Activity-Based Costing (CO-OM-ABC)

Release 4.6C
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## Icons

<table>
<thead>
<tr>
<th>Icon</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="icon" /></td>
<td>Caution</td>
</tr>
<tr>
<td><img src="image2" alt="icon" /></td>
<td>Example</td>
</tr>
<tr>
<td><img src="image3" alt="icon" /></td>
<td>Note</td>
</tr>
<tr>
<td><img src="image4" alt="icon" /></td>
<td>Recommendation</td>
</tr>
<tr>
<td><img src="image5" alt="icon" /></td>
<td>Syntax</td>
</tr>
<tr>
<td><img src="image6" alt="icon" /></td>
<td>Tip</td>
</tr>
</tbody>
</table>
Contents

Activity-Based Costing (CO-OM-ABC) ......................................................... 11
Activity-Based Costing Approaches ........................................................................... 13
Parallel Activity-Based Costing ................................................................................. 15
Integrated Activity-Based Costing ............................................................................ 17
Pure Cost Distribution Methods (Push Approach) .................................................. 19
Method of Quantity Consumption (Pull) .................................................................. 21
Master Data in the Activity-Based Costing Component ........................................ 25
Processing Master Data .......................................................................................... 27
Time-Dependency of Master Data ........................................................................ 29
Master Data Groups ............................................................................................... 32
Processing Master Data Groups .............................................................................. 33
Creating or Changing Master Data Groups ............................................................... 35
Copying Master Data Groups .................................................................................. 37
Processing Standard Hierarchies with the Group Maintenance ......................... 40
Selection variant ..................................................................................................... 43
Business Processes ............................................................................................... 45
Active and Inactive Master Data ........................................................................... 46
Standard Hierarchy of the Business Process .......................................................... 48
Creating and Maintaining Standard Hierarchies .................................................... 49
Working with Standard Hierarchies ..................................................................... 50
Maintaining Business Process/Groups in the Hierarchy .......................................... 52
Active and Inactive Master Data ........................................................................... 56
Activating Inactive Master Data ........................................................................... 58
Deleting Inactive Master Data ............................................................................... 60
Maintaining Business Processes ........................................................................... 61
Fields in Business Process Master Data ................................................................. 63
Assignment Fields in Business Process Master Data ............................................. 68
Checklist for Creating Business Processes ........................................................... 70
Maintaining Business Processes with Collective Processing ............................... 71
Deleting Business Processes .................................................................................. 74
Business Process Groups ...................................................................................... 76
Maintaining Business Process Groups .................................................................. 77
Statistical Key Figures ......................................................................................... 78
Processing Statistical Key Figures ......................................................................... 80
Master Data for Statistical Key Figures ................................................................. 81
Link to LIS ............................................................................................................ 82
Checklist for Creating Statistical Key Figures ....................................................... 85
Processing Statistical Key Figures With Collective Processing .......................... 86
Deleting Statistical Key Figures ........................................................................... 87
Statistical Key Figure Groups ............................................................................... 88
Processing Statistical Key Figure Groups .............................................................. 89
Template ............................................................................................................... 90
Maintaining Templates ......................................................................................... 93
## Activity-Based Costing (CO-OM-ABC)

<table>
<thead>
<tr>
<th>Aids for Manual Process Planning</th>
<th>213</th>
</tr>
</thead>
<tbody>
<tr>
<td>Copy Plan Data</td>
<td>214</td>
</tr>
<tr>
<td>Copying Planning: Procedure</td>
<td>215</td>
</tr>
<tr>
<td>Copying Actual Data into the Plan</td>
<td>217</td>
</tr>
<tr>
<td>Copying Actual into Plan</td>
<td>219</td>
</tr>
<tr>
<td>Periodic Reposting</td>
<td>221</td>
</tr>
<tr>
<td>Formula Planning in Business Processes</td>
<td>223</td>
</tr>
<tr>
<td>Templates for Formula Planning Process</td>
<td>225</td>
</tr>
<tr>
<td>Assigning Templates for Processes (Formula Planning)</td>
<td>227</td>
</tr>
<tr>
<td>Executing Formula Planning</td>
<td>228</td>
</tr>
<tr>
<td>Scheduled Activity Transfer</td>
<td>229</td>
</tr>
<tr>
<td>Transferring Scheduled Production</td>
<td>231</td>
</tr>
<tr>
<td>Transfer STKF: from Logistics Information System (LIS)</td>
<td>232</td>
</tr>
<tr>
<td>Transferring Statistical Key Figures</td>
<td>234</td>
</tr>
<tr>
<td>Workflow-Integration for Business Processes</td>
<td>235</td>
</tr>
<tr>
<td>Maintaining Task Costs</td>
<td>237</td>
</tr>
<tr>
<td>Example: Workflow Integration</td>
<td>238</td>
</tr>
<tr>
<td>Plan Reconciliation</td>
<td>240</td>
</tr>
</tbody>
</table>

## Period-Based Allocations | 241 |

<p>| Differences Between Allocation Methods | 242 |
| Template Allocation in Plan | 243 |
| Executing Template Allocations | 245 |
| Template-Allocation for Cost Objects | 246 |
| Template-Application in Standard Cost Estimate | 248 |
| Templates for Cost Object and Calculation | 249 |
| Assigning Templates for Cost Objects and Calculations | 252 |
| Template-Allocation for Profitability Segment | 254 |
| Templates for Profitability Segments | 255 |
| Assigning Templates to Profitability Segments | 257 |
| Template Allocation in Plan: Processes/Cost Centers | 259 |
| Templates for Business Processes/Cost Centers | 261 |
| Templates for Bus. Proc. / Cost Center Assignment | 264 |
| Example Template-Allocation Process (Plan) | 265 |
| Distribution | 267 |
| Assessment (Cost Centers, Business Processes) | 268 |</p>
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect Activity Allocation</td>
<td>269</td>
</tr>
<tr>
<td>Senders and Receivers in Indirect Activity Allocation</td>
<td>271</td>
</tr>
<tr>
<td>Activity Quantity Valuation</td>
<td>272</td>
</tr>
<tr>
<td>Requirements for Indirect Activity Allocation</td>
<td>273</td>
</tr>
<tr>
<td>Planning Overheads</td>
<td>274</td>
</tr>
<tr>
<td><strong>Plan Price Calculation</strong></td>
<td><strong>275</strong></td>
</tr>
<tr>
<td>Calculating Prices</td>
<td>277</td>
</tr>
<tr>
<td>Example of Price Calculation</td>
<td>282</td>
</tr>
<tr>
<td>Valuating Activity Quantities</td>
<td>283</td>
</tr>
<tr>
<td>Price Calculation Methods</td>
<td>284</td>
</tr>
<tr>
<td>Price Calculation With Cost Component Split</td>
<td>288</td>
</tr>
<tr>
<td>Manual Actual Postings</td>
<td>291</td>
</tr>
<tr>
<td>Primary Costs in Business Processes</td>
<td>292</td>
</tr>
<tr>
<td><strong>Editing Manual Actual Postings</strong></td>
<td><strong>294</strong></td>
</tr>
<tr>
<td>Displaying Manual Actual Postings</td>
<td>295</td>
</tr>
<tr>
<td>Entering Manual Actual Postings</td>
<td>296</td>
</tr>
<tr>
<td>Reversing Manual Actual Postings</td>
<td>299</td>
</tr>
<tr>
<td>Reposting Costs and Revenues Manually</td>
<td>300</td>
</tr>
<tr>
<td>Reposting Line Items</td>
<td>302</td>
</tr>
<tr>
<td>Selecting Line Items</td>
<td>304</td>
</tr>
<tr>
<td>Reposting Line Items</td>
<td>306</td>
</tr>
<tr>
<td>Displaying Line Item Repostings</td>
<td>309</td>
</tr>
<tr>
<td>Reversing Line Item Repostings</td>
<td>310</td>
</tr>
<tr>
<td><strong>Time Sheets</strong></td>
<td><strong>311</strong></td>
</tr>
<tr>
<td><strong>Direct Activity Allocation</strong></td>
<td><strong>312</strong></td>
</tr>
<tr>
<td><strong>Reposting Internal Activity Allocation</strong></td>
<td><strong>315</strong></td>
</tr>
<tr>
<td>Selecting Internal Activity Allocations</td>
<td>317</td>
</tr>
<tr>
<td>Reposting Internal Activity Allocations</td>
<td>319</td>
</tr>
<tr>
<td>Displaying Internal Activity Allocation Repostings</td>
<td>322</td>
</tr>
<tr>
<td>Reversing Repostings for Internal Activity Allocation</td>
<td>323</td>
</tr>
<tr>
<td>Entering Sender Activities</td>
<td>324</td>
</tr>
<tr>
<td>Manual Actual Price</td>
<td>325</td>
</tr>
<tr>
<td>Entering Actual Prices Manually</td>
<td>326</td>
</tr>
<tr>
<td>Displaying Actual Prices Manually</td>
<td>327</td>
</tr>
<tr>
<td>Manual Cost Allocation</td>
<td>328</td>
</tr>
<tr>
<td><strong>Entering Statistical Key Figures</strong></td>
<td><strong>331</strong></td>
</tr>
<tr>
<td><strong>Period-End Closing</strong></td>
<td><strong>332</strong></td>
</tr>
<tr>
<td>Individual Functions of the Schedule Manager</td>
<td>334</td>
</tr>
<tr>
<td>Using the Scheduler</td>
<td>335</td>
</tr>
<tr>
<td>Using the Monitor</td>
<td>337</td>
</tr>
<tr>
<td>Using the Flow Definition</td>
<td>339</td>
</tr>
<tr>
<td>Periodic Reposting</td>
<td>340</td>
</tr>
<tr>
<td><strong>Period-Based Allocations</strong></td>
<td><strong>342</strong></td>
</tr>
<tr>
<td>Differences Between Allocation Methods</td>
<td>343</td>
</tr>
<tr>
<td>Template Allocation in Actual</td>
<td>344</td>
</tr>
<tr>
<td>Executing Template allocations</td>
<td>347</td>
</tr>
<tr>
<td>Template-Allocation for Cost Objects</td>
<td>348</td>
</tr>
<tr>
<td>Templates for Cost Object and Calculation</td>
<td>350</td>
</tr>
<tr>
<td>Assigning Templates for Cost Objects and Calculations</td>
<td>353</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Activity-Based Costing Information System</td>
<td>436</td>
</tr>
<tr>
<td>Activity-Based Costing (CO-OM-ABC)</td>
<td>8</td>
</tr>
<tr>
<td>Actual Price Calculations</td>
<td>419</td>
</tr>
<tr>
<td>Actual Cost Splitting</td>
<td>380</td>
</tr>
<tr>
<td>Assessing Activity and Resource Allocation</td>
<td>369</td>
</tr>
<tr>
<td>Assessing Customer Relationships (Delivery and Fulfillment)</td>
<td>403</td>
</tr>
<tr>
<td>Assigning Indirect Costs to Profitability Segments</td>
<td>370</td>
</tr>
<tr>
<td>Assigning Templates to Profitability Segments</td>
<td>358</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assumptions for Indirect Activity Allocation</td>
<td>374</td>
</tr>
<tr>
<td>Assessment (Cost Centers, Business Processes)</td>
<td>390</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>372</td>
</tr>
<tr>
<td>Assigning Direct Costs to Profitability Segments</td>
<td>371</td>
</tr>
<tr>
<td>Assigning Indirect Costs to Profitability Segments</td>
<td>370</td>
</tr>
<tr>
<td>Assessing Activity and Resource Allocation</td>
<td>369</td>
</tr>
<tr>
<td>Assessing Customer Relationships (Delivery and Fulfillment)</td>
<td>403</td>
</tr>
<tr>
<td>Assigning Indirect Costs to Profitability Segments</td>
<td>370</td>
</tr>
<tr>
<td>Assigning Indirect Costs to Profitability Segments</td>
<td>370</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assumptions for Indirect Activity Allocation</td>
<td>374</td>
</tr>
<tr>
<td>Assessment (Cost Centers, Business Processes)</td>
<td>390</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assigning Direct Costs to Profitability Segments</td>
<td>371</td>
</tr>
<tr>
<td>Assigning Indirect Costs to Profitability Segments</td>
<td>370</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
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<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
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<tr>
<td>Assignment of Business Processes to Cost Centers</td>
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<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
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<td>Assignment of Business Processes to Cost Centers</td>
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<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
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<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
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<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
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<tr>
<td>Assignment of Business Processes to Cost Centers</td>
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</tr>
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<td>Assignment of Business Processes to Cost Centers</td>
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<tr>
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<td>Assignment of Business Processes to Cost Centers</td>
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<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
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<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
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<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
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<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
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<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
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<td>Assignment of Business Processes to Cost Centers</td>
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</tr>
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<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
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<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
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<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
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<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
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<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
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<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
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<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
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<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Assumptions for Direct Activity Allocation</td>
<td>371</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>362</td>
</tr>
<tr>
<td>Assignment of Business Processes to Cost Centers</td>
<td>365</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Important Standard Reports</td>
<td>463</td>
</tr>
<tr>
<td>Plan/Actual Comparison</td>
<td>467</td>
</tr>
<tr>
<td>Process List Plan/Actual Costs</td>
<td>468</td>
</tr>
<tr>
<td>Plan/Actual Comparison for Processes (per Cost Elements)</td>
<td>470</td>
</tr>
<tr>
<td>Business Process: List With Partners (per cost elements)</td>
<td>472</td>
</tr>
<tr>
<td>Business Processes: List with Partners</td>
<td>474</td>
</tr>
<tr>
<td>Cost Component Split</td>
<td>476</td>
</tr>
<tr>
<td>Target/Actual Comparison</td>
<td>477</td>
</tr>
<tr>
<td>Process List Target/Actual Costs</td>
<td>478</td>
</tr>
<tr>
<td>Variance Analysis for Business Processes</td>
<td>480</td>
</tr>
<tr>
<td>Planning Overview</td>
<td>484</td>
</tr>
<tr>
<td>Executing Planning Overviews Online</td>
<td>486</td>
</tr>
<tr>
<td>Executing Planning Overviews in Background</td>
<td>487</td>
</tr>
<tr>
<td>Comparison: Scheduled/Planned Process Quantities</td>
<td>488</td>
</tr>
<tr>
<td>Price Report</td>
<td>490</td>
</tr>
<tr>
<td>Price Report for Business Processes</td>
<td>491</td>
</tr>
<tr>
<td>Executing Price Reports Online</td>
<td>492</td>
</tr>
<tr>
<td>Determining Selection Options</td>
<td>493</td>
</tr>
<tr>
<td>Executing Price Reports Online</td>
<td>494</td>
</tr>
<tr>
<td>Displaying Price Reports</td>
<td>495</td>
</tr>
<tr>
<td>Displaying Period Screens and Overview Screens</td>
<td>497</td>
</tr>
<tr>
<td>Displaying the Master Record</td>
<td>498</td>
</tr>
<tr>
<td>Displaying Cost Components</td>
<td>499</td>
</tr>
<tr>
<td>Executing Price Reports in Background</td>
<td>500</td>
</tr>
<tr>
<td>Line Item Report</td>
<td>501</td>
</tr>
<tr>
<td>Business Processes Plan Line Items</td>
<td>502</td>
</tr>
<tr>
<td>Business Process Actual Line Item</td>
<td>503</td>
</tr>
<tr>
<td>Executing Line Item Reports Online</td>
<td>504</td>
</tr>
<tr>
<td>Deleting Selections</td>
<td>506</td>
</tr>
<tr>
<td>Maintaining Variants</td>
<td>508</td>
</tr>
<tr>
<td>Setting Actual Versions</td>
<td>509</td>
</tr>
<tr>
<td>Selecting Value Types</td>
<td>510</td>
</tr>
<tr>
<td>Specifying Additional Selection Criteria</td>
<td>511</td>
</tr>
<tr>
<td>Displaying Groups</td>
<td>512</td>
</tr>
<tr>
<td>The Line Item Report Display</td>
<td>513</td>
</tr>
<tr>
<td>Displaying Source Documents and Accounting Documents</td>
<td>514</td>
</tr>
<tr>
<td>Displaying the Master Record from the Line Item Report</td>
<td>516</td>
</tr>
<tr>
<td>Displaying Selection Criteria and Selection Logs</td>
<td>518</td>
</tr>
<tr>
<td>Maintaining Header Rows</td>
<td>519</td>
</tr>
<tr>
<td>Executing Line Item Reports in Background</td>
<td>520</td>
</tr>
<tr>
<td>Document Display</td>
<td>522</td>
</tr>
<tr>
<td>CO Plan Documents</td>
<td>524</td>
</tr>
<tr>
<td>CO Documents: Actual Costs</td>
<td>525</td>
</tr>
<tr>
<td>CO Documents: Actual Costs</td>
<td>526</td>
</tr>
<tr>
<td>Section</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Executing Document Display Online</td>
<td>527</td>
</tr>
<tr>
<td>Basic List for Document Display</td>
<td>529</td>
</tr>
<tr>
<td>Executing Document Display in the Background</td>
<td>531</td>
</tr>
<tr>
<td>Master Data Indexes</td>
<td>533</td>
</tr>
<tr>
<td>Displaying Master Data Indexes</td>
<td>534</td>
</tr>
<tr>
<td>Process Attributes</td>
<td>535</td>
</tr>
<tr>
<td>Business Process: Value Added Partner</td>
<td>536</td>
</tr>
<tr>
<td>Process: Value-Added Development</td>
<td>538</td>
</tr>
<tr>
<td>Comparison: Plan/Actual Price per Value Added</td>
<td>540</td>
</tr>
<tr>
<td>List: Breakdown per Process Category</td>
<td>541</td>
</tr>
<tr>
<td>List: Breakdown per Cost Behavior</td>
<td>543</td>
</tr>
<tr>
<td>More Reports</td>
<td>545</td>
</tr>
<tr>
<td>Statistical Key Figures: Monthly Displays</td>
<td>546</td>
</tr>
<tr>
<td>Cost Centers: Actual/Plan Variance</td>
<td>547</td>
</tr>
<tr>
<td>Cost Centers: Actual/Target Variance</td>
<td>549</td>
</tr>
<tr>
<td>Activity Type: Utilization</td>
<td>551</td>
</tr>
</tbody>
</table>
Activity-Based Costing (CO-OM-ABC)

Purpose
You can use the Activity-Based Costing component (CO-OM-ABC) to provide a process-oriented, cross-functional view of overhead in addition to the traditional, location-oriented view provided by the Cost Center Accounting component (CO-OM-CCA). The Activity-Based Costing component thus enhances the Cost Center Accounting component.

The Activity-Based Costing component allocates process quantities based on resource and process drivers, allowing you to define cost allocation more exactly along the Value Added Chain [Ext.] than is possible with overhead rates. Activity-Based Costing (ABC) likewise enhances product costing by assigning the sources of costs to their originating business processes. Cost center resources can allocate to business processes based on their true utilization of activities.

Activity-Based Costing in the SAP System

By including ABC in profitability analysis, you create more realistic views of your revenue position.

The primary goal is not just improving individual aspects of processes, but rather the optimization of entire process chains. Other goals of ABC include shortening lead times and improving quality.
Features

As of SAP-R/3 System Release 4.0, you can use the Activity-Based Costing component parallel to the existing traditional cost accounting system, or you can use it as an operational component integrated with product costing and profitability analysis in the Controlling component (CO).

See also:
- Parallel Activity-Based Costing [Page 15]
- Integrated Activity-Based Costing [Page 17]
Activity-Based Costing Approaches

Purpose

Activity-Based Costing provides helps assign overhead costs to products, customers, and other object in a way that is more correlated to cost drivers than traditional overhead allocation methods. The definition of cross-functional business processes in addition to the functional cost center standpoint opens a further dimension of overhead transparency in cost accounting.

First, the resources consumed by Business Processes [Ext.] are assigned according to the true origins of the costs. The characteristic unit of measure for this assignment is known as the resource driver. In the second step, the business processes are assigned to the assorted receiver objects based on their actual utilization of resources. The assignment of business processes takes place via "process drivers [Ext.]", which represent reasonable measurements of business process consumption. Receiver objects can be products, customers, sales channels, and other types of profitability segment.

Activity-Based Costing in the SAP System

ABC, in contrast with traditional cost accounting, allows a more realistic profitability analysis of different products and customers because the resources of overhead areas can also be taken into account via process consumption by market segments using the business processes.

The primary costs in external accounting appear as primary cost element assignments to the responsible cost centers. In this way, the cost center structure offers the complete view of organizational overhead. The resources relevant to the business processes are provided in their entirety by the cost centers. This means you cannot make direct postings of primary costs from external accounting on business processes.
Activity-Based Costing Approaches

Features

In general, we can distinguish between two different techniques used for assigning cost center resources to business processes (via resource drivers) and allocating business processes on the corresponding receiver objects (via process drivers). Both techniques are treated here as pure cost distribution (Push Approach) and as quantity tracing (Pull approach). Deciding for one of the two approaches has far-reaching consequences for the use of ABC as a management tool in your organization.

Cost distribution (push) and quantity inputs (pull)

The SAP System supports numerous allocation methods that allow the realization of both approaches to Activity-Based Costing.

For more information on the methods, see: Pure Cost Distribution Methods (Push Approach) [Page 19], Method for Quantity Consumption (Pull) [Page 21].
Parallel Activity-Based Costing

Use
You can use parallel Activity-Based Costing (ABC) in your organization to provide strategic information for managerial decisions. In addition, you can define as many delta versions as desired with which you can carry out alternative calculations. This allows you to display and analyze a variety of what-if scenarios using ABC.

Parallel Activity-Based Costing

Parallel ABC acts as an addition to integrated cost accounting. The integrated cost accounting system remains unaffected.

Parallel Activity-Based Costing with Delta Versions

With parallel ABC and delta versions, you can analyze important sub-areas of your organization. You can include the process model into your integrated value flow at a later time after detailed analysis of the initial results. Delta versions – that is, alternative calculations – provide critical information for managerial decision-making.

The delta version is a statistical version that you can use to create independent allocation scenarios. In order to use existing data, a delta version is based on a reference version. The reference version provides primary cost posting data and selected allocations that you can change in the delta version.

Parallel Activity-Based Costing with Delta Versions
You can use the delta version concept in both plan and actual. You may create as many delta versions as you feel necessary.

**Activating Parallel ABC**

To activate parallel ABC in the Implementation Guide (IMG) for the Activity-Based Costing component, choose **Controlling → Overhead Controlling → Activity-Based Costing → Activating Activity-Based Costing in Controlling Area**. Select a controlling area and choose **Activate components/control indicators**. You must activate parallel ABC individually for each controlling area in question. Set the **Activity-Based Costing** indicator to “Component active for parallel calculation”. For the Activity-Based Costing component, this means:

- The component is active for parallel cost accounting only
- None of the allocations are posted as true debits or credits
- The allocations appear as statistical postings in the delta versions

You must activate parallel ABC for each separate controlling area.

**See also:**

*Activity-Based Costing active in controlling area [Ext.]*
Integrated Activity-Based Costing

Use

Integrated Activity-Based Costing (ABC) fully integrates the Activity-Based Costing component (CO-OM-ABC) in the value flow of the Controlling component (CO), in particular the Product Cost Controlling component (CO-PC) and the Profitability Analysis component (CO-PA). Integrated ABC posts costs and quantities as real values, not statistical ones, to the participating objects.

Integrated ABC in Manufacturing Industries

Integrated ABC requires a radical rethinking of cost accounting as part of the overall managerial accounting strategy, with corresponding organizational restructuring requirements.

Activating an Integrated Activity-Based Costing

To activate integrated ABC in the Implementation Guide (IMG) for the Activity-Based Costing component, choose Controlling → Overhead Controlling → Activity-Based Costing → Activating Activity-Based Costing in Controlling Area. Select a controlling area and choose Activate components/control indicators. Set the Activity-Based Costing indicator to “Component active for parallel and integrated calculation”.

For the Activity-Based Costing component, this means:

- The component is completely active
- Business processes act as real account assignment objects
- You can post allocations as true debits and credits and update the allocation objects accordingly with the appropriate posting transactions
Integrated Activity-Based Costing

- Allocations based on the delta version concept are still possible. You must activate integrated ABC for each separate controlling area.

See also:

Activity-Based Costing active in controlling area [Ext.]
Pure Cost Distribution Methods (Push Approach)

Use

The pure cost distribution ("Push") methods in the SAP System are:

- Assessment in planning and in period-end closing (Assessment: Cost Centers, Business Processes [Page 369])
- Distribution in planning and in period-end closing (Distribution [Page 368])

Assessment uses a secondary cost element, and is useful in highlighting for which purpose the costs assigned via assessment were used. Distribution, in contrast, leaves all primary cost elements intact on the receiver. It is useful where the origins of costs are of more interest than their causes.

Features

Resource Consumption

Assessment and distribution are available for the assignment of cost center resources to business processes. The tracing factor in an assessment cycle or distribution cycle is in both cases the resource driver.

For example, the resource driver can appear as a statistical key figure illustrating a measurement for the resource consumption of a business process. This statistical key figure can be taken, when necessary, from the Logistics Information System (LIS) by creating a connection between the LIS key figure relevant to the resource driver and the statistical key figure of the business process. As an example the "Number of Purchase Orders" can be logged automatically in an LIS information structure whenever a purchase order is posted. You can also assign resources to business processes using fixed percentages.

The costs appearing on business processes due to this method are always treated as fixed costs.

Process Consumption

To assign business processes to receiver objects, the R/3 System offers assessment because in Activity-Based Costing (ABC) the question of the source of consumption costs on the receiver remains paramount. The Process Driver [Ext.] appears as a tracing factor in the assessment cycle, just like the resource driver. The LIS can serve as a source of relevant process driver information, as it does for resource drivers in the scenario described above. If you define a process assessment directly to the profitability segments in the Profitability Analysis component (CO-PA), the value fields in the operating concern serve as the sole tracing factors. However, in order to create a causal relationship between profitability segment and process consumption, you can transfer the process driver information from the LIS to the corresponding value fields.

The process costs posted on the receiver object via assessment are always treated as fixed costs.

Consequences of Pure Cost Distribution Methods (Push Approach)

The pure cost distribution (Push) methods make it possible, through the appropriate selection of resource and process drivers, to assign overhead costs to their originating receiver objects (such as products and customers). Nevertheless, this is solely an assignment of all occurring costs that
Pure Cost Distribution Methods (Push Approach)

does not take the true activity quantities consumed into account. You thus cannot answer questions dealing with the productivity of overhead processes, or with the costs of idle resource capacity.
Method of Quantity Consumption (Pull)

Use

The quantity consumption ("Pull") methods in the SAP System are:

- Direct activity allocation ([Direct Activity Allocation [Page 312]](https://example.com/direct-activity-allocation))
- Indirect activity allocation in plan and actual ([Indirect Activity Allocation [Page 370]](https://example.com/indirect-activity-allocation))
- Target=actual allocation ([Target=Actual Activity Allocation [Page 375]](https://example.com/target-actual-activity-allocation))
- the Template Allocation in Plan [Page 243] and in the actual in Cost Object [Page 348] or Profitability Segment [Page 355]
- the Template Allocation in Processes/Cost Centers in Plan [Page 259] and in Actual [Page 360] (the following text addresses the handling of allocations in processes)
- the connection to the work center and routing ([Calculation]. [Ext.]

The primary difference between quantity consumption ("Pull") and pure cost distribution ("Push") methods is that the former is based on allocation of activity and business process quantities, which are then valued using prices in a second step. Allocation takes place using a cost element specific to an activity type or a business process. As explained below, the ability to create multiple quantity and cost flows opens up a wide range of possibilities for using Activity-Based Costing (ABC) techniques in the overall framework of Activity-Based Management (ABM).

Method of Quantity Consumption (Pull)

**Financial Accounting**

Resource Quantities - Pull

- Cost centers (Resources)
- Resource drivers
- Process-drivers
- Products, customers, Channels.

Costs = Quantity * Price

Features

Resource Consumption

The methods for quantity-based assignments of resources to business processes (Pull) in the SAP System are [direct activity allocation [Page 312]](https://example.com/direct-activity-allocation) and [indirect activity allocation [Page 370]](https://example.com/indirect-activity-allocation) in
Method of Quantity Consumption (Pull)

plan and actual, target=actual activity allocation [Page 375], and template allocation in processes [Page 360].

In direct activity allocation [Page 312], the resource driver is represented by an activity type that illustrates the activity produced by a cost center resource (such as employee hours or kilowatt-hours, among others). Direct activity allocation is the most exact method, but at the same time the most time-consuming, because you must measure and enter the exact quantities of activities and processes consumed. This usually occurs as manual confirmation of quantities on both the sender and the receiver sides. The costs appearing on the business process via direct activity allocation can consist of fixed as well as of variable portions.

In indirect activity allocation in plan and actual [Page 370], the resource driver is represented by the tracing factor of the corresponding cycle, similar to the way it is represented in the pure cost distribution approach. The difference, however, lies in the fact that the resource driver is not used for cost distribution, but rather as the basis for allocations of activity or process quantities. Indirect activity allocation appears in two variations. In manual indirect allocation, you assign the known activity quantities on the cost center to the business processes in relation to the resource drivers (tracing factors). In inverse indirect allocation, you multiply the resource drivers (such as the number of orders) by a standard quantity (such as two minutes per order). This thereby determines the activity quantity of a given resource consumed by a business process. The total of all activity quantities consumed by business processes equals the total activity output of the resource by the cost center. If you use a statistical key figure as a resource driver, this results in purely fixed costs on the business process. If, on the other hand, the process output serves as the resource driver, this results in purely variable costs instead.

In target=actual activity allocation [Page 375], the method used is also an inverse approach for determining resource consumption, but it is used for determining actual quantities only. The R/3 System uses individually posted actual quantities for business processes and the corresponding plan quantities in order to calculate an operating rate. For resource activity inputs which are difficult or impossible to measure, target=actual allocation multiplies the plan quantities by the operating rate in order to calculate target quantities. Assuming that the individual business process flows can be standardized for the most part, and that the plan activity quantities show a realistic picture of the true resource consumption, these target quantities can then be defined as equal to the actual quantities.

Template allocations in processes [Page 360] offer the greatest flexibility for allocation of activity quantities on business processes via the corresponding resource drivers. By storing a template [Page 90] in the master data of a given Business Process [Ext.], you create an explicit description of the business process structure. Similar to a routing for direct activities, the template describes the indirect activities that occur during each execution of a business process. It defines which cost center resources are consumed by the business process and in which quantities. The great flexibility of this function is made possible by the ability to define methods for finding resource consumption data and for calculating quantities dynamically. This means you can model complex resource drivers by means of functions and formulas. Further, the template allows you to distinguish between variable and fixed activity quantities. The variable quantity factor represents a standard quantity for each business process execution, which when multiplied by the process output equals the variable activity quantity of the resource consumed by the process. The fixed activity quantity consumption, on the other hand, is independent of the business process output and can be treated as a standby resource which is consumed by the business process even if the business process is never carried out. Cost input in this manner can be divided into fixed and variable portions.

Template Allocation for Business Processes
Process Consumption

In order to assign business processes on receiver objects based on quantities, you can use all the described methods of quantity allocation for resource consumption. Instead of resource drivers, the process driver [Ext.] serves as the measurement for consumption of overhead business processes by the receivers. The methods of direct and indirect process allocation and target=actual allocation will therefore not be described in detail again.

However, the template allocation in processes [Page 360] can be discussed further from this standpoint. The template, in addition to the objects and functions mentioned above, can also include business processes themselves. You can thereby divide a primary business process into different sub-processes. These sub-processes, in turn, can be subdivided further by a template, making it possible for you to display a multi-step process hierarchy. You can use the R/3 System to determine dynamically the sub-processes relevant to the primary business process. You can also structure the process drivers of the sub-processes easily with the aid of formulas and functions. As with resource consumption, the consumption of sub-processes can be broken down into fixed and variable quantities. With multi-step business process models, note that you must ensure a causal relationship between the process drivers of the primary business process and the process drivers of the sub-processes and the resource drivers on the task level. The allocations of the resulting resource inputs through the cost drivers of the primary business process will make sense only if you ensure proportionality between the drivers of the various steps.

You can assign process costs to cost objects or profitability segments with the template allocation in plan [Page 243] or in actual [Page 344]. Business processes are assigned to cost objects with the template allocation in cost object [Page 348] based on the appropriate process driver and the originating source. Again, you can determine dynamically the relevant business processes for a cost object. The R/3 System calculates the process quantities consumed automatically at the time of costing using process driver relevant data in the environment of the cost object. A wide spectrum of functions as well as user-defined formulas allows you to model complex process drivers. The process quantities consumed by the cost objects are posted as variable, in order to allow the process costs accepted by the cost object in this way to include variable and fixed amounts. You can also use cost component splitting in order to display the process costs on a cost object in an aggregate form in the Profitability Analysis component (CO-PA), by assigning the relevant allocation cost elements to cost components specific to the business processes.
Method of Quantity Consumption (Pull)

Profitability segments [Page 355] of the profitability analysis are additional receiver objects of the template allocation. These profitability segments are multi-dimensional market segments that stand out through their various characteristics. You can analyze the profitability of a product in a specific region, customer group and distribution channel simultaneously. This multi-dimensionality is especially meaningful for service industries, which often see their products as much more than one-dimensional.

A further use of the template is in the determination of the plan process quantities required to satisfy a previously defined sales plan. The template thereby calculates the scheduled process quantities on the receiver objects based on the results of the sales and operations plan (SOP) and long-term planning (LTP).

The connection of the business process to the business transaction routing makes it possible to string together specific processes to concrete material or production orders. Thus, a work center and routing receive a process assignment, which can also be used through the production or plan calculation of the orders. The process quantities are then determined through the confirmation of the routing transactions, as is the case with activity types. According to the activity type, the cost accounting produces a credit to the process and a debit to the confirmed object. From this, the valuation produces a business process price, as is the case with the activity type.

For more information, see:

- explanations on work center/routing under Linking work center with business processes [Ext.]
- explanations for applications in Product Cost Controlling under Activity-Based Costing [Ext.] and Work Centers in the Calculation [Ext.]
- for production orders (confirmations) under Confirmations. [Ext.]

Consequences of Quantity Consumption (Pull)

The quantity consumption (Pull) method makes it possible to examine an activity quantity or process quantity flow throughout the entire value added chain of an organization. This is true as long as the user selects the appropriate resource and process drivers and makes appropriate assignments of overhead costs to their originating receiver objects (such as products and customers). The advantage of this pull approach is the use of only those quantities actually consumed by the receiver objects. You thus can answer questions dealing with the productivity of overhead processes, or with the costs of idle resource capacity. The R/3 System offers variance analysis instruments for these questions.

By using the inverse methods described above, the quantity consumption (Pull) approach allows you to transfer plan sales quantities automatically, for the most part, to the required activity quantities to be provided by the cost center resources. You can carry out realistic primary cost planning on the cost centers on the basis of this plan quantity structure. Additionally, you can identify idle capacity or under capacity of cost center resources early enough to take steps to redistribute these overhead resources if necessary.
Master Data in the Activity-Based Costing Component

Purpose

Master data determines the underlying structure of the R/3 System and undergoes minor changes, if any, in an active system for ongoing settlement periods.

You can use the relationships between business processes to mirror the flows and allocation structure of your organization on a process-oriented basis. These structures, as a rule, remain constant over long periods. Based on the business process structure, you can carry out business process planning and create period-based reports for business processes and areas, to be used by the responsible manager for analysis. You can use these reports to locate unprofitable areas and mistakes in planning for the individual business processes. In order to be able to compare results, you should not change the master data they are based upon.

You generally maintain master data once before activating the Activity-Based Costing component (CO-OM-ABC). You can enter master data manually, or you can use interface programs to transfer data from non-SAP systems.

The master data for Activity-Based Costing is stored in master data tables.

When you transport master data (between clients, for example), you must use additional master data tables not described in this section.

Integration

The concept of the SAP System distinguishes between:

- Master data
- Transaction Data

Transaction Data

Transaction data is the information based on business transactions that the current SAP System continually accepts or changes during processing.

Transaction data for the Activity-Based Costing component (CO-OM-ABC) is found in line item and totals tables where you can access the information as part of business process analysis and line item reports.

Line item tables receive the results of the following individual posting transactions:

- Financial Accounting component (FI) postings
The financial accounting bookings are saved in the FI component and the line item booking tables of the CO component, generating redundancies. However, this is necessary due to the different evaluations in both areas. Financial Accounting component evaluations are based on the connections between documents, whereas Controlling component evaluations differentiate between primary and secondary costs.

- **Controlling postings in actual:**
  - Distribution
  - Assessment
  - Internal activity allocation

- **Controlling postings in plan:**
  - Manual planning
  - Price calculation

Actual postings generally update line items; updates are optional in plan.

For more information, see [Line Items and Integrated Planning](#) [Page 172]

**Total tables** receive the totals of all line items by cost element and serve as a summarization of the line item tables.
Processing Master Data

Use
The following functions for creating, changing and displaying master data are available for:

- Cost elements [Ext.]
- Cost centers [Ext.]
- Business processes [Ext.]
- Activity types [Ext.]
- Statistical key figures [Ext.]
- Resources [Ext.]

Features
You can use the following functions for **individual objects** (individual processing):

<table>
<thead>
<tr>
<th>Master Data</th>
<th>Processing Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost elements</td>
<td>Create primary or secondary, change, display, delete, display changes</td>
</tr>
<tr>
<td>Cost centers</td>
<td>Create, change, display, delete, display changes</td>
</tr>
<tr>
<td>Business processes</td>
<td>Create, change, display or delete</td>
</tr>
<tr>
<td>Activity types</td>
<td>Create, change, display, delete, display changes</td>
</tr>
<tr>
<td>Statistical key figures</td>
<td>Create, change, display or delete</td>
</tr>
</tbody>
</table>

You can use the following functions for **more than one object** (collective processing):

<table>
<thead>
<tr>
<th>Master data</th>
<th>Processing Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost elements</td>
<td>Display, delete</td>
</tr>
<tr>
<td>Cost centers</td>
<td>Change, display, delete, rough entry</td>
</tr>
<tr>
<td>Business processes</td>
<td>Change, display, delete</td>
</tr>
<tr>
<td>Activity types</td>
<td>Display, delete</td>
</tr>
<tr>
<td>Statistical key figures</td>
<td>Change, display</td>
</tr>
<tr>
<td>Resources</td>
<td>Create, change, display</td>
</tr>
</tbody>
</table>
Processing Master Data

You can also create, change or display master data groups. For more information, see Processing Master Data Groups [Page 33]

See also

Creating, Changing or Displaying Master Data [Ext.]
Processing Statistical Key Figures [Page 80]
Processing Resources [Ext.]
Time-Dependency of Master Data

Use

You can maintain master data for cost centers [Ext.], cost elements [Ext.], activity types [Ext.] and business processes [Ext.] with time-based dependencies. You can make changes at any time for any time interval. The saving of data is also time-dependent. This can result in multiple database records for a master data record, with different information stored in each database record.

Features

SAP has determined the times when a field may be changed - these cannot be changed. The following time-dependencies are possible:

- **Not time-based**
  The corresponding fields are only valid for the whole period of time in which the object exists, and can only be changed during this period.
  **Example**: Hierarchy area

- **Day-based time dependency**
  You can change the corresponding fields as often as you wish, and they are also valid for one ore more days.
  **Example**: Lock indicator

- **Period-based time dependency**
  The corresponding fields are valid for one period (for example, a month) and are not changeable during this time.
  **Example**: Profit centers

- **Fiscal-year-based time dependency**
  The corresponding fields are valid for a whole fiscal year and cannot be changed during that year.
  **Example**: Cost center currency

For fields that are time-dependent on a **daily basis**, you can set an indicator to specify whether they are to be saved on a time basis (and so become **historically relevant**) in customizing for the given master data. See, for example, **Specifying Time-Dependent Fields for Cost Centers [Ext.]**.

Fields with **period-based** and **fiscal year-based** time dependencies are always historically relevant.

⚠️

Note that time-dependent storage can lead to large volumes of data. Therefore, define only important fields as historically relevant.
Time-Dependency of Master Data

If the contents of all fields marked as historically relevant are identical in consecutive analysis periods, the SAP System replaces the multiple data records during master data maintenance with a data record for all the single record periods.

Activities

- If you change master data marked as historically relevant, and define a new analysis period for the changed fields, the SAP System creates new data records and shortens the validity period of existing records.

  You create an object (such as a cost center) valid from 01.01.1996 to 31.12.1999, with the manager Brown. You then change the object by defining a different cost center manager for the period from 01.01.1997 to 31.12.1997. You marked the Manager field as historically relevant during Customizing.

  The SAP System saves three data records. To display these in master data maintenance, select the Person responsible field and choose Drilldown:

  - One data record for the interval from 01.01.1996 to 31.12.1996, Manager: Brown
  - One data record for the interval from 01.01.1997 to 31.12.1997, Manager: Smith
  - One data record for the interval from 01.01.1998 to 31.12.1999, Manager: Brown

- If you change master data fields marked as historically relevant without defining a new analysis period, the system changes the existing data record for the entire analysis period selected. You can find these changes listed in the change document.

  You proceed as with the previous example, but change the Person responsible field without defining a new analysis period. The SAP System creates only one data record for the Person responsible field from 01.01.1996 to 31.12.1999, Manager: Smith.

  To change historically-relevant fields in multiple analysis periods, select the appropriate analysis periods during master data maintenance.

- If you change master data fields that are time-dependent on a daily basis, and not marked as historically relevant, the SAP System changes the existing data record for the entire analysis period selected. You cannot define a new analysis period. You can find these changes listed in the change document.

  You have set the indicator for Person responsible to not historically relevant. Proceed in the same way as the previous example. The SAP System creates only one data record for the Person responsible field from 01.01.1996 to 31.12.1999, Manager: Smith.

  The change document lists the master data field changes. To display the individual changes, choose Environment → Change documents → For field/For cost center in
the master data maintenance, for detailed information on each change. Double click
to call up the detail information for each change.

- If you change master data fields that are not time-dependent, the SAP System changes the
existing data record for the entire period in which the master data exists. When you change
these fields, **no** new analysis period may be entered.

- Time-based master data storage reduces the maintenance requirements in the SAP System.
You can create master data across fiscal year boundaries, and use this data for more than
one year without having to recreate the data again each year. You can make changes
relevant to a given time-period at any time, without immediately affecting the current data.

You have created a cost center with the following data:

- Cost center 4110
- Validity period: 01.01.1996 to 31.12.2000
  This entry has the advantage that the cost center can be processed in the SAP
  On the other hand, you have created a cost center with the following data:

- Cost center 4110
- Validity period: 01.01.1996 to 31.12.1996
  This has the disadvantage that cost center 4110 must be created again if you require
  it for the following fiscal year.

  This rule applies to other objects in Cost Center Accounting, such as cost elements,
  activity types and business processes.

In the example above, the analysis periods correspond to year boundaries according
to the calendar year. You can, however, define periods not based on the calendar
year.

This is especially necessary when you have used the fiscal year variant in Financial
Accounting to define a postponed fiscal year, an over-long fiscal year or a shortened
fiscal year. In these cases, the master data is not based on the fiscal year variants.
Master Data Groups

Definition
Master data can be grouped together, for example:

- Cost center groups
- Cost element groups
- Activity type groups
- Statistical key figure groups
- Business process groups
- Order groups

In addition to those groups that are subnodes of the standard hierarchy, for analysis or planning purposes, you can also create alternative groups that do not belong to the standard hierarchy.

All cost centers and business processes must be incorporated in the relevant standard hierarchy [Ext.]. Note that you can assign a cost center or business process to only one hierarchy group, but to any number of alternative groups.

Use
You can use master data groups in different areas (analysis, planning, allocation).

You can divide complex groups into manageable sections by separating them into sub-groups. You can create and maintain sub-groups separately and then combine them in larger groups.

Remember that groups have no time dependencies. In contrast, most master data is time-dependent.

If, for example, the cost center structure changes for the new fiscal year, the standard hierarchy changes with it. As the standard hierarchy is not time-dependent, the system ensures that reports covering multiple fiscal years always use the same standard hierarchy [Ext.], thus providing comparable results.

To save older standard hierarchies for documentation purposes, copy the hierarchy before making changes and use this copy for evaluating reports for previous fiscal years (see: Copying Master Data Groups [Page 37]).
Processing Master Data Groups

Use
You can use the following functions to create and change groups for the following objects:

- Cost elements [Ext.]
- Cost centers [Ext.]
- Business processes [Ext.]
- Activity types [Ext.]
- Statistical key figures [Ext.]
- Orders [Ext.]
- WBS elements [Ext.]

Features
The following graphic shows the functions for processing master data groups:
Activities

To process master data groups, choose Master Data -> <Object> group from the SAP Easy Access menu in the relevant component.

See also

Creating or Changing Master Data Groups [Page 35].
Functions for Structural Processing of Master Data Groups [Ext.]
Additional Functions for Processing Master Data Groups [Ext.]
Transport Functions for Master Data Groups [Ext.]
Copying Master Data Groups [Page 37].
Creating or Changing Master Data Groups

Prerequisites

You want to create new master data groups or change existing ones.

Procedure

1. In the master data menu of the given application component, choose Master data → <object> group → Create or Change.

2. Enter the group you wish to change or create.

   If you are creating a new group, you can use an existing group as a template. The template group can belong to the same controlling area [Ext.], or chart of accounts [Ext.], or different ones.

   a. If you are using reference groups from the same controlling area, assign a new name to the new group. The highest node contains the group names entered. The existing structure is appended to the highest node. This means that every change to the original automatically affects the copy.

   b. If you are using a reference group from a different controlling area, you may use the same name for the new group. The entire structure is copied into the current controlling area. It retains the same name. The copy and the original are two separate structures.

   c. If a subgroup (node) already exists with the same name you have selected for the new group, the system asks whether you want the existing group to be overwritten by the new group or whether the copying should be aborted (see: Copying Master Data Groups [Page 37]).

3. Choose Hierarchy.

4. You can create your groups successively in the group structure display.

   To do so, select the node from which you want to extend the group, and choose Insert at same level or Insert at lower level.

5. At the required location in the tree structure, the system displays fields in which you can enter a name and description for the new subgroup (node).

   You can use the F4 help to make your entries.

6. Then choose Enter or Accept change.

7. To assign individual values to an end node, select the node and choose Insert <object> (for example, Insert cost center).

   So long as the structure is not the standard hierarchy for Cost Center Accounting or Activity-Based Costing, the system displays fields in which you can enter the From-value and the To-value.

   You can use the F4 help to make your entries.

8. Choose Accept change.

   The system either displays the individual values assigned and their descriptions, or issues a message that the individual values do not exist.
Creating or Changing Master Data Groups

9. To create or change groups belonging to an object (such as a cost element or cost center), you can assign a selection variant to an end node (see: Selection Variants [Page 43]). Proceed as follows:
   a. Position your cursor on an end node.
   b. Choose **Insert <object>group at lower level** and enter the **name of the selection variant**, or choose this variant using input help.
   c. Choose **Enter**.
   d. To change the selection variant, simply double-click on it. You can reassign selection variants just as you reassigned groups.
   e. To display a list of the master data for a selection variant, position your cursor on the selection variant and choose **Extras → Break down selection variant**. In a dialog box the system displays a list of the corresponding master data.

   When you are creating or changing groups you can **not** create any new selection variants.

10. Save your structure.

   If you are processing the **standard hierarchy [Ext.]** or a hierarchy group of cost centers or business processes, you can also create or change the master data of cost centers or business processes.

   **See**

   - Processing the Standard Hierarchy Using Group Maintenance [Ext.] (Cost Center Accounting)
   - Processing the Standard Hierarchy Using Group Maintenance [Page 40] (Activity-Based Costing)
Copying Master Data Groups

Use
You can copy the following groups within a controlling area [Ext.] or within a chart of accounts [Ext.]:

- Cost center groups [Ext.]
- Cost element groups [Ext.]
- Activity type groups [Ext.]
- Statistical key figure groups [Ext.]
- Order groups [Ext.]
- Business process groups
- WBS element groups

Copying groups is especially useful for fixing characteristic values at a given time for a group with time-dependent objects: This lets you make changes that will affect the next fiscal year.

Features

Copying the entire group structure in the same controlling area or chart of accounts

1. In the relevant application component, choose Master data → <object>group → Create or Change or Display.
2. On the initial screen for group maintenance, choose Group → Copy.
3. Enter the group to be copied and enter a suffix.
   The suffix can be any given string of alphanumeric or special characters. For example, you can use a numerical fiscal year that characterizes the group.
4. Choose Copy <object>group.
   The system copies the group. If a subgroup (node) in the target controlling area has the same name, the system asks whether you want the existing group to be overwritten by the new group.
5. Save the copy.
   The system creates a copy of the existing group in the same controlling area or chart of accounts. The system creates a new name for the copy by adding the suffix to the original name of the node. If a suffix already existed in the previous name, this is replaced by the new suffix.

   The copy and the original are two separate, independent structures.
The number of groups doubles with each copy transaction. For very large hierarchies, you should therefore regularly delete any copies you no longer require. Alternatively, you can keep the number of groups low if you copy only the parts in which changes have taken place and manually create the security copy.

Within controlling area 0001, you want to copy the current HIER group. Enter the suffix 1998.

The system generates the HIER 1998 group in controlling area 0001.

You copy order groups and WBS element groups independent of controlling area and chart of accounts.

**Copying the entire group structure in a different controlling area or chart of accounts**

1. In the relevant application component, choose Master data → <object>→group → Create.
2. Choose a group from a different controlling area or chart of accounts (see: Creating or Changing Master Data Groups [Page 35] )
3. Enter a name for the new group and choose Hierarchy.

   You can adopt the name of the group used as the reference. The entire structure is then copied into the current controlling area or chart of accounts. It retains the same name.
4. Save the copy.

   The copy and the original are two separate, independent structures.

   This option does not exist for order groups, because they are not assigned to either a controlling area or a chart of accounts.

In controlling area 9999, you want to create a copy of the HIER group of controlling area 0001. To do this, create the HIER group in controlling area 9999 with reference to the HIER group of controlling area 0001.

**Copying the top group node in the same controlling area or chart of accounts and appending the existing structure.**

1. In the relevant application component, choose Master data → <object>→group → Create.
2. Choose a group from the same controlling area or chart of accounts as a reference (see: Creating or Changing Master Data Groups [Page 35] )
3. Enter a new name for the new group and choose Hierarchy.

   The highest node contains the group names entered. The existing structure is appended to the highest node. This means that every change to the original automatically affects the copy.
4. Save the copy.
In controlling area 0001, you want to create the HIER_NEW group as a copy of the HIER group. To do this, create the HIER_NEW with reference to the HIER group. The system creates the HIER_NEW node. The remaining nodes are appended to this node.

When you copy groups, the system checks whether nodes of the same name as the copy already exist in the system. If the system finds at least one node with an existing name, a message asks you whether the system should overwrite the existing nodes or if the copying should not be executed. It is not possible to overwrite existing nodes in the standard hierarchy.
Processing Standard Hierarchies with the Group Maintenance

Use

Before you create business processes, you must define a business process hierarchy. This structure is described in Activity-Based Costing as Standard Hierarchy [Ext.].

Integration

You assign the standard hierarchy to the controlling area during Customizing to set it apart from other, alternative business process hierarchies.

You must assign each business process to a group in the standard hierarchy when you create the process. This ensures that all business processes in the controlling area appear in at least one overall structure. When analyzing the standard hierarchy, the R/3 System automatically includes all business processes.

Features

The following illustration shows a standard hierarchy:

You can subdivide individual groups further depending on the level of detail required in the hierarchy. A business process group can include additional business process groups or multiple business processes.
If the standard hierarchy consists of a single group node – the highest node – you cannot assign business processes to it. You must create further, subordinate group nodes first.

**Changing and Displaying the Standard Hierarchy**

To change or display the standard hierarchy for the current controlling area, choose `Master data → Standard hierarchy → Change or Display`.

You can create and edit the standard hierarchy like any others (see: Creating and Changing Master Data Groups [Page 35], Editing Master Data Groups [Page 33]).

**Creating, Changing and Displaying Master Data from the Standard Hierarchy**

You can create or change standard hierarchies and master data simultaneously. You can also display the standard hierarchy and business processes simultaneously.

**Creating a Business Process in an End Node**

To insert a business process and assign it to an End Node, positions the cursor on the desired Node and choose `Insert Value`.

In the dialog box enter the name of the business process and overwrite the default valid time period. If the business process already exists for one or more valid time periods, then the new time period may not be overwritten with the existing ones. Otherwise, an error message appears. You can determine existing valid time periods in group maintenance by double clicking on an existing business process.

You can enter your own valid time period through `Extras → Default Settings → Structure`. If no entry is made here, the system will automatically insert either the maximum period (1.1.1950-12.31.9999) or the last manual entry.

Choose `Enter` and create the master data of the business process.

Return to Group Maintenance with `Back or Exit`. If you choose `Cancel`, your entries will not be saved.

The business process are temporarily created or changed. Only when the standard hierarchy are saved together with the new or changed groups, is the process also saved. To avoid the loss of data, you should save often, especially when creating a standard hierarchy with a master data.

**Changing or Displaying Existing Business Processes**

When you create or change the standard hierarchy, you can maintain the master data by double clicking on an existing business process.

You can display the standard hierarchy by double clicking on a business process master data.

If the business process already exists for several valid time periods, then you can choose the desired valid time period from a dialog box.

**Changing the assignment of a business process to a standard hierarchy node.**
Processing Standard Hierarchies with the Group Maintainance

In order to assign a business process to a standard hierarchy, mark the business process, position the cursor on the target node and choose Lower Level or Same Level.

Deleting Nodes in the Standard Hierarchy

You may not delete a business process while maintaining the standard hierarchy. If you wish to delete standards hierarchy nodes, to which business processes are assigned, then you must first delete these processes (see: Deleting Business Processes).

The “Warehouse” group represents the lowest level of the “Logistics” group. This group includes the business processes “Goods Receipt Inspection” and “Goods Shipping Inspection”. The color of the group node indicates this. You wish to delete the “Warehouse” group.

This is not possible in the standard hierarchy. You must first reassign the two business processes to a new group before you can delete the “Warehouse” group. Only afterwards can you delete the “Warehouse” group. If the “Warehouse” group is in an alternative hierarchy, you can delete the group immediately.
Selection variant

Use
You use selection variants to select master data for cost elements [Ext.], cost centers [Ext.], activity types [Ext.], business processes [Ext.], orders [Ext.] or WBS elements [Ext.] using one or more master data attributes.

You define a selection variant, with which you can select all cost elements of a cost element category [Ext.], or all primary costs [Ext.].

You only need to enter the selection criteria for the object once and then save them in a selection variant. The system uses the criteria stored in the selection variant during runtime to determine the corresponding objects.

Features
During collective processing of master data you can use selection variants to select objects according to master data attributes.

When creating or changing groups (see: Creating or Changing Master Data Groups [Page 35]) you can insert existing selection variants in the end node of a hierarchy by choosing <Name of selection variant> or making a selection from the F4 help.

You can execute reports using selection variants in the Information System. To do this, enter the name of the selection variant instead of a group in the selection screen. You can also define reports using selection variants. Enter the name of the selection variant as the characteristic value under Group. This allows you, for example, to display in the report all the cost centers of a company code [Ext.]

Activities
You can create, change or display selection variants.

- You create selection variants in the Implementation Guide (IMG) of the given component under Master data under the information system [Ext.].
  For more detailed information on the procedure, see the IMG for each set of master data (for example, under Define Selection Variants and Cost Centers [Ext.]).

- During collective processing of the given master data
  To create new selection variants in collective processing, select Selection variant and choose Create selection variant.
  - In the list of activity type fields for each object, enter the criteria to be used for activity type selection.
  - Save your entries.
  - Enter a variant name and a description for your variant.
Selection variant

- **Save** your entries.

  To change an existing selection variant, select *Selection variant* and then choose *Change selection variant*.

  To display existing selection variants, select *Selection variant* and then choose *Display selection variant*.

→

When you are creating or changing groups you can double click on the selection variant you have entered to change it. You **cannot**, however, create any new selection variants.
Business Processes

Definition

This is a description of a cross-functional structure within an organization. It consumes resources and can cross internal organizational boundaries.

Executing a business process can include resource inputs from multiple cost centers in a controlling area.

Use

Business processes serve in cost accounting for organizational procedures that cross cost center boundaries. Generally, multiple cost centers participate in the execution of a business process. The business process demands various resources. These are made available from the activity types of cost centers or included in the process through a simple assessment method.

You can use a template to assign other business processes and cost center activities to a business process.

For more information, see Template [Page 30].

Structure

Before you can create business processes, you must define a Standard Hierarchy [Ext.].

The structures and values of business processes depend on the purposes and methods of cost accounting in your organization.

See also:

Standard Hierarchy of the Business Process [Page 48]
Maintaining Business Processes [Page 51]
Business Process Groups [Page 76]
Fields in Business Process Master Data [Page 83]
Active and Inactive Master Data

Use
A master record can be in an active and/or an inactive version. There are active/inactive master record versions for cost centers [Ext.], business processes [Ext.] and profit centers [Ext.].

Prerequisites
You are in the maintenance screen for the Enterprise Organization [Ext.].

Features
Active Master Data
The system works only with the active version of the master record. Therefore, only active master data is used for postings for example.

Inactive Master Data
If you change one or more of the values in a master record, the system initially saves these changes in a new inactive version without making the required consistency checks. This version is not used productively, for example, for postings.

When you create a new master record, the system initially creates an inactive version of the master record. To be able to use the master data productively, you need to activate the master record.

When you activate the master data, the system checks the data and if no inconsistencies, transfers it to the active version of the master record. The inactive version is deleted.

If there is an older active version of the corresponding master record, the system overwrites it.

Inactive master data is not transported, nor is it distributed via ALE. You cannot maintain inactive master data with either single processing [Ext.] or collective processing [Ext.].

Activities
You can activate or delete the corresponding inactive master data:

- In the Enterprise Organization [Ext.]
- In standard hierarchy processing for cost centers [Ext.]
- In the standard hierarchy for profit centers [Ext.]
- In standard hierarchy processing for business processes [Page 52]
- In Customizing for the relevant application, choose Master Data → <Object> → Delete/activate inactive <objects>.
See also
Activating Inactive Master Data [Page 58]
Deleting Inactive Master Data [Page 59]
Standard Hierarchy of the Business Process

Definition
The standard hierarchy is a tree structure used to organize all business processes of a controlling area. The highest node of the standard hierarchy is normally the first business process group that you created (see Creating and Maintaining Standard Hierarchies [Page 49]). The groups created thereafter make of the remaining nodes of the standard hierarchy.

Use
You must define a Standard Hierarchy [Ext.] to create business processes.

Structure
You can structure your processes based on groups (for example, reflecting the sequence of event in your firm). A business process group can include additional business process groups or multiple business processes. In addition to business process groups, which are subordinate nodes to standard hierarchies, you can also create alternative business process groups that do not belong to standard hierarchies (see: Business Process Group [Page 76]).

The standard hierarchy is the group containing all hierarchy business process groups and all business processes.

Integration
The standard hierarchy is assigned directly to the controlling area and has itself a set of business process groups assigned to it.

You must assign each business process to a group in the standard hierarchy when you create the process. This ensures that all business processes belonging to a controlling area are grouped together (see: Assignment Field in Business Process Master Record [Page 38]).

See also:
Creating and Maintaining Standard Hierarchies [Page 49]
Working with Standard Hierarchies [Page 50]
Creating and Maintaining Standard Hierarchies

Use
You must define a Standard Hierarchy to create business processes.

Prerequisites
You should already have created a complete controlling area.

Procedure
You can create the standard hierarchy manually or automatically.

Automatically creating standard hierarchies during the assignment
1. Call up screen Maintain Standard Hierarchy for Controlling Area, where standard hierarchies are assigned to the controlling area.
2. Even if you have not created a standard hierarchy, enter a name for it in the column Std. Hierarchy.
3. When you save the assignment, the standard hierarchy is created automatically.
You can find more information under Maintain Standard Hierarchy for Controlling Area. [Ext.]

Manually creating standard hierarchies
You can create the standard hierarchy as you would a master data group, and then enter it under point Maintain Standard Hierarchies for Controlling Areas (see above).
For more information, go to Create or Change Master Data Group [Page 35].

Maintaining Standard Hierarchies
You maintain standard hierarchies by creating or editing business process groups. This can be done in the group maintenance (see Editing the Standard Hierarchy with the Group Maintenance [Page 40]) or with the maintenance of the standard hierarchy.

SAP recommends that you use the maintenance transaction for the Standard Hierarchy. (also see: Maintain Business Process/Groups in the Hierarchy [Page 52]).
Working with Standard Hierarchies

Use

Use the maintenance screen of the firm’s organization to display and edit your standard hierarchy.

The maintenance screen has several sections or screen areas, each of which has a specific function.

Features

Search Range

Use the search range to choose one or several business processes, or business process groups that you want to display or edit. Use the same range to assign these to standard hierarchies or business process groups.

Selection area

The desired business processes or groups thereof are listed in the selection area.

Overview area

The overview area shows the chosen object (business process or business process group) and how it is assigned to the standard hierarchy in the structure tree.

You can:
• create objects and assign existing objects to it
• move objects with *drag-and-drop* within the structure tree
• choose another object for display or editing.

**Detailed area**

The master data for the individual objects are shown in the detail area.

To display or edit the master data for a special object, choose the desired object in the structure tree by double clicking on it.

You can find further information under *Maintaining Business Process /Groups in the Hierarchy.* [Page 52]

**Activities**

You can reach the transaction using the menu for Activity-Based Costing and path: *Master Data → Standard Hierarchy → Change* ; or in the IMG for ABC, use path *Master Data → Business Process → Maintain Standard Hierarchy of Business Process.*
Maintaining Business Process/Groups in the Hierarchy

Use

In the maintenance screen for standard hierarchies, you can create and maintain business processes and business process groups.

While maintaining standard hierarchies, no alternative groups can be created or processed (see: Business Process Groups [Page 76]).

Procedure

General Requirements

Calling up the function

You can reach the transaction using the menu for Activity-Based Costing and path: Master Data → Standard Hierarchy → Change; or in the IMG for ABC, use path Master Data → Business Process → Maintain Standard Hierarchy of Business Process.

Search for business processes or business process groups

2. The dialogue box Find Business Process or Business Process Group appears.
3. Enter either a numeric key or a name.
4. Choose an additional field to limit the search further. You can also use * for the search.
5. To view the hit list before the search run, choose Display.
6. To transfer the hit list to the selection area, choose Find.

When searching for business processes, you can also set “person responsible” as an additional search criteria (Goal and with). In Value, enter a search term.

Creating, displaying and deleting search variants

1. Choose the desired object by clicking on it. The Find dialog box appears.
2. Enter the search criteria.
3. Choose (save value as search variant) and give a name.
4. Choose . The system saves the entered selection criteria as search variant, and assigns it to the corresponding organizational unit in the search area.
5. To check you entry, select the search variant, and choose (Display search variant).
6. To delete a search variant, select the corresponding variant and choose (Delete search variant).
You view the results of a search directly in the selection area. Choose the corresponding search variant by double clicking on it.

You can page through the search result. In **Search Range** choose **Previous search results** or **Next search result**.

**Choose objects to display or process**

In the **selection area** either business processes or business process groups are displayed; that is, a search must have already occurred.

1. To display the data of a business process or of a business process group, double click on the corresponding name in the selection area.
2. The (respective) business process group is displayed in the overview area. The master data for the object is shown in the detail area.

**Changing the column configuration**

You can choose which columns are to be displayed in the selection area as well as the overview area.

1. To change the column configuration, choose **.**
2. Select or deselect the columns that you want or do not want displayed respectively.
3. Choose **.**

**Creating and changing business processes and business process groups**

**Creating business processes**

1. In overview area, select the business process group that the business process should be assigned to.
2. Choose **Maintain → Create Business Process**
3. Enter the master data for the business process in the detail area.
4. Choose **Save** (above menu).

In the overview area, you can see which group the process is assigned to. Further information regarding creating business processes is in **Editing Business Processes [Page 3]**.

**Creating business process groups**

1. Choose the business process group in the overview area by double clicking that should be assigned to the group.
2. Choose **Edit → Create Group (same level), or Create Group (lower level).**
3. Enter the name, short description and report information for the group in the detailed area.
4. Choose **Save .**

You will see the new groups in the overview area (scroll if necessary).
Maintaining Business Process/Groups in the Hierarchy

Change business process or business process group
1. Choose a business process or business process group in the selection area or in the overview area by double clicking on it.
2. You can view or edit the master data for this object in the detail area.
3. To view or edit the master data, choose the corresponding tab page in the detail area.
4. Enter data as required.
5. Choose Save.

More information regarding editing business processes can be found under Editing Business Processes [Page 51].

Moving Objects

Also note the information for changing group assignments in Edit Business Processes [Page 51].

Moving objects from the selection area
1. Search for an object (see above section on “Search for business process or business process group”).
2. The selected objects are shown in the selection area.
3. Choose one of the selected business processes or business process groups in the selection area.
4. Assign the selected object to the upper level organizational unit using drag-and-drop in the overview area.
5. Choose Save.

If the organizational unit of the structure was already assigned, the old assignment is deleted. The organization unit is then moved to the new position.

Moving objects from the overview area
1. Select an object in the structure appearing in the overview area that you want to move.
2. To move an object within a group one position higher or lower, choose:
   - or Edit → Change Sequence → Move Up, or
   - Edit → Change Sequence → Move Down.
3. Use drag-and-drop to move an object within the standard hierarchy or group to the new position. The old assignment is deleted.

To navigate between work steps, choose (Scroll backwards) or (Scroll forwards).

You can activate and delete the master record version for cost centers, profit centers and business processes. To do this, you must first go to the overview screen and select the corresponding objects in the selection list or the structure tree.
See also:

Active and Inactive Master Records [Page 56]
Active and Inactive Master Data

Use
A master record can be in an active and/or an inactive version. There are active/inactive master record versions for cost centers [Ext.], business processes [Ext.] and profit centers [Ext.].

Prerequisites
You are in the maintenance screen for the Enterprise Organization [Ext.].

Features
Active Master Data
The system works only with the active version of the master record. Therefore, only active master data is used for postings for example.

Inactive Master Data
If you change one or more of the values in a master record, the system initially saves these changes in a new inactive version without making the required consistency checks. This version is not used productively, for example, for postings.

When you create a new master record, the system initially creates an inactive version of the master record. To be able to use the master data productively, you need to activate the master record.

When you activate the master data, the system checks the data and if no inconsistencies, transfers it to the active version of the master record. The inactive version is deleted.

If there is an older active version of the corresponding master record, the system overwrites it.

Inactive master data is not transported, nor is it distributed via ALE. You cannot maintain inactive master data with either single processing [Ext.] or collective processing [Ext.].

Activities
You can activate or delete the corresponding inactive master data:

- In the Enterprise Organization [Ext.]
- In standard hierarchy processing for cost centers [Ext.]
- In the standard hierarchy for profit centers [Ext.]
- In standard hierarchy processing for business processes [Page 52]
- In Customizing for the relevant application, choose Master Data \(\rightarrow\) <Object> \(\rightarrow\) Delete/activate inactive <objects>. 
See also

Activating Inactive Master Data [Page 58]
Deleting Inactive Master Data [Page 56]
Activating Inactive Master Data

Prerequisites

You are on the maintenance screen for the enterprise organization, and have already selected cost centers, business processes, or profit centers.

In the search area you can look for inactive cost centers, business processes, or profit centers.

Procedure

1. Select the inactive object that you want to activate,
   a. In the list in the selection area, or
   b. In the structure tree in the overview area.

   You can select more than one object in the selection area and/or the overview area.

2. Choose Activate.

   A dialog box appears that contains a list of all inactive objects. The objects that you selected in the selection list or structure tree are already marked in this list.

   If you have not yet selected any objects, you can mark in this dialog box all the inactive objects that you want to activate.

3. In the dialog box choose Activate.

   The system saves the objects as active [Page 56].

   You can activate inactive master data in Customizing also. In Customizing for the relevant application component, choose Master Data → <Object> → Activate inactive <object>.

Result

The system changes the activation status in the selection area and in the overview area from inactive (red) to active (green).

In the detail area you see whether a master data was created, changed or deleted by looking at the status text.
If there is an active and an inactive master record version, you can switch between versions in the **detail area**. You can also trigger the checks for the inactive master record version.

You trigger activation and checking only after you have made all your changes. You can also select more than one object in the **selection area** and/or the **overview area** for this.
Deleting Inactive Master Data

Prerequisites
You are on the maintenance screen for the enterprise organization, and have already selected cost centers, business processes, or profit centers.

In the search area you can look for inactive cost centers, business processes, or profit centers.

Procedure
1. Select the inactive object that you want to delete,
   a. In the list in the selection area, or
   b. In the tree structure in the overview area.

   You can select more than one object in the selection area and/or the overview area.

2. Choose Delete inactive version.

   A dialog box appears that contains a list of all inactive objects. The objects that you selected in the selection list or structure tree are already marked in this list.

   If you have not yet selected any objects, you can mark in this dialog box all the inactive objects that you want to delete.

3. In the dialog box, choose Delete inactive version.

   The system deletes the marked inactive objects.

You can delete inactive master data in Customizing also. In Customizing for the relevant application component, choose Master Data → <Object> → Delete inactive <objects>.
Maintaining Business Processes

Use
The following functions allow you to create, change, and display business processes.

Features

Changing Business Process Master Data
You may change basic data such as name, description, person responsible, and attributes as often as you wish.

You can change the business process currency and assignment to a node in the standard hierarchy only in certain cases (see Assignment Fields in Business Process Master Data [Page 68]).

Changing the assignment of the standard hierarchy to a group
You assign a business process to a hierarchy area for the entire lifetime of the business process. Therefore, changes to the assignment apply to the entire lifetime of the business process. The R/3 System does not accept the change otherwise. If you have divided the analysis into different periods, and now wish to choose the entire analysis period, then go to the dialogue box Analysis Period: Choose. There you need to either mark the entire Object interval list or simply press Enter.

Evaluations of standard hierarchies through older assignments to groups
You can only use the current assignment to evaluate the standard hierarchy through a group. To compare an evaluation from the current hierarchy with one from a previous hierarchy, save the previous group assignments as alternative hierarchies before changing the master data (that is, copy the original business process group under a new name to an alternative hierarchy).

You want to transfer business process BP10 in the standard hierarchy from group S04 to group S03. If you wish to make evaluations using the old assignment even after changing the master data:

- You create an alternative group name, such as S04X, for the original assignment, S04/BP10.
- You change the group assignment in the standard hierarchy by entering group S03 in the master data for business process BP10.
- For evaluations using the old group assignment, you use group S04X; for evaluations with the current group assignment, you use group S03 in the standard hierarchy.

Assignment to alternative business processes groups
In addition to business process groups, which are subordinate nodes to standard hierarchies, you can also create alternative business process groups that do not belong to standard hierarchies. A business process can only be assigned to one hierarchy group, but to any number of alternative business process groups which can also be used to control the evaluations. The assignment to
Maintaining Business Processes

an alternative group is not done in the master data of the business process, but rather in the maintainance of the business process groups (see: Business Process Groups [Page 76] and Processing Master Data Groups [Page 33]).

Activities

You can create and maintain business processes in the following transactions.

  - also see: Field in Business Process Master Record [Page 63], Assignment Field in the Business Process Master Record [Page 68]
- in the IMG for Activity-Based Costing using path: Master Data → Business Process → Maintain → Business Process
  - also see: Maintain Business Processes [Ext.]
- from the menu for Activity-Based Costing, go to the maintainance screen of the standard hierarchy using path: Master Data → Standard Hierarchy → Change/Create
  - also see: Maintain Business Process/Groups in the Hierarchy [Page 52]
  - also see: Change the Business Process with Collective Processing [Page 71].
Fields in Business Process Master Data

You can create time-based dependencies for business process master data (see Time-Based Dependencies for Master Data [Page 29]). The SAP System supports the following time-based dependencies:

- Not time-based (I)
- Fiscal-year-based dependency (Y)
- Period-based dependency (P)
- Day-based dependency (D)

The table lists the time-based dependencies of fields in the business process master data.

<table>
<thead>
<tr>
<th>Not Time-Based (I)</th>
<th>Fiscal-Year-Based (Y)</th>
<th>Period-Based (P)</th>
<th>Day-Based (D)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Data</td>
<td>Basic Data</td>
<td>Organizational Units in Allocation</td>
<td>Basic Data</td>
</tr>
<tr>
<td>Hierarchy area</td>
<td>Company code</td>
<td>Plant</td>
<td>Description</td>
</tr>
<tr>
<td></td>
<td>Business area</td>
<td>Profit center</td>
<td>Description</td>
</tr>
<tr>
<td></td>
<td>Object currency</td>
<td>Sales organization</td>
<td>Person responsible</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Distribution channel</td>
<td></td>
</tr>
<tr>
<td>Attributes</td>
<td>Division</td>
<td>1. Attribute</td>
<td></td>
</tr>
<tr>
<td>External value-added</td>
<td>Cost center group</td>
<td>2. Attribute</td>
<td></td>
</tr>
<tr>
<td>Internal value-added</td>
<td>Cost center</td>
<td>Task type</td>
<td></td>
</tr>
<tr>
<td>Category</td>
<td>Task</td>
<td>Allocation</td>
<td></td>
</tr>
<tr>
<td>Cost behavior</td>
<td></td>
<td>Description</td>
<td></td>
</tr>
<tr>
<td>Additional attribute</td>
<td></td>
<td>Templates</td>
<td></td>
</tr>
<tr>
<td>Allocation</td>
<td>Costing sheet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output unit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Output factor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allocation category</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Allocation cost element</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price indicator</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average price</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Fields in Business Process Master Data

<table>
<thead>
<tr>
<th>Field Use</th>
<th>Time-Based Dependency</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-distribution of fixed costs</td>
<td></td>
</tr>
<tr>
<td>Actual quantity set</td>
<td></td>
</tr>
<tr>
<td>Plan quantity set</td>
<td></td>
</tr>
<tr>
<td>Actual allocation category</td>
<td></td>
</tr>
<tr>
<td>Actual price indicator</td>
<td></td>
</tr>
<tr>
<td><strong>Templates</strong></td>
<td></td>
</tr>
<tr>
<td>Formula planning template</td>
<td></td>
</tr>
<tr>
<td>Allocation template</td>
<td></td>
</tr>
</tbody>
</table>

The following table lists:

- The uses of the fields
- The time-based dependencies of the fields

### Fields in Business Process Master Data

<table>
<thead>
<tr>
<th>Field</th>
<th>Use</th>
<th>Time-Based Dependency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Register basic data</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Description</td>
<td>Business process name</td>
<td>T</td>
</tr>
<tr>
<td>Description</td>
<td>Business process short description</td>
<td>T</td>
</tr>
<tr>
<td>Person responsible</td>
<td>Business process, person responsible</td>
<td>T</td>
</tr>
<tr>
<td><strong>Hierarchy Area [Ext.]</strong></td>
<td>Business process assignment in the standard hierarchy</td>
<td></td>
</tr>
<tr>
<td><strong>Company Code [Ext.]</strong></td>
<td>Company code assignment</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Business Area [Ext.]</strong></td>
<td>Business area assignment</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Object Currency [Ext.]</strong></td>
<td>Business process currency, with controlling area currency as default value</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Template [Page 90]</strong></td>
<td>Assigning processes to a planning or allocation template</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Register organization units</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Plant [Ext.]</td>
<td>Plant assignment</td>
<td>P</td>
</tr>
<tr>
<td>Profit Center [Ext.]</td>
<td>Profit center assignment</td>
<td>P</td>
</tr>
<tr>
<td>Sales Organization [Ext.]</td>
<td>Sales organization assignment</td>
<td>P</td>
</tr>
<tr>
<td>Distribution Channel [Ext.]</td>
<td>Distribution channel assignment</td>
<td>P</td>
</tr>
<tr>
<td><strong>Divisions [Ext.]</strong></td>
<td>Division assignment</td>
<td>P</td>
</tr>
<tr>
<td>---------------------</td>
<td>---------------------</td>
<td>---</td>
</tr>
<tr>
<td><strong>Cost Center Group [Ext.]</strong></td>
<td>Cost center group assignment</td>
<td>P</td>
</tr>
<tr>
<td><strong>Cost Center [Ext.]</strong></td>
<td>Cost center assignment</td>
<td>P</td>
</tr>
<tr>
<td><strong>Task type</strong></td>
<td>Type selection for workflow task (see: <em>Workflow-Integration for business processes</em> [Page 235])</td>
<td>P</td>
</tr>
<tr>
<td><strong>Task</strong></td>
<td>Assigning workflow task (see: <em>Workflow-Integration for business processes</em> [Page 235])</td>
<td>P</td>
</tr>
<tr>
<td><strong>Register attributes [Ext.]</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Value Added [Ext.]</strong> ext.</td>
<td>Attribute assignment for external value added to be selected and scaled</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Value Added [Ext.]</strong> int.</td>
<td>Attribute assignment for internal value added to be selected and scaled</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Category [Ext.]</strong></td>
<td>Attribute assignment for a freely-defined parameter (such as affected organizational area) to be selected and scaled</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Cost Behavior [Ext.]</strong></td>
<td>Cost behavior assignment to be selected and scaled</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Additional Attributes [Ext.]</strong></td>
<td>Attribute assignment for a freely-defined parameter to be selected and scaled</td>
<td>Y</td>
</tr>
<tr>
<td><strong>1. Attribute</strong></td>
<td>Assignment of an additional freely-defined attribute</td>
<td>T</td>
</tr>
<tr>
<td><strong>2. Attribute</strong></td>
<td>Assignment of an additional freely-defined attribute</td>
<td>T</td>
</tr>
<tr>
<td><strong>Register allocation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Unit</strong></td>
<td>Activity unit in which the business process allocation takes place as <em>Process Driver [Ext.]</em></td>
<td>Y</td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td>Process driver description</td>
<td>T</td>
</tr>
<tr>
<td><strong>Output unit</strong></td>
<td>Alternative output unit</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Output factor</strong></td>
<td>Alternative output factor</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Allocation Category [Ext.]</strong></td>
<td>Type of process allocation (default value)</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Allocation Cost Element [Ext.]</strong></td>
<td>Cost element used for process allocation (default value)</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Price Indicator [Ext.]</strong></td>
<td>Determines how the activity type price for a business process is <em>used (default value)</em> [Ext.]</td>
<td>Y</td>
</tr>
<tr>
<td><strong>Average Price [Page 429]</strong></td>
<td>Determines whether prices remain constant throughout the fiscal year (default value)</td>
<td>Y</td>
</tr>
</tbody>
</table>
## Fields in Business Process Master Data

<table>
<thead>
<tr>
<th>Field Name</th>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-distribution of Fixed Costs</td>
<td>Determines whether fixed costs on processes accepting the activity are pre-distributed before allocation (default value)</td>
<td>Y</td>
</tr>
<tr>
<td>Actual quantity set</td>
<td>Determines whether the quantity with which the process is credited can also accept an additional manual posting or confirmation (default value)</td>
<td>Y</td>
</tr>
<tr>
<td>Plan quantity set</td>
<td>Sets the planned activity quantities through the plan reconciliation so that they cannot be changed, even when the planning for the object is not to be reconciled</td>
<td>Y</td>
</tr>
<tr>
<td>Actual allocation category</td>
<td>Type of process allocation in actual (default value) Set only if different from plan value</td>
<td>Y</td>
</tr>
<tr>
<td>Actual price indicator</td>
<td>Type of price calculation used for process allocation in actual (default value) Set only if different from plan value</td>
<td>Y</td>
</tr>
<tr>
<td>Register template</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formula plan Template</td>
<td>Assigned template for the formula planning; also see: Assigning templates for processes (formula planning) [Page 227]</td>
<td>Y</td>
</tr>
<tr>
<td>Allocation template</td>
<td>Assigned template for the allocations; also see: Assigning templates for processes/cost centers [Page 365]</td>
<td>Y</td>
</tr>
<tr>
<td>Calculation Template [Page 379]</td>
<td>Controls the calculation of overhead costs (entry necessary only when such costs need to be determined; for more on this see: Maintaining cost sheet). [Ext.]</td>
<td>P</td>
</tr>
<tr>
<td>Register history</td>
<td>Name of the last person to make changes, date of the last changes (filled automatically by the system)</td>
<td></td>
</tr>
</tbody>
</table>

You can add certain additional fields to business process master data. For this, you have the enhancement COOMBP01 Business Process: Customer Own Additional Field in Master Data. You can maintain the additional fields for each separate master data record on its own tab. Selection variants for the additional fields support selection of master data for deletion and for list display.

To create the additional fields in the Implementation Guide (IMG) for the Activity-Based Costing component (CO-ABC), choose Master Data → Business Processes → Developing Enhancements for Business Process Master Data [Ext.].
For more information on the enhancement COOMBP01, see the enhancement documentation. To find the documentation in enhancement transaction SMOD, choose Display SAP documentation.
Assignment Fields in Business Process Master Data

You make assignments to organizational units in the business process master data.

**Person Responsible**

This field names the manager or supervisor of one business process.

**Hierarchy Area**

You must assign each business process to a Hierarchy Area [Ext.]. This is either a standard hierarchy of the business process itself, or a node from the standard hierarchy (that is, a business process group that belongs to the standard hierarchy; see: Business Process Groups [Page 76]).

**Company code**

In Customizing for the Activity-Based Costing component (CO-OM-ABC), you assign one or more company codes to your controlling area. A business process can be assigned to only one company code. If you define a one-to-one assignment between controlling area and company code, you cannot enter a company code in master data maintenance. The R/3 System sets the company code as default. If a one-to-one assignment does not exist (cross-company-code cost controlling), you can enter a company code in master data maintenance.

**Business Area**

When defining a company code, you can specify whether the R/3 System creates a balance sheet or a profit and loss (P/L) statement for the business area. If you assign a business process to this company code, you must specify the business area in the business process master data as well.

- A business area balance with business processes is possible only in integrated Activity-Based Costing (ABC).
- However, you can enter this organizational unit for record-keeping purposes in parallel ABC. The assignments are of critical importance if you switch from parallel to integrated ABC.

**Object Currency**

The SAP System uses the controlling area currency as object currency. However, you can change the object currency when you create a business process.

If you activate the Variant company code currency indicator for the controlling area – that is, if the company code currency differs from the controlling area currency in at least one company code – the SAP System adopts the company code currency as the object currency. The Object currency field does not appear in this case.

The object currency is valid for one fiscal year only. You also cannot change it during a fiscal year.
Changes in object currency during the fiscal year would result in inconsistent total values due to currency translation fluctuations. Therefore, the SAP System does not permit these changes.

⚠️ You can change the object currency only if you have not posted plan or actual values on the object in question.

**Profit center**

In the Implementation Guide (IMG) for the Activity-Based Costing component, you determine whether the Profit Center Accounting component (EC-PCA) is active for the controlling area. If the Profit Center Accounting component is active, a warning message appears if you do not enter a profit center in the business process master data.

**Templates**

You can assign a template to a business process or use it for the formula planning (see Assigning templates for processes/cost centers [Page 365] or Assigning Templates for Processes (Formula Planning) [Page 227].

You can provide a costing sheet [Page 879] in case you need to determine such overhead costs (see: Maintaining costing sheet).
Checklist for Creating Business Processes

- Create a complete controlling area and assign one or more company codes to it
- Define a standard hierarchy for business processes.
- Assign the standard hierarchy to your controlling area.
Maintaining Business Processes with Collective Processing

Use

You can use collective processing to change or display multiple business processes in one operation. To delete business processes with collective processing, see Deleting Business Processes [Page 74].

To display business processes, use the ABAP list viewer grid control.

For more information on displaying and navigating, go to ABAP List Viewer (ALV): Grid Control [Ext.].

Procedure

1. To change business processes with collective processing, go to the Activity-Based Costing initial screen and choose Master data → Business process → Collective processing → Change.

   To display business processes with collective processing, go to the Activity-Based Costing initial screen and choose Master data → Business process → Collective processing → Display, or Information system → Reports for Activity-Based Costing → Master Data Indexes → Master Data for Business Processes.

2. You can select business processes based on the following criteria:
   - Individual business process or business process interval
   - Business process groups
   - All business processes in a controlling area
   - Selection variant (see: Selection variant) [Page 43]

   In the selection variant you save the search criteria for finding business processes. The selection variant locates all business processes possessing identical entries in one or more master data fields.

   To create new selection variants, choose (Create selection variant).

   • In the list of business process fields, enter the criteria according to which you want the R/3 System to select business processes. For example, you can define a selection based on a common company code.

   • Save your entries.

   • Enter a name and a description for your variant.

   • Save your entries.

   To change existing selection variants, choose (Change selection variant).

   To display existing selection variants, choose (Display selection variant).

   Select one of the criteria and enter the corresponding selection parameters.

3. Enter a time frame in which the selected business processes are valid.
Maintaining Business Processes with Collective Processing

Business processes that you want to **change** must exist in the selected time frame. The validity period of the business processes must lie entirely within the time frame.

Business processes that you want to **display** must exist in the selected time frame. However, the validity period of the business processes only need to overlap in whole or in part with the time frame.

4. **To change** business processes, enter a list variant or choose *Possible entries* to select an existing list variant.

   Use the list variant to determine how the R/3 System shows the list of selected business processes.

   The standard R/3 System offers standard list variants that differ in the number of master data fields offered for maintenance. Moreover, you can define custom list variants that select all standard master data fields for maintenance. To create custom list variants, choose:
   - *Environment → Maintain list variant,* or
   - In the Implementation Guide (IMG) for the Activity-Based Costing component (CO-OM-ABC), choose *Master Data → Business Process → Defining List Variants for Collective Processing of Business Processes [Ext.].*

   To **display** business processes, you do not need a list variant.

5. **Choose Execute.**

   The SAP System displays a list of all selected business processes. The following functions are available:
   - **Master data**
     
     You can display the relevant master data by selecting a row and choosing path *Goto → Master data.*
   - **Create group**
     
     Choose *Generate group* to create a master data group. Select the master data that you want to include in a group and then name the group.

     You can select the number of rows that you want (also see *Select lines [Ext.]*). If you do not select any lines and then choose *Generate group,* the system will create a group consisting of all master data displayed.

6. **To change** business processes, overwrite the values given in the entry-ready fields and save your entries.

   You can only change those master data fields that have the same value for the entire selected time frame. Otherwise, the fields do not appear as entry-ready.

   - To maintain fields not appearing in collective processing, choose *Display → Other list variant,* or *Previous list variant,* or *Next list variant.*
   - To branch from list processing to the master data of individual business processes, select the business process and choose *Goto → Master data.* You can then make changes to the master data and save the data records.
Maintaining Business Processes with Collective Processing

- To branch from list processing to the master data index for business processes, choose \textit{Goto \rightarrow Business process master data index}. The master data index uses the selection criteria you entered in the initial screen for collective processing.
Deleting Business Processes

Prerequisites

You can delete business processes individually or with the aid of collective processing.

You can delete business processes in the current controlling area only if you have not yet posted plan or actual transaction data for the affected fiscal years. In addition, no statistical figures in plan must exist. The SAP System checks whether these conditions have been met before allowing the business process to be deleted.

Procedure

1. To delete individual business processes, go to the Activity-Based Costing initial screen and choose Master data → Business process → Individual processing → Delete.

   To delete multiple business processes, go to the Activity-Based Costing initial screen and choose Master data → Business process → Collective processing → Delete.

2. When deleting individual processes, enter the business process in the initial screen.

   When deleting multiple processes, enter the selection criteria for the business processes.

   You can select business processes based on the following criteria:
   
   – Individual business process or business process interval
   – Business process groups
   – All business processes in a controlling area
   – Selection variant

   In the selection variant you save the search criteria for finding business processes. The selection variant locates all business processes possessing identical entries in one or more master data fields.

   To create new selection variants, choose Create new selection variant.

   • In the list of business process fields, enter the criteria according to which you want the R/3 System to select business processes. For example, you can define a selection based on a common company code.

   • Save your entries.

   • Enter a name and a description for your variant.

   • Save your entries.

   To change existing selection variants, choose Change selection variant.

   To display existing selection variants, choose Display selection variant.

   Select one of the criteria and enter the corresponding selection parameters.

3. Enter a time frame in which the selected business process or processes are valid.

   Business processes that you want to delete must exist in the selected time frame. However, the validity period of the business processes only need to overlap in whole or in part with the time frame.
Deleting Business Processes On-line

4. Before deleting business processes, start a test run to check whether you selected the correct business processes and whether they can be deleted. To do so, accept the default setting of the Test run indicator and choose Execute.

The R/3 System carries out extensive checks of the dependent data. The selected processes that you can delete appear in a list.

A further list displays the selected business processes that you are not allowed to delete. This list shows the dependent data on the business process preventing the deletion.

The list display is controlled by the ABAP list viewer [Ext.].

Return to the initial screen and change the selection entries if necessary.

5. To delete one or more business processes, deactivate the Test run indicator and choose Execute. Answer the confirmation by selecting Yes.

The selected processes that you can delete appear in a list.

A further list displays the selected business processes that you are not allowed to delete. This list shows the specific reason preventing deletion for each business process.

The list display is controlled by the ABAP list viewer [Ext.].

Deleting Business Processes in Background Processing

6. If you have multiple business processes pending deletion, the checks of dependent data can take some time. If you want to delete a large number of business processes, start the deletion in a background run during a period of low system use. To do so, choose Background processing.

7. Choose Execute. Answer the confirmation by selecting Yes.

8. Enter a job name in the dialog window.

9. Enter a date and a time for the background run, or activate the Start now indicator.

You can also enter a date and time after which no background run is to take place.

10. To leave the dialog window, choose Copy. In the following dialog window, choose Save.

The R/3 System deletes the business processes at the given time.

To check the current status of your background run, choose System → Own jobs → Job overview → Execute.
Business Process Groups

Definition
The SAP System makes it possible to group business processes. The groups can contain business processes or other groups.

Use
When you create a business process, you must assign it to a group, which can be either the Standard Hierarchy [Ext.] itself or a business process group that belongs to the standard hierarchy. The standard hierarchy is the business process group that you create before you define the first business process. You can create additional business process groups as subordinate nodes under the standard hierarchy.

In addition to business process groups, which are subordinate nodes to standard hierarchies, you can also create alternative business process groups that do not belong to standard hierarchies. A business process can be assigned to only one hierarchy group, but to any number of alternative business process groups.

You can use business process groups as a selection criterion; for example, for planning, allocations, price calculations, price calculations and generation of reports. This makes it possible to choose business processes for editing or evaluating during an operation. Because you can define many different groups, you can create those most appropriate for your needs. You can create user-defined business process groups, for example, for special planning and allocation purposes.

See also:
Edit Business Process Groups [Page 77]
Standard Hierarchy of the Business Process [Page 48]
Maintaining Business Process Groups

Procedure

You can create and maintain business processes groups in the following transactions.

- in the IMG for Activity-Based Costing, use path Master Data → Business Process → Maintain Business Process Groups
  - see also: Maintaining Business Process Groups [Ext.], Editing Master Data Groups [Page 33]

- using the menu for Group Maintenance, use path Master Data → Business Process Group → Create/Change/Display.
  - see also: Maintaining Business Process Groups [Ext.], Editing Master Data Groups [Page 33]

- from the menu for Activity-Based Costing, go to the maintenance screen of the standard hierarchy using path: Master Data → Standard Hierarchy → Change/Display
  - also see: Maintain Business Process/Groups in the Hierarchy [Page 52]

During the maintenance of the standard hierarchies, no alternative groups can be created.

To copy business process groups from any of the initial screens for group maintenance, choose Group → Copy.
Statistical Key Figures

Definition

Figure representing

- Cost Centers [Ext.]
- Activity Types [Ext.]
- Orders [Ext.]
- Business Processes [Ext.]
- Profit Centers [Ext.]
- Real Estate Objects [Ext.]

You can use them as the basis for internal allocations, such as Distribution [Ext.] and Assessment [Ext.].

You assess the costs for the cafeteria to the individual cost centers, based on the number of employees in each cost center. To do this, you need to enter the number of employees in each cost center as a statistical key figure.

Structure

You can define statistical key figures as either:

- Fixed values
- Totals values

Key figures defined as **fixed values** are valid as of the posting period, and in all subsequent posting periods of the fiscal year.

The statistical key figure *Employees* is defined as a fixed value. In period 1 of the fiscal year, you post 10 *Employees* on cost center 4100. The system then automatically posts 10 employees in periods 2 through 12.

In period 6, the number of employees is increased to 15. This means that in period 6, you post 15 *Employees* on the cost center. The system automatically posts 15 employees in periods 6 through 12.

Key figures defined as **Totals values** are valid only in the posting period in which they are entered.

You define the statistical key figure *Telephone units* as a totals value. In period 1 of the fiscal year, you post 1000 Telephone units on cost center 4100. The system posts 1000 telephone units in period 01 only.
Integration

As well as entering statistical key figures manually, you can also transfer them automatically from the information systems of other SAP System application components. To do this, statistical key figure maintenance includes an interface that enables you to link the statistical key figures in Controlling with those in the Logistics Information System (LIS). You transfer plan and actual key figures from the LIS separately.
Processing Statistical Key Figures

Use

You can create, change and display statistical key figures individually or collectively. Individual processing lets you process only one statistical key figure. Collective processing lets you process multiple statistical key figures simultaneously.

You can use the following functions in individual processing: The functions for collective processing are in: Processing Statistical Key Figures Using Collective Processing [Page 86].

Creating Statistical Key Figures

You enter statistical key figures with individual processing in a similar way to master data maintenance for cost centers [Ext.], cost elements [Ext.], activity types [Ext.] and business processes [Ext.].

Individual processing has the following advantages compared to collective processing:

- You can use a reference when you create statistical key figures.
- The entry screen is more clearly structured than the list screen.
- If you are using the Logistics Information System (LIS), you can create a link to the LIS (see: Link to The LIS [Page 82]).

Changing Statistical Key Figures

When you make changes to statistical key figures, be careful to avoid generating any inconsistencies.

For example, do not change the key figure category and the statistical key figure unit during the fiscal year. Otherwise you cannot reliably compare values with earlier periods. It is best to change the key figure categories or create new statistical key figures at the end of the fiscal year.

The key figure category affects changes made to statistical key figures in the following ways:

- When you make changes to key figures of the category Fixed values, you must enter a new fixed value. This new value is valid for all subsequent periods, until you enter another new value.
- When you make changes to statistical key figures of the category Totals values, you can first reset the values using reversed +/- signs, and then enter the new values.

Activities

To process statistical key figures individually, access the Cost Center Accounting menu, the Activity-Based Costing menu, or the Profit Center Accounting menu and choose:

Master data -> Statistical key figures → Individual processing → Create/Change/Display.
Master Data for Statistical Key Figures

Use
The following table shows:

- The use of master data for statistical key figures [Ext.]
- The time dependency of master data

Features

Master Data for Statistical Key Figures

<table>
<thead>
<tr>
<th>Field</th>
<th>Use</th>
<th>Time base</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Name</td>
<td>D</td>
</tr>
<tr>
<td>Unit of measure of StKF</td>
<td>Creation of key figures</td>
<td>D</td>
</tr>
<tr>
<td>Key figure categories [Ext.]</td>
<td>Creation of key figures</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Tracing factors for Distribution [Ext.]</td>
<td>Y</td>
</tr>
<tr>
<td></td>
<td>Assessment [Ext.]</td>
<td></td>
</tr>
</tbody>
</table>
Link to LIS

Use
During the individual processing of statistical key figures [Ext.] you can use an interface to the Logistics Information System (LIS). This enables you to link the key figures in Controlling with the key figures in the LIS. This link lets you create the prerequisites for a later transfer of key figures from the LIS to the key figures defined in Controlling and with the key figures connected with the LIS.

Features
The following graphic depicts the functions for the link to the LIS:

Creating an LIS Link
If you want to transfer key figures, choose Link to LIS in the basic screen for statistical key figures. The system automatically creates the link to the LIS.

The system offers you two methods with which you can search for key figures in the LIS.

- Search by info structure
- Search by info set

Info structures are the database tables in which period-based data of the operative application is updated. They are comprised of characteristics suitable for summarization (such as, Purchasing Organizations), and key figures (for example, Sales).
Info sets are collections of key figures that have a logical relationship to each other. They contain either key figures or sets. This allows you to generate different levels of detail.

**Differences Between the Two Search Strategies**

<table>
<thead>
<tr>
<th>Scope</th>
<th>Search by info structure</th>
<th>Search by info set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope</td>
<td>Key figures from LIS standard analyses</td>
<td>Key figures from:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- LIS standard analyses</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Reports</td>
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<tr>
<td></td>
<td></td>
<td>- Transactions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Tables</td>
</tr>
<tr>
<td>Level of detail</td>
<td>Three levels:</td>
<td>Any number of levels:</td>
</tr>
<tr>
<td></td>
<td>1. Application</td>
<td>Info set</td>
</tr>
<tr>
<td></td>
<td>2. Info structure</td>
<td>Additional info sets</td>
</tr>
<tr>
<td></td>
<td>3. Key figure</td>
<td>Key figure</td>
</tr>
</tbody>
</table>

To search effectively using the info structure, you need to know about the technical relationships of the database tables. When you search by info set, it is helpful if you know about the logical relationships.

The following examples demonstrate the search procedure for LIS key figures:

**Search by info structure**

When you created the statistical key figure *Incoming orders* in Controlling, you activated the link to the LIS. In the dialog box, you choose *Search by info structures*. The system displays a list of applications:

- Sales and Distribution
- Purchasing
- Production
- Logistics General, and so on.

Select *Sales and Distribution*. Another list appears with the info structures for the selected application. Select *S001* for *Customer*. Another list appears with the key figures for the *Customer* info structure. Select the key figure *Incoming orders qty* (AEMENGE).

When you transfer this key figure, the system uses the LIS value for the key figure *Incoming orders* in CO.

**Search by info set**

Select the following info sets, successively, from the lists offered to you by the system:

1. Info set: Logistics info sets
2. Info set: Sales and Distribution
Link to LIS

3. Info set: Customer
4. Info set: Incoming sales order (customer view)
5. Key figure: Incoming orders in base unit from customer analysis

You cannot transfer any currency key figures.

If you have selected a key figure from the LIS using one of the above methods, the system displays the information for the LIS statistical key figure in the initial screen for key figure maintenance.

Additional Functions

If you want to display the assignments of a CO statistical key figure to LIS key figures, choose Edit → Display assignments.

If you want to display all uses of the CO key figure, including manually set figures, choose Edit → Display all references.

Breaking the Link to LIS

If you want to break the link to LIS, choose Separate from LIS in the basic screen for statistical key figures.
Checklist for Creating Statistical Key Figures

- You have created the controlling area, and assigned one or more company codes to it (see: Maintain Controlling Areas [Ext.] in Customizing for General Controlling).

- You have defined units for the statistical key figures. You define units of measure in Customizing under Global Settings → Check units of measure [Ext.].
Processing Statistical Key Figures With Collective Processing

Use
You can use the following functions to change and display statistical figures with collective processing:

Features
The following graphic depicts the functions available for the collective processing of statistical key figures:
Deleting Statistical Key Figures

1. To delete individual statistical key figures, go to the menu for cost center or business process cost calculation and choose Master data → Statistical key figures → Individual processing → Delete.

2. In screen Delete Statistical Key Figures: Initial Screen, enter the key figure to be deleted.

3. Choose Delete 🗑.

4. Answer Yes when the system asks if the statistical key figure should be deleted?

The system rejects attempts to delete statistical key figures that are already used in total records.
Statistical Key Figure Groups

**Definition**
You can gather statistical key figures into statistical key figure groups.

**Use**
You can use statistical key figures, or parts of them, when you need to process multiple statistical key figures in one business transaction. For example, in cost center planning, distribution or assessment.

Statistical key figures used as tracing factors for distribution or assessment can be collected in groups.

As with other master data groups, you can create and maintain statistical key figure groups in parallel in the system.

**Processing Statistical Key Figure Groups**

- To create, change, or display statistical key figures, choose Accounting → Controlling → Cost Center Accounting or Activity-Based Costing, or Profit Center Accounting → Master data → Statistical key figure groups → Create/Change/Display.

- To copy statistical key figure groups, choose Accounting → Controlling → Cost Center Accounting or Activity-Based Costing, or Profit Center Accounting → Master data → Statistical key figure groups → Create/Change/Display → Group → Copy.

See:
Creating or Changing Master Data Groups [Page 35].
Copying Master Data Groups [Page 37].
Processing Statistical Key Figure Groups

You can create, change, or display statistical key figures, choose Accounting → Controlling → Cost Center Accounting or Activity-Based Costing or in the menus for Cost Center Accounting, Activity-Based Costing or Profit Center Accounting. To do this, choose:

1. Master data → Statistical key figure group → Create/Change/Display.
2. To copy statistical key figure groups, Accounting → Controlling → Cost Center Accounting or Activity-Based Costing or Profit Center Accounting → Master data → Statistical key figure groups → Create/Change/Display → Group → Copy.

For more information, see Creating or Changing Master Data Groups [Page 35] and Copying Master Data Groups [Page 37].
Template

Definition

The template is a dynamic tool, which uses functions [Ext.], formulas [Page 151] and Boolean logic (true/false) to calculate values. It consists of a grid of columns and rows.

It is used in overhead allocations, and planning of business processes or cost center/activity types.

Special environments exist for each template application. Select an environment before you create a template. The environment determines which row and column types you will have available.

Use

Applications and receiver objects

Template-Allocation

Quantities are determined with the template, and then evaluated with a (unit) price. Costs calculated this way can be allocated to the receiver objects with the template:

- For example, cost objects (environments 001-002) in the area of cost object controlling for production, customers process order, and in product cost planning. The system assigns the template to a cost object (see: Template-Allocation to Cost Objects [Page 348], or Template Application in the Standard Cost Estimate [Page 248]).

- Business process, cost center, cost center/activity type (environment SBP, SCI, SCD): It allows you to record the cost and quantity flow under business processes and cost centers. The template is assigned to the process or to the cost center in the master data (see: Template Allocation in Plan: Processes/Cost Centers [Page 259] and Template Allocation in Actual: Processes/Cost Centers [Page 360]).

- Profitability segment (environment PAC), which can be used for administration, operation and other service activity processes, since with these many evaluations can be carried out. Here, the templates are assigned in the results and market segment calculations (CO-PA) to a profitability segment (see: Template Allocation to Profitability Segments [Page 355]).

Plan calculation (environment 001 - 003)

Controlled here are the overhead cost allocations from business processes or cost center/activity types to the calculation object over the template. The template ascertains which overhead costs are used and to which extent. It also determines how these costs are assigned to the product. (see: Template-Allocation in Plan Calculation [Page 248]).

Easy Cost Planning/External Services (Environments 200 -299)

This costing method enables a simple, SAP System integrated cost planning. You work with derivation rules, which are used to define the template. This method can be used for, among other things, the planning objects Internal service requests (see also: Easy Cost Planning and Execution Services [Ext.]).

Formula planning (environment CPD, CPI, BPP, PCA)

Formula planning is an aid to planning. You can plan cost elements, statistical key figures, activity types and other elements in cost center and business process planning with the template.
(see: Formula Planning Cost Centers [Ext.], Formula Planning Business Processes [Page 223], Formula Planning Profit Centers [Ext.]). Use environments CPI and CPD for cost center planning, BPP for business process planning, and PCA for profit center planning.

**Process quantity determination (environment SOP)**

With the template you can set process output quantities through the transfer of scheduled activities from PP (see: Transferring Activity Schedules). The environment is SOP.

**Flexible Inputs**

Templates are set flexibly:

- Templates are independent of receiver object types. You can use a given template for multiple receiver objects. At the time the valuation event occurs, a search strategy actively looks for the appropriate template to be used. For more information, see Assigning Templates for Cost Objects and Calculations [Page 353].
- You can define the objects to be evaluated in various way. You can define methods that determine the object dynamically for the analysis period. For more information, see Object Determination [Page 128].
- The quantity can be a function of variables You can use formulas to determine the quantity of an object (for example, of a business process), which is allowed by a receiver object. For more information, see Quantity Determination [Page 133].
- You can set individual template rows (items) to active or inactive Using the methods allows you to determine when the position is active and when not; this is helpful when certain processes are necessary but only for specific receiver objects, and not for others. The template uses active items only during valuations. For more information, see Activation [Page 139].
- You can use sub-templates. You can define allocation data once in a template, and then use this template later as a sub-template.

**Environments and functions**

In order to dynamically determine objects and quantities as well as activation requirements with the template use the Formulas [Page 151] and Methods [Page 146]. These use Functions [Page 103].

You are provided many functions. The ones that can be used is determined by the application of the template; that is, the chosen environment. You can also create your own functions.

For more information, see Template Environments [Page 101].

**Structure**

A template consists of rows (which hold items) and columns. The environment chosen also determines the rows and columns available to you.

The columns displayed include the following:

- **Type** of item, such as business process, cost element, statistical key figure, sub-template, or Calculation row [Page 159].
- **Name** of the item
- **Object column**, such as the name of the process, sub-template, or formula row
Template

- quantity columns (actual/plan): for example, process quantity, statistical key figure quantity, resource quantity
- **Activation column** (actual/plan)

See also:
- Maintaining Templates [Page 93]
- Other Methods to Maintain Templates [Page 95]
Maintaining Templates

Initial screen

1. In the Implementation Guide (IMG) of the application follow path Templates → Maintain Template [Ext.] → Create template, or Change template.
2. In the Template field, enter the name of the template you wish to create or maintain.
3. Choose Template environment [Page 101].
4. Choose Overview.

When creating templates, you can choose the one with the settings you want to transfer from group box Copy from. You can change this data in the overview screen.

Overview Screen

1. If you are creating a new template, enter a descriptive text.
2. Select the item category in column Category/Obj.
3. Enter a name for the item.
4. Edit the remainder of the columns. You come to the individual columns with a mouse click or by using the keyboard. With a mouse click you arrive at:
   i. Object columns in the selection editor (for procedure, see: Object Determination [Page 128])
   ii. Quantity columns in the quantity editor (for procedures, see: Quantity Determination [Page 133])
   iii. Activation column in the activation editor (for information see: Activation [Page 139]).
5. After creating or changing all the rows, choose Enter.
6. Choose Save data.

To see what column types are available, see information on the corresponding template:

Templates for Cost Objects and Calculations [Page 350]
Template for Profitability Segments [Page 356]
Template for Business Processes/Cost Centers [Page 362]
Template for Processes Formula Planning [Page 225]
Template for Cost Center Formula Planning [Ext.]
Template for Profit Center Formula Planning [Ext.]
Template for Easy Cost Planning [Ext.]

See also:
Maintaining Templates

Other Methods to Maintain Templates [Page 95]
## Other Methods to Maintain Templates

### Use

The following functions allow you to maintain the template.

### Features

#### Initial screen

<table>
<thead>
<tr>
<th>In order to:</th>
<th>... Choose</th>
</tr>
</thead>
<tbody>
<tr>
<td>reach the change mode</td>
<td>Template → Change</td>
</tr>
<tr>
<td>reach the display mode</td>
<td>Template → Display</td>
</tr>
<tr>
<td>reach the create mode</td>
<td>Template → Create</td>
</tr>
<tr>
<td>reach the maintenance of the function tree [Page 120]</td>
<td>Environment → Function tree</td>
</tr>
<tr>
<td>reach the maintenance of the environment [Page 101]</td>
<td>Environment → Maintain environment</td>
</tr>
<tr>
<td>see the Where-used list (an overview of where templates are used as sub-templates, or where business processes or cost centers are assigned to)</td>
<td>or Template → Where-used list</td>
</tr>
<tr>
<td>display the template hierarchy (an overview of all existing templates), delete templates directly in this tree structure If you delete a template from the hierarchy, the template is permanently deleted from the R/3 System. The hierarchy tree structure consists of the levels Controlling area, Environment, Template, and Sub-template.</td>
<td>or Environment → Hierarchy</td>
</tr>
</tbody>
</table>
| Generate templates (this occurs after the transport; see Transport Settings for Activity-Based Costing [Ext.]) | You are in the hierarchy display.  
1. Place the cursor on a controlling area, an environment or a template.  
2.  or Processing → Generate Template.  
All templates belonging to the chosen level are generated. |
| see an overview of the individual rows of templates which were created, viewed or changed |  or Goto → Overview:                    |

#### Overview Screen

<table>
<thead>
<tr>
<th>In order to:</th>
<th>... Choose</th>
</tr>
</thead>
</table>
### Other Methods to Maintain Templates

<table>
<thead>
<tr>
<th>Action</th>
<th>Tool or Command</th>
</tr>
</thead>
<tbody>
<tr>
<td>switch from the display to the change mode (or reverse)</td>
<td>or Template → Display/Change</td>
</tr>
<tr>
<td>save your entries</td>
<td>or Template → Save</td>
</tr>
<tr>
<td>Check your entries (the system performs a syntax check of formulas and methods, and also ensures that all objects exist; it returns a message after the checking is done)</td>
<td>or Template → Check</td>
</tr>
<tr>
<td>display the Where-used list</td>
<td>or Template → Where-used list</td>
</tr>
<tr>
<td>display only the Actual column</td>
<td>Actual column or Template → Column selection → Actual column</td>
</tr>
<tr>
<td>display only the Plan column</td>
<td>Plan column or Template → Column selection → Plan column</td>
</tr>
<tr>
<td>display all columns</td>
<td>all columns or Template → Column selection → All columns</td>
</tr>
<tr>
<td>insert an existing template into one that you will create (all rows of the existing template will be inserted in the current template, and can be changed thereafter)</td>
<td>or Edit → Insert template</td>
</tr>
<tr>
<td>assign a receiver object to a template - to reach the respective assignment transaction</td>
<td>Environment → Assignment</td>
</tr>
<tr>
<td>assign a receiver object to a template - to reach the respective assignment transaction</td>
<td>or Environment → Assignment</td>
</tr>
<tr>
<td>display the template hierarchy</td>
<td>or Processing → Generate Template.</td>
</tr>
<tr>
<td>Generate templates (see above)</td>
<td>or Environment → Hierarchy</td>
</tr>
<tr>
<td>test the template</td>
<td>1. Choose 📇.</td>
</tr>
<tr>
<td></td>
<td>2. in screen Parameters for testing, enter your test data</td>
</tr>
<tr>
<td></td>
<td>3. Choose 📇.</td>
</tr>
<tr>
<td></td>
<td>4. you reach Template Trace: Basic screen [Page 164] and can continue to Template Trace: Detail [Page 165].</td>
</tr>
<tr>
<td>You can test only the templates of environment 001!</td>
<td></td>
</tr>
</tbody>
</table>
### Editing in Overview screen

<table>
<thead>
<tr>
<th>In order to:</th>
<th>... ... follow these steps</th>
</tr>
</thead>
</table>
| select a cell for editing | 1. position the cursor on the cell that you want to edit  
2. double click on the row or choose ![icon]  
In the description column you arrive at the long text editor; in the object and activation column, at the selection or activation editor (see, Defining methods [Page 148]); in the quantity column, at the quantity editor (see, Defining formulas [Page 152]). |
| create long text for the row | 1. mark the row  
2. choose Edit → Item long text  
3. in screen Text processing enter an abbreviation for the corresponding language  
4. Choose ![icon]  
5. enter the text (for more information, see screen Long text for items through Help → Application help) |
| copy a row or cell | 1. place the cursor on the row or cell  
2. choose ![icon] or Edit → Copy line/cell.  
3. Place the cursor on the target point  
4. choose ![icon] or Edit → Insert line/cell |
| Move a row/line or cell | 1. place the cursor on the row or cell  
2. choose ![icon] or Edit → Cut line/cell  
3. Place the cursor on the target point  
4. choose ![icon] or Edit → Insert line/cell |
| Insert a line/row | 1. place the cursor on the line, over which another line is to be inserted  
2. choose ![icon] or Edit → Insert line |
Maintaining Templates (new approach)

In the updated Template [Page 90] maintenance function, you now have to perform some tasks differently. The changed process steps are described below:

- Processing Options for the Template (new approach) [Ext.]
- Processing Options for the Editor (New Approach) [Ext.]
- Defining Methods (new approach) [Ext.]
- Defining Formulas (new approach) [Ext.]
- Defining Flexible Functions (new approach) [Ext.]
- Editing Flexible Functions (new approach) [Ext.]
- Defining Calculation Rows (new approach) [Ext.]
- Calling Up Calculation Rows (new approach) [Ext.]

Initial screen

1. In the Implementation Guide (IMG) of the application follow path Templates → Maintain Template [Ext.] → Create template, or Change template.

2. Enter the template name in the field Template for the template that you want to create, change or display, or select the template that you wish to change or display – in this case continue with step 4.

3. Choose Template environment [Page 101].

4. Choose Overview.

When creating templates, you can choose the one with the settings you want to transfer from group box Copy from. You can change this data in the overview screen.
Overview Screen

The Overview screen, in which you create and edit templates, is organised into the following areas:

Upper screen area: System function and Title bar, under this is the application function title bar (five icons: Display/Change, Check, Where-used List, Add Template, Hierarchy), Name of the Environment and the Template as well as a field for additional template text.

Template Table: Application toolbar, table with the columns and cells of the current template, or space in order to create these cells.

Function Selection screen area (Bottom left) Application toolbar, Display of the available functions.

Editor screen area (bottom right) Application toolbar, display of the selection, activation editor or quantity editor.

Create Template
1. If you are creating a new template, enter a descriptive text.
2. Choose or from the application toolbar of the template table.
3. Select the item type in the column Type.
4. Enter a name for the item.
5. Edit the remainder of the columns. You come to the individual columns with a mouse click or by using the keyboard. Select by clicking on:
   a. The object column in order to call up the selections editor (for further information see Defining Methods (new approach) [Ext.]).
Maintaining Templates (new approach)

b. The quantity column in order to call up the quantity editor (for further information see Defining formulas (new approach) [Ext.]

c. The activation column in order to call up the activation editor (for further information see Defining Methods (new approach) [Ext.]

6. After creating or changing all the rows, choose Enter from the system titlebar.

7. To save the entries, choose .

To see what column types are available, see information on the corresponding template:

Templates for Cost Objects and Calculations [Page 350]
Templates for Profitability Segments [Page 356]
Templates for Business Processes/Cost Centers [Page 362]
Templates for Processes Formula Planning [Page 225]
Templates for Cost Center Formula Planning [Ext.]
Templates for Profit Center Formula Planning [Ext.]
Templates for Easy Cost Planning [Ext.]

Change Template

Click on the Overview screen area Further information to the change options available to you can be found under:

Processing Options for the Template (new approach) [Ext.]
Processing Options for the Editor (New Approach) [Ext.]
Environment of Templates

Use

Maintenance of Template Environments

The maintenance of template environments administers all environments, sub environments, and functions [Ext.], that you have available to you when working with the template.

In this function you can complete the following tasks:

- Maintenance of functions (for example creating, editing and copying functions). For more information see Functions in Environments [Page 103] and Maintaining Functions [Page 104].
- Maintenance of function trees (structuring of functions through function trees, grouping nodes and function references). For more information see Functions Trees [Page 120] and Maintaining Function Trees [Page 122].
- Display of environments, sub environments and functions

Environments and sub environments are standard, and cannot be changed, this means that they can not be deleted and you are not able to create new environments or sub environments.

Environments and Associated Sub-environments

An Environment is a group of functions. A template is always created for one particular environment and can then access all functions that belong to that environment and its sub-environments (for more information see Template [Page 90]). For the most part, the environment provides only those functions and information necessary for the template in its corresponding context.

The SAP System includes environments for the following areas:

- Template Allocation to cost objects or use of cost objects and materials in the plan calculation (environment 001-012)
- Template allocation to business process, cost center or cost center/activity type (environments SDP, SCI, SCD)
- Template-Allocation for Profitability Segment (environment PAC)
- Formula planning (environment CPD, CPI, BPP, PCA)
- Determining output quantities (environment SOP)
- Easy Cost Planning/ Internal service orders (environments 200 – 299)

Sub-Environments are groups of function that are assigned to the environment. They are organised on the basis on content. A sub-environment can be assigned to many different environments. If you create a function in a sub environment, it is automatically available in all environments which contain the sub environment (see note) A template, however can only be created in an environment.
Environment of Templates

Functions permit it that, with the use of Templates, cost-driver-relevant data of the SAP System and possible external systems can be accessed. Functions are evaluation procedures with which you can call up the value of a field or the results of a function module.

Functions in Sub-Environments

<table>
<thead>
<tr>
<th>Possible receiver</th>
<th>Environment</th>
<th>Sub-Environment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost Object:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Production order</td>
<td>Environment 001: Materialcalc./ Production orders</td>
<td></td>
</tr>
<tr>
<td>Sales Orders</td>
<td>Environment 008: Sales orders</td>
<td></td>
</tr>
<tr>
<td>Profitability Segment</td>
<td>Environment PAC: Profitability Analysis</td>
<td></td>
</tr>
</tbody>
</table>

Functions, that were created in sub-environment 101 are then available in Environments 001, 008 and PAC. Functions that were created in sub-environment 105 are then available in Environments 001 and 008.
Functions in Environments

Definition

Functions are evaluation procedures with which you can call up the value of a field or the results of a function module within a Template [Ext.]. A function is clearly identifiable through the environment [Ext.], name space [Ext.] and logical function names.

Use

Objects, quantities, activation requirements and assignment times are dynamically determined through the definitions of Methods [Page 146] and Formulas [Page 151] for Templates [Page 90]. They are always assigned to environments [Ext.] or sub-environments [Ext.] (see Environment of the Template [Page 101]), and can be structured or organized into function trees (see Function Trees [Page 120]).

You can use standard functions or define new ones (see Maintaining Functions [Page 104]), this means that you can access exactly the right driver information that the respective enterprise needs. In addition to access to table fields and standard function modules, you can also create ABAP-function modules, whose results are accessible by the function (see Implementing ABAP-functions [Page 111]).

Structure

While creating functions, you determine, among other things, the following:

- The external (language dependent) function names
- To which environment or sub-environment they belong (see Maintaining Functions [Page 104])
- The logical (internal to program) function names and name space (see Functions - Basic Data and Language [Page 107])
- Which values and data will be determined with the function; that is, which field or function module will contain these (see Activating the Function [Page 109])
- Whether and which parameter and function will be assigned (see Parameter of Functions [Page 112])
- In which columns of the template the function can be used (see Function Use [Page 113])
- Which function hierarchy the function belongs to (see Additional Function Trees [Page 116])

See Also: Example: Creating Functions [Page 117]
Maintaining Functions

Maintaining Functions

Maintain functions [Ext.] in the Implementation Guide (IMG) of the Activity-Based Function under Templates → Maintaining environments and function trees [Ext.]. It is the same transaction in which you Maintain function trees [Page 122].

If you want to edit or create functions, it is useful to create a special function tree for this purpose. By doing this you retain an overview of your work.

Display functions

1. Position the cursor on a function reference 🔄.
2. Choose Edit → Function → Display.
3. The tab index of the function-transaction appear on the right screen area.
4. To see in which templates the function is used, choose 📚 (screen area to the right).
5. To switch to the change mode, choose 🏗.
6. To close and leave the screen area, choose 🗑.

Displaying using the right mouse button option: position the cursor on the function symbol 🔄; right mouse click and choose Display function.

You can also display the function by double clicking on the function reference.

Creating functions

Create a function, and generate the corresponding function reference at the same time.

1. Choose 🔄.
2. In the selection window Maintaining Environments and function trees, enter the Template application, for the function you want to create.
3. All environments and sub-environments that exist within the chosen template application are listed in the screen area to the left.
4. Position the cursor on a Function tree, Structure node or Function reference. From the function tree, you can create the function reference only at a subordinate level. From the structure nodes, you can create a function at the same level or lower. From the function reference, you can create a function only at the same level.
5. Choose Edit → Function → Create
6. In dialog box Creating functions, enter a description for the new function.
7. Choose Same level or Lower level.
8. The tab index of the function transaction appear on the right screen area.
9. Make your entries using the tab index.
10. To save the entries, choose 🚫.
Maintaining Functions

For more information on the entries necessary for tab indexes, see:
- Functions - Basic Data and Language [Page 107]
- Realization of the Function [Page 109]
- Function Parameters [Page 112]
- Function Use [Page 113]
- Additional Function Trees [Page 116]
- Example: Creating Functions [Page 117]

Copying functions
1. Position the cursor on a function reference.
2. Choose Edit → Function → Copy.
3. In dialog box Copying functions, enter a description for the new function in row Function.
4. Choose Same level.
5. The tab index of the function transaction appear on the right screen area.
6. Make your entries using the tab index.
7. To save the entries, choose.

Copying using the right mouse button option: position the cursor on the function symbol; right mouse click and choose Copy function.

Changing functions
1. Position the cursor on a function reference.
2. Choose Edit → Function → Change
3. The tab index of the function transaction appear on the right screen area.
4. Make your entries using the tab index.
5. To save the entries, choose.

You can make changes by using the right mouse button option.

Deleting functions
1. Position the cursor on a function reference.
2. Choose Edit → Function → Delete
3. Answer the following system query with Yes.
4. To save the entries, choose.
Maintaining Functions

⚠️

The function is then completely deleted, along with the SAP1 function trees for the environments containing this function.

💡 You can also delete by using the right mouse button option.

Displaying function documentation

1. Position the cursor on a function reference.
2. Choose Goto → Function docu.
3. You can leave the document display by using Back.

💡 You can also display the function documentation by using the right mouse button option.
Functions - Basic Data and Language

Use

In view Basic Data enter the function [Ext.] a description and a logical (internal program) function name, and determine a name space. In the view Language, you can enter external function names in other languages.

See Also: Example: Creating Functions [Page 117]

Basic Data of Function

Description

Here, enter a short description of the function. Through option Documentation, you can enter a detailed description.

Logical Function Names

The logical function name is the clear function description (part of the internal programming). This name is the same for all languages.

Environment

Choose the environment [Ext.] or sub-environment [Ext.] to which the function should be assigned.

Name Space

You can use the Name space field to distinguish your own functions from those functions provided in the standard SAP System. You can buy name spaces from SAP or use a default name space. The SAP name space is SAP.

For more information about working with name spaces, see Name Spaces and Naming Conventions (BC-CTS-NAM) [Ext.]

Language of Function

In the view Language, you can assign the external function names and descriptions in other languages to the function.

Enter the external function names in the field with the same name. This name is language-dependent.
Realization of the Function

Use

In the Implementation view

- Assign an ABAP program function to the logical function [Ext.] (with reference field)
- As an option, use a data element to determine the Possible entries for functions (in cases with reference fields)
- Fill the Result field for the function (in cases with function references)
- For a function in the hierarchy derived from an existing function, include the associated sub-function (in cases with reference functions)

Features

Assigning Realizations (Field or Function references)

You can base a logical function on function modules or table fields, meaning that the function result comes from a module or from field contents. Make entries either in the ABAP function name field for a function module, or in the fields Table name and Field name for the table field.

Function Result Types

Functions based on function modules can have the following result types:

- **Number Value/String**: Useful for functions in activity quantities and activation.
- **Boolean values (true/false)**: this result type is useful for functions in the activation editor that have true/false results.

Functions with reference to a function module must either use **Type of Parameter** or **Type of Function**.

- **Type of parameter**: Useful for functions in object determination. Choose (F4) a function parameter in the field that determines the type at the time of processing. A parameter of this result type can refer to different table fields. It is therefore more flexible than a type for a given, fixed table field.

  For the function COMPONENTS_OF_GROUP, you enter ABAP parameter GROUP_FIELD in the Results field. In template maintenance, you enter the function SEND_PROCESS as a parameter.

- **Type of Function**: This result type (or Type of Parameter) must be used for functions in object determination. Through F4 choose from the valid functions.

Using Data Elements for Determining/Selecting Possible Entries

Comparison

During comparisons in the framework of defining Methods [Page 146], the Possible entries function for comparison operand 2 offers only those functions with data elements agreeing with
Realization of the Function

those for comparison operand 1. Each function that is realized as a table field is assigned a data element via the ABAP Dictionary. Functions realized as function modules have no data element assignments.

You can use the $F_4$ data element field to change the existing assignment, or create an assignment (for functions with reference to function modules) that makes additional comparisons possible.

If the function you selected as comparison operand 1 is assigned data element KOKRS, the R/3 System will not offer functions for comparison operand 2 using the assigned data element BUKRS. In order to allow compares with both these functions, you must assign both functions the same data element, such as ORG_UNIT.

If you enter an asterisk (*) in the $F_4$ data element field, this function appears for all instances of comparison operand 2, as long as it is generally available in this context.

Selecting Parameters

By using $F_4$ for parameters, you call up a selection list of only those functions whose data elements match those of the parameters. If you enter a data element, in addition to the above, you will also call up all functions that contain the given data elements.

For more information, see Function parameters [Page 112] and Function Uses [Page 113].

See Also: Example: Creating Functions [Page 117]

Table for Flexible Functions

Define a flexible function by entering in this field. Here you determine which table (for example: routing, BOM) is used for the posting run of the flexible function, in case this is created in the template maintenance. For more information see Defining Flexible Functions [Page 156].

Including the Reference Function

You can define a function by copying an existing function (such as one in the standard R/3 System) and then modifying it for your own requirements. In this case, enter the logical function name of the reference in the Reference function field.
Implementing ABAP Functions

Use

Enter the name of the appropriate function module in field ABAP Function name if the result of the function [Ext.] should also be the result of the function module.

A multitude of function modules are standard in this SAP release. If these modules do not meet your needs, you can create your own by following these steps.

Procedure

1. Create a function group for your ABAP functions
2. In the Top-Include of the function group enter the line TYPE-POOLS: TPLIC. The group TPLIC contains important types for the Template Analysis.
3. Create function modules in the function group:
   a. First define the interface Choose the tab page Import In the rows of column Import Parameter enter:
      i. PERIOD_FROM (starting period)
      ii. PERIOD_CNT (number of periods)
      iii. CALL_PROG (calling program); in this line enter SY-REPID in column Reference field/structure.
      iv. In the column Transfer values set the respective flag
   b. Then choose the tab page Tables Enter RTABLE_VAL in the column Table Parameter, and TPLIC_RVAL_TAB in the column Associated type (this is contained in group TPLIC). RTABLE_VAL is the results table; it contains the period with the resulting value of the function for each entry
4. Fill in fields Period, with the corresponding periods, and Value, with the results of the period (PERIOD_CNT) at the end of the coding for the ABAP-Function in the results table for each period to be evaluated.
5. Save your entries.

Result

The ABAP-Function you have created is now available for when you define functions. It can be called up in field ABAP Function name (tab page Implementation).
Function Parameters

Use

Use the Parameters view to assign parameters to functions [Ext.] (with function reference).

See Also: Example: Creating Functions [Page 117]

Features

ABAP Parameters and External Parameters

A function module can have parameters. If this is the case, you must assign the corresponding ABAP parameters to the associated functions. Parameters that have already been applied are shown. If external names or descriptions of such parameters are changed, then these are valid for all applications of this parameter. You can choose any parameter here except PERIOD_FROM, PERIOD_CNT and CALL_PROG. You then assign each of these to a language-dependent external parameter; use the Explanation column to enter a commentary on the parameters.

Parameter Type and Default Value

The parameter types include:

- **Normal**: The parameter appears without an entry; you must fill the field during template maintenance. Do not enter any values in the Default column.

- **Hidden**: The parameter does not appear on the screen. You need to enter a value in the Default column. This can be a function with field reference or a character string bracketed in quotation marks (").

- **Literal field**: The entry value of the parameter contains the function name field as a character string; that is, a literal entry. The parameter does not take hold of these contents, but rather the program transfers internally the combination of table fields in quotation as character string. With this parameter type you can enter a field name in column Default.

- **Optional**: A free space (" ") is shown as parameter in the template maintenance. You can fill the field during template maintenance. Do not enter any values in the Default column. However, you must enter a default value in the associated function module if you do not make any entries during template maintenance.

Using Data Elements for Determining Possible Entries

By using F4 for parameters gives only those functions whose data elements match those of the parameters. You can enter the data element in the F4 data element column, or allow the R/3 System to take the data element from the corresponding function module.

If you enter an asterisk (*) in the F4 data element column, all functions appear for all instances of the parameter, as long as they are generally available in this context.

For more information, see Function Uses [Page 113].
Function Uses

Use

In the Function Use view, determine in which template cells (line/column intersection) a Funktion [Ext.] can be used.

When arranging functions in sub-environments [Ext.], the item categories, columns and column types available for you to process depends on the template application you chose. You can choose the template application through your filter entry before creating the function (see the example below and also Editing Functions [Page 104], section "Creating functions").

See Also: Example: Creating Functions [Page 117]

Features

Overview/All Columns Tabs

Overview / All Columns: you can use the tab page Overview or All Columns for your entries. In Overview only the types of template columns are shown; for example, Object, Quantity, Activation, and Assignment Time. A marking applies to all columns of a particular type. All existing columns are shown in All Columns; for example, Object, Quantity Plan, Activation Plan, Assignment Time Plan, Actual Quantity, Actual Activation, Actual Assignment time.

In editing mode: The selection in the Overview is valid for the column type (for example Quantity). In the All Columns tab you can, therefore edit all available columns with that type (for example if you deselect Plan Qty, the selection of Actual Qty remains).

The selection on the Overview tab shows you whether selections on the All Columns tab have been made uniformly or not:

<table>
<thead>
<tr>
<th>Selection on Overview tab (in editing mode)</th>
<th>Settings in All Columns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tick in white field (changes possible)</td>
<td>All columns are selected</td>
</tr>
<tr>
<td>Tick in grayed out field (changes only possible in All Columns tab)</td>
<td>At least one, but not all columns are selected</td>
</tr>
<tr>
<td>No tick (changes possible)</td>
<td>No Columns are selected</td>
</tr>
</tbody>
</table>

Column Type

The column type shows you which item categories can be chosen (for example, Process, Sub-Template, Calculation Row, and so on). Which column types are available depends on the template application chosen (see example below).

Other Columns

Additional columns (object, quantity, and others): by marking the checkbox, you decide that the functions in these column-line combinations can be chosen.

Filter

By using the icon (Filter) while in a cell you can activate or deactivate further requirements, and thereby constrain the use requirements:
Function Uses

- In the columns for quantities and allocation events you can determine whether a function can be used as a formula component and/or as a parameter.
- in the columns for Object and Activation you can decide whether the function can be used as a Column Header (comparison operand 1), Column Entry (comparison operand 2), and/or Parameter.

In editing mode: If you call the filter in the overview tab, you see through the selection of the usage criteria, whether they are uniformly set or not (in the individual columns of the All columns tab).

<table>
<thead>
<tr>
<th>Selection on Overview tab (in editing mode)</th>
<th>Settings in All Columns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tick in white field (changes possible)</td>
<td>The usage criteria are set in all columns</td>
</tr>
<tr>
<td>Tick in grayed out field (changes only possible in All Columns tab)</td>
<td>Usage criteria set for at least one, but not all columns</td>
</tr>
<tr>
<td>No tick (changes possible)</td>
<td>No usage criteria set</td>
</tr>
</tbody>
</table>

Switching between Applications

While displaying functions, you can switch between the template applications by using Environment Other template applications and see the various line/column combinations.

Create a function in the sub-environment 101. Various column types and item categories are made available depending on what template application you chose.

<table>
<thead>
<tr>
<th>Chosen template application</th>
<th>Column types available</th>
<th>Item categories available (lines)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost object/Calculation COB</td>
<td>Object, quantity, activation, allocation event</td>
<td>Process</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Calculation row (Process)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flexible function (process)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost center / activity type</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Calculation rows (cost centers/activity types)</td>
</tr>
<tr>
<td>Cost center/business process activity allocation SBP</td>
<td>Object, quantity/costs, activation</td>
<td>Process</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost center / activity type</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Calculation row (Process)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Calculation rows (cost centers/activity types)</td>
</tr>
<tr>
<td>Profitability segment PAC</td>
<td>Object, quantity, activation</td>
<td>Process</td>
</tr>
<tr>
<td>--------------------------</td>
<td>-----------------------------</td>
<td>---------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Calculation row (Process)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Flexible function (process)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cost center / activity type</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Calculation rows (cost centers/activity types)</td>
</tr>
</tbody>
</table>
Additional Function Trees

Use

Functions [Ext.] are assigned to specific function trees which are selected by asset environment [Ext.]. These are always the trees which are directly assigned to this environment, or which belong to a sub-environment [Ext.] of the latter.

In view Function tree you can determine in which additional function trees the function can be found.

Features

The mark in column One indicates that the function is assigned to a function tree. The subsequent columns indicate which function tree that is and to which environment it belongs.

A field with gray background and marks documents the function trees containing functions.

In order to assign functions to further trees, mark the white field. Provided here are the individual trees, belonging to the environments, and containing the sub-environment of the function.

For more information, see Function Trees [Page 120].
Example: Creating Functions

Starting Situation

You want to create a template in such a way that a business process “Quality Inspection” is only activated when the confirmed quantities of an order deviates from the total order quantity. In order to do this you need a function that allows you to access the confirmed order quantities. You create this is in the following way: (a function for the total order quantity already exists).

The function Order_Yield_Confirmed already exists in the standard SAP System. This gives you the opportunity to compare executed tasks with data in the System.

Selection Window

In the selection window you decide in which template application, environment and sub-environment the new function should be placed. For this example:

- Template Application: COB Cost object/Calculation
- Environment: 001 Cost Estimates/Production Orders
- Sub-environment: 102 Order Data

1. In section Defining Environments and Function Trees, choose 🍀:
2. In the Template Application field enter: COB All environments and sub-environments that exist within the chosen template application are listed in the screen area to the left.
3. Expand the Environment 001; Cost Estimates/Production Orders and also the structure node Order Data
4. Select the structure node.
5. Choose Edit → Function → Create
6. In dialog box Creating functions, enter a description for the new function: Order_Yield_Confirmed
7. Choose Lower level The tab index of the function transaction appear on the right screen area.
8. Make your entries using the tab index.

Basic Data Tab

Here, you describe the function and can also create documentation for it.

1. Description: Confirmed period based order quantities.
2. Logical Function Name: K_ABC_GET_ORDER_CONFIRMATION
3. Environment: 102
4. Namespace: Select using F4
5. Click on the documentation Icon (📝) to create documentation for the function.

For more information, see Functions – Basic Data and Languages [Page 107].
Example: Creating Functions

Implementation Tab

Choose the function module, to which the results of the function should be delivered. You determine, therefore which data the function should supply. We are assuming here, that the appropriate function module exists.

1. ABAP Function Name: Select the function module: K_ABC_GET_ORDER_CONFIRMATION using F4.
2. Result type: The function module delivers a numerical value, therefore select Num. Value/String
3. F4 possible entries for comparison/parameters: in the Possible Entries field Enter QUANTITY
   Effect: The following is achieved by this entry: when defining Methods (activation) as a comparison operand 2 all functions contained by the data element QUANTITY are displayed (See Section: Results).

For more information, see Realization of the Function [Page 109].

Parameter Tab

Here, you determine exactly which data the function should supply. You indicate among other things to which fiscal year and which controlling area the data should belong.

1. ABAP Function: K_ABC_GET_ORDER_CONFIRMATION
2. ABAP Parameter: Invisible parameters (default values in brackets): Order confirmation number (Order confirmation number), fiscal year (current fiscal year), controlling area (Function ORDER_CONTROLLING_AREA), order number (function ORDER_NUMBER)
3. Literal: Confirmation quantity type, F4 data element QUANTITY. This entry in the column Possible Entries means that when selecting comparison parameters (see section Results) only functions where the data element QUANTITY was entered, in the possible entries field on the implementation tab, are selected.

For more information, see Function Parameters [Page 112].

Uses Tab

On this tab you determine in which cells of the template the function can be used.

1. On the overview tab select Quantity and Activation for the cells Business process, Calculation row (business process) and Flexible function (business process).
2. Goto the All Columns tab.
3. Deselect the ticks from the columns Plan Activ. and Plan Qty.
4. In the lines Business process, Calculation row and Flexible functions of the column Actual Qty, choose \ and select Formula component. The function can then be used as an element of a formula for quantitative determination.
5. In the column Act Acty use \ to select Column heading and column entry. This means that the function can be used as comparison operand 1 and 2.

For more information, see Function Uses [Page 113].

Function Hierarchy Tab

On this tab you enter within which function trees the function should be contained.
For more information, see Additional Function Trees [Page 116].

**Language Tab**

Enter external, language dependent descriptions for the functions in different languages, for example Confirmed period based order quantities and Periodengerecht rückgemeldete Menge für Auftrag.

For more information, see Functions – Basic Data and Languages [Page 107].

**Result**

You can now use the function in template maintenance to compare confirmed order quantities and total order quantities.

**Column: Actual Activation**

Comparison operand 1 = Function Order Yield Confirmed with parameter Confirmed Yield This function can be selected as a parameter, because you also selected the F4 data element QUANTITY (see section above: Parameter).

Unlike

Comparison operand 2 = Function Total Order Quantity. This function can be chosen as the same F4 data element was selected as with the Confirmed Order quantities (F4 Help Possible entries for comparison/parameters on Implementation tab), namely the data element QUANTITY (see section above: Implementation Tab).

This means that the quality process will only be activated when the confirmed order yield deviates from the total order quantity.

**Column: Actual Quantity**

in the column Actual Quantity you can enter a 1. This means that a new quality process will be executed, everytime the activation criteria are met.
Function Trees

Definition

A function tree is a directly definable structure used to organize functions. It is always assigned to an environment or sub-environment and can contain structure nodes and function references.

Use

The function tree organizes the available functions in the applicable process template environment according to their uses or other characteristics. Afterwards, the function is the main focus of further editing. For more information on editing function trees, structure nodes and function references, see Editing Function Trees. Go to Editing Functions for more on working with functions.

Structure

<table>
<thead>
<tr>
<th>Function Tree Structure Levels</th>
<th>Contains:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment</td>
<td>Standard environments or sub-environments with their associated function trees.</td>
</tr>
<tr>
<td>Function Tree</td>
<td>Structure for the hierarchical structure of functions with the associated structure nodes and function references. The standard SAP System includes function tree SAP1 for all environments.</td>
</tr>
<tr>
<td>Structure Nodes</td>
<td>Further structuring possibilities</td>
</tr>
<tr>
<td>Function reference</td>
<td>Link to Function</td>
</tr>
</tbody>
</table>

Delivered as part of the software, function tree SAP1 is standard to all environments (for example, for Environment 001 - Function Tree SAP-001, for Environment PAC - Function Tree SAP1-PAC). Furthermore, this includes all standard-delivery structure nodes (sub-environments) and function references (with links to the respective functions).

Example

Function Trees

The example illustrated shows functions of environments 001 and the groups they correspond to. Structure node “BOM” contains function references relevant to bill of materials, while structure node “Routing” provides those referring to the routing.
Function Tree SAP1-001 für Environment 001

- Structure node: BOM
  - Function reference AME_
  - Function reference ANZAHL_

- Structure node: Routing
  - Function reference APLAN_
  - Function reference ANZAHL_
  - ...
Editing Function Trees

Use
In the function Environments and Function trees you can process:

- Function Trees [Page 120]
- Structure Nodes [Page 120] and
- Function References [Page 120]

How you do this will be explained in this document. The processing of functions [Ext.], that are used in the same transaction, is explained in Maintaining Functions [Page 104].

The selected environment always serves as the basis for maintaining these objects.

You have the left and right screen area available. The left side shows the existing environments. You can expand the hierarchies and display the structure of the function trees, structure nodes and function references in these hierarchies Position the cursor on the object you want to edit.

The right side lists the details of the object chosen most recently (function tree, structure nodes or function reference) or all tab pages of the currently chosen function. Otherwise, use the right side to edit functions.

If you want to maintain Function trees structure nodes and function references (for example change, delete and so on) – you must first copy the standard function tree SAP1: maintenance is only possible in copied function trees.

Procedure

General Requirements

Display filter

1. In the Implementation Guide (IMG) of the Activity-Based Costing follow path Templates → Maintaining Environments and Function Trees [Ext.] . Displayed on the left side are all the existing environments.

2. Choose 📦.

3. If you want to further focus the display, choose Template application, Environment and/or Tree.

If you enter SBP as the environment, the system displays only the function trees assigned to environment SBP. If you enter CPI in field Template-Application, the system displays only those trees of the environment that belong to the Template-Application Formula Planning Business Processes/Cost Center.

Displaying higher and lower level environments

1. Position the cursor on an environment line.
2. To display all higher level environments, choose 🍃.
3. To display all lower level environments, choose 🍃.

**Enlarging and reducing the screen area**
1. To change the size of the screen area, click on its respective vertical border.
2. Hold the left mouse button down and drag to the left or the right.

**Display object**
To view objects that are subordinate to other objects, double click on its name: the system displays the contents of the objects in both screen areas.

To display the structure nodes belonging to a function tree, double click on the function tree.
To display the function references belonging to a structure node, double click on the structure node.

**Copying with drag and drop**
You can copy objects from the right to the left screen areas, or within the left screen area.
1. Position the cursor on an object (Function tree, Structure node or Function reference).
2. Hold down the left mouse button.
3. Drag the cursor to the insert position.
4. Release the mouse button.
5. To save the function tree, choose 🍃.

**Editing Function Trees**

**Creating function trees**
1. Position the cursor on the environment where you want to create a new function tree.
2. Choose Function tree → Create .
3. In the dialog box Create function tree enter the name and description of the new function tree in row Tree. The chosen environment is displayed.
4. In the dialog box, choose 🍃.
5. To save the function tree, choose 🍃.

The new function tree is then displayed in both screen areas.

**Building new function trees**
While building new function tree, the system reconstructs its contents based on the environment with all subordinate environments and their functions.
1. Position the cursor on a function tree.
Editing Function Trees

2. Choose Function tree → Newly reconstruct.

3. Enter the name and description of the new function tree or accept the default values in the dialog box Generate function tree. The chosen environment is displayed.

4. In the dialog box, choose 🗝.

5. To save the function tree, choose 🗝.

The function tree is now newly reconstructed. The original contents are also reconstructed; that is, it contains all subordinate environments (as structure nodes) and their functions (as function references) of the chosen environment as delivered in SAP1.

Newly reconstructing using the right mouse button option: position the cursor on the function tree symbol; press the right mouse button and choose Build new function tree. Here, you cannot change the name or description.

Copying function trees

Copy function trees to work with the contents of its SAP1. The SAP1 is standard, but cannot be changed. However, you can change the copied version. You can also copy your own function trees.

1. Position the cursor on a function tree.

2. Choose Function tree → Copy.

3. In the dialog box Copy function tree enter the name and description of the new function tree in row Tree. The chosen environment is displayed.

4. In the dialog box, choose 🗝.

5. To save the function tree, choose 🗝.

The copy of the function tree contains all structure nodes and function references of the original tree, and it can be changed as you wish.

Copying using the right mouse button option: position the cursor on the function tree symbol; press the right mouse button and choose Copy function tree.

You can also copy with drag and drop.

Importing function trees

Use the import function to import a function tree from another client (for example, from an upgrade).

1. Position the cursor on a function tree.

2. Choose Function tree → Import.

3. In dialog box Import function tree, determine the tree to be imported.

4. Enter the source client from which the tree is to be imported.

5. In the dialog box, choose 🗝.

6. To save the function tree, choose 🗝.
Activating/deactivating function trees

These settings are made by the user. The environment function tree SAP1 is always active, even when no flag is set.

1. Position the cursor on a function tree. Note the small box in column Active: if the small box is marked, then the function tree is active; that is, it will be displayed in the template-maintenance. If it is not marked, the function tree is inactive.

2. Choose Function tree → (de)activate: an inactive tree has an unmarked box, and an active one has a marked box.

3. To save the function tree, choose .

You can also activate or inactivate the tree by using the right mouse button options.

Delete function tree

1. Position the cursor on a function tree.

2. Choose Function tree → Delete.

3. To save the deletion, choose .

Editing Structure Nodes

Creating structure nodes

1. Position the cursor on a structure node of a function tree.

2. Choose Edit → Structure nodes → Create

3. In dialog box Create structure nodes, enter the names of the new structure nodes.

4. Determine if the structure nodes should be inserted at the same level or at a lower level.
   i. If you choose Same level, the new structure node appears before the structure node you placed the cursor on.
   ii. If you choose Lower level, the new structure node appears below the node you placed the cursor on.

5. To save the entries, choose .

Copy structure nodes

1. Position the cursor on a structure node of a function tree.

2. Choose Maintain → Structure nodes → Copy

3. In the dialog box Copying structure nodes, determine if the structure nodes should be inserted at the same level or at a lower level.
   i. If you choose Same level, the new structure node appears before the structure node you placed the cursor on.
   ii. If you choose Lower level, the new structure node appears below the structure node you placed the cursor on.

4. To save the entries, choose .
Editing Function Trees

You can also copy using the right mouse button options, or drag and drop.

Changing structure nodes
Here you can give a structure node another name.
1. Position the cursor on a structure node of a function tree.
2. Choose Maintain → Structure nodes → Change
3. In dialog box Change structure node enter a new text for the structure node.
4. In the dialog box, choose ✔.
5. To save the entries, choose ✎.

You can make changes by using the right mouse button options.

Deleting structure nodes
Here you delete structure nodes including the text.
1. Position the cursor on a structure node of a function tree.
2. Choose Maintain → Structure nodes → Delete
3. To save the deletion, choose ✎.

You can also delete by using the right mouse button options.

Maintaining Function References
The function reference is the structure object that refers to a function. Use the function reference if you want to load a function and edit or display it on the right side of the screen (see Editing Functions [Page 104]).

Entering function references
1. Position the cursor on a function tree or a structure node.
2. Choose Edit → Function reference → Insert.
3. In the List of available functions you can choose the function that the function reference should refer to.
4. In the dialog box Create function reference, determine whether the reference should be inserted at the same level or at a lower level.
   i. If you choose Same level, (only affecting structure nodes) the new function reference appears before the structure node you placed the cursor on.
   ii. If you choose Lower level, the new function reference appears below the structure node or function tree you placed the cursor on.
5. To save the entries, choose ✎.
Copying function references
1. Position the cursor on a function reference.
2. Choose Edit → Function reference → Copy.
3. In dialog box Copy function reference, choose Same level, and the copy will be inserted before the function reference.
4. To save the entries, choose .

You can also copy using the right mouse button options, or drag and drop.

Changing function references
Here you change the reference to a function with another function.
1. Position the cursor on a function reference.
2. Choose Edit → Function reference → Change.
3. In selection window List of available functions choose another function.
4. To save the entries, choose .
The function reference is replaced and carries the description of the new function.

You can make changes by using the right mouse button options.

Deleting function references
Deleting a function reference does not affect the function it refers to. They remain in function tree SAP1 of the respective environment.
1. Position the cursor on the function reference to be deleted.
2. Choose Maintain → Function reference → Delete
3. To save the deletion, choose .

You can also delete by using the right mouse button options.
Object Determination

Use

Object determination uses Methods [Page 146] to find objects, such as business processes, for use in the process template. For example, you can allow the R/3 System to find all the processes of a given process type in a particular process group.

In order to define the methods, you use a method editor function.

See also:

Example: Object Determination [Page 129]
Defining Methods [Page 148]
Workflow-Integration Business Process [Page 235]
Example: Object Determination

Starting Situation

Your firm has two plants. Each one has its own warehouse with different processes for material movements. These processes use different resources and therefore have different costs. However, the process driver for both processes is the number of pallet movements. Therefore, the correct warehouse process must be automatically considered in your production calculation. To this end, create a template which recognizes the correct warehouse process (depending on the plant) through the dynamic object search. For this, only one template row is required, in which a search method in the object column can be defined.

The following data is assumed. The information in parentheses is for the data required by IDES.

- The environment for production order (001)
- Two plants (1000 Hamburg, 1200 Dresden)
- A business process for plant A warehouse (business process 300200 pallet movements at Dresden plant)
- A business process for plant B warehouse (business process 300300 pallet movements at Hamburg plant)
- A business process which encompasses both warehouse processes (BP_02 warehouse processes with business processes 300200 and 300300)
- Material master record (R-4000)
- Function [Ext.] SEND_PROCESS_PLANT, Plant of the sender business process
- Function ORDER_PLANT, plant of the production order; enter in Activity-Based Costing through Business process → Individual processing → Create → Organizational unit
- Function SEND_PROCESS, sender process
- Function PROCESSES_IN_PROCESS_GROUP, process of the given process group

ORDER_PLANT belongs to node Order (function tree SAP1 for environment 001), the others to node Processes. Arrange the assignment of plant-business process in business process master data under Organizational unit, Plant.

Procedure

If you only wish to view the search methods in IDES, see section “View Search Methods in IDES”.

Entering the Search Method

1. In the Implementation Guide (IMG) of the Activity-Based Costing follow path Templates → Maintain Template [Ext.] → Create template.
2. Under Template, enter a name for the template.
3. Under Environment enter 001 (environment material calculation/production order).
4. Choose Overview.
Example: Object Determination

5. Enter the description *Pallet movement*.
6. In the first row of the template, in column *Type*, choose entry *Process*.
7. In column *Name* enter *Pallet movement*.

**Results of this Step**

The initial data for the template has been entered. You have chosen the environment (001) and the template row type (Process).

Now define the requirements with which the template can find the correct business process, or the correct object.

8. Double click on column *Object*.

The selection editor where you input the search requirements is shown.

9. Select *Column insert*.
10. Choose the function SEND_PROCESS_PLANT as comparison operand 1.
11. Select = (*equal to*) as *Comparison operator*.
12. In the screen *Possible entries* choose the options *Functions/Variables as comparison operand 2*.
13. Choose function ORDER_PLANT.
14. Select the option *Transfer*.

**Results of this Step**

The first part of the search method is entered: the plant of the sender business process must be the same as the plant of the production order.

Now you enter the second part of the requirement. Both parts are bound by a logical AND. This is already entered.

15. Select *Column insert*.
16. Choose the function SEND_PROCESS as *Comparison operand 1*.
17. Select = (*equal to*) as *Comparison operator*.
18. In screen *Possible entries* choose the options *Functions/Variables in row comparison operand 2*.
19. Choose function PROCESSES_IN_PROCESS_GROUP.
20. In column *Plant* enter the business process group of the warehouse process; in IDES for example, *BP_02*.
21. Choose *Continue*.
22. Save your entries.
23. Go back.
24. Save the template.
Result

You have defined the method with which the object (here, the business process) is dynamically determined. The method in this example consists of two comparisons which are bound through a logical AND. The comparisons operands are the functions of the environment 001.

The selection conditions mean that you should find the business process from the warehouse process groups (in IDES for example, BP_02) in which the plant of the sender business process is the same as the ordering plant.

View Search Method in IDES

1. In the Implementation Guide (IMG) of the Activity-Based Costing follow path Templates → Maintain template → Change template.
2. Choose template T-PROD3.
3. Choose environment 001(Environment Material calculation/Production orders).
4. Choose Overview.
5. Double click on entry METHOD in column Object.
6. Double click on ORDER_PLANT.
   
   You can see the first part of the search method.
7. Double click on PROCESSES_IN_PROCESS_GROUP.
   
   You can see the second part of the search method.
8. Leave the function without saving.

Checking and Testing Templates

You are in screen Create template or Template. Choose Check in order to check the syntax of your entry.

Follow these steps to test the template:

1. Select Process Test.
2. Enter the test parameter, for ORDER_PLANT <Plant number> (1200), for ORDER_MATERIAL_NUMBER <Material number> (R-4000), for TOTAL_ORDER_QUANTITY <Quantity of your choice> (100).
3. Choose Plan.

Template Evaluation

In the screen Evaluation template you are provided with a results structure. If you open the path displayed, you will see in row Object the business process into which the plant was entered. The IDES example should display the value 300200. If you worked with your own data, then you need to display the business process (to which the plant entered in the master data was assigned).

Template Evaluation - Details

To see more details, double click on row Object. You receive the following information:
Example: Object Determination

*Formula/Methods:* you will see the entered search method with the applied function (F1 = function with parameters; see function list).

*Function list:* you will see the description/name of the function which works with parameter: PROCESSES_IN_PROCESS_GROUP. You entered parameter BP_02 in the search requirements. The second parameter belongs to type “invisible” (not visible on the template) and is automatically filled.

Both of these in the row show the results of the function run; business process group BP_02 includes processes 300200 and 300300.

*Results:* only business process 300200 (controlling area 1000) belongs to business process group BP_02 and is simultaneously assigned to the master data of plant 1200. Because this is also the entered plant of the order, process 300200 is chosen.

*Field contents:* you entered the plant of the order in the test entry field.

0
Activity Quantity Determination

Use

Activity quantity determination uses Formulas [Page 151] to calculate the amounts used in the evaluation of a template. For example, you can allow the R/3 System to calculate the quantity of a sender object (for example, a business process) utilized by a cost object.

In order to define the formulas, you use a formula editor function.

See also:

Example: Quantity Determination [Page 134] (Template for cost object/calculation)
Example: Quantity Determination [Ext.] (Template for formula planning/cost centers)
Defining Formulas [Page 152]
Workflow-Integration Business Process [Page 235]
Example: Quantity Determination

Starting Situation
With a flexible function [Page 154], a specific plan quantity can be determined through the template. The example starts as follows: the material transport from inventory to production site in a new plant is a source of overhead costs, which until now have been calculated only on a percentage basis. The template enables us to assign an exact measure of overhead cost in this scenario. The process driver for this process is the number of pallet movements, which the template helps compute based on the production lot size foreseen. In this example, remember the larger production components require more pallet movements than smaller ones. Also keep in mind that a pallet movement is necessary even if only one component is required and the last pallet is empty.

The following data is assumed. The information in parentheses is for the data required by IDES.

- A template [Ext.] for the production order (T-PROD3, Environment 001), the column Object of the first template row is filled (see: Example: Object Determination [Page 129])
- A material master record, to which a BOM is assigned, the master record and each component on the BOM must be maintained for the same alternative quantity unit (PAL)
- Function [Ext.] TOTAL_OF_BOM_ITEMS sums the results of the formulas at the BOM item level and for each BOM item
- Function [Ext.] CEIL, rounding up to the next whole figure
- Function [Ext.] BOM_ITEM_REQUIRED_QUANTITY, needed quantity of materials of the BOM items
- Function [Ext.] ALT_QTY_FACTOR_FROM_MATERIAL, factor for an alternative quantity unit (see: Units of Measure [Ext.]) of a material
- Function [Ext.] ALTERNATIVE_QUANTITY_UNIT, the packing unit of the component; that is, the quantity unit for which you determine a conversion factor
- Function [Ext.] MATERIAL_NUMBER, material number
- Function [Ext.] BOM_ITEM_COMPONENTS, material number of the BOM item

Procedure
Prerequisites
Create an algorithm that calculates the number of pallet movements needed. It should reflect the following points

- Lot size x Number of pieces according to the BOM item / factor of the alternative quantity unit (piece per pallet)
- Rounding up to the next whole figure
- The end result is the number of pallet movements necessary for a component of the BOM.
- Finally, the pallet movements of all components on the BOM are totaled.
This algorithm is now entered as the quantity formula of the template.

⚠️

If the alternative quantity unit has not been maintained, then do this next. This quantity unit must be the same by all components of the BOMs’. In the following example, we create it for one component only: namely, material r-4001.

If you wish to view the alternative quantity unit in IDES only, then see “Alternative Quantity Unit in the IDES”.

**Entry of Alternative Quantity Units**

2. Enter the material number (r-4001).
3. Select Basic Data 1.
4. Choose Extras → Units of measure.
5. In the column titled AUn, enter the name of the alternative quantity unit (PAL).
6. In column Y enter the number of basis quantity units which the alternative quantity unit consists of.
7. Save your entries.

**Results of this Step**

The alternative quantity unit has been created. The IDES example indicates the unit PAL (pallets). Column Y indicates the basis quantity units of the alternative quantity unit, or the number of pieces per pallet.

In the next step, enter the algorithm formula for quantity into column Quantity Plan found in the template.

**Enter Quantity Formula**

If you wish to only view the alternative quantity unit in IDES, go to part see “Alternative quantity unit in the IDES”.

1. Call up the template for editing.
2. Double click on column Plan qty.
3. Select the first row under Quantity.
4. Choose Functions.
5. Choose function (node BOM) TOTAL_OF_BOM_ITEMS
   
   This function adds the necessary pallet movements of all BOM items.
6. In screen Definition of a flexible function, label the function appropriately (movement per BOM item).
7. Select Formula of the flexible function.
9. Select the first row.
Example: Quantity Determination

10. Choose *Functions*.

11. Choose function (node *Mathematical functions*) CEIL.
   
   This function rounds up the result to the next whole number.

12. Position the cursor between the parentheses.

13. Choose function (node BOM) BOM_ITEM_REQUIRED_QUANTITY.
   
   This function provides you the necessary quantity per BOM item; in the IDES example, you are provided with the number of pieces per BOM item (this entails lot size x number of pieces per BOM item).

14. Enter the division sign, and leave a blank space before or after it.

15. Choose function (node Material) ALT_QTY_FACTOR_FROM_MATERIAL.
   
   This function prepares the factor, which the result “lot size x number of pieces of the BOM components” will be divided by.

16. Row ALTERNATIVE_QUANTITY_UNIT, column *Value*: choose *Fixed value* by using the F4 selection option.

17. Enter the alternative quantity unit (**PAL**).
   
   This entry is necessary to arrive at the correct conversion factor.

18. Row MATERIAL_NUMBER, column *Value*: choose **F4** and activate Functions/Variables.

19. Choose function (node BOM) BOM_ITEM_COMPONENTS.
   
   The system finds the material number of the BOM item just processed.

*Result*

The quantity formula is now as follows:

\[
\text{CEIL} \left( \frac{\text{BOM\_ITEM\_REQUIRED\_QUANTITY}}{\text{ALT\_QTY\_FACTOR\_FROM\_MATERIAL}} \right),
\]

**Alternative Quantity Unit in IDES**


2. Enter the material number (r-4001).

3. Select *Basic Data 1*.

4. Choose *Extras ### Units of measure*.
   
   In column AME you can see the alternative quantity unit (**PAL**), and in column Y the conversion factor.

*View Quantity Formula in IDES*

1. Call up the template for editing (**T-PROD3**, environment **001**).

2. Double click on column *Plan qty*.
3. Position the cursor on $1$.
5. Select Formula of the flexible function.

Here you see the entire quantity formula. Leave the function without saving.

### Checking and Testing Templates

You are in either screen Create template or Change template. To check the syntax of your entries, choose Test.

Follow these steps to test the template:

1. Select Process Test.
2. Enter the test parameter in the IDES system; for example, ORDER_PLANT: 1200 and ORDER_MATERIAL_NUMBER: r-4050.

IDES produces these results with the following entries in TOTAL_ORDER_QUANTITY:

<table>
<thead>
<tr>
<th>Entries in TOTAL_ORDER_QUANTITY</th>
<th>Results (pallet movements)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>10</td>
<td>8</td>
</tr>
<tr>
<td>50</td>
<td>14</td>
</tr>
<tr>
<td>100</td>
<td>22</td>
</tr>
<tr>
<td>1000</td>
<td>187</td>
</tr>
</tbody>
</table>

The results can be clarified as follows:

Seven components belong to material r-4050. The SAP system uses this calculation for the pallet movements.

Lot size (= Entry in TOTAL_ORDER_QUANTITY) * piece per material r-4050 / factor of the alternative quantity unit (piece per pallet). The result is rounded up to the next whole number.

With a 100 piece order of material R-4050, the following results are obtained:

<table>
<thead>
<tr>
<th>Material number</th>
<th>Quantity per material r-4050</th>
<th>Factor of the alternative quantity unit (pieces per pallet)</th>
<th>Pallet movements</th>
</tr>
</thead>
<tbody>
<tr>
<td>r-4001</td>
<td>1</td>
<td>200</td>
<td>1</td>
</tr>
</tbody>
</table>
Example: Quantity Determination

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>r-4002.</td>
<td>4</td>
<td>12.000</td>
<td>1</td>
</tr>
<tr>
<td>r-4003.</td>
<td>1</td>
<td>60</td>
<td>2</td>
</tr>
<tr>
<td>r-4004.</td>
<td>1</td>
<td>8</td>
<td>13</td>
</tr>
<tr>
<td>r-4005.</td>
<td>1</td>
<td>160</td>
<td>1</td>
</tr>
<tr>
<td>r-4006.</td>
<td>1</td>
<td>160</td>
<td>1</td>
</tr>
<tr>
<td>r-4007.</td>
<td>1</td>
<td>40</td>
<td>3</td>
</tr>
</tbody>
</table>

Total pallet movements 22

**Template Evaluation**

To see more details, double click on row *Quantity*. You receive the following information:

*Formula/Method*: placeholder for the name of the function.

*Function list*: you are notified by the system that this function works with a flexible function ($1$). The parameters of the function are listed (all are type “invisible”). The last row shows the results of the calculation: 22 pallet movements.

*Result*: display total results (22).

*Field content*: among other information, the system shows the material number you entered.

**Template Evaluation - Details**

To see the individual results of the calculations, use the button *Display Flexible Function* and choose the function suggested. The system returns the same information as in the above table: *Field content*: shows the value of column "Material number", *Function list*: that of column "Factor of the alternative quantity unit", and *Results*: that of column "Pallet movements".
**Activation**

**Use**

Activation is based on the use of [Methods](#46) that determine whether to assign the value `True` to an item in the template. The template uses only active items and their associated objects or quantities during valuation.

In order to define activation methods, you use a method editor function.

**See also:**

- [Example: Activation](#40)
- [Defining Methods](#48)
Activation Example

Starting Situation

This example deals with the activation of a specific business process. The process “Paint” is to be activated only through a PC, where the color differs from the standard. The characteristics Standard, and also White, Red, Green and Blue are found in the material master.

The following data is assumed. The information in parentheses is for the data required by IDES.

- An environment [Ext.] for production orders (001)
- The business process “Paint” (business process 300000 Paint)
- A plant
- A material for which the following are defined in the material master: the class type, classification characteristics and values (class type 001 material class, characteristic T-COLOR, value 01 = standard, 02 = white, 03 = red, 04 = green, 05 = blue)
- Function [Ext.] MATERIAL_MERKMALSWERT, node Material
- Function [Ext.] MATERIAL_NUMMER, node Material

Procedure

Looking Into Material Classification

2. Enter the material number.
3. select the view Classification.
   The Class Types screen appears. The Class Types created are displayed.
4. Double-click on 001 material class.
   Appearing next is screen Display material: Classification. Class PC01 with the description Characteristics for PC’s and Components is displayed.
5. Double-click on PC01 in the column Class.
   Characteristics and characteristic values of the material are displayed; these are for r-4000 in IDES: number of paint layers 3 and color red.
6. Double-click on the value red.
   The system provides an overview of all created values for characteristic color: 01 = standard, 02 = white, 03 = red, 04 = green, 05 = blue.
7. Return to screen Characteristic value assignment display and choose View → Language.
8. Select neutral and also characteristic and value
   Now you can view the internal characteristic name: T-COLOR. You will need this description when you create the template.

For more information on creating material classes, characteristics and characteristic values see: The classification system [Ext.] and Characteristics. [Ext.]
Results of this Step
You are now familiar with the information which you need to enter the correct formula in the activation column of the template; namely, material class, characteristic and characteristic value.

Entering Activation Requirements in the Template
If you want to view the activation requirements only in IDES, see section “View Activation Requirements in IDES”.

1. Call up the template for editing.
2. Double-click on column Active. Plan.
3. Choose Column insert.
4. Choose MATERIAL_MERKMALSWERT as Comparison operand 1.
5. As characteristic of the classification enter T–COLOR in the column Value.
6. In the row Class type of the classification, column Value choose Fixed value using F4.
7. Choose class type 001.
8. In row Material number choose the function MATERIAL_NUMMER (containing the material just calculated), using F4 Function/Variable.
9. Save your entries.
10. Select not equal to as Comparison operator.
11. In row Comparison operand 2, enter the fixed value 01.

Result
The activation condition means that the activation of the business process when the material characteristic value of the PC (the material number entered) is not equal to the standard color (that is, white, red, green or blue).

Viewing Activation Requirements in IDES
1. Call up the template for editing (T-PROD1).
2. Double-click on column Active. Plan.
3. Double-click on the entry 01.
   You can see the activation requirement (see above).

Checking and Testing Templates
You are in either screen Create template or Change template. To check the syntax of your entries, choose Test.

Follow these steps to test the template:
1. Select Process Test.
Activation Example

2. Enter the test parameter, for AUFTRAGWERK <Plant number> (1200), for AUFTRAGMATERIALNUMMER <Material number> (R-4000), for AUFTRAGGESAMTMENGE <Quantity of your choice> (1).

3. Choose Plan.

Template Evaluation

In the screen Evaluation template you are provided with a results structure. If you open the path displayed, you will see the activated business process 300000 in row Object in IDES. The row Plan: Activation shows the result as active. In the material master, “red” is saved as the characteristic for material r-4000.

Template Evaluation - Details

To display the details, double-click on the row Activation. You receive the following information:

Formula/Method: you can see the activation requirement entered. Because a function is used with parameters, the name is replaced through F1.

Function list: You see the complete name of the function and all parameters with the entries you made in the activation requirements (T-COLOR, 001; MATERIAL_NUMMER). The date comes from the window Parameters for template testing. Per. 9 = 03 means that in period 9 the function gives result 3 (= Color Red).

Result: The condition “Result F1 (= 03) is not equal to Color 01” is fulfilled; thus, ACTIVE is set.

Field content: Material number and date stem from the test entry field.
Processing Possibilities in the Editor

Use

To reach the Selection or Activation Editors, double click on the Object or Activation column (see, Defining methods [Page 148]); to reach the Quantity Editor, click on the Quantity or Cost columns (see Defining formulas [Page 152]). The following processing possibilities are available:

You can activate most processing possibilities by using the mouse or the right mouse button.

Processing Possibilities in all Editors

<table>
<thead>
<tr>
<th>In order to</th>
<th>... follow these steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>call up the Editor</td>
<td>1. Position the cursor on an Object, Activation or Quantity column.</td>
</tr>
<tr>
<td></td>
<td>2. Double click on the column.</td>
</tr>
<tr>
<td>leave the editor (the entries remain until saved)</td>
<td>Choose either ☐ or F3.</td>
</tr>
<tr>
<td>stop the processing and leave the editor (entries are rejected)</td>
<td>Choose either ☒ or F12.</td>
</tr>
<tr>
<td>mark a line</td>
<td>Click on the furthest left end of the line.</td>
</tr>
<tr>
<td>mark a column</td>
<td>Double click on the column header.</td>
</tr>
<tr>
<td>insert a line/row</td>
<td>1. Mark the line.</td>
</tr>
<tr>
<td></td>
<td>2. Choose either ☐ or CTRL+F2.</td>
</tr>
<tr>
<td>delete a line</td>
<td>1. Mark the line.</td>
</tr>
<tr>
<td></td>
<td>2. Choose either ☐ or CTRL + F1.</td>
</tr>
<tr>
<td>reverse your entry</td>
<td>Choose ☐ or CTRL + F12 (you remain in Editor).</td>
</tr>
<tr>
<td>reach the previous position</td>
<td>Choose either ☐ or SHFT+F1.</td>
</tr>
<tr>
<td>reach the next position</td>
<td>Choose either ☐ or SHFT+F6.</td>
</tr>
</tbody>
</table>

Processing possibilities in the Selection and Activation Editor (Object and Activation columns)

<table>
<thead>
<tr>
<th>In order to</th>
<th>... follow these steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>check your entries</td>
<td>Choose either ☐ or F6.</td>
</tr>
</tbody>
</table>
### Processing Possibilities in the Editor

<table>
<thead>
<tr>
<th>Operation</th>
<th>Steps</th>
</tr>
</thead>
</table>
| select a line for editing      | 1. Position the cursor on the line.  
                                 | 2. Choose either 🌕 or F2.                                               |
| insert a condition             | 1. Mark the cell or column.  
                                 | 2. Choose *Insert condition*.                                           |
| delete a condition             | 1. Mark the cell or column.  
                                 | 2. Choose *Delete condition*.                                           |
| delete a cell                  | 1. Position the cursor on the cell.  
                                 | 2. Choose CONTROL + F10.                                                |
| insert a cell                  | 1. Place the cursor on the cell, over which another cell is to be     
                                 | inserted  
                                 | 2. Choose either 🌕 or CTRL + F11.                                      |
| insert an open parenthesis/bracket | 1. Mark the corresponding column.  
                                 | 2. Choose the keyboard key (.).                                         |
| insert a close parenthesis/bracket | 1. Mark the corresponding column.  
                                 | 2. Choose the keyboard key ().                                           |
| delete an open parenthesis/bracket | 1. Mark the corresponding column.  
                                 | 2. Choose CONTROL + F7.                                                 |
| delete a close parenthesis/bracket | 1. Mark the corresponding column.  
                                 | 2. Choose CONTROL + F8.                                                 |
| insert the operator AND        | 1. Mark the column.  
                                 | 2. Choose the AND button.  
                                 | *(see: Changing Logical Links from Columns [Page 150]*)                 |
| insert the operator OR         | 1. Mark the column.  
                                 | 2. Choose the OR button.  
                                 | *(see: Changing Logical Links from Columns [Page 150]*)                 |

Cells positioned underneath one another are linked through the operator OR by default. Changes are not possible.

Comparisons between cells positioned next to one another are linked through AND through default; a change to OR is possible.

### Processing possibilities in the Quantity Editor (Quantity and Cost Columns)

<table>
<thead>
<tr>
<th>In order to:</th>
<th>... follow these steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>check the formula</td>
<td>Choose F6.</td>
</tr>
<tr>
<td>format the formula</td>
<td>Choose CONTROL + SHIFT F4.</td>
</tr>
</tbody>
</table>
### Processing Possibilities in the Editor

<table>
<thead>
<tr>
<th>Action</th>
<th>Instructions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display the documentation for an applied</td>
<td>1. Place the cursor on letters of the function.</td>
</tr>
<tr>
<td>function [Ext.].</td>
<td>2. Choose either <code>F1</code> or <code>SHIFT</code>+<code>F2</code>.</td>
</tr>
<tr>
<td>End the processing</td>
<td>Choose <code>SHIFT</code>+<code>F3</code>.</td>
</tr>
<tr>
<td>Select a function</td>
<td>Choose <code>SHIFT</code>+<code>F7</code>.</td>
</tr>
<tr>
<td>Change a flexible function</td>
<td>Choose <code>SHIFT</code>+<code>CONTROL</code>+<code>F2</code> (see Maintaining Flexible Functions [Page 158]).</td>
</tr>
<tr>
<td>Delete a flexible function</td>
<td>Choose <code>SHIFT</code>+<code>CONTROL</code>+<code>F3</code> (see Maintaining Flexible Functions [Page 158]).</td>
</tr>
</tbody>
</table>
Methods

Use

Methods are used in object determination and in activation. Methods are procedures for selecting objects or for defining a requirement for activation.

You can use methods to create logical conditions made up of multiple individual comparisons. You combine these by means of logical AND or logical OR statements. A comparison consists of two comparison operands and a comparison operator, such as $a > b$. The operands are either functions valid in the current environment or are constants. The method results in the values True or False for an activation and in the selection of an object or group of objects for an object selection.

For more information, see Object Determination [Page 128], or Activation [Page 139].

To define a method, you create different columns, each consisting of a header and at least one cell. The header serves as the first comparison operand and each cell as the sequential second operand. A column with three cells, therefore, represents three comparisons.

When the R/3 System valuates a method, the entries in the column cells are linked with a logical OR. The resulting quantity of a column is treated as a default value and is linked with the resulting quantities from other columns with a logical AND. You can change the default values if necessary.

For more information, see Changing Logical Conditions of Columns [Page 150].

Example

You want to create the following condition:

$$(x > 10 \text{ OR } x \in M) \text{ AND } x < 100$$

with $M = \{2; 20; 200\}$. Here, $x$ and $M$ represent functions from the current process template environment.

To do so, you create the following columns:

<table>
<thead>
<tr>
<th>1. Column</th>
<th>2. Column</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comparison operand 1: $x$</td>
<td>Comparison operand 1: $x$</td>
</tr>
<tr>
<td>1. Second row</td>
<td></td>
</tr>
<tr>
<td>Comparison operator: $&gt;$</td>
<td></td>
</tr>
<tr>
<td>Comparison operand 2: 10</td>
<td></td>
</tr>
<tr>
<td>2. Second row</td>
<td></td>
</tr>
<tr>
<td>Comparison operator: $\in$</td>
<td></td>
</tr>
<tr>
<td>Comparison operand 2: $M$</td>
<td></td>
</tr>
</tbody>
</table>

1. Second row

Comparison operator: $<$

Comparison operand 2: 100
See also:
Defining Methods [Page 148]
Flexible Functions [Page 154]
Functions in Environments [Page 103]
Defining Methods

Procedure

1. Double click on the cell of the object or Activation column of the template in which you want to define a method. This action takes you to the method editor for object selection/activation.

2. Choose Insert condition. A dialog window appears where you can define comparisons.


4. The type of function you chose will determine how you should proceed (the function type is not clear at the time you choose the function).

<table>
<thead>
<tr>
<th>Chosen function</th>
<th>Further Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>You chose a function without a parameter</td>
<td>Continue with step 5 (relational operator).</td>
</tr>
<tr>
<td>You chose a function with a parameter A new screen appears. The lines indicate the parameter type “normal” or “optional” (see the note in the right column and Function Parameters [Page 112], section “Parameter Type and Default Value”).</td>
<td>Enter a value by choosing F4, and then follow these steps: the values or functions available for selection is determined during the function definition in tab  Function Use [Page 113].</td>
</tr>
<tr>
<td></td>
<td>• If you select Fixed value, you can enter the value directly or you get a selection window where you can select specific master data.</td>
</tr>
<tr>
<td></td>
<td>• If you choose Functions/Variables, choose a function from the function tree.</td>
</tr>
<tr>
<td></td>
<td>You must enter something in the empty cells of column Value (parameter type “normal”). You can enter something (parameter type “optional”) in cells with apostrophes.</td>
</tr>
</tbody>
</table>

5. Select a comparison operator.

6. To maintain comparison operand 2, choose F4 and then carry out one of the following options:

7. Select a fixed value (a constant) or

8. Select a function and, if necessary, enter the desired parameters.

9. Choose Transfer (Copy).

10. To maintain other cells in the column, select the corresponding location in order to call up the dialog window for defining comparisons. (For information on the logical relationship between rows and columns, see Methods [Page 146].)

11. To maintain other columns, choose Column again.

12. To leave the editor, choose Back (your entries remain until you save the template).
In the selection editor, you defined a column for function “ProcessesInProcessGroup” and “SendProcessCategoryAttrib”. For function ProcessesInProcessGroup, you enter process group XYZ as parameter. Process type should be “01”: when the valuation event occurs, all business processes from process group XYZ with process type 01 to determine the activity quantity from this column.

In the Comparison Definition dialog window, you can change or display existing parameters.

For more information on the Editor, see Processing Possibilities in the Editor [Page 143].
Changing Logical Conditions Between Columns

Procedure
To change the logical condition definitions between the individual columns:

- Mark the affected column and allocate it a comparison operator, or a parenthesis, through which you mark one of the switches: AND, OR, (, or ).

<table>
<thead>
<tr>
<th>Operator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AND</td>
<td>The column will be bound with the following one through the logical AND.</td>
</tr>
<tr>
<td>OR</td>
<td>The column will be bound with the following one through the logical OR.</td>
</tr>
<tr>
<td>( = open parenthesis</td>
<td>The contents of the column will get an open parenthesis (sensible with more than two columns).</td>
</tr>
<tr>
<td>) = close parenthesis</td>
<td>The contents of the column will get a close parenthesis (sensible with more than two columns).</td>
</tr>
</tbody>
</table>
Formulas

Use

A formula is a logical or mathematical expression used to calculate numerical values, such as \( a + b \). You can use basic expressions to construct formulas of any degree of complexity required. In addition, you can use functions from the currently valid environment, or you can use constant values.

See also:

Activity Quantity Determination [Page 133] and Defining Formulas [Page 152].
Defining Formulas

Procedure

1. Double click on the cell in the quantity column of the template in which you want to define a formula. This action takes you to the activity quantity formula editor.

2. Enter a formula. Enter values directly or activate button Function [Ext.] and choose a function from the function tree.

3. The type of function you chose will determine how you should proceed (the function type is not clear at the time you choose the function).

<table>
<thead>
<tr>
<th>Chosen Function or Entry</th>
<th>Further Steps</th>
</tr>
</thead>
<tbody>
<tr>
<td>Enter the value directly or you have chosen a Function [Ext.] without parameters.</td>
<td>Proceed with step 4.</td>
</tr>
<tr>
<td>You chose a function that is assigned to a table. You can tell that this is the case if screen Definition of a flexible function appears.</td>
<td>Define a flexible function (see Defining Flexible Functions [Page 156] and Implementing the Function [Page 109]). After the definition, continue with step 4.</td>
</tr>
<tr>
<td>You chose a Function [Ext.] with parameters. An additional screen will appear.</td>
<td>Enter a value for each row for which you choose F4, and then choose Fixed value or Functions/Variables. The values or functions available for selection are determined during the function definition in tab Function Use [Page 113].</td>
</tr>
<tr>
<td>The lines indicate the parameter type “normal” or “optional” (see the note in the right column and Function Parameters [Page 112], section “Parameter Type and Default Value”).</td>
<td>• If you select Fixed value, you can enter the value directly or you get a selection window where you can select specific master data.</td>
</tr>
<tr>
<td></td>
<td>• If you choose Functions/Variables, choose a function from the function tree.</td>
</tr>
<tr>
<td></td>
<td>You must enter something in the empty cells of column Value (parameter type “normal”). You can enter something (parameter type “optional”) in cells with apostrophes.</td>
</tr>
</tbody>
</table>

4. To check if your entries can be properly processes, choose button Check or Formula → Check.

5. To format an entered formula, choose Formula → Format.

6. To get information for a chosen function, position the cursor on the function name and use the button Information about Function or choose Formula → Information about function.

7. To leave the editor, choose Back (your entries remain until you save the template).

For more information on the Editor, see Processing Possibilities in the Editor [Page 143].
Flexible Functions

Use
Flexible Functions [Ext.] broaden the methods for quantity calculations by making it possible to run evaluations using internal tables. For example, internal tables can contain business transactions for routings, components of a BOM or costing items. As the data accessed becomes more detailed, it is possible to evaluate several BOM components of production orders or material components of a network activities.

Flexible functions also allow you to further process the results after checking specific, user-defined requirements.

Flexible functions consist of the following components:

- table that is evaluated (set in flexible function)
- Conditions: for each routing activity or bill of materials item, the R/3 System checks whether the activity or item fulfills a condition defined by the user.
- Formula: if the condition is fulfilled, the R/3 System evaluates a formula defined by you (per entry in the internal table). The formula uses the data just located for the entry in question. The formula result is a numerical value.
- Calculation: all formula results of an evaluation run are then used in calculations. For example, the function can add the results, or it can calculate an average based on the results (set in the flexible function). The function name reflects the type of calculation involved: TOTAL_ - addition, MULTI_ - multiplication, AVERAGE_ - average.

If you do not define a condition, the formula evaluates all entries on the internal table.

Activities
You define the flexible functions in the quantity editor of the template. Choose a function with table assignment from the function tree, and enter the conditions and formulas.

For more information, see Defining Flexible Functions [Page 156].

Example
A flexible function (TOTAL_OF_BOM_ITEMS) evaluates a BOM. The system checks whether each BOM component fills the condition “item category = stock material (condition is entered by the user). If the condition is filled, the values are calculated per component through a formula entered by the user. The individual values are then added (set in the flexible function).
SAP AG Activity-Based Costing (CO-OM-ABC)

Flexible Functions

**TOTAL_OF_BOM_ITEMS**

<table>
<thead>
<tr>
<th>Material</th>
<th>Component 1 / Stock</th>
<th>Quantity = 2</th>
<th>✔</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Component 2 / Non-Stock</td>
<td>Quantity = 3</td>
<td>✗</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>Component 3 / Stock</td>
<td>Quantity = 5</td>
<td>✔</td>
<td>5</td>
</tr>
</tbody>
</table>

\[ \sum \]

= 7
Defining Flexible Functions

Prerequisites

To define a flexible function, you need a function with table assignments (see Implementing Functions [Page 109], section "Table for flexible functions").

Functions referencing internal structures (for example, BOM’s or routings) are colored in the function tree.

Procedure

1. Double click on the cell in the quantity column of the template in which you want to define a flexible function. This action takes you to the activity quantity formula editor.

2. Activate the switch Functions and choose a function referencing an internal structure (colored) using the function tree. The window Definition of Flexible Function appears.

3. Enter a name for the function.

4. If you want to enter a condition, choose Flexible function condition → Edit. This action takes you to the activation method editor.

5. Enter a condition. Proceed as if defining a method. For more information, see Defining Methods [Page 148].

6. Choose Back to return to the Definition of Flexible Function dialog window. Choose Flexible function formula → Edit. This action takes you to the activity quantity formula editor.

7. Enter a formula. Proceed as if defining a standard formula. For more information, see Defining Formulas [Page 152].

8. Choose Back to return to the Definition of Flexible Function dialog window. Choose Transfer. This action takes you to the activity quantity formula editor. There you can see the flexible function call up you created.

Never change the internal names of flexible functions beginning with a dollar sign ($). The R/3 System cannot find the function otherwise.

9. Choose Back to return to general template maintenance and save your entries there.

The call up of the flexible function appears in the quantity column of the item from which you entered the formula editor for activity quantities.

You define the selection using the flexible function TOTAL_ALL_BOM_ITEMS and enter the name F1.

One possible condition is "CHECK_MATERIAL_CLASS = TRUE", with the parameters CLASS TYPE = ‘001’, MATERIAL NUMBER = BOM_ITEM_COMPONENT and CLASS = ‘AB'.

As formula, you enter "BOM_ITEM_CONSUMPTION_REQUIRED × 1.1 ÷ ORDER_TOTAL_QUANTITY".

The R/3 System then selects all bills of material components where the materials belong to class AB in type 001. The formula generates a numeric value for each chosen component. The final result of the flexible function is the sum of all values.

See also:
- Maintaining Flexible Functions [Page 158]
- Example: Quantity Determination [Page 134]
Maintaining Flexible Functions

Procedure

You can change or delete flexible functions subsequently.

- Change:
  1. In the quantity editor, position the cursor on the internal name ($-indicator) of the flexible function.
  2. Choose Goto → Flexible function → Change.
     The dialog window Definition of Flexible Function appears.
  3. Change the function using the same functions as in function definition.
     For more information, see Defining Flexible Functions [Page 156].

- Deleting:
  1. In the formula editor, select the internal name of the function.
  2. Choose Goto → Flexible function → Delete.
     The R/3 System deletes the flexible function. The flexible function call up still exists in the formula editor.
  3. In the formula editor, delete the function call up by choosing Delete row, for example.
Calculation Rows

Use

Calculation rows in the template create subtotals that you can use in multiple locations. You can define formulas and methods in calculation rows. You have access to any items in formulas via the activity quantity column and the activation column, and access to any items in methods via the activation column.

You use three business processes in your template where the process quantity results from the formula "BOM_ITEM_CONSUMPTION_REQUIRED × 1.1". You define this formula in a calculation row and apply it to all three business processes.

Use plan values only in plan columns, but you may use actual values in both plan and actual columns.

See also:
Defining Calculation Rows [Page 160]
Displaying Calculation Rows [Page 161]
Defining Calculation Rows

1. For the type of the process template item, select Calculation row.
2. Enter a name.
3. Enter a name in the Object column.
4. Define a formula.
   For more information, see Defining Formulas [Page 152].
5. Define a method.
   For more information, see Defining Methods [Page 148].
6. Save your entries.

You can define calculation rows in any location in the template. In order to keep overviews simple, however, SAP recommends placing all calculation rows at the beginning of the template.

See also:
Displaying Calculation Rows [Page 161]
Calling Up Calculation Rows

Procedure

You can call up calculation rows for activity quantity determination or for activation.

- **Quantity Determination [Page 133]:**
  1. Use the formula editor to select the function [Ext.] RESULT_OF_CALCULATION_ROW and enter the name of the calculation row that you wish to call up as the parameter.
  2. Define the remaining formula.

- **Activation [Page 139]:**
  1. Use the formula editor to select RESULT_OF_CALCULATION_ROW as comparison operand 1 and enter the name of the calculation row that you wish to call up as the parameter.
  2. Select = or Not equal as the operator.
  3. Select True or False as the value for comparison operand 2.

The operator = activates the value of the item when the valuation event occurs if the values of the calculation row and comparison operand 2 are the same. The operator Not equal gives the opposite result.

**Result of Method for Operator “=”**

<table>
<thead>
<tr>
<th>Comparison Operand 2</th>
<th>Result of Calculation Row</th>
<th>Item Activation</th>
</tr>
</thead>
<tbody>
<tr>
<td>True</td>
<td>True</td>
<td>Active</td>
</tr>
<tr>
<td>True</td>
<td>False</td>
<td>Inactive</td>
</tr>
<tr>
<td>False</td>
<td>True</td>
<td>Inactive</td>
</tr>
<tr>
<td>False</td>
<td>False</td>
<td>Active</td>
</tr>
</tbody>
</table>

You entered the value **False** for comparison operand 2. If the value of the calculation row at the time of the valuation event is also **False**, the result of the method is **Active**; If the calculation row returns the value **True**, the result of the method is **Inactive**.

**See also:**

[Defining Formulas [Page 152]](#) and [Defining Methods [Page 148]](#)
Template Evaluation

Use

You have several tools available when you use a template. You can use these tools to view the results of the allocations or the building/structure of the applied templates.

Display run results: template allocation [Page 163]: the system produces this automatically after executing a template allocation. It contains the sender objects (for example, processes), allocated to the respective receiver objects, with their overhead costs (quantity and value).

Template Trace/Basic screen [Page 164]: this screen shows the results of the template trace for every cell of the respective template.

Template Trace/Details [Page 165]: you call this screen up for each template cell. Here, you see how the result of the cell was reached.

Activities

The results screen automatically appears after the system successfully executes a template allocation.

You can activate the template trace:

- From a results display
- When you test a created template in environment 001
- By tracing the process allocation structure [Ext.]
- When you display calculation overhead costs

You can view the details from the template trace.
Display Run Results: Template Allocations

Use

Displayed are the receiver and sender objects of the allocation, the allocated quantities and costs. You can use the following functions in the list:

Editing functions

<table>
<thead>
<tr>
<th>Function</th>
<th>Scope of functions/Selection</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Period screen</strong></td>
<td>Totals of all period values are shown after calling it up.</td>
</tr>
<tr>
<td></td>
<td>Select a row and choose <em>Period screen</em> to view the list screen for allocation for all selected periods.</td>
</tr>
<tr>
<td></td>
<td>The period screen offers the same functions as in totals displays for the periods.</td>
</tr>
<tr>
<td></td>
<td>Choose 🗄️ <em>Period screen</em> or Goto → Period screen.</td>
</tr>
<tr>
<td><strong>Master data</strong></td>
<td>Displays master data associated with the selected object.</td>
</tr>
<tr>
<td></td>
<td>Choose 🗄️ <em>Master data</em> or Goto → Master data display.</td>
</tr>
<tr>
<td><strong>Messages</strong></td>
<td>Displays messages dealing with errors, warnings, or other information issued during allocation.</td>
</tr>
<tr>
<td></td>
<td>Choose 📣 <em>Messages</em> or Goto → Messages.</td>
</tr>
<tr>
<td><strong>Template Evaluation</strong></td>
<td>After clicking on a row or line, you can display the structure of the template belonging to it as well as the individual Template Functions [Ext.] with function Template Trace [Page 164].</td>
</tr>
<tr>
<td></td>
<td>Choose Goto → Template trace</td>
</tr>
</tbody>
</table>

For more information on working with list editing see ABAP List Viewer (ALV) Grid [Ext.].
Template Trace: Basic Screen

Use
The template trace shows the items (lines) of the templates and the results of the template trace or the default of each cell (column contents of an item).

Activities

Items
Depending on where you call up the template trace, you will see:

- The template, related to the allocation or the calculation, and its items
- The template, called up for testing, and its items
- The template, assigned to a process, and its items

Results/Defaults
Each item (line) of a template has several columns: for example, type, description, object, and more. To see the contents of a template cell, expand the corresponding node. The cells display which results the template evaluation had, or which settings were applicable for the column.

In order to reach the Template Trace: Details [Page 165], position the cursor on a cell and choose Edit → Choose.
Template Trace: Details

Use
This function displays the following information for each cell of the chosen template or for each row of the template trace:

- The formula or method used
- The functions [Ext.] used
- The results of the template evaluation
- Which field content is accessed

Through the details, you can view the results of the template evaluation, how these were reached and how the template columns were built.

Prerequisites
You have executed a template trace. You can do this in Structure Breakdown [Ext.] or when the Results [Page 163] of an allocation are displayed.

Features
The application toolbar of the detailed screen shows two buttons with which you can display flexible functions for activation or quantity columns. With the arrow button you set the desired display period (in case you want to make the analysis for several periods).

The system displays four fields with information regarding the chosen columns, periods and reference objects.

The main section of the screen shows four display areas: Formula/Methods, Results, Function list, and Field contents.

Details

<table>
<thead>
<tr>
<th>Field or Display</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Column</td>
<td>Chosen columns of the template</td>
</tr>
<tr>
<td>Reference object</td>
<td>Allocation object (displayed only with quantity column)</td>
</tr>
<tr>
<td>Period trace</td>
<td>Possible periods, for which data can be displayed</td>
</tr>
<tr>
<td>Actual periods</td>
<td>To display chosen periods</td>
</tr>
<tr>
<td>Formula/Method</td>
<td>Displays the formula (with quantity column) or method (with object and activation column) applied. Names of the applied functions [Ext.] are shown. Uses the template columns of a function with parameters; the function name appears in short form, such as F1, F2, and so on. The function and its parameters are listed in the Function list</td>
</tr>
</tbody>
</table>
Result

The results of the template evaluation are shown here. If you display the details in the form of an expanded structure (where the structure of the column is shown and no allocations occur), you will see the entered base values.

Function list

Applied functions [Ext.] and their parameters are shown here as well as the interim results of the allocations.

Field content:

Displays the field contents for accessed functions.

Buttons

Activate Flexible

Use this button to construct a cell with the aid of a flexible function. Clicking here only displays the data of the flexible function. Shown in Formula/Method are the parts of the flexible function. The Function List parameters in these parts (with the exception of the results run) are accessed by the flexible function.

Buttons / Flexible Function

Quantity

Choose the period for which you want to see data (in case you want analyses for several periods).

Activities

- To change the displayed period (in order to analyze several periods) go to screen Template Trace: Details and click on the arrow button in the button row.
- To display flexible functions, click on the button with the same name.

More information on Template Traces can be found in the following documents:

- Example: Object Determination [Page 129]
- Example: Quantity Determination [Page 134]
- Example: Activation [Page 140]
Business Process Planning

Business process planning is handled differently in almost every organization. The type of industry, organizational structures, and responsibilities are factors affecting planning.

In the Activity-Based Costing component (CO-OM-ABC), you can perform the entire planning process on-line. On-line planning provides immediate, real-time results that you can analyze with the information system. The following planning tools in the Activity-Based Costing component support interactive business process planning:

- Planning is based on pre-defined planning layouts in the standard R/3 System (see Support Techniques for Manual Process Planning [Page 190]), and saved under planner profiles (see Planner Profiles [Page 202] and the Implementation Guide (IMG) under Activity-Based Costing → Planning → Manual Planning → Maintaining User Defined Planner Profiles [Ext.]). Planning layouts are data entry screens for plan transactions. The layouts are divided into planning areas such as cost element or activity type planning. You can create your own planning layouts using Report Painter if the standard layouts do not meet your requirements. For more information, see the Implementation Guide (IMG) under Activity-Based Costing → Planning → Manual Planning ® Creating User Defined Planning Layouts [Ext.].

- The planning process is not a one-time event, but an iterative process that usually goes through several cycles. This is reflected in plan data storage: The R/3 System allows parallel storage of alternate versions.
Process Planning Scope

Purpose

In general, there is no single sequence to follow in business process planning. However, you should keep certain rules in mind. The following is our recommended procedure, but it is not meant to be binding.

Before you call up the initial planning screen, select a planner profile. You use planner profiles to control the planning process. The SAP System includes multiple standard planner profiles. For more information, see Planner Profiles [Page 202] and the Implementation Guide (IMG) for the Activity-Based Costing component (CO-ABC) under Planning → Manual Planning Aids → Maintaining User Defined Planner Profiles [Ext.] .

Process Flow

Before you call up the initial planning screen, select a planner profile. For more information, see Execution of Manual Process Planning [Page 183].

Statistical Key Figure Planning

We suggest you begin with statistical key figure planning because you can use them to determine plan activity and capacity, as well as use them as tracing factors in plan distribution and assessment.

You can also carry out actual distribution, assessment, or indirect activity allocation on the basis of plan statistical key figures. For more information, see Execute Statistical Key Figure Planning [Page 182].

Activity Input Planning

Business process planning is based generally on cost center planning, along with activity type planning and tracing factor planning, because the plan activity quantities and capacities influence the plan cost volume for the business processes. All cost center costs relate to the activity types (as tracing factors) and lead to the determination of price for each activity type. Allocation for activity types results in the crediting of the cost center based on the sources of the costs and the corresponding debiting of the business process. This requires price calculation or manual price determination for the plan activities after closing cost center planning. For more information, see Planning Process Inputs [Page 176].

Primary Cost Planning

Planning primary costs follows activity and capacity planning because the activity volumes must be taken into account here.

Manual Primary Cost Planning

In primary cost planning, you schedule the main costs (meaning those arising from external sources) for the activity quantities and capacities. You enter these on-line by cost object or cost element. Plan distribution is the last activity undertaken in primary cost planning. Distribution in plan is normally analog to distribution in actual. The primary costs are entered on “collection cost centers” and distributed on a periodic basis according to pre-defined keys. You plan these primary costs (such as telephone, heating, or rent costs) on the collection cost centers for the
entire fiscal year and, with plan distribution, assign them to the individual business processes or cost objects in planning.

Before you carry out plan distribution, you must define distribution rules. For the most part, they are identical to the distribution rules defined in actual.

**Secondary Cost Planning**

After finishing primary cost planning, you can carry out secondary cost planning. It can be value or quantity based, and carried out manually or automatically.

**Manual Secondary Cost Planning**

In secondary cost planning, you schedule the subordinate costs (meaning those arising from internal sources) in the form of activity inputs. You can:

- Plan activity inputs for business processes
- Plan activity inputs for cost objects

When you plan activity types, the SAP System creates an automatic, preliminary credit posting on the sender cost center or business process if you plan your prices manually (see also Template Allocation in Plan: Processes/Cost Centers [Page 259]). This credit posting appears in the activity type master data under the allocation (meaning the secondary) cost element. If the SAP System calculates prices iteratively, it valuates the activity type only after determining the price and creating a preliminary credit posting. For each activity input, the System reduces the preliminary credit posting by the amount of the accepted activity as valuated with the price from the activity type.

You plan 10,000 hours of the activity “Lathing” on cost center 4210. The activity unit has a price of 45 USD and is allocated under allocation cost element 620.000, “Internal Activity Allocation, Production”. This results in a credit posting of 450,000 USD on cost center 4210 under cost element 620.000. If a business process thereupon accepts an activity input of 100 hours, the preliminary credit posting is reduced by 100 \* 45 = 4500 USD.

**Automatic Secondary Cost Planning**

In automatic secondary cost planning, you can enter the secondary costs on a value basis in the form of plan assessment, or on a quantity basis in the form of indirect activity allocation, for allocations from cost centers to business processes.

**Cost Center Assessment**

You can use plan assessment for value-based planning of secondary costs. Assessment allocates totals of primary (or primary and secondary) costs from cost centers to business processes or cost objects according to clearly-defined keys.

Before you carry out plan assessment, you must define assessment rules. For the most part, they are identical to the assessment rules defined in actual. You can start plan assessment only after you complete rule definition. (See Assessment (Cost Centers, Business Processes) [Page 369])
Process Planning Scope

Indirect Activity Allocation to Business Processes

Indirect activity allocation is a tool for automatically assigning plan and actual activities to business processes. Unlike manual planning or actual activity allocation, you define keys to allocate the activities. (See Indirect Activity Allocation [Page 370].)

Output Planning

You have multiple options for output planning:

- Manual output planning with planner profiles and planning layouts (see Planning Process Outputs (Quantities and Prices) [Page 178]).
- Transferring planning requirements from sales and production planning (SOP), where you accept long-term planning or SOP planning values with a template using a SOP environment (see Transfers of Scheduled Activities [Page 229]).
- Template Allocation in Plan: Processes/Cost Centers [Page 259]: this method of output planning for business processes is tied to a template.
- Using process assessment for cost centers and business processes (see Assessment (Cost Centers, Business Processes) [Page 369]).

Plan Reconciliation

Plan reconciliation takes the various internal plans and coordinates and adjusts their activity exchanges. In the case of business processes, the plan activity quantity is reconciled with the scheduled activities of the receiver processes. (See Plan Reconciliation [Page 240].)

Plan Price Calculation

After closing the planning activities, you can start iterative price calculation. All previous planning transactions form the basis of this activity. The R/3 System calculates the prices iteratively for the activity types by cost center by dividing the plan costs by the plan activity. These prices form the basis of valuation of the activity relationships among the business processes. Only then will the correct allocation of costs to business processes be guaranteed.

For more information see Planned Activity Price Calculation [Page 275] and Actual Activity Price Calculation [Page 419].

Process Assessment

Planning ends in the Activity-Based Costing component with the automatic allocation of overhead between business processes and between business processes and cost objects. This allocation is also applicable to both plan and actual. It is similar to cost center assessment.

For more information, see Period-Based Allocations [Page 342].

Plan Data Transfer from Other Components

Integrated planning supports data transfers from the following components to the Cost Center Accounting component (CO-OM-CCA) to be used in cost center planning:

- Planning requirements from the Production Planning and Control component (PP) (see Transfers of Scheduled Activities [Page 229]).
- Statistical key figures from the Logistics Information System (LIS) (see Transfers of Statistical Key Figures from the Logistics Information System [Page 388]).
- Organization management (see: Workflow-Integration Business Process [Page 235]).
See also:
Line Items and Integrated Planning

Use

To record line item documents for each change in plan data, activate the *Integrated planning* indicator, which automatically activates line items.

The *Integrated planning* indicator is found in various components, including Cost Center Accounting (CO-OM-CCA), Activity-Based Costing (CO-OM-ABC), and Overhead Orders (CO-OM-OPA). Changing the indicator in one component affects all other components.
Activating Line Item and Planning Integration

Procedure

You have options for setting the *Integrated planning* indicator:

- In version maintenance as part of fiscal-year-based parameters

  Make the settings in the Implementation Guide (IMG) under *Activity-Based Costing → Planning → Maintain versions [Ext.]* by activating the *Integrated planning* indicator in the fiscal year settings.

  You can set the *Integrated planning* indicator in version maintenance only before posting plan data in the R/3 System.

- In planning

  If plan data exists, set the *Integrated planning* indicator in the Activity-Based Costing initial screen by choosing *Planning → Planning aids → Activate integration*.

  The function has the following effects:

  - All existing plan data records for controlling area/version/fiscal year are updated as line items. The R/3 System transfers the line items to the AC interface.
  - The R/3 System transfers any existing line items from plan allocation (assessment, distribution, or accrual calculation) to the AC interface.

  You can deactivate integrated planning only if no plan data exists.

  To avoid system performance problems, schedule the processing run in the background for periods of low system use. To do so, set the *Background processing* indicator.
Checklist for Planning in the Activity-Based Costing Component

Distribution keys
Do you need to create your own distribution keys?
- Create your own distribution keys if necessary.

Planner Profiles and Planning Layouts
Do the planner profiles and planning layouts meet your planning requirements?
- Check the planner profiles and planning layouts in the standard R/3 System and define new ones if necessary (for more information, see the Implementation Guide (IMG) under Activity-Based Costing → Planning → Manual Planning [Ext.]).

Versions
Do you want to create your own versions for alternate plans?
- If necessary, create new versions. For more information, see the IMG under Activity-Based Costing → Basic Settings → Maintaining Versions [Ext.].

Do you need to copy existing versions?
- Copying must be authorized in the versions to be copied.

Do you want to record changes in planning?
- Integrated planning must be active for the affected versions. If plan values do not exist, activate line items and their transfer to the AC interface by setting the Integrated planning indicator in the relevant version. If plan values exist, choose Planning → Planning aids → Activate integration (for more information, see Activating Line Items and Integrated Planning [Page 173]).
Manual Process Planning

Purpose

Manual process planning is used in direct planning of the business process inputs (activity inputs) as well as the business process outputs (quantities and prices). This requires, however, that the corresponding quantities on the input and output sides are known quantities. Manual planning is useful for scenarios in which you can determine these quantities without too much effort. Manual planning in actual is equivalent to directly confirming the corresponding quantities from activities and processes.

Constraints

For those cases where measuring the relevant quantities requires unacceptable effort, we recommend indirect planning approaches such as:

- Template Allocation in Plan: Processes/Cost Centers [Page 259]
- Indirect Activity Allocation [Page 370]
- Scheduled Activity Transfer [Page 229]
Planning Process Input

Use
With input planning of business processes, you can not only enter the records from activities or other processes, but also portions of fixed and variable primary cost and quantities through the corresponding cost elements.

You can plan:
- Cost Elements (Primary Costs [Ext.])
- Activity Inputs (Secondary Costs [Ext.])
- Process Inputs (Secondary Costs)

Prerequisites
- The output planning of the sender must have been carried out for the activity and process inputs
- Before executing the manual planning, choose a suitable planner profile. Standard planner profiles SAPABC, SAPALL, SAP101, and SAP102 include planning layouts relevant to business process planning. You can also create your own planning layouts and store them in a custom planner profile.

For more information, see: Standard Planning Layouts [Page 205]; to create planner profiles in the Implementation Guide (IMG) for Activity-Based Costing under Planning → Manual planning → Maintain User Defined Planner Profiles. [Ext.]

Features
- Cost elements: you can plan fixed and variable costs, as well as quantities. For the planning layout, use 1-D01.
- Activity inputs (from cost centers/activity types): you can plan fixed and variable quantities. For the planning layout, use 1-D02.
- Process inputs (from other business processes): you can plan fixed and variable quantities. For the planning layout, use 1-D02P.

Activities
Carry out activity input planning in the component of the object that is to receive the activity or activities:
- To create activity inputs from cost centers to business processes, choose Accounting → Controlling → Cost center accounting → Planning → Costs and Activity Inputs → Change.
- To create activity inputs from cost centers to business processes, choose Accounting → Controlling → Processes → Planning → Activity/process inputs → Change.
- For the activity input planning Business process → Cost object choose the following path Accounting → Controlling → Product cost controlling → Cost object controlling → Intangible goods and services → Planning → Cost object - Periodic → Costs/Activity Inputs → Change.
For specific procedures, see: CheckList for Executing Process Planning [Page 174] and Executing Planning [Page 187]; for the sequence of entry screens, see: Executing Manual Process Planning [Page 183].
Planning Process Output (Quantities and Prices)

Procedure
The manual planning of the process output (process quantities and prices) assumes that the corresponding quantity for the input or output side is known. Manual planning is useful for scenarios in which you can determine these quantities without too much effort. Manual planning in actual is equivalent to directly confirming the corresponding quantities from activities and processes.

You can plan:
- Quantities and prices
- Control indicators

Prerequisites
Before executing the manual planning, choose a suitable planner profile. Standard planner profiles SAPABC, SAPALL, SAP101, and SAP102 include planning layouts relevant to business process planning. You can also create your own planning layouts and store them in a custom planner profile.

For more information, see: Standard Planning Layouts [Page 205]; to create planner profiles in the Implementation Guide (IMG) for Activity-Based Costing under Planning → Manual planning → User Defined Planner Profiles. [Ext.]

Integration
In Activity-Based Costing you can clearly define the business processes with the Plan activity quantity, Capacity, Output production quantity, Price and Equivalency figure.

The price can either be:
- manually set, or
- iteratively set; that is, determined by the SAP System with regard to all activity relationships between business processes.

Moreover, you can overwrite this data with the suggested value of Allocation category [Ext.] from the business process master data. The SAP System saves the new allocation category in the fiscal year and the version in which you are currently planning.

Business process planning and plan price determination

If you want to execute an iterative price determination, you must correctly set the price indicator in the planning of your process quantity. To do this, you must first choose a planning layout for the business process planning; it contains the attribute Price indicator as entry field. This is possible with the standard planning layout 1-102 in standard planner profile SAP101 (see: Standard Planning Layouts [Ext.]). The suggested values for the price indicator, which come from the business process master data, is set in the standard system so that it determines a price iteratively based on the plan activity (see Price Indicators [Ext.]).
You can also set other prices manually per business process. This case arises if you want to record prices in the calculation of cost records; prices referred to here are those preset for an enterprise, and not influenced by the internal activity allocations. If you set the price indicator to “1” (price determination based the plan activity), the system will overwrite the price you entered when the price determination is executed. It is possible to use a temporary price for allocation, and later acquire a more exact price through the price determination. For more information on price determination, see Plan Price Determination [Ext.].

Business process planning and fixed cost fixed distribution

You can use the Fixed Cost [Page 412] when you execute a standard cost based on marginal costs, but you do not want to relate the fixed costs to the operation proportionally in the allocation record. In the business process planning you can overwrite the default value with the indicator predistributed fixed costs from the business process master record, in case you want to use this attribute in your planning layout. This indicator controls whether the fixed costs for the business processes, that consume these activities, are to be pre-distributed or not.

Features

With business process planning, the SAP System generates a credit record for the affected business process (unspecific credit); the credit record is posted with a secondary cost element. This record is calculated based on the planned process quantity and the respective price. The default value of this cost element is set in the business process master record, and can be overwritten with each new business process. The unspecific credit ensures that the sender business process is completely credited, independent of the planned activity input in plan. With each activity input, the system reduces the unspecific credit record for the sender regarding the consumed activity quantity.

The values Plan activity quantity and Capacity are used for iterative price calculations, and can be analyzed in the information system. Along with the above-mentioned values, you also plan an equivalence number for each business process. Equivalence numbers are weighting factors that are called up for the distribution of activity independent planned costs in the business process. Likewise, the activity independent planned costs that are distributed go through the iterative price calculation. For more on Equivalence numbers, see Plan Activity Price Calculation [Ext.]

You can define equivalence numbers per period. The overview screen of the business process planning shows average values.

You can vary the equivalence numbers in the following way:

- the same equivalence number in all periods
  - enter the distribution key 1 in the overview screen (even distribution) for the equivalence number for subsequent changes, you must simply correct the equivalence number in the overview screen

- different equivalence numbers in the individual periods
  - go to the period screen and enter the individual values for the equivalence numbers per period

Activities

For output planning, you have three possibilities in addition to the manual planning:

- Transferring planning requirements from sales and production planning (SOP), where you accept long-term planning or SOP planning values with a template using a SOP environment (see Transfers of Scheduled Activities [Page 229]).


- Using process assessment for cost centers and business processes (see Assessment (Cost Centers, Business Processes) [Page 369]).
Statistical Key Figure Planning

Use
You can plan statistical key figures for the following purposes:

- To determine business key figures on business processes
- To use as a receiver base (key) for assessment and distribution

Prerequisites
You must activate and use the Logistics Information System (LIS).

Features
You can carry out planning as follows:

- Activity-independent on a business process, business process group, or all business processes in a controlling area
- Activity-dependent on a business process, business process group, or all business processes in a controlling area based on an activity type, activity type group, or all activity types
Carrying Out Statistical Key Figure Planning

Procedure

To plan statistical key figures:

1. Select an appropriate planner profile.

Standard planner profiles SAPABC, SAP101, and SAP102 include planning layouts relevant to business process planning. You can also create your own planning layouts and store them in a custom planner profile.

For more information, see Standard Planning Layouts [Page 205].

For more information on creating a planner profile, see the Implementation Guide (IMG) under Activity-Based Costing and use path Planning → Manual Planning → Maintain User-Defined Planner Profiles [Ext.].

2. In the Activity-Based Costing initial screen, choose Planning → Statistical key figures → Change

This action takes you to the initial screen for planning. The planner profile you selected determines the appearance and organization of the screen.

See also:

Execution of Manual Process Planning [Page 183]
Execution of Manual Process Planning

Use
In planning, you can use the following functions:

Features
Planning
- → Set planner profile
- → Activity/process inputs
- → Quantities/prices
- Statistical key figures
- → Create/change
Execution of Manual Process Planning

### Initial Screen

Before you call up the initial planning screen, select a planner profile. (see Planner Profiles [Page 202])

To select the planner profile, choose Set planner profile. The profile is set in user parameter PPP, used by the R/3 System when you call up planning.

The initial screen displays the planning layout for the selected planning area. (see Planning Layouts [Page 204])
If you activate the *Free* indicator in the initial screen, you can decide whether plan records appear on the overview screen, whether you can change them, and whether you can enter and insert new characteristic values in the rows.

If you activate the *Form-based* indicator, all planning objects selected in the initial screen appear in the overview screen even if no plan values are available. In each planning sitting, the same characteristic value structure appears. You cannot enter any new characteristic values.

**Overview Screen**

The overview screen layout depends on the planner profile and related planning layouts. You can change individual settings, such as scaling, during planning.

Choose *Scaling* to specify whether planning should be entered or displayed in its original value or scaled, for instance, as a power of ten.

You plan costs of $100,000 on the business process *Material procurement*.

If you select scaling factor 3, the amount is displayed in thousands of dollars: 100 T$. To increase plan costs to $150,000, you must enter 150 T$.

You can select any factors and change the plan value display. In addition, you can set the number of decimal places. The number of places is dependent on the scaling factor. An invalid combination results in an error message.

Choose *Goto → Functions or Edit → Functions* to select a specific combination (such as cost center/cost element), branch to the period screen, or write a long text for planning with the SAP word processing program SAPScript.

If you want to process combinations of groups in planning, it may be necessary at times to select a given combination. To edit group combinations, choose *Goto → Next combination/Previous combination* to call up a specific combination.

**Period Screen**

In the period screen, you have the option of displaying or changing the period-based distribution of your plan values. You can select the period screen from the planning overview screen or from the list screen of detailed planning.

- Select an entry in the planning overview screen and choose *Goto → Period screen*.
- In the list screen, choose *Detail screen* for detailed planning.

**Help with Errors**

If you receive an error message during business process planning, choose *Extras → Error log* for more detailed information on the error.
## Execution of Manual Process Planning

<table>
<thead>
<tr>
<th>Effects</th>
<th>Detailed documentation: Instructions on how to solve the error, master data used, integrated planning used</th>
<th>List of selected groups (business process group, cost center group, and so on)</th>
</tr>
</thead>
</table>

Executing Planning

Prerequisites

To access the initial screen for planning, you need to select a planner profile (see also: Planer Profiles [Ext.]), or ensure that a planner profile is entered in the PPP user parameters. You can also overwrite this planner profile before you enter planning and save it in your user parameters.

Procedure

1. Set a planner profile in the planning menu for your component. Choose:
   
   Planning → Set planner profile

2. Enter a planner profile.

3. Choose Save user master record.

   In the subsequent planning sessions, the SAP system selects the last planner profile saved in the user master record.

Initial screen

1. Enter the characteristics of the characteristic groups for which you want to execute planning, for example, cost center, cost element, activity type or the given group.

2. Activate Free or Form-based.

   If you select Free, the SAP system lists in the overview screen the planned records to be changed. The SAP system displays the header characteristics completely, even if no planning values exist. You can also enter new characteristic values and add them to the rows.

   If you select Form-based, the SAP system lists in the overview screen all planning objects with valid master records selected in the initial screen, even if no planning values exist. The SAP system displays the same characteristic value structure in each planning session. You cannot enter any new characteristic values. The following section contains an example of the free and form-based selection:

   - You plan activity-independent primary costs for all cost centers of cost center group “Production”, S04100, using, for example, cost element 400000. Enter cost center group S04100 in the initial screen. The group contains cost centers 4110, 4120, 4130 and 4140. You have not yet planned any costs for cost center 4110.

   - If you select Free, the SAP system displays cost centers 4120, 4130, and 4140. The system does not offer you cost center 4110 for changes. You can include the cost center still to be planned in the rows.

   - If you select Form-based, the SAP system displays all cost centers of the group for changes and entries. However, it is not possible in this case to add further cost centers in the rows.
Executing Planning

To check the entry data, the system provides you with error analysis help under Extras (see also: Manual Planning Aids [Ext.]).

3. Choose Execute.

Overview screen

In the overview screen, proceed as follows:

1. Enter planning values for the characteristic combinations you have selected.
2. To do this, use the planning aids provided by the SAP system (see: Planning Functions [Page 189]).
3. Save your entries.

Period screens

To branch to the period screen, proceed as follows:

1. In the Planning: Overview Screen, position your cursor on an entry and choose Period screen.
2. Adopt the default values offered by the SAP system or enter your own period values.

You can also use a distribution key [Ext.] in the overview screen other than that offered by the SAP system. This enables you to carry out a different distribution of the planning values across the periods.

Result

You can now view your planning values in the information system and compare them with plan or actual values from other areas or periods (see Important Standard Reports in Cost Center Accounting [Ext.]).
Planning Functions

Use
Planning contains functions that you can use in the following areas:

- Entering and processing plan data
- Navigating within planning (between planning layout and combinations)
- Settings for planning
- Error analysis
Support Techniques for Manual Process Planning

Use

The Activity-Based Costing component (CO-OM-ABC) offers a wide range of planning techniques. The techniques you use depend on your organization’s requirements and approaches to the following questions: They can vary from organization to organization.

Features

This section provides answers to the following questions:

- Which cost structures can be expected in the planning period?
  If seasonal fluctuations are expected, they can be planned with flexible distribution keys.

- How are the planning screens arranged?
  You must adjust the planning screens (the planning layouts) to match your planning requirements. You must decide whether the standard R/3 System planning layouts suffice and, if necessary, create custom layouts. In this way you can set up your entry screens exactly as you need them for your planning purposes.

See also:

Implementation Guide (IMG) of Activity-Based Costing under User-Defined Planning Layouts [Ext.].
Planning Screen Organization [Page 201].
Currencies in Planning

Use

Currencies can be updated for both plan and actual values. The use of more than one currency must be allowed in the controlling area.

You can plan in the following currencies:

- **Controlling area currency [Ext.]**
- **Object currency [Ext.]**
- **Transaction currency [Ext.]**
- Currency of the user’s choice

The controlling area is always used, regardless of whether you have selected *All currencies* in the control indicators for your controlling area.

You specify the object currency in the master data of the given planning object, for example, a cost center. The object and transaction currencies are only active if you have selected *All currencies* in the controlling area for the relevant fiscal year.

You can select any permitted currency as the transaction currency. The system always derives the value date and the exchange rate type from the fiscal-year dependent data of the version.

**User-Definable Currency**

In addition to planning in controlling area, object or transaction currencies, you can also plan in a currency of your choice. You can also translate your plan values, for example, into euro. You can include the user-definable currency in additional columns or rows of the planning layout for cost element planning. You can then display or maintain this currency.

If you have made a change to the exchange rates between two planning meetings for activity input (for example, due to the EURO changeover), this may cause large differences between the values in the object currency for the receiver, and for the sender, even though both have the same currency.

This is due to the fact that the system does not revaluate when the exchange rates change.

To avoid data inconsistencies, you can create a new version as a buffer, and copy your prices into it.

Then copy the prices back to your original version.

You need to copy the objects as well as the prices for orders and projects that are not plan integrated.

The following key figures are available for plan values in user-definable currency:

- Planned fixed costs
- Planned variable costs
Currencies in Planning

- Planned total costs
- Actual total costs

If the appropriate rows or columns exist in the planning layout, you can set your user-definable currency in the initial screen for manual planning. Choose Settings -> User-definable currency.

If you use the user-definable currency, you can enter the following attributes:

- Currency
- Exchange rate type
- Value date for the translation

If you do not specify a currency, the system uses the controlling area currency. If you do not enter an exchange rate type, the SAP R/3 System derives the exchange rate type and the value date from the fiscal-year dependent version parameters.

You can make default settings for your user-definable currency in Customizing for Cost Center Accounting or Activity-Based Costing. Choose Planning -> Manual Planning -> Create User-Defined Planner Profiles.

You can also define the relevant Set/Get parameters as user parameters in your user master data.

The SAP R/3 System translates into the user-definable currency, or from the user-definable currency into controlling area currency, regardless of whether you have selected All currencies in the control indicators for the controlling area.

The SAP R/3 System does not write the user-definable currency to the database when postings occur.

Currencies in Planning Layouts

If you do not use the transaction currency as a characteristic in your planning layout:

- The SAP R/3 System automatically uses the object currency for newly created planning records
- As of Release 4.0, the system updates the accumulated plan and actual costs in controlling area and object currencies across all data records, even if the costs were updated under different transaction currencies.

If you change these accumulated costs, the system updates under the transaction currency corresponding to the object currency, if such a record already existed. Otherwise, the update is executed using the first transaction currency that the system finds in the database.

You can only include the key figure “Actual costs in transaction currency” in those planning layouts that use the characteristic “Transaction currency”.

If you plan in the transaction currency, the system automatically translates the plan data to cost center and controlling area currency during the planning process.

When planning in different currencies, the planning results are always stored in transaction currency, object currency, and controlling area currency.
You plan raw materials on cost center 4210 in Japanese Yen JPY (the raw materials come from Japan, and are invoiced in Yen). However, you plan personnel costs in US dollars USD.

The following situations might exist:

1. You want to plan in USD only
   Enter USD as the transaction currency.

2. You want to plan in JPY only.
   Enter JPY as transaction currency.

3. You want to plan in both currencies.
   Enter an asterisk (*).
Distribution Keys

Use

During planning, the SAP R/3 System interprets the values you enter as overall values. Planning transactions use distribution keys, based on different criteria, to distribute the values to the individual plan periods. You can enter the distribution key in manual planning.

The SAP R/3 System uses your planning data during runtime, regardless of whether you have already saved a distribution key or not. The entered plan value is distributed according to each distribution key to the periods. The system saves the period values that are determined in this way.

The standard system includes predefined fixed distribution keys which cannot be changed (see: Standard Distribution Keys [Page 195]).

In addition, you can create any distribution keys you require, for example, to allow for seasonal fluctuations, or to create shift schedules (see: User-Defined Distribution Keys [Page 200]).

Any changes made to the definition of a distribution key do not have an effect on the data that you planned previously using this distribution key.

For more information on creating your own distribution keys, see the Implementation Guide for Cost Center Accounting, under Planning → Manual Planning → Define Own Distribution Keys [Ext.]
Standard Distribution Keys

Use

SAP provides the following standard distribution keys:

- **Distribution key 0**
  Used to enter values manually for each period.

- **Distribution key 1**
  Used to distribute the input value (annual plan value) equally across all plan periods.

- **Distribution key 2**
  Used to distribute the input value (annual plan value) according to the last distribution key used.

- **Distribution key 3**
  Interprets the input value as a percentage rate and multiplies it each period by the previous value.

- **Distribution key 4**
  Used to distribute period values not equal to zero to the subsequent empty periods.

- **Distribution key 5**
  Copies period values not equal to zero to the subsequent empty periods.

  The SAP R/3 System differentiates between true distribution keys and input help.

- **Distribution key 6**
  Copies a given period value to subsequent periods.

  This distribution key has no effect on the manually planned values, as it is used on the period level. The distribution keys are, however, available on the annual level.

- **Distribution key 7**
  Used to distribute the input value (annual plan value) among the individual periods in line with the number of calendar days per period.

- **Distribution key 11**
Standard Distribution Keys

Can only be used in Cost Center Accounting for planning activity-dependent costs or activity-dependent statistical key figures.

The input value (annual plan value) is distributed in line with the activity quantity planned on the cost center.

⚠️

The R/3 System uses only those activity quantities planned at the time of the distribution key’s use. If you change activity quantities later or copy plan values to another version, the R/3 System does not automatically carry out new distributions.
Examples of Standard Distribution Keys

The following graphics illustrate distribution, based on the various distribution keys. The examples use monthly planning. Distribution keys can also be used in the same manner for other period cycles (for example, quarterly planning).

**Distribution Key 0**
- Distribution key 0
- Individual values entered manually for each period

<table>
<thead>
<tr>
<th>Period</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2,000</td>
</tr>
<tr>
<td>2</td>
<td>2,000</td>
</tr>
<tr>
<td>3</td>
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<tr>
<td>4</td>
<td>1,500</td>
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<tr>
<td>5</td>
<td>2,000</td>
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<tr>
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<td>7</td>
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<td>8</td>
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<tr>
<td>10</td>
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<tr>
<td>11</td>
<td>2,000</td>
</tr>
<tr>
<td>12</td>
<td>1,500</td>
</tr>
<tr>
<td>Total</td>
<td>24,000</td>
</tr>
</tbody>
</table>

**Distribution Key 1**
- Distribution key 1
- Equal distribution across the individual periods

<table>
<thead>
<tr>
<th>Input value: 24,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>1</td>
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<tr>
<td>2</td>
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<td>3</td>
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<tr>
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<tr>
<td>10</td>
</tr>
<tr>
<td>11</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

**Distribution Key 2**
- Distribution according to an existing distribution

<table>
<thead>
<tr>
<th>Input value: 36,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>1</td>
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<tr>
<td>2</td>
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<tr>
<td>3</td>
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<tr>
<td>4</td>
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<tr>
<td>5</td>
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<tr>
<td>10</td>
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<tr>
<td>11</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

**Distribution Key 3**
- Distribution key 3
- Input value is interpreted as a percentage and refers to previous values

<table>
<thead>
<tr>
<th>Input value: 50(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period</td>
</tr>
<tr>
<td>--------</td>
</tr>
<tr>
<td>1</td>
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<tr>
<td>2</td>
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<tr>
<td>3</td>
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<tr>
<td>4</td>
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<tr>
<td>10</td>
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<tr>
<td>11</td>
</tr>
<tr>
<td>12</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>
### Examples of Standard Distribution Keys

#### Distribution Key 4

<table>
<thead>
<tr>
<th>Period</th>
<th>Input</th>
<th>Subs. value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8,000</td>
<td>2,000</td>
</tr>
<tr>
<td>2</td>
<td>2,000</td>
<td></td>
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<tr>
<td>3</td>
<td>2,000</td>
<td></td>
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<tr>
<td>4</td>
<td>2,000</td>
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<tr>
<td>5</td>
<td>10,000</td>
<td>2,500</td>
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<td>9</td>
<td>6,000</td>
<td>1,500</td>
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<td>1,500</td>
<td></td>
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<tr>
<td>11</td>
<td>1,500</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>1,500</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>24,000</td>
</tr>
</tbody>
</table>

Period values are distributed to subsequent empty periods.

#### Distribution Key 5

<table>
<thead>
<tr>
<th>Period</th>
<th>Input</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2,000</td>
<td>2,000</td>
</tr>
<tr>
<td>2</td>
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<td>2,000</td>
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<tr>
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<tr>
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<td>1,500</td>
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<tr>
<td>12</td>
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<td>1,500</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>24,000</td>
</tr>
</tbody>
</table>

Period values are copied to subsequent empty periods.

#### Distribution Key 6

<table>
<thead>
<tr>
<th>Period</th>
<th>Prev. value</th>
<th>Input</th>
<th>Subs. value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2,000</td>
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<td>3,000</td>
</tr>
<tr>
<td>2</td>
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<tr>
<td>Total</td>
<td></td>
<td>24,000</td>
<td>31,000</td>
</tr>
</tbody>
</table>

Period value is copied to subsequent periods.

#### Distribution Key 7

<table>
<thead>
<tr>
<th>Input value: 24,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period</td>
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<tr>
<td>--------</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>2</td>
</tr>
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</tr>
<tr>
<td>11</td>
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<tr>
<td>12</td>
</tr>
</tbody>
</table>
### Distribution Key

11

Input value is apportioned to the costs centers corresponding to the activity quantity (only applies to Cost Center Accounting)

<table>
<thead>
<tr>
<th>Period</th>
<th>Planned activity</th>
<th>Subs. value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>30h</td>
<td>3,000</td>
</tr>
<tr>
<td>2</td>
<td>60h</td>
<td>4,000</td>
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<tr>
<td>3</td>
<td>45h</td>
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<tr>
<td>4</td>
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<td>1,500</td>
</tr>
<tr>
<td>12</td>
<td>15h</td>
<td>1,500</td>
</tr>
</tbody>
</table>

Input value: 24,000

---

**April 2001**

199
User-Defined Distribution Keys

Use
If your planning must allow for regular periodic fluctuations, you can define custom distribution keys. The R/3 System distributes the total value you entered in planning to the individual periods, based on the distribution defined in the key.

You can create distribution keys before or during planning. SAP recommends creating them before planning begins if you know that organization-specific distribution keys are required.

Examples for distribution keys are seasonal fluctuations or shift schedules.

Activities
To define individual distribution keys, see the Implementation Guide (IMG) for the relevant Controlling component, under Planning → Manual Planning, for example under Maintain User-Defined Distribution Keys [Ext.] for cost centers.
Planning Screen Organization

Use

You enter plan data in the Controlling component (CO) with entry screens that you can structure using the Report Painter functions in Customizing. The planning screens are referred to as Planning Layouts [Page 204].

The standard R/3 System includes several commonly used planning layouts. These layouts are assigned to a planner profile for each planning area (see Planner Profiles [Page 202]). A planner profile can thus include several planning layouts belonging to different planning areas, but cannot include more than one planning layout from the same planning area. You can group planning layouts efficiently by assigning them to planner profiles. During planning you can switch between the different planning areas of a planner profile.

Before switching planning layouts within a planning area, you must save the data of the layout you wish to leave.

We recommend creating separate planner profiles with related planning layouts depending on the organizational structure.

Planning on the basis of flexible data entry screens offers many advantages.

You can:

• Define multiple key columns
• Define flexible value columns representing, for example:
  – Version planning
  – Quarterly, half-year, and annual planning
  – Centralized or decentralized planning
  – Activity outputs (sender perspective)
  – Cost planning in different currencies
  – Planning with variant actual activity price indicators and a switch structure for cost component splitting
Planner profiles

Use

You use planner profiles to control the planning process. These are structured hierarchically. You specify the planning layout used for each planning area, such as cost element/activity inputs, activity type/activity price, or statistical key figure planning. A planner profile must contain one planning layout for each planning area.

Profile items assign the planning layouts in the planner profile. Currently, each planning area must have exactly one profile item.

In a planner profile, you can set the following planning conditions.

- You can control planning authorizations by assigning an authorization group to a planner profile. This is particularly important for decentralized planning. By using specialized planner profiles for planners, and by assigning authorization groups, you ensure that planning is restricted to the authorized area.

- To specify settings for variables in a planning layout, you can preset the planning layout parameters in the planner profiles, by entering variable values in the planner profile. You can overwrite these values, and you can also prevent overwriting by activating the appropriate indicator in the planner profile definition. In a planning session, the SAP System checks all variables defined in a planning layout and handles them as parameters.

The R/3 System includes the following standard planner profiles:

<table>
<thead>
<tr>
<th>Planner Profile</th>
<th>Use</th>
<th>Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>SAPALL</td>
<td>Overhead Cost Controlling (CO-OM): Business process planning</td>
<td></td>
</tr>
<tr>
<td>SAP101</td>
<td>Overhead Cost Controlling (CO-OM): Planning of primary costs/activity types/statistical key figures</td>
<td></td>
</tr>
<tr>
<td>SAP102</td>
<td>Overhead Cost Controlling (CO-OM): Planning of activity inputs/activity types/statistical key figures</td>
<td></td>
</tr>
<tr>
<td>SAP104</td>
<td>Overhead Cost Controlling (CO-OM): Secondary order costs/activity types for cost component splitting/activity-dependent statistical key figures</td>
<td></td>
</tr>
</tbody>
</table>

Standard profiles SAP101, SAP102, SAP104, and SAPALL include the following standard planning layouts relevant to the Activity-Based Costing component (CO-OM-ABC):

- Business processes: activity input planning
  Business processes as senders on:
  - Cost Centers
  - Orders
  - Business Processes
Planner profiles

- Cost Objects
- WBS Elements

Business processes as receivers from:
- Cost Centers

- Business processes: Planning process quantities and prices
- Business processes: Statistical key figure planning

Standard layouts for planning of cost centers and orders supplement these standard profiles. Profiles SAP101 and SAP102 cover most general planning situations, and profile SAPALL covers all situations arising in business process planning.

For more information on creating a planner profile, see the Implementation Guide (IMG) under Activity-Based Costing → Planning → Aids for Manual Planning → Maintain Custom Planner Profiles [Ext.].
Planning layouts

Use

You use planning layouts to specify your cost planning structure. You define the headings, value columns, and key columns based on your specific business requirements and by planning area. You proceed by planning area. The planning areas are:

Business Processes

- Activity inputs
- Quantities and prices
- Statistical key figures

Cost Objects

- Cost elements/activity inputs
- Statistical key figures

You use planner profiles or their related planning layouts to control object selections.

You can create various planning layouts per planning area that differ depending on the key columns, characteristics and other criteria. This allows you to set up flexible planning schemes, which meet specific business requirements such as versions, semiannual, or quarterly planning, and others. The standard R/3 System includes pre-defined planning layouts for common planning jobs. You can also create custom layouts quickly and easily. The R/3 System documentation describes the standard planning layouts.

See also:

Standard Planning Layouts [Page 205]
Standard Planning Layouts

Use

The standard R/3 System includes planning layouts for all planning areas. You can use these standard layouts, copy and adapt them to your requirements, or create completely new layouts. The standard planning layouts are divided into layouts permanently assigned to a profile and unassigned layouts. The latter are only required for special situations. Before using these layouts you have to assign them to a planner profile.

Standard layouts are provided only in client 000. To use the layouts in other clients, you must import them. An import should take place after each release change. For more information, see the Implementation Guide (IMG) under Controlling: General → Prepare for Production Start → Transport of System Settings → Transport of Planning Settings → Importing Standard Planning Layouts [Ext.].

The standard R/3 System layouts are write-protected. You cannot change the standard layouts. To create custom layouts with similar structures, copy the standard layout under a different name and then change the copy.

The SAPALL planner profile holds all planning layouts relevant for business processes.

The following table lists the standard planning layouts with brief descriptions. The standard R/3 System includes:

**Business Processes as Receivers**

**Activity Input Planning**

<table>
<thead>
<tr>
<th>Planning Layout</th>
<th>Description</th>
<th>Planner Profile Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - D01 (Total)</td>
<td>Activity input planning: Cost centers → Business processes</td>
<td>SAP101, SAP102, SAP104</td>
</tr>
<tr>
<td>1 - D02 (Fixed/Variable)</td>
<td>Activity input planning: Cost centers → Business processes</td>
<td>SAPALL</td>
</tr>
<tr>
<td>1 - D02P</td>
<td>Activity input planning: Business processes → Business processes</td>
<td>SAPALL</td>
</tr>
</tbody>
</table>

**Quantity and Price Planning**

<table>
<thead>
<tr>
<th>Planning Layout</th>
<th>Description</th>
<th>Planner Profile Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - E01</td>
<td>Quantity and price planning for business processes</td>
<td>SAPALL</td>
</tr>
<tr>
<td>1 - E02</td>
<td>Control indicator planning for business processes</td>
<td>SAPALL</td>
</tr>
</tbody>
</table>

**Statistical Key Figure Planning**
**Standard Planning Layouts**

<table>
<thead>
<tr>
<th></th>
<th>Planning/Process Description</th>
<th>SAP Code(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - F01</td>
<td>Planning statistical key figures for business processes</td>
<td>SAPALL, SAP101, SAP102, SAP104</td>
</tr>
<tr>
<td>1 - F03C</td>
<td>Central planning of statistical key figures for business processes</td>
<td>SAPALL</td>
</tr>
</tbody>
</table>

**Business Processes as Senders**

**Receiver: Cost center**

<table>
<thead>
<tr>
<th></th>
<th>Planning/Process Description</th>
<th>SAP Code(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 102P</td>
<td>Activity input planning: Business processes → Cost centers</td>
<td>SAPALL</td>
</tr>
<tr>
<td>1 - 104P</td>
<td>Secondary order cost planning: Business processes → Orders → Cost centers</td>
<td>SAPALL</td>
</tr>
</tbody>
</table>

**Receiver: Orders**

<table>
<thead>
<tr>
<th></th>
<th>Planning/Process Description</th>
<th>SAP Code(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 402P</td>
<td>Activity input planning: Business processes → Orders</td>
<td>SAPALL</td>
</tr>
</tbody>
</table>

**Receiver: WBS Elements**

<table>
<thead>
<tr>
<th></th>
<th>Planning/Process Description</th>
<th>SAP Code(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 702P</td>
<td>Activity input planning: Business processes → WBS elements</td>
<td>SAPALL</td>
</tr>
</tbody>
</table>

**Receiver: Cost object**

<table>
<thead>
<tr>
<th></th>
<th>Planning/Process Description</th>
<th>SAP Code(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - G02P</td>
<td>Activity input planning: Business processes → Cost object</td>
<td>SAPALL</td>
</tr>
</tbody>
</table>

**Planning Layouts for Activity Input Planning**

- **Activity-independent and activity-dependent activity input planning (1 - D02)**
  
  The following list shows an example of which plan records are possible in this layout as individual or as group examples.

  **Header Area**
  
  Period
  Fiscal year
  Version
  Business process

- **Activity-independent and activity-dependent activity input planning (1 - D02P)**
  
  This layout lends itself to activity inputs from business processes (senders) to other business processes (receivers). The following list shows an example of which plan records are possible in this layout as individual or as group examples.

  **Header Area**
  
  Period
  Fiscal year
  Version
  Business process
Planning Layouts for Quantity and Price Planning

- Quantity and price planning for business processes (1 - E01)
  This layout lends itself to quantity and price planning on business processes.
- Control indicator planning for business processes (1 - E02)
  This layout lends itself to control indicator planning for business processes.

Planning Layouts for Statistical Key Figure Planning

- Planning statistical key figures for business processes (1 - F01)
  This layout lends itself to statistical key figure planning for business processes. The layout permits you to set ongoing as well as maximal values. You can use Distribution key, Unit, Key figure type, and Long text exists as attributes.

  **Header Area**
  - Period
  - Fiscal year
  - Version
  - Statistical key figures

- Planning of a single statistical key figure for business processes (1 - F03C)
  This layout lends itself to planning a single statistical key figure for business processes. The layout permits you to set ongoing as well as maximal values. You can use Distribution key, Unit, Key figure type, and Long text exists as attributes.

  **Header Area**
  - Period
  - Fiscal year
  - Version
  - Statistical key figure
Structuring Planning Layouts

Use

If the standard planning layouts supplied by SAP do not meet your requirements, you can define your own layouts. The following section describes the structure of a planning layout and the procedure for defining your own layouts (see also Defining Planning Layouts [Ext.]).

All planning layouts are based on the following structure:

<table>
<thead>
<tr>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headers</td>
</tr>
<tr>
<td>Key Columns</td>
</tr>
</tbody>
</table>

The header of the planning layout contains the characteristics that apply to the whole planning table. You make these entries in the planning layout, under Edit → Gen. data selections.

To plan activity-independent costs, you define header characteristics, such as version, period, fiscal year, cost center and cost element. These characteristics are always displayed in the planning initial screen and the planning overview screen.

The lead columns contain the objects to be planned. You can define multiple lead columns. You create lead columns using predefined characteristics provided by SAP.

If you want to plan activity-independent costs, you define the cost element as a lead column. When you plan activity-dependent costs, you add the activity type as the second column. You enter the cost element and the activity type in the initial screen. However, in contrast to the other characteristics on this screen, you must also define them in the lead columns. This is so that you can plan them.

The value columns are used for the planning itself. This is where you enter the plan values.

You create value columns from the following:

- Characteristics
- Attributes
• Formulas

For activity-independent or activity-dependent cost planning, you set the characteristics *Fixed plan costs* or *Variable plan costs* in the value columns. You can add further characteristics, such as a distribution key.

You define these three areas during Customizing for Controlling, under *Overhead Cost Controlling → Cost Center Accounting* or *Activity-Based Costing under Planning → Manual Planning → User-Defined Planning Layouts*. Once you define a planning layout, you can only change it in Customizing, not during planning.
Defining Planning Layouts

Procedure

The following section describes the basic steps required for defining a planning layout. For more information, see the Implementation Guide (IMG) under Activity Based Costing → Planning → Manual Planning → User-Defined Planning Layouts [Ext.].

A planning layout consists of the following:

- General data selections
- Key columns
- Value columns

Defining General Data Selections

General data selections control the data in the headings of the planning layout. The characteristics specified in the general data selections apply to the whole planning layout. You have the options of using the characteristics in the general data selections and in the columns as variables. If you define them as variables, these fields appear as ready for data entry in the initial screen at the time of executing planning.

In a layout for activity input planning for business processes, you select the Version, Period, Fiscal year and Business process characteristics. The value columns contain statistical key figures. In the key columns, you define the sender cost center and activity type as characteristics.

Defining Key and Value Columns

The column and row organization is based on the selection of pre-defined characteristics. You must assign characteristic values to each selected characteristic:

Defining Key Columns

The key column definition options are:

- Use the column heading to define one or more key columns.
  
  You can select exactly one characteristic for each column heading.
  
  If you use this definition method, the SAP System suggests all possible characteristic value combinations of the defined key columns for planning.

- Use rows to define exactly one key column.
  
  This allows you to select one characteristic per row or combine several characteristics.
  
  You can also select specific characteristic values.
  
  For example, if you define the Version and Cost element characteristics in two key columns, you receive all combinations of available values for version and cost element for planning.
Defining Value Columns

The value column definition options are:

- Define value column using a key figure with characteristics, or just characteristics
  
  In the dialog window for the first value column, you determine whether to define a statistical key figure with characteristics or just to define characteristics.

  You define value columns of the type *Key figure with characteristics* by selecting exactly one statistical key figure from the list of possible entries. Afterwards, determine the characteristics and characteristic values.

  Value columns of the type *Characteristic* are defined by selecting characteristics and assigning characteristic values.

- Define attribute column
  
  The attribute column definition options are:
  
  - Attribute column directly related to value column
    
    The *Distribution key*, *Unit*, and *Action* attributes should be used together with a value column. To create the definition, choose
    
    \*Edit* → *Columns* → *Append additional fields*

  - Attribute column not directly related to value column
    
    Define all other attribute columns by selecting the blank space next to a column.

- Define formula column
  
  Formula columns are based on the values of columns already defined. You can see the available value columns in a dialog window for defining formulas. The R/3 System calculates the formula column values when you enter values in the value columns included in the formula.

  **Inverse formulas**
  
  You use inverse formulas in planning to enter values in a formula column that calculates values for another planning layout column. To define an inverse formula:

  1. Define and save the planning layout with the desired formula column.
  2. Define the column to be given calculated values as not entry-ready. To do so, select the column and choose \*Format* → *Entry-ready on/off*
  3. Define the formula column as entry-ready in the same manner.
  4. Then create the inverse formula. To do so, choose
    
    \*Extras* → All inverse formulas → Generate formulas

    The SAP System uses the inverse formulas to calculate the values in columns locked against data entry.

    You plan a percentage wage raise for the employees. You want to enter a percentage overhead rate. The SAP System calculates the plan value of the current year based on the percentage raise and the plan value of the previous year.

    1. You define the following:
Defining Planning Layouts

Planning Layout

<table>
<thead>
<tr>
<th>Key columns</th>
<th>Value Column 1</th>
<th>Value Column 2</th>
<th>Formula columns</th>
</tr>
</thead>
<tbody>
<tr>
<td>cost element</td>
<td>Plan, current year</td>
<td>Plan, previous year</td>
<td>% Raise ( \frac{\text{Plan current} - \text{Plan previous}}{\text{Plan previous}} \times 100 )</td>
</tr>
</tbody>
</table>

Define the column *Plan, current year* as not-entry-ready and the column *% raise* as entry-ready. Then create the inverse formula.

2. Planning (example):

If you copy plan values from the previous year onto those for the current year before beginning manual planning (choose *Planning → Planning aids → Copy planning*), you provide for calculating the new plan costs by entering the percentage raise.

### Before Copying Planning

<table>
<thead>
<tr>
<th>cost element</th>
<th>Plan, current year</th>
<th>Plan, previous year</th>
<th>% Raise</th>
</tr>
</thead>
<tbody>
<tr>
<td>430000</td>
<td>50.000</td>
<td>50.000</td>
<td>10</td>
</tr>
</tbody>
</table>

### After New Planning Cost Calculation

<table>
<thead>
<tr>
<th>cost element</th>
<th>Plan, current year</th>
<th>Plan, previous year</th>
<th>% Raise</th>
</tr>
</thead>
<tbody>
<tr>
<td>430000</td>
<td>55.000</td>
<td>50.000</td>
<td>10</td>
</tr>
</tbody>
</table>
Aids for Manual Process Planning

Purpose
This section describes planning enhancements in the Activity-Based Costing component (CO-OM-ABC) dealing with integrated planning.

Integrated planning supports data transfers to the Activity-Based Costing component from other components in the R/3 System. You must fulfill several requirements in each component before you can take advantage of integrated planning transfers.

Integration
You can transfer plan data from the following components to Activity-Based Costing:

- Planning requirements from the Production Planning and Control component (PP) (see Transfers of Scheduled Activities [Page 229])
- Logistics Information System (LIS) (see Transferring Statistical Key Figures from the Logistics Information System [Page 388])
- Organization management (see: Workflow-Integration Business Process [Page 235])

If you enter and plan activities, key figures, or costs in one of the components feeding information to the Activity-Based Costing component, you do not need to repeat activity requirement and statistical key figure planning there.
Copy Plan Data

Use

The SAP System offers the *Copy planning* function for automatic transfers of plan values entered manually. You can:

- Reuse much of your planning from the previous year in the current fiscal year
- Transfer plan values within a business year across period boundaries
- Create alternative versions for planning

For more information, see *Copying Planning [Page 215]*.
Copy planning: Procedure

**Procedure**

To copy planning, proceed as follows:

1. Choose

   *Planning → Planning aids → Copy planning*

2. Select the reference to be copied and the target to be copied to.

   You can copy as follows:
   - **Within fiscal years, periods, versions, and business processes**
     
     The reference and the target must differ in at least one of the selection criteria above – you cannot copy plan values onto themselves.
   - **Between different fiscal years, periods, and versions**
     
     The reference and the target can differ in all of the above selection criteria, or at the very least in only one.

   You can copy the following data:

<table>
<thead>
<tr>
<th>Reference</th>
<th>Target</th>
</tr>
</thead>
<tbody>
<tr>
<td>Version</td>
<td>From Period</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

   - The data from a single business process, a business process group, or all business processes
   - The data from a single planning transaction or from all planning transactions

   You can copy either the plan values of all planning transactions or only those from individual transactions (for example, just plan quantities and statistical key figures).

   - You can specify the following target:
     - Version
     - Fiscal year
     - From period, To period
     - Business process
Copy Planning: Procedure

- Group

3. Edit the following parameters:
   - Reset target data and overwrite
     
     If you set this indicator, the SAP System deletes any existing data in the target. Check first whether you really want to overwrite or delete existing target data.
   - Create detailed list of copied data
     The SAP System creates a list of all the data records copied, along with the planning transactions you selected for copying.
   - Copy in background or on-line
     If you have a great deal of planning data to copy, create a background job to run during periods of low system use.

To speed up copying and to avoid unnecessarily loading the SAP System, keep the following in mind:

- Select only those transactions actually planned. For example, if you did not plan any statistical key figures, deactivate the corresponding planning transaction selection.
- Copy in a background job. This allows you to take advantage of periods with low system loads.
- Avoid copying that overwrites existing data. This keeps the amount of data to be read for resetting as low as possible.
- Abstain from creating a detailed list of records copied if you do not necessarily need one. The basic list (without copied records) always appears in any case.

There is little difference in runtimes between copying a single period and copying multiple periods or an entire fiscal year.
Copying Actual Data into the Plan

Use

Function **Copy actual into plan** automatically copies actual values from previous business transactions, which can also be manually planned. You cannot copy periodic allocations/assignments in actual, like Distributions or Assessments. You must carry these out in the plan. You can:

- reuse much of your actual data from the previous year in the current fiscal year
- copy actual to plan within a fiscal year and across period boundaries

Features

Following is a description of what you can and cannot copy.

- You can copy process quantities that result from the sender side through manual activity allocation or through the entry of sender activities.
- Actual prices: the SAP System updates the actual price as plan in the target version. The system values the recorded activities in the receivers with these prices in plan.
- Primary costs: you can copy only the following manually planned business transactions:
  - primary bookings from financial accounting
  - transfer postings in CO

  You cannot copy actual automatic business transactions like periodic distributions.

- Activity Allocations: you can copy manually booked activity allocations, but not automatic business transactions.
  - Plan updates are similar to manual planning. The system updates the planned quantity only. The resulting costs are a factor of the plan quantity multiplied by the plan price.
- Order Settlement you can copy debits from business processes out of order settlements. Depending on the cost origin, the SAP /3 system updates the primary or secondary order costs in plan. The two cases to note are:
  - If the target version is not plan-integrated for orders, then the system copies all order settlement costs.
  - If the target version is plan integrated for orders, then the system copies only the settlement costs orders that are not plan integrated. You must insert the plan settlement into the target version for the orders that are plan integrated.

  The SAP System does not copy the corresponding debit of the business transaction if an order is settled by cost element. The SAP System records this instance in the error protocol, noting that the secondary cost planning does not include primary cost elements or assessment cost elements. In the area of order cost planning, only cost elements of type 21 (internal settlement) are allowed.
Activity-Based Costing (CO-OM-ABC)

Copying Actual Data into the Plan

- Statistical Key Figures: the system updates statistical key figures in plan just as you have booked them in actual.

Activities

For more information on how to copy see Copying Actual into Plan [Page 219].
Copy Actual into Plan

Procedure

To copy actual values in a new plan, proceed as follows:

1. Choose Accounting → Controlling → Processes → Planning → Planning aids → Copy actual to plan.

2. Select the data you want to copy. That is, choose one of the following alternatives:
   a. a single business process
   b. a business process group
   c. all business processes

3. Make a selection from Reference. Enter the periods and the fiscal year.

4. Choose a target. Enter the periods, the fiscal year and the version.

   You can copy as follows: within a fiscal year and period, or between various fiscal years and periods. The reference and the target can differ in all of the above selection criteria, or at the very least in only one.

You can copy the following data:

<table>
<thead>
<tr>
<th>Reference (actual)</th>
<th>Target (plan)</th>
</tr>
</thead>
<tbody>
<tr>
<td>From period</td>
<td>To period</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>1</td>
<td>12</td>
</tr>
</tbody>
</table>

5. Select the Actual data to be copied. Here you have the following alternatives:
   a. All actual data
   b. Choose actual data: the data of individual transactions

   You can copy either the actual value of all transactions or of individual transactions, such as Primary costs, Activities/prices, and others.

6. Make additional selections in parameter Processing:
   a. Do not change: if you want to leave the data in the target unchanged, choose Do not change. If you chose Do not change and the target of an object already has data, the SAP System will not transfer the reference data.
   b. Reset and overwrite
Copy into Plan

If you set this indicator, the SAP System deletes any existing data in the target. Check first whether you really want to overwrite or delete existing target data.

c. Background processing: if you have a great deal of data to copy, create a background job to run during periods of low system use by choosing Background processing.

d. Test run: if you do not want to book the data, choose Test run. The SAP System produces a protocol in this case, but does not change any data.

e. Detail list: the SAP System creates a list of all the data records copied, along with the actual transactions you selected for copying.

7. Choose Copy → Execute.

To speed up copying and to avoid unnecessarily loading the SAP System, keep the following in mind:

Select only those transactions actually planned.

Choose Background processing if you have a large quantity of data to copy. This allows you to take advantage of periods with low system loads.

Avoid using the option Reset and overwrite. This keeps the amount of data to be read for resetting as low as possible.

Abstain from creating a detailed list of records copied if you do not necessarily need one. The basic list (without copied records) always appears in any case.

Copy only a portion of the business process hierarchy.
Periodic Reposting

Use

Periodic reposting [Ext.] is posting aid that enables you to adjust postings made to your cost centers or business processes, internal orders, or WBS elements. It has the same result as transaction-based reposting. The results of transaction-based repostings have a direct effect on the actual costs of the sender and the receiver, whereas periodic repostings have a one-time effect on actual costs at period-end closing.

Postings relevant to Controlling (CO) such as telephone costs, postal charges, insurance, and so on are entered in Financial Accounting (FI) and posted to an allocation cost center or a business process. These are used exclusively for cost collection. This minimizes the number of different account assignments you have to make when entering data in FI. At the end of the period, the collected costs are reposted to the cost centers or business processes which incurred the costs by means user-defined keys (fixed values or dynamic tracing factors). The following information is passed on to the receivers:

- The original cost element (the primary cost element [Ext.]) is retained.

  During periodic repostings, you can allocate activity-dependent plan costs to receiver objects of the category “Cost center” (sender activity type is retained) or “business process”.

  You can allocate activity-independent costs to all receiver object categories, for example, cost centers, business processes, or orders.

- The allocation cost center is not important for the receiver cost centers (neither is the sender business process for the receiver processes). The SAP System therefore stores data records for periodic reposting in a way that uses less memory than, for example, distribution [Ext.]. For this reason, the sender cost center or sender process is not updated using this method. You can only analyze from which cost center or from which business process the costs originate from the line items, and not from the totals records.
If you are working with transfer prices (multiple valuation approaches) the periodic reposting is executed in parallel in all valuations. The costs to be allocated are taken from the corresponding valuation. The tracing factor is always taken from the values of the operational valuation. The values allocated may differ in each of the valuation methods.

Senders and receivers are displayed in the results list, differentiated according to the parallel actual versions of the various valuations.

For more information on transfer prices, see the SAP Library under:

- Financials → Enterprise Controlling (EC) → Profit Center Accounting → Multiple Valuation Approaches/Transfer Prices
- Financials → Controlling (CO) → Controlling → Overhead Cost-Controlling → Multiple Valuation Approaches in Overhead Cost Controlling

See also:

Defining Periodic Repostings or Periodic Allocations
Creating or Changing Cycles
Executing Periodic Repostings or Periodic Allocations Online
Displaying the Cycle Overview
Formula Planning in Business Processes

Use

In order to plan quantities and costs of your business processes in formula planning, you can use mathematical dependencies. You can set these mathematical dependencies in templates [Page 140] in the form of formulas, which are independent of the business processes. This allows you to use the same formulas for similarly defined business processes. You can enter fixed and variable costs and quantities, per activity unit, in the calculation of the formula.

Formula planning supports manual planning. Formula planning is especially appropriate for the planning of cost elements, whose values are determined from business processes with similar logic.

For formula planning, you create templates and assign these to one or more business processes. Additionally, you can define sub-templates that can refer to higher level templates.

You can use the following data from the SAP System in formula planning:

- All master data information relevant to the business process: for example, to narrow the definitions
- The plan primary costs of your choice
- Plan activity, scheduled activity and capacity of the chosen business process
- User defined statistical key figures

You can plan primary costs and statistical key figures. These can be calculated from values that are already planned.

- The SAP System calculates costs in the template using only the controlling area currency.
- Activity inputs, activities and order costs cannot be planned.
- Formula planning is possible in business processes, cost centers [Ext.] and profit centers [Ext.].

Prerequisites

Create a template and assign the business process to the template (see section: Activities).

Features

Formula planning includes the following functions:

- Template maintenance
  - In template maintenance, you can define one or more formulas for an object (cost element, statistical key figure or calculation row) on separate lines or rows (see: Formulas [Page 151]). The SAP system evaluates these formulas by calculating objects (cost element, statistical key figure or calculation row) a line at a time. You can link functions (see: Functions in Environments [Page 103]), which enable the reading of plan or actual values, with simple formulas.
  - With interim results, which you can depict in the Calculation rows [Page 159], you can calculate complicated formulas. With activation (see: Activation [Page 139]) you can also build in requirements under which a formula operates.
Formula Planning in Business Processes

- The execution of formula planning and evaluation of the template (see: Executing formula planning [Page 228])
  - While evaluating a template for business processes, the SAP system applies the formula defined in the template, and calculates the desired costs, quantities or key figure values. The system then calculates each line in the template for the corresponding business process. If the object is a cost element or statistical key figure, the system also creates a planned record for the object, in the corresponding business process. This planned record overwrites any manual planned record, and can itself also be overwritten in the manual planning.
  - During the execution of the formula planning, you can enter the business processes of your choice or all of them. The SAP system searches for the template corresponding to these business processes and evaluates them. You can start the evaluation as often as you want for a business process.

Activities

Create a template in environment BPP (see: Template for Formula Planning Process [Page 225] and IMG for controlling under Overhead Cost Controlling -> Activity-Based Costing -> Templates -> Maintaining templates).

Assign the business process to a template (see Assigning Templates for processes/Cost centers [Page 227]).

Execute the formula planning (see: Executing Formula Planning [Page 228]).
Templates for Formula Planning Process

Use

Create Templates [Page 80] for the formula planning of business processes in environment BPP. You can choose between five item categories. Depending on the item category you choose, you will have the following columns available for data entry.

<table>
<thead>
<tr>
<th>Item Type</th>
<th>Available columns</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commentary row</td>
<td>Name/Item text</td>
</tr>
<tr>
<td>Sub-Template</td>
<td>Object, Name, Activation condition</td>
</tr>
<tr>
<td>Statistical Key Figure</td>
<td>Object, Name, Quantity fixed formula, Quantity variable/LE formula, Activation condition</td>
</tr>
<tr>
<td>(StKF)</td>
<td></td>
</tr>
<tr>
<td>Calculation row [Page 159]</td>
<td>Object, Name, Quantity fixed formula, Activation conditions</td>
</tr>
<tr>
<td>Cost element</td>
<td>Object, Name, Costs fixed formula, Costs variable/LE formula, Quantity fixed formula, Quantity variable/LE formula, Activation conditions</td>
</tr>
</tbody>
</table>

You have the following entry and maintenance possibility per column type.

<table>
<thead>
<tr>
<th>Column type</th>
<th>Possible Entries/Processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Type</td>
<td>Commentary line, Sub-template, Statistical key figure, Calculation row, Cost element</td>
</tr>
<tr>
<td>Object</td>
<td>According to the item category: cost element, statistical key figure, and more</td>
</tr>
<tr>
<td>Name</td>
<td>Descriptive name for the line</td>
</tr>
<tr>
<td>Costs fixed formula</td>
<td>fixed costs</td>
</tr>
<tr>
<td>Costs variable/LE Formula</td>
<td>Variable costs</td>
</tr>
<tr>
<td>Quantity fixed formula</td>
<td>Fixed quantity</td>
</tr>
<tr>
<td>Quantity variable/LE Formula</td>
<td></td>
</tr>
</tbody>
</table>

You can specify these values as constants, or you can have the system calculate them dynamically at the time of evaluation - the corresponding Editor is accessible (for procedures on the Editor, see: Quantity determination [Page 133]).
Templates for Formula Planning Process

| Activation Requirements | You can enter Active or Inactive as fixed values, or you can define a method which allows the R/3 System to activate or deactivate the item when the valuation occurs (see Activation [Page 139]). |

If you choose item category calculation row, the editor cannot be called up in the object columns.

For more information on creating a template, see Editing templates [Page 93].
Assigning Templates for Processes (Formula Planning)

1. In the menu for processes, choose Master data → Business process → Individual processing → Change ..

2. In the initial screen for Change business process, choose the business process to which you want to assign a template.

3. Choose tab Templates.

4. In field Formula planning template, choose a template Here you will find all templates for environment BPP.

5. Choose →

In field Formula planning You can also choose to:
- Display template ( Showcase )
- Change template ( ), or
- Create template ( )
Executing Formula Planning

Prerequisites

These include:

- Creating a template in environment BPP (see: Template for Formula Planning Bus. Process [Page 225], Maintaining Templates [Page 93]) and
- Assigning at least one business process to it (see: Formula Planning in Business Processes [Page 223], Assign Template for Bus. Process (Formula Planning) [Page 227]).

Procedure

2. For the plan value that the particular template must calculate, select whether you want to enter a: business process, a business process interval, a business process group, all the business processes of your area or a variant of your choice.
3. Enter the version, period and fiscal year.
4. For large jobs, activate the background processing to avoid overloading the system.
5. Choose Test run, if you do not want to post the results.
6. The SAP system writes the plan data to a detail list. You should always activate the detail list with test runs.
7. Choose Detail list to check the results of the evaluation.

Result

The SAP system displays the calculated plan value in the detail list.
Scheduled Activity Transfer

Use

You can use activity requirement values determined in long-term planning (LTP) or in Sales and Operations Planning (SOP) as a basis for plan values in the Activity-Based Costing component (CO-OM-ABC).

You can use process templates to determine quantities and involved. The template environment for quantity and process determination is SOP.

The environment SOP includes the sub-environment functions:

- 101: Processes
- 103: Material
- 104: BOM
- 105: Routing
- 107: General data

In addition, environment SOP includes a great number of other standard functions. These functions allow you to:

- Determine SOP quantities
- Determine SOP-specific data such as SOP order end
- Determine SOP/LIS structure
- Determine quantities from LTP
- Determine LTP-specific data such as LTP storage area
- Information on the LTP BOM such as number of BOM items

You can enhance the SOP environment with your own functions (see Functions in Environments).

For more information, see the R/3 Library under Controlling → Cost Center Accounting → Cost Center Planning → Planning Process → Transferring Scheduled Production. Scheduled Activity Transfer.

Activities

You can find more information on setting up templates in Transferring Scheduled Activities from PP.

You can find more information on transfers under Transferring Scheduled Activities from Production.

Scheduled Activity Transfer
Scheduled Activity Transfer

Overview:
-Scheduled Process
-Quantities
-Plan-Orders

Overview:
-Template
-Activities

Overview:
-BOMs

Overview:
-Scheduled components

Overview::
-Activity quantities

Overview::
-Scheduled Process Quantities

SOP
LTP

Transferring Scheduled Production

Prerequisites
Before the transfer, you must establish and assign an appropriate template.

See also:
Transferring Scheduled Activities from PP [Ext.]

Procedure
To transfer data:
1. In the Activity-Based Costing initial screen, choose Planning → Planning aids → Transfers → SOP/LTP.
2. Specify the source of the data to transfer:
   - Indicate whether the data is to be transferred from Sales and Operations Planning (SOP) or long-term planning (LTP).
     - For SOP, enter a version.
       In the version, activate the Product groups indicator (transfer process requirements for groups) in order to allow transfers of product group or material planning data from SOP to the Activity-Based Costing component (CO-OM-ABC).
     - For LTP, enter a plan scenario.
3. Enter the values for Plant, Version, From period, To period, and Fiscal year.
4. If you want to process large volumes of data, select Background processing.
5. Choose Execute.
6. To revoke the data transfer, choose Transfer → Cancel.
Transfer StKF. from Logistics Information System (LIS)

Use
You can transfer statistical key figures defined in the Logistics Information System (LIS) to the Controlling component (CO).

Prerequisites
The requirements include:

- The LIS is active and the Logistics components (LO) feed data to the LIS database.
- You must create statistical key figures in the Controlling component, such as number of invoice verifications, and created the corresponding key figure [link to the LIS](Page 82).
  - In the master data, specify the LIS statistical key figure to be transferred, such as Number of invoices (S012 - ALFPP).
- Maintain the assignment of one or more statistical key figures to the relevant objects in Customizing or in Assignment → Maintain, along with the version and the fiscal year.
- You have entered a variant that uses an assortment of parameters to delimit the values to be taken from the LIS.

If you need more information on customizing settings, then choose the text in the Implementation Guide (IMG) Controlling → Overhead Costs-Controlling → Activity-Based Costing → Planning → R/3 internal Plan Data Transfer → Transfer stat. Key Figure from LIS → Assigning Business Process - Maintain Key Figure [Ext.]; or Controlling → Overhead Costs-Controlling → Activity-Based Costing → Actual Postings → R/3 Internal Actual Data Transfer → Transfer stat. Key Figure from LIS → Assigning Business Process - Maintain Key Figure [Ext.].

Features
You can transfer to a single business process, a business process group, or to all business processes in a controlling area.

Transfer from LIS
The settings illustrated above help the user accomplish the following:

- process "Orders/Inland" only calculates costs for inland orders
- process "Orders/Foreign" only calculates costs for foreign orders

How is this accomplished?

The following prerequisites are fulfilled in the illustration:

- the statistical key figure "number of inland/foreign orders" is created in Activity-Based Costing
- the link to the corresponding LIS key figure ("number of orders") is produced
- the statistical key figure is assigned to processes "inland orders" and "foreign orders"

Before the process can allocate the correct quantity from LIS, the system must be able to identify which data record belongs to which process. The "inland" and "foreign" variants, which works with parameter "Delivery number", serve this purpose. The data records with delivery numbers 1 to 1000 belong to variant "inland"; those with numbers 1001 to 2000, to variant "foreign".
Transferring Statistical Key Figures

Prerequisites

Create the necessary statistical key figures and connect them to the Logistics Information System (LIS). Assign the business process and key figure(s) with variants in Customizing, or by choosing Assignments → Maintain.

Procedure

1. Choose Period-end closing → Single functions → Transfer → Statistical key figures from LIS or Planning → Planning aids → Transfer → Statistical key figures from LIS.
2. You can activate LIS reference and enter the reference and the fiscal year if, for example, you want to transfer actual data from a previous fiscal year to use as plan data in the current year.
3. In any case, define the following parameters:
   - Version
   - Period
   - Fiscal year
4. Activate or deactivate the appropriate indicators:
   - Reset and overwrite
   - Do not change
   - Processing parameters:
     - Background processing
     - Test run
     - Detailed list
5. Afterwards, start the transfer transaction by choosing Execute.
   After you post data records, they are available as statistical key figures on the object.
6. You can enter or transfer statistical key figures for the following objects:
   - Cost center
   - Cost center / activity type
   - Business process (only if the Activity-Based Costing component is active)
   - Cost Objects
Workflow-Integration for Business Processes

Use

Within the context of workflows, you can reproduce business work steps in the SAP System. The workflow serves as an interface between organization and controlling.

To do this, you can plan a workflow in which you describe and set the individual tasks of a business process.

You can assign such workflow definitions to business processes. This enables you to create allocation systems that calculate the data of various business processes and/or cost centers/activity types.

Activities

You must complete the following:

• create or choose a workflow definition with the business process steps, and assign the workflow to a business process
• assign cost data to the individual tasks
• create a template in environment SBP
• assign the template to the business process

Creating or choosing a workflow definition / assigning bus. processes

• Choose a business process that you want to change (see Business processes) [Page 45].
• Go to the register Organization.
• Create or choose a task.
  • In field Task type, choose WS/Workflow template. Use the Workflow Builder to create the necessary steps, and/or insert existing tasks (for procedures, see Workflow Builder [Ext.] and Tasks and Tasks Groups [Ext.]) or
  • choose an existing task in field Task
• Save the changed business process.

assign cost data to the individual tasks

For procedures, see: Maintaining Task Costs [Page 237]
**create a template in environment SBP**

Create a template in environment SBP (for procedures, see Maintaining templates [Page 33] and Template for business processes/cost centers [Page 362]).

Enter the following data:

<table>
<thead>
<tr>
<th>Business process category</th>
<th>Object</th>
<th>Plan: Qty. factor</th>
<th>Actual: Qty. factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost center / activity type</td>
<td>in the selection editor, choose: as comparison operand 1: SEND_COST_CTR_ATYP_OBJECT as comparison operand 2: WORKFLOW_SEND_CCTR_AT_OBJECT</td>
<td>In the quantity editor, choose Function [Ext.]: WORKFLOW_STANDARD_QTY_CCTR_AT</td>
<td>In the quantity editor, choose: AS_PLAN_QUANTITY_FACTOR</td>
</tr>
<tr>
<td>Business process</td>
<td>in the selection editor, choose: as comparison operand 1: SEND_PROCESS_OBJECT_NUMBER as comparison operand 2: WORKFLOW_SEND_BUS_PROC_OBJ</td>
<td>In the quantity editor, choose: WORKFLOW_STD_QTY_BUS_PROC</td>
<td>AS_PLAN_QUANTITY_FACTOR</td>
</tr>
</tbody>
</table>

**assign the template to the business process**

Assign the template to the business process (for procedures, see Assigning templates for processes/cost centers [Page 365]).

See also:

Example: Workflow Integration [Page 238]
Maintaining Task Costs

Use

After you defined the tasks in the Workflow Builder and assigned them to a business process, enter the cost data (cost centers or cost center groups, activity types and standard quantities) for the individual tasks here. This information is used as sender data when a template allocation is carried out for the receiver business process.

Prerequisites

The tasks are defined and assigned to a receiver business process (see Workflow-Integration for Business Processes). [Page 235]

Displaying Cost Data from the Task Catalog

1. In the Activity-Based Costing initial screen, choose Environment → Task catalog → Display.
2. In the initial screen, select the task types.
3. Limit the task area by entering a search term, if you wish.
4. Define the validity time frame for the task costs.
5. Choose Enter.
6. You can see the the data in the overview screen.

Creating, Changing or Deleting Cost Data from the Task Catalog

1. In the Activity-Based Costing initial screen, choose Environment → Task catalog → Change.
2. In the initial screen, select the task types.
3. Limit the task area by entering a search term, if you wish.
4. Define the validity time frame for the task costs.
5. Choose Enter.
6. In the overview screen:
   - Delete the activity type for the task in the Activity type column. This deletes the connection in its entirety. Note that, if you delete the standard quantity in the Quantity column, the link remains intact.

   ![Warning]

   You cannot save a standard quantity without an activity type.

   - create or change the data for the task in columns Cost center, Cost center grp., Acty typ., and Quantity.

7. Save your entries.
Example: Workflow Integration

A workflow contains both business processes, "Checking" and "Controlling". An appropriate SBP template already exists. The processes "Checking" and "Controlling" are assigned to the appropriate Workflow definition and template.

Whenever the business process "Controlling" is executed, "Checking" is also carried out.

Workflow Definition for Business Process "Checking"

Business process "Checking" contains two tasks and receives activities from two cost centers/activity types.

- Cost center FUNCTIONCHECK/Activity type INHR (INSPECTIONHOURS)
- Cost center MATERIALCHECK/Activity type INHR (INSPECTIONHOURS)

A task with two steps is created in Workflow Builder: step 1 consists of the jobs done in cost center FUNCTIONCHECK/activity type INHR (INSPECTIONHOURS); step 2 consists of those in cost center MATERIALCHECK/activity type INHR (INSPECTIONHOURS).

Assigning cost data

The following cost data is assigned:

- Cost center FUNCTIONCHECK/Activity type INHR (INSPECTIONHOURS): standard quantity 5.0
- Cost center MATERIALCHECK/Activity type INHR (INSPECTIONHOURS): standard quantity 1.0

Workflow Definition for Business Process "Controlling"

Business process "Controlling" consists of a task and a business process. It receives activities from cost center ENDCONTROLLING, activity type CLHR (CLERKHOURS).

The system created a workflow definition in the Workflow Builder with one step and a sub-process: step 1 consists of cost center task ENDCONTOLLING/activity type CLHR (CLERKHOURS), and the business process "Checking" is entered as the sub-process.

Assigning cost data

The following cost data are assigned: cost center ENDCONTROLLING/activity type CLHR (CLERKHOURS) : standard quantity 0.5.

Business process "Controlling" is planned with an output of 1,200.

You can now view the allocation relationship through the structure explosion (see: Explode Structure Process [Ext.]).

Template-Allocation Results

You receive the following results when you run the template allocation:

- Cost center FUNCTIONCHECK/activity type INHR (INSPECTIONHOURS) sends 6,000 STD (standard quantity 5.0) to business process "Checking".
- Cost center MATERIALCHECK/activity type INHR (INSPECTIONHOURS) sends 1,200 STD (standard quantity 1.0) to business process "Checking".
- Cost center ENDCONTROLLING, activity type CLHR (CLERKHOURS) sends 600 STD (standard quantity 0.5) to business process "Controlling".
- Because "Checking" is always carried out when "Controlling" is executed, "Controlling" receives the activity from "Checking" (planned output receiver object * quantity factor; here, 1).
Plan Reconciliation

Use

Plan reconciliation takes the various internal plans and coordinates and adjusts their activity exchanges.

Use plan reconciliation in the following situations:

1. Initial planning

   The process quantity is planned independently for each business process. This can result in inconsistencies between sender and receiver business processes. Plan reconciliation helps avoid this problem.

2. Plan adjustments

   If the plan process quantity of a receiver process changes, the entire planning network must be adjusted accordingly. Plan reconciliation displays and analyzes those areas where the changes affect planning.

As part of plan reconciliation, plan process quantities of sender business processes are corrected along with plan process quantities of receiver business processes. The SAP System changes variable process quantities and process costs accordingly. The fixed portions of participating process quantities and process costs remain unchanged.

For more information, see the R/3 Library under Controlling ... / Cost Center Accounting Executing Plan Reconciliation [Ext.].
Period-Based Allocations

Use

Distribution, assessment, and process assessment allocate costs collected on a cost center or business process during the accounting period to receivers according to pre-defined keys.

Indirect activity allocation assigns activity quantities. These procedures are called indirect allocation methods because the exchanges of activities are not the basis for allocating costs/quantities, but rather the user-defined tracing factors such as percentage rates, flat amounts, statistical key figures, or posted amounts.

These procedures make the allocations more manageable; the keys as well as the sender and receiver relationships are normally defined once.

The most powerful tool for activity quantity calculations is template allocations. This method uses custom formulas and functions from an operational environment of the SAP System to determine the quantities for allocation dynamically.

Distribution, assessment, and process assessment are best suited for cost centers and business processes where direct activity allocation is not possible because the business transactions are so varied that it is impossible or difficult to define all the activity types.

Prerequisites

Allocations are carried out during period-end closing and draw upon the pre-defined parameters (keys, sender-receiver relationships).

To use multiple currencies in period-based allocations, see Currencies in Period-Based Allocations [Ext.].
## Differences Between Allocation Methods

The table illustrates the main differences between the allocation methods.

### Allocation Methods

<table>
<thead>
<tr>
<th>Allocation Method</th>
<th>Allocation Of</th>
<th>Allocation Using</th>
<th>Line Item Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Template-Allocation</td>
<td>Actual and plan quantities of business processes and cost centers/activity types</td>
<td>Allocation (secondary) cost element</td>
<td>Item text for templates, and sender and receiver objects</td>
</tr>
<tr>
<td>Indirect activity allocation</td>
<td>Actual and plan quantities of business processes and activity types</td>
<td>Allocation (secondary) cost element</td>
<td>Sender activity type or process and receiver objects</td>
</tr>
<tr>
<td>Target=actual allocation</td>
<td>Actual and plan quantities of business processes and activity types</td>
<td>Allocation (secondary) cost element</td>
<td>Sender activity type or process and receiver objects</td>
</tr>
<tr>
<td>Assessment/process assessment</td>
<td>Primary and secondary cost elements</td>
<td>Assessment (secondary) cost element</td>
<td>Sender cost center or process and receiver objects</td>
</tr>
<tr>
<td>Distribution</td>
<td>Primary costs</td>
<td>Original cost element</td>
<td>Sender cost center, sender business processes and receiver objects</td>
</tr>
</tbody>
</table>
Template Allocation in Plan

Use

The use of *template [Ext.]* allocations is one method to assign overhead costs. This method is unique for several reasons:

- Costs are not only allocated, but the system also determines the quantities that the respective receiver objects consume or utilize; costs are calculated based on the quantities and prices and are, therefore, more accurately determined
- You work with templates: the sender, quantities and activation time do not already exist, but are dynamically determined through the template at the time of the calculation
- The template uses functions defined by the user or already provided in the system to determine the needed data; these functions pull information already in fields or carry out complex algorithms from the operative data in the SAP system; they are created and maintained in the environment maintenance
- Sender objects can be business processes or cost centers/activity types
- Possible receiver objects of the template allocation in plan can be:
  - Internal Orders
  - WBS Elements
  - Profitability segments of profit and market segment analysis
  - Business Processes
  - Cost centers or cost centers/activity types

In order to describe the allocation quantities in plan, you create modeled assumptions allowing best estimates of expected quantities based on the given (static) master data.

For example, the number of purchase orders per sales orders serves as the process driver of the procurement process for a sales order processor. In order to estimate the plan quantities of expected procurements for this order, the SAP System uses the relevant template function to dynamically determine the number of different components not in stock based on the bill of materials for the product to be produced.

Prerequisites

These include:

- Creating the necessary sender objects; for example Business Processes [Page 45] or cost centers/activity types
- Maintaining the environment [Page 101] or Functions necessary for your receiver object
- Providing the process drivers (for example, statistical key figures) used by the functions
- Creating an appropriate template [Page 30]
Template Allocation in Plan

- Assigning the template to the receiver object (Cost Driver [Page 348] or Profitability Segment [Page 355]).

Features

Enter the receiver object(s) in the entry screen for template allocation to determine the overhead costs. When you carry out the allocation, the system does the following:

- Through the search rule you defined, the correct template is assigned to the receiver object
- The template finds the correct business process(es) or cost centers/activity types
- It calculates the quantities demanded/required
- It sets the time period of the allocation and checks, if necessary, the activation requirements

The result is a list of receiver and sender objects of the activity quantities and relevant costs (quantity*price).

Activities

You have completed all prerequisites.

To carry out a template-allocation:

- Enter the template-allocation transaction for which receiver object(s) determine overhead costs
- Execute the template-allocation
- After the results are displayed (Display run results: Template Allocation [Page 163], you can use the Template Trace [Page 164] to display a more detailed view.
- In Display Detail [Page 165] it is also possible to view the results of individual template cells.

See also:

Template Allocation in Actual [Page 344]
Executing Template Allocations

1. Choose the transaction for the template allocation in your application.
2. Enter the receiver object(s) (see Selection variant [Page 43]).
3. Enter the version [Ext.] (if more than one exists) and the periods and fiscal year for the allocation.
4. You can determine the type of processing and the preparation of results with the Test run, Background processing, and Detail list indicators.
   i. If you activate the Test run indicator, the SAP system runs the template allocations without posting the results. We recommend using the Detail list indicator together with the Test run indicator so that you may then analyze the test run results.
   ii. If you need to process large volumes of data, use the Background processing indicator for executing the allocation during periods of low system use.
5. To execute the template allocation, choose or Allocation → Execute.
6. After the results are displayed (Display run results: Template Allocation [Page 163]), you can use the Template Trace: Basic Screen [Page 164] for a more detailed/broken down view.
7. In Display Detail [Page 165] it is also possible to view the results of individual template cells.
Template-Allocation for Cost Objects

Use

With this template-allocation you can carry out job costing at the cost object level. In the SAP system, Cost objects [Ext.] represent operational job objects (for example production orders, sales orders and so on). You can couple a cost object with a product (for example, production order for a specific product), or, irrespective of product, a cost object can represent a certain job (for example, a trade fair order). Plan costs, which are periodically compared with incurred actual-costs, are recorded on cost objects.

You can use business processes or cost center/activity types as senders with template-allocation for cost objects. You can use the following cost objects as receivers (001 = number of the environment):

001: Material cost estimate/production orders (actual)
004: Network (actual)
005: WBS-Elements (plan and actual)
006: General cost objects/cost object hierarchy (actual)
007: Internal orders (plan and actual)
008: Customer orders (actual)
009: Process orders (actual)
010: Product cost collector (actual)
011: Service orders (actual)
012: CO-production orders (actual)

Prerequisites

These include:

• Creating the necessary sender objects; for example Business Processes [Page 45] or Cost Center [Ext.]/Activity Types [Ext.]
• Maintaining the Environment [Page 101] or functions necessary for your receiver object
• Providing the Process Drivers [Ext.] (for example, statistical key figures) used by the functions
• Creating appropriate Process Templates [Page 90]
• Assigning the template to the receiver object (cost object or profitability segment).

Activities

• You have completed all prerequisites.
• Execute the template allocation (see Executing template allocations [Page 347]).

See also:
Assigning Templates for Cost Objects and Calculations [Page 353]
Template-Application in Standard Cost Estimate

Use

In contrast to the template-allocations (for cost objects, profitability segment, and others) the template-application is carried out implicitly during the normal cost calculation work steps, and not explicitly in its own transactions. Together with this, the template helps direct the overhead cost allocations from business processes or cost center/activity types to the costing object (see: Overhead costs [Ext.]).

You can apply the template in plan through:

- Costs calculation not generated by an order
  - The system automatically determines the overhead costs in the cost estimate with quantity structure, when you carry out the calculation.
  - The system determines the overhead costs in the cost estimate without quantity structure, in the additive calculation, and in the base planning and simulation calculation, once you save one of these calculation or if you choose the function Calculate overhead costs in the menu.

- Preliminary costing for a cost object
  - Overhead costs are determined automatically during the preliminary costing of production orders with quantity structures, process orders and in the sales order costing (with the product costing method), when you carry out one of these calculations.
  - Overhead costs are determined in the preliminary calculation of production orders without a quantity structure, in sales order costing (with the unit costing method) and in the general cost object planning, when you save one of these calculations or choose the function Calculate overhead costs in the menu.


The template ascertains which overhead costs are used and to which extent. It also determines how these costs are assigned to the product. You can find the template through the costing sheet in the valuation variant (see: Assigning Templates for Cost Objects and Cost Estimates [Page 353]).

You can assign overhead costs in actual through the template, while you execute a template-allocation in the period-end closing of cost object controlling (see: Template Allocation in Actual [Page 344]).
Templates for Cost Object and Calculation

Definition

The template is a dynamic tool, which uses functions [Ext.], formulas [Page 151] and Boolean logic (true/false) to calculate values. It consists of a grid of columns and rows. Templates for cost objects are set in environments 001 or 004 to 012, and those for plan calculation in environments 001 to 003.

Structure

You can choose between six item categories. Depending on the item category you choose, you will have the following columns available for data entry.

<table>
<thead>
<tr>
<th>Item Type</th>
<th>Columns that can be edited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commentary row</td>
<td>Description</td>
</tr>
<tr>
<td>Process</td>
<td>Name, Object, Quantity Plan, Active. Plan, Quantity Actual, Activation Actual, Allocation event actual</td>
</tr>
<tr>
<td>Sub-Template</td>
<td>Name, Object, Activation Requirements Plan, Activation Actual</td>
</tr>
<tr>
<td>Cost center / activity type</td>
<td>Name, Object, Quantity Plan, Active. Plan, Quantity Actual, Activation Actual, Allocation event actual</td>
</tr>
<tr>
<td>Calculation row (Process)</td>
<td>Name, Object, Quantity Plan, Active. Plan, Quantity Actual, Activation Actual, Allocation event actual</td>
</tr>
<tr>
<td>Calculation rows (cost centers/activity types)</td>
<td>Name, Object, Quantity Plan, Active. Plan, Quantity Actual, Activation Actual, Allocation event actual</td>
</tr>
</tbody>
</table>

You have the following entry and maintenance possibility per column type.

<table>
<thead>
<tr>
<th>Column type</th>
<th>Possible Entries/Processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Type</td>
<td>Commentary row, Process, Sub-template, Cost center/activity type, Calculation row (Process), Calculation row (Cost center/activity type)</td>
</tr>
<tr>
<td>Description</td>
<td>Explanations</td>
</tr>
<tr>
<td>Object</td>
<td>Based on the item type, enter the object (such as business process). You can enter a fixed object with type process or cost center/activity type, or you can let the system determine this dynamically within an analysis period for one or more processes or cost center/activity types. For more information, see Object Determination [Page 128].</td>
</tr>
<tr>
<td>Quantity Plan/Actual</td>
<td>Enter the consumption quantities in items process or cost center/activity types. You can enter a constant value, or you can allow the SAP System to determine the appropriate value when the valuation event occurs. For more information, see Quantity Determination [Page 133].</td>
</tr>
</tbody>
</table>
### Activation requirements

**Plan/Actual**

Under *Activation*, determine the conditions, which activate the item. You can enter *Active* or *Inactive* as fixed values, or you can define a method, which allows the R/3 System to activate or deactivate the item when the valuation occurs. Ensure that the default value for the activation column is set to active. If you do not enter anything into the column, the system assumes the condition “active”.

In beer production, the business process *Reduce Alcohol Content* is required for alcohol-free beer but not for other beers. The process must be activated for alcohol-free beer and remain inactive otherwise.

For more information, see [Activation](Page 139).

### Allocation event

**(actual/plan)**

You can define different process allocation events. You can allocate the individual business processes for multiple-period orders at the times the processes are actually utilized. This is vital in order to ensure correct calculations of work in process (WIP) because processes cannot always be confirmed on a periodic basis in these situations.

Determine the valuation events that trigger the item for allocations. By double clicking, you reach a selection window with all functions that you can use to determine the allocation event.

In beer production, ingredient testing takes place at the beginning of the production order, whereas storage of the final product takes place at the end.

By entering the corresponding valuation events, you can ensure that the SAP System takes ingredient tests into account early in the costing calculations (calculate work in process) and that costing calculations for storage take place towards the end of the production order.

If you choose item category *calculation row*, the editor cannot be called up in the object columns.

**Column Layout, Template for Cost Object**
The diagram illustrates which questions the important column entries answer.

- Which process or cost center/activity type is used?
- What quantity is pulled by the receiver object?
- Under which conditions is the item active?
- When should the item be assigned?
Assigning Templates for Cost Objects and Calculations

Use

Because templates for cost objects are dependent on materials and orders, the SAP System must select the appropriate template at the time of the valuation event. Template selection is based on the following assignment logic:

The SAP System selects the template based on the overhead structure, the distribution key, and the environment.

- When planning product costs, the R/3 System uses the overhead structure based on the valuation variant, itself selected based on the costing variant. The distribution keys are selected through the overhead cost group in the master data of the material to be costed. The SAP System selects the environment based on the costing method (direct or product costing).

- When costing cost objects and allocating to cost objects, the SAP System uses the overhead structure and distribution key taken from the master data of the cost object. The environment is also selected based on the cost object.

Procedure

1. In the Implementation Guide (IMG) of Activity-Based Costing, choose Templates → Assigning templates for cost objects and calculations, or in the menu for Activity-Based Costing Period-end closing → Current settings → Assign templates to cost objects

2. Enter the controlling area, costing sheet, overhead key and environment, and then the template to be applied.

3. Save your entries.

The costing sheet must always be entered. Without a costing sheet, the template is not pulled and costs are not calculated.
Only one template will be called up for each environment.
Template-Allocation for Profitability Segment

Use

In the profit and profitability segment calculations (CO-PA), you can execute periodic reporting in controlling at product level. You can build up multi-dimensional market segments (Profitability Segment [Ext.]) distinguishable through many different characteristics. You can analyze the profitability of a product in a specific region, customer group and distribution channel simultaneously. This multi-dimensionality is especially meaningful for service industries, which often see their products as much more than one-dimensional.

You can use business processes or cost center/activity types as senders with template-allocation for profitability segments. You can define the profitability segment of the profitability analysis as the receiver: this allows the system to assign costs to the appropriate market segment. You create the template in environment PAC.

Prerequisites

These include:

- Creating the necessary sender objects; for example Business Processes [Page 45] or Cost Center [Ext.]/Activity Types [Ext.]
- Creating cost driver data in CO-PA (for example, over the SD interface)
- Completing all editing steps specified in the Implementation Guide (IMG) for profit and market segment calculation (CO-PA).

For more information, see:

Planning → Integrated planning → Transfer cost center/process planning → Set up template-allocation [Ext.].

Activities

- You have completed all prerequisites.
- Execute the template allocation (see Executing template allocations [Page 347]).
Templates for Profitability Segments

Definition

The template is a dynamic tool, which uses functions [Ext.] and Boolean logic (true/false) to calculate values. It consists of a grid of columns and rows. Create a template for profitability segment in environment PAC.

Structure

You can choose between six item categories. Depending on the item category you choose, you will have the following columns available for data entry.

<table>
<thead>
<tr>
<th>Item Type</th>
<th>Columns that can be edited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commentary row</td>
<td>Description</td>
</tr>
<tr>
<td>Process</td>
<td>Name, Object, Quantity Plan, Active Plan, Quantity Actual, Activation Actual</td>
</tr>
<tr>
<td>Sub-Template</td>
<td>Name, Object, Activation Requirements Plan, Activation Requirements Actual</td>
</tr>
<tr>
<td>Cost center / activity type</td>
<td>Name, Object, Quantity Plan, Active Plan, Quantity Actual, Activation Actual</td>
</tr>
<tr>
<td>Calculation row (Process)</td>
<td>Name, Object, Quantity Plan, Active Plan, Quantity Actual, Activation Actual</td>
</tr>
<tr>
<td>Calculation rows (cost centers/activity types)</td>
<td>Name, Object, Quantity Plan, Active Plan, Quantity Actual, Activation Actual</td>
</tr>
</tbody>
</table>

You have the following entry and maintenance possibility per column type.

<table>
<thead>
<tr>
<th>Column type</th>
<th>Possible Entries/Processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Type</td>
<td>Commentary row, Process, Sub-template, Cost center/activity type, Calculation row (Process), Cost center/activity types, Calculation row (Cost center/activity type)</td>
</tr>
<tr>
<td>Description</td>
<td>Explanations</td>
</tr>
<tr>
<td>Object</td>
<td>Based on the item type, enter the object (such as business process). You can enter a fixed object with type process or cost center/activity type, or you can let the system determine this dynamically within an analysis period for one or more processes or cost center/activity types. For more information, see Object Determination [Page L28].</td>
</tr>
</tbody>
</table>
## Templates for Profitability Segments

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Quantity Plan/Actual</strong></td>
<td>Enter the consumption quantities in items <em>process</em> or <em>cost center/activity types</em>. You can enter a constant value, or you can allow the R/3 System to determine the appropriate value when the valuation event occurs. For more information, see [Quantity Determination](Page 133).</td>
</tr>
<tr>
<td><strong>Activation requirements Plan/Actual</strong></td>
<td>Under <em>Activation</em>, determine the conditions, which activate the item. You can enter <em>Active</em> or <em>Inactive</em> as fixed values, or you can define a method, which allows the R/3 System to activate or deactivate the item when the valuation occurs. Ensure that the default value for the activation column is set to active. If you do not enter anything into the column, the system assumes the condition “active”. For more information, see [Activation](Page 139).</td>
</tr>
</tbody>
</table>

If you choose item category *calculation row*, the editor cannot be called up in the object columns.
Assigning Templates to Profitability Segments

Use

The corresponding templates must be selected at the time of evaluation since the template for Profitability segments is dependent on the characteristics of the objects. Template selection is based on the following assignment logic:

You set the dimensions of the profitability segment by entering the update characteristics. You can make one or more selection feature(s). These determine the criteria used to choose the receiver object in the dynamic process allocation (determine selections and fixed update characteristics).

Using a selection rule, assign a characteristic area to a specific template (maintain template search and further update characteristics). While making the allocations, enter the company code and characteristic area for which the allocation should be done. When characteristic values, which are assigned to a template through a selection rule, exist in this area, this template will be used automatically for allocations.

Activities

The assignment occurs in the Implementation Guide (IMG) of the Profit and Market Segment Calculation (CO-PA). For more information, see:

Planning → Integrated planning → Transfer cost center/process planning → Set up template-allocation → Specify Characteristics for Selection and Update [Ext.], or Maintain template determination and other update characteristics [Ext.].

or

Flow of Actual Values → Transfer of Overhead → Set Up Template Allocation → Specify characteristics for selection and update, or Maintain template determination and other update characteristics.

Example

Assigning Templates - Profitability Segments

Templates FDGK and FDKK are found through selection rule 1. The characteristics used are “Customer groups”, “Product groups” and “Product variants”. The characteristic attributes “Firms”, “Loans” and “Large credit” find template “FDGK”; attributes “Firms”, “Loans” and “Small credit” find template “FDKK”.

If the search through selection rule 1 was unsuccessful, the system uses a more general search (only two characteristics) through selection rule 2. Depending on the characteristic values, templates FD or PD are found.
Assigning Templates to Profitability Segments

CO-PA Characteristics (Dimensions)
- Region
- Branch
- Customer Group
- Prod. Group
- Prod. Variant
- ...

Derivation strategy for Templates

Selection rule 1
<table>
<thead>
<tr>
<th>Customer Group</th>
<th>Product Group</th>
<th>Product Variant</th>
<th>Template</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firms</td>
<td>Loan</td>
<td>Lg. Credit</td>
<td>FDGK</td>
</tr>
<tr>
<td>Firms</td>
<td>Loan</td>
<td>Sm. Credit</td>
<td>FDKK</td>
</tr>
</tbody>
</table>

Selection rule 2
<table>
<thead>
<tr>
<th>Customer Group</th>
<th>Product Group</th>
<th>Template</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>Loan</td>
<td>FD</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PD</td>
</tr>
</tbody>
</table>

Templates
- FDGK
- FDKK
- FD
- PD
Template Allocation in Plan: Processes/Cost Centers

Use

Along with profitability segments and cost objects, business processes, cost centers/activity types, and cost center receiver objects can also be used in template allocations. A template allocation can be run on such business processes, cost centers or cost centers/activity types only when these are assigned fixed allocation templates in the master data. Only one template can be referenced to each business process for allocations; to each cost center one for activity dependent and another for activity independent allocations. You can assign additional templates for the formula planning. Each business processes or cost center can appear several times as a sender in various templates.

In the allocation templates for business processes or cost centers/activity types, the system sets the fixed plan quantities and the plan quantity factor (here, only with activity dependent planning) as absolute values or calculates them through the formulas or functions.

Cost centers and sender business processes allocate plan quantities to receiver. By evaluating the process flow with the plan activity price, the R/3 System can assign costs to the receivers during the allocation itself.

The allocation is dependent on the period and fiscal year.

You can use business processes or cost center/activity types as senders with template-allocation for business processes/cost centers. You can use the following objects as receivers (SBP = name of the environment):

- SBP: Business process
- SCD: Cost centers/Activity types (activity dependent allocation)
- SCI: Cost centers (activity independent allocation)

Prerequisites

Master data and templates

These include:

- Creating the necessary sender objects; for example Business Processes [Page 45] or Cost Center [Ext.]/Activity Types [Ext.]
- Maintaining the Environment [Page 101] or functions necessary for your receiver object
- Providing the Process Drivers [Ext.] (for example, statistical key figures) used by the functions
- Creating appropriate Templates [Page 90]
- Assigning the template to the receiver object (business process, cost center or cost center/activity type)

The allocation uses only activity types of category 1 (manual entry, manual allocation) and category 2 (indirect entry, indirect allocation) and sender business processes of category 1 and category 2 (equivalent to the activity type categories). You do not need to accept the category from the activity type or business process
Template Allocation in Plan: Processes/Cost Centers

master data. These are default values which you can overwrite in quantity and price planning for activity types and business process for each version and fiscal year.

Planning, Quantities and Prices

- First, the quantities must be summed and the prices planned for all the receiver objects of the intended allocation and for all sender objects of type cost center/activity type.

For more information, see Process Output (Quantities and Prices) Planning [Page 178] (ABC) and Activity Type Planning [Ext.] (CCA).

- SOP/LTP: you can determine and transfer plan quantities for receiver objects (business processes) of the highest hierarchy level (see Exploding Structured Processes [Ext.]) in the following manner: you can transfer the requirements of production from the intended, rough production planning (SOP), or of the long term planning (LTP) from the receiver object, and execute the allocation with this data.

For more information, see Transferring Activity Schedules [Page 229] (ABC) and Transferring Activity Schedules [Ext.] (CCA).

Note the following regarding receiver business processes: if a sub-process does not include a plan process quantity, the SAP System uses the allocated process quantity for process cost calculations. The system uses this process quantity for further calculations.

This happens only if the sub-process is simultaneously a receiver process in the structure hierarchy. Therefore, activity quantities of cost center/activity types are treated only as scheduled activities.

Activities

In Activity-Based Costing or Cost Center Accounting, choose Planning → Allocation → Template allocation.

For more information on template assignments and allocations, see:

- Templates for Business Processes/Cost Centers [Page 362]
- Templates for Bus. Proc./Cost Center Assignment [Page 365]
- Executing Template-Allocations [Page 347]
- Example Template Allocation Process (Plan) [Page 265]

Reversing allocations in plan

It is possible for you to reverse an allocation in plan. In the screen for template allocations, choose Extras → Reverse (normally not necessary, as corrections are made in the delta postings).

Additional business posting transactions while executing allocations in plan

You can also make a manual posting in the template allocation. This allows you to make additional postings for extraordinary cases manually; namely for business processes, cost centers or cost center/activity types.
Templates for Business Processes/Cost Centers

Definition

The template is a dynamic tool, which uses functions [Ext.] , formulas [Page 151] and Boolean logic (true/false) to calculate values. It consists of a grid of columns and rows.

- Create a template in environment SBP for allocations in business processes.
- Create a template in environment SCI for allocations in cost centers.
- Create a template in environment SCD for allocations in cost centers/activity types.

Structure

You can choose between six item categories. Depending on the item category you choose, you will have the following columns available for data entry.

<table>
<thead>
<tr>
<th>Item Type</th>
<th>Columns that can be edited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commentary row</td>
<td>Description</td>
</tr>
<tr>
<td>Process</td>
<td>Name, Object, Activation condition, Plan quantity factor variable (only SBP and SCD), Plan quantity fixed, Actual quantity factor variable (only SBP and SCD), Actual quantity fixed</td>
</tr>
<tr>
<td>Sub-Template</td>
<td>Name, Object, Activation condition</td>
</tr>
<tr>
<td>Cost center / activity type</td>
<td>Name, Object, Activation condition, Plan quantity factor variable (only SBP and SCD), Plan quantity fixed, Actual quantity factor variable (only SBP and SCD), Actual quantity fixed</td>
</tr>
<tr>
<td>Calculation row (Process)</td>
<td>Name, Object, Activation condition, Plan quantity factor variable (only SBP and SCD), Plan quantity fixed, Actual quantity factor variable (only SBP and SCD), Actual quantity fixed</td>
</tr>
<tr>
<td>Calculation rows (cost centers/activity types)</td>
<td>Name, Object, Activation condition, Plan quantity factor variable (only SBP and SCD), Plan quantity fixed, Actual quantity factor variable (only SBP and SCD), Actual quantity fixed</td>
</tr>
</tbody>
</table>

You have the following entry and maintenance possibility per column type.

<table>
<thead>
<tr>
<th>Column type</th>
<th>Possible Entries/Processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Type</td>
<td>Commentary row, Process, Sub-template, Cost center/activity type, Calculation row (Process), Cost center/activity types, Calculation row (Cost center/activity type)</td>
</tr>
<tr>
<td>Description</td>
<td>Explanations</td>
</tr>
<tr>
<td>Object</td>
<td>Based on the item type, enter the sender object (such as business process). You can enter a fixed object with type process or cost center/activity type, or you can let the system determine this dynamically within an analysis period for one or more processes or cost center/activity types. For more information, see Object Determination [Page 128].</td>
</tr>
</tbody>
</table>
**Activation Requirements**

Under *Activation*, determine the conditions, which activate the item. You can enter *Active* or *Inactive* as fixed values, or you can define a method, which allows the R/3 System to activate or deactivate the item when the valuation occurs.

For more information, see [Activation](Page 139).

<table>
<thead>
<tr>
<th>Plan/Actual quantity factor (only in environment SCD and SBPI)</th>
<th>Factor for variable output quantity. Enter a factor in items <em>process</em> or <em>cost center/activity types</em>. The planned output quantity of the receiver object is multiplied with the factor. The result is the sender output quantity. You can enter a constant value, or you can allow the R/3 System to determine the appropriate value when the valuation occurs. For more information, see [Quantity Determination](Page 133).</th>
</tr>
</thead>
</table>

| Plan quantity fixed/Actual quantity fixed | Enter the consumption quantities in items *process* or *cost center/activity types*. You can enter a constant value, or you can allow the R/3 System to determine the appropriate value when the valuation event occurs. For more information, see [Quantity Determination](Page 133). |

If you choose item category *calculation row*, the editor cannot be called up in the object columns.

**Example**

**Template for allocation in business processes (environment SBP).**

In the above illustration, the resource consumption chain appears with the main process at the very end, Process 3.
Whenever process HP is consumed, processes 1,2 and 3 are also used, as well as the cost center/activity type 1.

The following table clarifies the allocation names:

<table>
<thead>
<tr>
<th>This process is used...</th>
<th>...then this object is used...</th>
<th>...with a fixed quantity that is calculated with...</th>
<th>...with a variable quantity that is calculated with...</th>
<th>...all of which is set in template.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process HP (through receiver object)</td>
<td>process 1</td>
<td>formula 1</td>
<td>factor 0.5</td>
<td>HP</td>
</tr>
<tr>
<td></td>
<td>process 2</td>
<td>20 units (fixed entry, no calculation)</td>
<td>formula 2</td>
<td>HP</td>
</tr>
<tr>
<td>Process 2 (through process HP)</td>
<td>CCtr 1/Activity type 1</td>
<td>_</td>
<td>factor 10</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>process 3</td>
<td>formula 3</td>
<td>factor 2</td>
<td>2</td>
</tr>
</tbody>
</table>

See also:

Templates [Page 90]
Executing Template-Allocations [Page 247]
Templates for Bus. Proc. / Cost Center Assignment

Use

The assignment allows the template-allocation to use the respective business process or cost center as receiver objects.

Each business process or cost center can be tied to only one template. However, each business processes, cost center and cost center/activity type can appear as a sender object in various templates.

The assignment is year-dependent. It cannot be changed within the fiscal year time frame. However, you can take shorter periods within a fiscal year into account by activating or deactivating time-based entries within the template itself.

Prerequisites

You must create one or more templates in the template environments SBP (business processes), SCD (cost center/activity types) or SCI (cost centers).

Procedure

1. In the menu for Activity-Based Costing choose Master data → Business process → Individual processing → Change; in the menu for Cost Center Accounting you can also choose Master data → Cost Center → Individual processing → Change.
2. In the initial screen for Change business process or for Change cost center, choose the business process or cost center to which you want to assign a template.
3. Choose tab Templates.
4. Choose a template in the Template field.
   - i. For business processes, use field Allocation template; here you will find all templates created for environment BPP.
   - ii. Cost center / activity type: choose a template in field Alloc.templ. actl. depen. Here you will find all templates for environment SCI.
   - iii. Cost center: choose a template in field Alloc.templ. actl. indep. Here you will find all templates for environment SCD.
5. Choose ✅.

From the template fields you can also:
- Display allocation structure
- Display templates
- Change templates, or
- Create templates
Example Template-Allocation Process (Plan)

Receiver business process BP1 is stored with sender processes BP2 and BP3 in template SBP1. Template SBP2 is assigned to each sender process. This template stores activity input ATYP1 from cost center CCTR1.

Receiver BP1 has a process quantity of 200 posted in plan. In Template SBP1 of receiver process GP1, Sender BP2 uses a fixed plan process quantity of 10 with a plan quantity factor of 0.5. Sender BP3 uses a fixed plan process quantity of 5 with a plan quantity factor of 0.7. In Template SBP2, ATYP1 uses a fixed plan process quantity of 30 with a plan quantity factor of 1.5.

### Plan Allocation of Process Quantities

Allocation of process quantities results in the calculation and allocation of the following: sender BP2: fixed period quantity 10 + Variable period quantity 100 (0.5 X 200); sender BP3: fixed period quantity 5 + Variable period quantity 140 (0.7 X 200); lan allocation to receiver BP1: process quantity of 110 scheduled for sender BP2 and process quantity of 145 scheduled for sender BP3.
Further allocation calculations result in senders BP2 and BP3 becoming receivers as well. The plan quantity of the sender process BP2 is not planned. The planned quantity of the sender process BP3 is 100. The allocation of the business process quantity is continued with the planned quantity instead of the scheduled quantities of the receiver process BP1 which are already calculated.

ATYP1: Fixed period quantity 30 + Variable period quantity 150 (1.5 X 100) allocates in plan to receivers BP2 and BP3

Because no process quantity exists in plan for BP2, the R/3 System uses the scheduled process quantity 110 from receiver BP1 (from the first allocation step).

This sets the plan quantity for BP2 equal to the scheduled process quantity of 110. Receiver BP2: Variable activity quantity 155 = Scheduled quantity 110 from BP1 X Plan quantity factor from ATYP1 (1.5 X 110)

Receiver BP3: Variable activity quantity 150 = Plan process quantity 100 X Plan quantity factor from ATYP1 (1.5 X 100)

**Additional Manual Posting**

An additional manual posting of a variable process quantity of 50 is made for receiver BP1. The previously posted debits from senders BP2 and BP3 remain untouched.

See also:

Executing Template-Allocations [Page 347]
Distribution

Use

The distribution concept is based on primary cost allocations between controlling objects. Distribution only takes primary costs into account. The following information is passed on to the receivers:

- The original (primary) cost element is retained.
- The sender and receiver information is documented in the cost center document (line items)

Business processes can be used as sender and receiver.

You can analyze the results of the distribution according to sender and receiver relationship in the information system (see Important Standard Reports [Page 463], Business Processes: Plan Line Items [Page 504], Business Processes: Actual Line Items [Page 505]).

For more information, see the R/3 Library under Controlling → Cost Center Accounting for the following topics:

Definition of Period-Based Re-postings or Period-Based Allocations [Ext.]
Executing Period-Based Re-postings or Period-Based Allocations On-line [Ext.]
Assessment (Cost Centers, Business Processes)

Use

Assessment allocates both primary and secondary costs in the Cost Center Accounting component (CO-OM-CCA) and business process costs in the Activity-Based Costing component (CO-OM-ABC). The following information is passed on to the receivers:

- The original cost elements are combined in secondary (assessment) cost elements. The original cost elements are not displayed on the receivers.

- Sender and receiver information (sender cost center, receiver cost center, and so on) appears in the Controlling (CO) document.

In the cases of:

- Distribution from cost centers on business processes
- Assessment from cost centers on business processes
- Assessment from business processes on all possible valid receivers

the R/3 System writes line items per sender and per receiver. You cannot set the R/3 System to limit the recording of line items. The R/3 System reverses and overwrites line items if you repeat period-based allocations within a period. The posting date for actual allocation is always the last day of the calendar month. The posting date for plan allocation is always the first day of the calendar month.

Note that you cannot allocate consumption quantities using assessment. In order to make activity quantity assignments, you must use indirect activity allocation.

For more information, see the R/3 Library under Controlling → Cost Center Accounting for the following topics:

Definition of Period-Based Re-postings or Period-Based Allocations [Ext.]
Executing Period-Based Re-postings or Period-Based Allocations On-line [Ext.]
Indirect Activity Allocation

Use
Indirect activity allocation automatically assigns activity quantities in plan and actual. Unlike manual planning or actual activity allocation, you define keys to allocate the activities. In addition, if calculating the sender activity quantities involves too much time or expense, the R/3 System can determine this value *inversely* based on the receiver activity quantities.

Target=actual allocation is a special form of indirect activity allocation in actual. In contrast with the other forms of indirect activity allocation, target=actual allocation allows you to create an iterative activity input network with multiple levels using the operating rate as the tracing factor.

Features
You may use two approaches in indirect activity allocation, depending on the activity category. You define these approaches using segments, which you can combine in cycles.

- **Posting activity quantities on the sender object allowed**

  Certain activity types allow you to determine the total activity provided per sender. These activity types belong to category 3 (manual entry, indirect allocation). Indirect activity allocation assigns the activity quantity from the sender to the receivers defined in the segment according to the specified tracing factor.

  The segment must use the sender rule *Posted quantities*. Any receiver rule can be used with the exception of *Fixed quantities*.

- **Posting activity quantities is difficult or impossible**

  For those activity types where it is impractical to calculate activity quantities, the R/3 System determines the activity quantity based on:

  - Receiver tracing factors with weightings defined for each sender
  - Segment definition (*Fixed quantities*)

  These activity types belong to category 2 (indirect entry, indirect allocation).

  The segment must use the sender rule *Quantities determined indirectly* with any receiver rule or the sender/receiver rule *Fixed quantities*.

  If you use *Quantities determined indirectly*, the weightings described above are defined using *Sender values*.

Example
The numbers of orders executed by receiver processes (inland purchases) 1 and 2 (foreign purchases) are given in the illustration; inland 6000 orders, foreign 4000 orders.

Calculation of the consumed activity quantities: because the processing of the foreign orders is expensive, the system assigns it a weighted factor of 2. The activity quantity is calculated from sender value 0.1 h (base processing time per order), weighted factor and consumed activity (bottom, left part of the illustration).
Indirect Activity Allocation

Cost calculations: the price per hour is the result of dividing the total costs by the activity quantity. This value is then multiplied with the consumes activity.

\[
(600 \times 60.\,\text{.-} = 36,000.\,\text{.-} \quad \text{or} \quad 800 \times 60.\,\text{.-} = 48,000.\,\text{.-}).
\]

For more information, see:

- Definition of Period-Based Re-postings or Period-Based Allocations [Ext.]
- Executing Period-Based Re-postings or Period-Based Allocations On-line [Ext.]
- Senders and Receivers in Indirect Activity Allocation [Page 372]
- Activity Quantity Valuation [Page 373]
- Requirements for Indirect Activity Allocation [Page 374]
- Target=Actual Activity Allocation [Page 375]
Senders and Receivers in Indirect Activity Allocation

Use

Senders in both plan and actual indirect activity allocation are always business processes or cost center/activity type, whereby you can use only activity types of category 2 or 3 in a segment. You do not need to accept the default category from the activity type master data. It is merely a suggested value that you can change during activity type planning for each version and fiscal year. If activity type planning is complete, the SAP System checks whether the activity type category matches the segment definition.

The activity type category is 1 (manual entry, manual allocation): this case does not allow indirect activity allocation.

The activity type category 2 (indirect determination, indirect allocation): the segment definition must include the sender rule Indirectly calculated quantity as well as a receiver rule, or Fixed quantities as both sender and receiver rule.

The activity type category 3 (manual entry, indirect allocation): here the segment definition must include the sender rule Posted quantities and any receiver rule except Fixed quantities.

If activity type planning and internal activity allocation has not yet taken place, indirect activity allocation is possible only for activity types of category 2 because the R/3 System has no basis for allocation (meaning plan and actual quantities) yet. In this case, determine the activity type category in the segment definition.

In actual indirect activity allocation, the activity type category is determined in segment definition or is drawn from the default value in the activity type master data.

Receivers for indirect activity allocation in the Activity-Based Costing component (CO-OM-ABC) are business processes and cost objects, just as in manual activity allocation (activity input planning). To do so, you must enter a delta version in the header information.

If the receiver of the activity allocation is a cost object (for example, a production order or a product cost collector), then the prices used in the valuation are determined based on the valuation variant. In this case, the valuation variant is linked to the cost object through the costing variant for the simultaneous costing. If the receiving cost object is not tied with a costing variant for the simultaneous costing, then the planned price for the period is used for the valuation.
Activity Quantity Valuation

**Use**

<table>
<thead>
<tr>
<th>Business Process as Receiver (Plan)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tracing factor:</td>
<td>Valuation</td>
</tr>
<tr>
<td>Output quantity</td>
<td>Completely variable</td>
</tr>
<tr>
<td>All others</td>
<td>Completely fixed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Business Process as Receiver (Actual)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tracing factor:</td>
<td>Valuation</td>
</tr>
<tr>
<td>All tracing factors</td>
<td>Always completely variable</td>
</tr>
</tbody>
</table>

Even if the price includes variable portions, the valuation of a fixed quantity always results in fixed costs on the business process.
Requirements for Indirect Activity Allocation

Use

- You have carried out activity type planning for all category 3 activity types for all senders of the category cost center/activity type, if you are using the Posted quantities rule. Enter the plan sender activity quantities (activity category 3 manual entry, indirect allocation; allocation method 1) using activity type planning.

  You enter the actual activity quantities of category 3 by choosing Non-allocable activity.

You can only plan activity quantities using activity type planning for activity types of activity category 3. For activity types of category 2, this field is not ready-for-input in activity type planning. This is because the system determines the activity quantities inversely from the receiver tracing factors or using fixed quantities. In this case, the system automatically determines the corresponding planning record of cost center/activity type.

- For category 2 activity types, choose Sender values in the segment definition to set a sender-specific weighting factor (not equal to zero) so that the system uses the appropriate record during indirect activity allocation [Ext.].

  If you carry out indirect activity allocation without completing planning for the combination cost center/activity type, you must select the actual price indicator in the activity type master data if you want to use actual prices.
Planning Overheads

Use

Once you have executed cost element planning [Ext.], the system can determine the overhead rates for the plan values.

For further information, see the SAP Library under Financials → Controlling → Cost Element Accounting.

Integration

- The system debits internal orders and cost centers with overheads, regardless of whether integrated planning with Cost Center Accounting is active.

- Cost centers, business processes and internal orders are only credited if integrated planning is active for the order to which overhead is applied and all credit objects. You also need to activate integrated planning for internal orders with Cost Center Accounting/Activity-Based Accounting in the version.
  For more information, see Integrated Planning Indicator in Versions [Ext.].

- You can use overhead rate planning on cost centers to execute plan accrual. This is useful if you are dealing with true overhead costs. If the object is plan integrated, and integrated planning with Cost Center Accounting is activated in the version, you can write credit records for any credit object, as well as debit records (in contrast to accrual for accrued overhead).
  For more information on plan accrual calculation, see the SAP Library under Financials → Controlling (CO) → Cost Center Accounting → Cost center planning → Utilities → Plan accrual calculation [Ext.].

Features

Whether plan costs incur overhead or not, depends on which costing sheet and, where appropriate, which overhead key you defined in your object.

The overhead rates are allocated using a secondary cost element for overhead rates.

Activities

To plan overhead rates, choose Planning → Allocations → Overhead in the corresponding application.

For more information on overhead rate calculation, see Calculating Overheads [Page 379].
Plan Price Calculation

Use

Plan price calculation determines the rates for plan activity types by cost center as well as the plan business processes (see also Actual Price Calculation [Page 419]).

In planning, the SAP System takes all plan activity relationships between cost centers and business processes into account and calculates the prices iteratively by dividing plan costs by plan activities.

Alternatively, the system can determine the fixed proportion of the price based on the plan costs and the capacity. This is useful should you not wish the costs of preparing the maximum activity capacity to influence product costing. For example, a power plant cost center must always be prepared to provide maximum power even if it is not called upon constantly. In this case, the fixed costs of capacity preparation remain on the cost center because they cannot be assigned in whole to the product costs.

You can carry out price calculation only if you set the Price Indicator [Ext.] (that indicates the allocation price) to 1 or 2 during activity type planning for the relevant cost centers or business processes. 1 is used for price calculation based on plan activity; 2 indicates price calculation based on capacity. If you set all prices manually (indicator setting 3), price calculation is not useful.

Prerequisites

In order to provide all the necessary data for iterative price calculation (costs of transactions, primary and secondary costs, activity-dependent and activity-independent costs), you must fulfill the following requirements:

1. You have closed planning.
2. If you use integrated planning with internal orders or with the Logistics components (LO), you must settle the orders or projects on the cost centers.

Features

The SAP System calculates prices based on the Method indicator setting in the version. To make the indicator setting, go to the Implementation Guide (IMG) for the Activity-Based Costing component and choose Planning → Maintaining Versions [Ext.]. The indicator is located in the Settings per fiscal year. Select the fiscal year and choose Detail. Under Plan, you can choose the desired method.

The indicator accepts the following values:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Period-based price</td>
</tr>
<tr>
<td>2</td>
<td>Average price</td>
</tr>
<tr>
<td>3</td>
<td>Cumulated price</td>
</tr>
</tbody>
</table>

For more information, see Price Calculation Methods [Page 429].
Plan Price Calculation

The SAP System calculates the price of an activity for a cost center or a business process by dividing the sum of all costs for either of the these by the plan activity or capacity. Therefore, different prices can appear in the affected periods due to the differing plan cost totals for a cost center or business process, due to the differing plan activity, or due to both factors. The following factors influence these period-based differences:

- Distribution keys
  
  If you do not intend to use even distribution of plan activity and plan prices, this results in different values for plan activity and plan costs (primary and secondary) in the individual planning periods, leading to different bases for price calculation.

- Equivalence numbers
  
  You can plan equivalence numbers on a period basis. If you use different equivalence numbers for individual planning periods, the result will be different proportions of activity-independent costs for distribution in these planning periods. This, in turn, results in different total costs, based upon which the fixed proportion of the price changes by period. The equivalence number default is 1 if you do not make any other entries. This means that all activity types have the same weighting.

  You bind the activity-independent plan costs in the prices via splitting rules that you define as part of plan cost splitting. The SAP System divides the activity-independent plan costs of a cost center among its activity types. The simplest method is a distribution on the basis of equivalence numbers. The SAP System displays the relationship between an activity type equivalence number and the total of all activity type equivalence numbers for the cost center. The R/3 System uses these weighting factors to multiply the activity-independent and activity-dependent plan costs.

  Because activity-independent plan costs are always fixed, the fixed proportion of the activity-independent plan costs increases by the amount resulting from the distribution of activity-independent costs using equivalence numbers.
Calculating Prices

Procedure

You can use price calculation (see also Plan Price Calculation [Ext.]) for Cost Center Accounting and Activity-Based Costing.

To calculate prices:

1. Choose:
   a. Accounting → Controlling → Cost Center Accounting or Activity-Based Costing
   b. Planning → Allocations → Price calculation

2. Choose either
   a. Cost center group/business process group (To ensure correct results, the group must consist of a closed activity network)
   b. All cost centers/all business processes
   c. No cost center/business process

3. Enter the following parameters:
   a. Version
   b. Periods
   c. Fiscal year

   Iterative prices cannot be calculated for special periods, since no plan values exist for these periods.

4. Maintain the following processing parameters:
   a. Background
      You can carry out price calculation either online or in the background.
      Online calculation should be used only when you do not expect excessively long run times, such as due to large activity networks.
      If you set up complex activity networks you should always use background processing. By starting a background job during times of low system use, you avoid processing bottlenecks during peak times.
      To plan background processing, check off the appropriate indicator in the Price Calculation initial screen and enter a job name in the subsequent dialog box.
   b. Test run
      If you do not want to update immediately, you should select Test run. The SAP System does calculate the price, but it does not post any data. It only generates the detail list.
   c. Detail lists
Calculating Prices

If you want to check your results, you should select Test run together with Detail lists. The detail lists shows the prices calculated by the system for each cost center / activity type combination. You can make the posting later from the list.

To post the price calculation from the list display, choose Price calculation → Post.

Alternatively, in the Price Calculation initial screen, choose Price calculation → Execute. Deselect Test run to allow updating of the results.

d. With predistribution of fixed costs

If you are using marginal costing, yet still wish to work with allocation rates based on full costs, you should select With predistribution of fixed costs. The SAP system predistributes the fixed costs during the plan price calculation (see also: Predistributing Fixed Costs [Page 416]).

Ensure that your planning is reconciled by checking that the scheduled activity quantity is not greater than the planned activity quantity for the sender cost center. If this is the case, the SAP System displays the error and does not update the values (see Plan Reconciliation [Ext.])

Result

The detail list contains the following information:

- The calculated prices (total and fixed) for each cost center and activity type or for each business process, per period
- The number of warnings and errors

Choose Edit → Format in the list display to change the display format of the prices to suit your own requirements.

- Currency
  
  The Currency function enables you to determine in which currency (object currency or controlling area currency) your prices should be displayed.

  If you want to display and post your prices in both controlling area currency and object currency, you must select All currencies when you maintain the control data for your controlling area.

- Values
  
  You can select from the following display options by choosing Values for your prices:

  - Overall/Fixed
  - Overall/Variable
  - Fixed/Variable

- Activity price
  
  If you use manually set prices as well as iteratively calculated prices, choose Price to display the following prices:
Iteratively calculated prices, for which the manually set prices were considered by the system.

This is the allocation price, whereas the fully iterative price can only be determined for control purposes.

Prices calculated iteratively only (manually set prices are ignored in this calculation).

To calculate fully iterative activity prices, you must activate the appropriate checkbox in your version. Activate activity price By calculating fully iterative activity prices as well as those which also consider manually-set prices, you can see the effect of the manual-set prices on your complete price calculation. Purely iterative prices can be calculated and displayed, but they cannot be used for allocations.

**Price unit**

You can select from the following values when displaying the *Price unit*:

1. Optimized

The price unit indicates how many units of measure the price for the activity type refers to. The SAP System optimizes the price unit to minimize rounding differences. The optimized value of the prices with the price units are then posted.

The system displays the prices by period in the detail lists. Choose *Previous period* and *Next period* to scroll between periods. Choose *Select* to display the period values of the selected list rows.

The following additional functions are available in the detail list:

**Period screen/basic list**

This function enables you to switch between a display of individual period values for all activity types and cost centers and a complete display of all periods for one specified activity type and cost center.

**Messages**

You get a list of all errors and warnings with corresponding explanations, as well as notes on how to correct the errors.

**Technical statistics**

This provides you with an overview of the amount of master data processed, as well as links, table entries and iteration steps.

**Sender analysis**

This function identifies and displays the part of the activity network from which the selected cost center is receiving an activity. When you select a list line, the system displays the corresponding activity types, the activity input quantity for the cost center, the overall price, the fixed price, and the price unit.

**Settings**

You can maintain control parameters defaulted by SAP for the process flow for price calculation. You can set the following parameters:

1. Generation
Calculating Prices

This controls the generation of the program for iterative price calculation.

Before you can calculate prices, the SAP System generates the report required for running the program. The system generates the number of entries in the relevant internal tables, as well as in the parallel-processed field groups.

This improves system storage requirements and run times.

As the generation itself also takes time, this indicator should be activated only for large-scale processing.

- **Number of senders/receivers**
  
The system sets the appropriate number of entries in the internal tables when you select *Generation*.

- **Number of relationships between senders and receivers**
  
The system sets the appropriate number of entries in the internal tables when you select *Generation*.

- **Number of cost centers in the controlling area**
  
The system sets the appropriate number of entries in the internal tables when you select *Generation*.

- **Number of significant digits of the price unit**
  
To increase the accuracy of the results, the SAP System optimizes the price unit during price calculation. The price refers not to unit 1, but to the units 10, 100, 1000 or 10000. If the price per unit is already relatively high, but you still want to use the price unit to increase the accuracy of your prices, this leads to still higher values for your prices. You can limit this by specifying the significant digits. Places will be shifted only until this number of significant digits has been reached.

  
  If the price per unit is exactly 1033.33333333, with six significant digits the price unit remains 1 and the price would be %1033.33. With 12 significant digits and a price unit of 10,000 the price is $10,333,33.3333.

- **Indicator for deactivating price unit optimization**
  
  Deactivates the optimization of price units as explained above. If this indicator is selected, the price unit always has the value 1.

- **The tolerance percentage rate for reconciliation of actual and scheduled activity**
  
  When you call up price calculation, the activity type planning should be reconciled. This means that the planned activity of the activity type should correspond to the scheduled activity quantity of the receiver. Only then can you determine meaningful prices. Therefore, price calculation checks all activity types for matching values and generates warnings or error messages if necessary.

  However, minor deviations can occur due to rounding differences in planning, in particular when distributing plan values to individual periods.

  Enter the allowable percentage difference (+ and -) between plan and scheduled activity.
Post anyway

Activate this indicator if the results of price calculation should be posted even if they contain errors.

Exceptions are serious system errors resulting in a software crash and errors occurring during posting preparation (problems with integration or document number assignment).

Usually, results are not posted when there is an error in price calculation. You can carry out the update online at a later time using the result list. This does not apply to background processing. For background processing, activate Post anyway so that prices will be posted automatically even if errors occur.

You can display the results of price calculation in the price report (see Price Report [Page 491]).
Example of Price Calculation

Sender A has the following plan and actual values:

<table>
<thead>
<tr>
<th>Costs</th>
<th>Activity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>$100</td>
<td>10 hrs</td>
</tr>
<tr>
<td>Actual</td>
<td>$110</td>
<td>9 hrs</td>
</tr>
</tbody>
</table>

The following activity input is performed:

<table>
<thead>
<tr>
<th>Senders</th>
<th>Primary costs</th>
<th>Receivers</th>
<th>Activity input</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>A</td>
<td>B</td>
<td>10 hrs</td>
<td>$10 /hr</td>
</tr>
<tr>
<td>Actual</td>
<td>A</td>
<td>B</td>
<td>9 hrs</td>
<td>$10 /hr</td>
</tr>
</tbody>
</table>

The actual activities are valued with plan activity prices: 9 hrs X $10 /hr, resulting in allocated actual costs of $90.

If actual price calculation is performed, the following values result:

<table>
<thead>
<tr>
<th>Sender credit</th>
<th>Sender balance</th>
<th>Sender revaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>10 hrs * $10/hr = $100</td>
<td>0</td>
</tr>
<tr>
<td>Actual</td>
<td>9 hrs * $10/hr = $90</td>
<td>$110 - $90 = $20</td>
</tr>
</tbody>
</table>

If the actual sender activity of 9 hours is revalued with the difference between plan and actual prices, sender A receives a further $20 and is fully cleared. Without actual price calculation and revaluation, the residual amount of $20 (110 - (9 * 10)) remains on the sender.
Valuating Activity Quantities

Use

Indirect Activity Allocation in the Actual

For actual indirect activity allocation [Ext.], all quantities are posted as total quantities. The quantity is split into fixed and variable portions using actual cost splitting (see: Actual Cost Splitting [Ext.]).

You are using indirect activity allocation in the actual together with predistribution of fixed costs [Ext.], and both sender and receiver are participating in the predistribution. The system reduces the valuation on the sender and receiver side by the amount of the sender fixed costs.

- **On the sender side**, the portion of the fixed costs is zero. The overall costs therefore contain only variable portions.
- **On the receiver side**, the overall costs also contain only variable costs. The fixed costs are zero, due to the fully variable activity input. This is because the sender fixed costs are allocated using the predistribution of fixed costs.

Indirect Activity Allocation in the Plan

For indirect activity allocation in the plan, the system determines the fixed and variable quantity portions according to the receiver type and its tracing factor in the given segment.

- The system posts all quantities as variable if the receiver type is a cost center/activity type combination or a business process and if the receiver tracing factor is determined on the portions of the plan or actual activity quantities of the receiver.
- The system posts all quantities as variable if the receiver type is an order, cost object or WBS element.
- In all other cases, that is, for other receiver types or other receiver tracing factors, the system posts the quantities as fully fixed.

If a price exists for a sender object, the R/3 system uses this to valuate the activity quantity for the sender and corresponding receivers. This amount is split into fixed and variable debits and credits in the same way as the valuation of activity-dependent activity input planning (see: Planning Secondary Costs [Ext.]).
Price Calculation Methods

Use
You can use the following price calculation methods in the plan and in the actual:

Price calculation can be based on:

- Period-based price
- Average prices
- Cumulative price

Features

Period-Based Prices
The system divides the costs arising in each period by the activity. This can result in different prices in each period. If your fixed costs remain constant throughout the fiscal year but the activity quantities fluctuate, the activity input valuation uses a relatively high price in those periods with lower activity quantities (see period 2 in the example). An activity input in a period with a higher activity quantity is valuated with a relatively low price, because the fixed costs draw on the higher activity quantity (see period 1 in the example).

<table>
<thead>
<tr>
<th>Fixed costs</th>
<th>Variable Costs</th>
<th>Activity</th>
<th>Period-Based Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period 1</td>
<td>$1,000</td>
<td>1,000 hrs</td>
<td>$2.00/hr</td>
</tr>
<tr>
<td>Period 2</td>
<td>$1,000</td>
<td>100 hrs</td>
<td>$11.00/hour</td>
</tr>
</tbody>
</table>

The activity receivers in period 2 are disadvantaged compared with the activity receivers of period 1. The period-based price is higher in period 2 than in period 1, due to the lower activity quantity. The price in period 2 contains a higher proportion of fixed costs than the price in period 1. This is because the fixed costs in period 2 are related to a lower activity quantity. The variable unit cost, that is, the variable portion of the period-based price, is the same in both periods ($1/hour).

Average Prices
The average price is based on the total costs from all periods divided by the total activity quantity of an activity type from those periods. This ensures that the activity inputs of all receivers are valuated with the same price, regardless of the period in which the activity input occurs.

<table>
<thead>
<tr>
<th>Fixed costs</th>
<th>Variable Costs</th>
<th>Activity</th>
<th>Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period 1, period</td>
<td>$1,200</td>
<td>$1,000</td>
<td>1,000 hrs</td>
</tr>
</tbody>
</table>
This method does not result in a complete crediting (clearing) of costs in the individual periods. This means:

- Too much is credited (Period 1: Credited with $3,000 compared with $2,200)
- Too little is credited (Period 2: Credited with $300 compared with $1,100)

You can clear a cost center or business process completely only by totaling across all periods.

**Cumulative Prices**

In cumulative price calculation the price for a period is based on the accumulated total costs and activity of all previous periods (the period entered in the **To period** field). In this way, price calculation allows for cost fluctuations in the periods.

When revaluation is carried out under the cumulative procedure, all the sender objects are fully credited in those periods that you specified for actual price calculation. In this process, the activity inputs are valued with the new price in each selected period. Clearing entries are made in these periods to ensure that this equal valuation.

The cumulative price calculation method requires that all activity receivers can be posted to in all periods in the interval specified, i.e. the period cutoff indicator must not be active for these objects. This is to ensure that receivers in the first period can still receive clearing entries in the last period.

**Example 1: Differences between cumulative price and price per period**

Periodically differentiated prices: The costs per period are divided by the activities; prices can vary widely.

<table>
<thead>
<tr>
<th>Period</th>
<th>Cost per period</th>
<th>Activity per period</th>
<th>Price per period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,000 USD</td>
<td>100 hours</td>
<td>10 USD/hour</td>
</tr>
<tr>
<td>2</td>
<td>2,000 USD</td>
<td>50 hours</td>
<td>40 USD/hour</td>
</tr>
<tr>
<td>3</td>
<td>1,000 USD</td>
<td>250 hours</td>
<td>4 USD/hour</td>
</tr>
</tbody>
</table>

Cumulative price: The price is calculated from the total of the current and previous periods. For example, the price for period 2 is calculated from the costs of periods 1 and 2 (1,000 USD + 2,000 USD) divided by the activities for these periods (100 + 50). The price variances are not so marked.

<table>
<thead>
<tr>
<th>Period</th>
<th>Cumulative costs</th>
<th>Cumulative activity</th>
<th>Cumulative price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,000 USD</td>
<td>100 hours</td>
<td>10 USD/hour</td>
</tr>
<tr>
<td>2</td>
<td>3,000 USD</td>
<td>150 hours</td>
<td>20 USD/hour</td>
</tr>
</tbody>
</table>
Example 2: Revaluation at actual prices

Under revaluation, activity allocations are valuated at actual prices and the difference as against
the values already posted is then subsequently allocated.

If, for actual price calculation, you enter a number of periods, the system reevaluates for each
period; the sender objects are fully credited in each period.

If you enter one period only, subsequent allocation is carried out for this period only and this is
then the only period that is fully credited.

Entry: Periods 1 to 3

<table>
<thead>
<tr>
<th>Per</th>
<th>Actual costs</th>
<th>Activity</th>
<th>Cum.actual price</th>
<th>Plan costs</th>
<th>Plan price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,000 USD</td>
<td>100 hours</td>
<td>10 USD/hour</td>
<td>500 USD</td>
<td>5 USD/hour</td>
</tr>
<tr>
<td>2</td>
<td>3,000 USD</td>
<td>150 hours</td>
<td>20 USD/hour</td>
<td>750 USD</td>
<td>5 USD/hour</td>
</tr>
<tr>
<td>3</td>
<td>4,000 USD</td>
<td>400 hours</td>
<td>10 USD/hour</td>
<td>2,000 USD</td>
<td>5 USD/hour</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Period</th>
<th>Difference between plan/actual costs</th>
<th>Revaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>500 USD</td>
<td>+ 500 USD</td>
</tr>
<tr>
<td>2</td>
<td>2,250 USD</td>
<td>+ 1,250 USD</td>
</tr>
<tr>
<td>3</td>
<td>2,000 USD</td>
<td>- 1,000 USD</td>
</tr>
</tbody>
</table>

- Period 1:
  The difference between actual and plan costs is 500 USD; the amount by which the receivers
  are debited. The sender objects are fully credited in period 1.

- Period 2:
  The difference between plan and actual costs is 2,250 USD. As calculation takes place using
  cumulative values here, the receiver objects are only debited with 1,250 USD. The
  sender objects are still credited in full, because 1,000 USD were already allocated to the
  receivers from the first period.

- Period 3:
  Revaluation results in the receivers being debited by 1,000 USD too much. This amount is
  credited to the receivers, so that the sender objects are credited in full (and correctly).
  Where does this figure come from? The difference between plan costs and actual costs
  is 2,000 USD. In periods 1 and 2 the receivers were debited with 1,250 USD plan costs
  and 1,750 USD revaluation, a total of 3,000 USD. The difference between plan and
  actual is however only 2,000 USD, meaning that the receivers were debited by 1,000
  USD too much.

Entry: Periods 3 to 3

If, for actual price calculation you enter period 3 only, allocation is correct, but the senders are
fully credited in this period only. This is because the price calculation program posts only in the
period(s) that were entered under From period/To period. Here, 750 USD is revaluated because
although the plan costs for periods 1 to 3 are included in the calculation (3,250 USD) no revaluation took place in periods 1 and 2.

<table>
<thead>
<tr>
<th>Per</th>
<th>Actual costs</th>
<th>Activity</th>
<th>Cum.actual price</th>
<th>Plan costs</th>
<th>Plan price</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>4,000 USD</td>
<td>400 hours</td>
<td>10 USD/hour</td>
<td>2,000 USD</td>
<td>5 USD/hour</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Period</th>
<th>Difference between plan and actual costs</th>
<th>Revaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2,000 USD</td>
<td>+ 750 USD</td>
</tr>
</tbody>
</table>

Unlike the average price, which you can also define for individual cost centers/activity types or business processes, cumulative calculation can be selected for all sender objects. You can make this setting in the version settings (see Maintaining Versions [Ext.]).

The cumulative method is only useful if the costs and/or the activity quantities are subject to wide-ranging fluctuations. In particular, this would apply if the time of activity output is not identical to the time of the cost occurrence. Compared to average price calculation (which also ensure a proportionate debiting of receivers) the advantage of cumulative prices is that the cost center or business process is fully credited at any given time. For average prices, this is true only for the entire period.
Price Calculation With Cost Component Split

Use

Price calculation [Ext.] with cost component split provides a breakdown of the price of an activity type [Ext.] or a business process [Ext.] that has been determined iteratively on the basis of all costs and activity relationships. You can determine, for example, the proportions of material costs and wage costs in the price.

During activity allocation the cost component split for the sender is retained on the receiver, provided you did not define different cost components [Ext.] for the target object in the switching structure. This applies only to price calculation. Internal activity allocation [Ext.] in the actual is not affected by this.

Prerequisites

Before you can display the cost component split for the prices (the splitting into cost components [Ext.]) you must fulfill several requirements on the system side.

- Create a cost component structure [Ext.]
  
  You save the cost component structure used for price calculation in the version [Ext.]. Cost component splitting is not carried out if a cost component structure does not exist in the version.

- Assign cost components to the cost component structure
  
  The cost component encompasses all costs of the assigned cost element range. You assign cost components to the cost component structure based on your organizational requirements.

You assign the following cost components to cost component structure 01:
Price Calculation With Cost Component Split

- 1 Raw materials
- 2 Personnel
- 3 Production
- 4 Energy

• Assign cost elements [Ext.] to the cost components

By assigning cost elements, you specify which costs (primary or secondary) flow to which cost component and how the costs are updated during price calculation. The cost component calculations occur in separate iterative calculations. This retains the cost component split for activity allocation.

You assign cost elements 400.000 through 410.000 to the cost component Raw Materials in cost component structure 01.

• Switching structure

If you want to use a different component split for the sender than that used for the receivers, create a switching structure for your cost component structure. The switching structure determines which sender cost component flows to which receiver cost components. You assign switching structures to cost center/activity type combinations within activity type planning.

The Energy cost center allocates activity to several production cost centers. All costs from the energy cost center (labor and materials) flow into the receiver cost component Energy.

You assign switching structure 2 to cost component structure 01. The switching structure contains the following information:

Labor costs assigned to cost component 2 Personnel flow to the target cost component 4 Energy during activity allocation.

Materials assigned to sender cost component 1 Raw Materials also flow to cost component 4 Energy during activity allocation.

The target cost component Energy contains costs from the cost components Personnel and Raw Materials.

For more information about price calculation or cost component splitting for Cost Center Accounting, see the Implementation Guide (IMG), under Controlling →

• Cost Center Accounting → Planning → Allocations → Activity Allocation → Price Calculation [Ext.] or
• Actual Postings → Period-End Closing → Activity Allocation → Price Calculation [Ext.] or
• Planning → Basic Settings → Maintain Versions [Ext.]

For more information about price calculation or cost component splitting for Activity-Based Costing, see the Implementation Guide (IMG), under Controlling → Overhead Cost Controlling →

• Planning → Allocations → Price Calculation [Ext.] or
Price Calculation With Cost Component Split

- Actual Postings $\rightarrow$ Period-End Closing $\rightarrow$ Price Calculation [Ext.] or
- Planning $\rightarrow$ Maintain Versions [Ext.].

See also:

Actual Price Calculation [Page 419]
Manual Actual Postings

Use

The purpose of the manual actual postings is to follow and monitor costs as the firm incurs them. This timely information allows you to identify variances [Ext.] and resolve them quickly.

Manual actual postings are supported by user-friendly reporting, which includes documentation of period-based actual postings and reports for actual/actual comparison (for example, comparing actual costs of the previous period with those of the current period) or plan/actual comparison.

Also see: Important Standard Reports [Page 363], Period Breakdown [Ext.].

Features

For actual cost entries, primary costs [Ext.] are transferred from previous components to controlling. Business processes follow this path starting from the Financial Accounting (FI) and Material Management (MM) components where business processes are already entered during the account assignment.

More information on entering primary costs can be found in Primary Costs in Business Processes [Page 292].

The R/3 System uses internal allocations to assign primary costs entered in feeder components to their causes and sources, where possible. Costs are calculated for each business transaction based on the valued internal activities and posted to the sender and receiver objects as debit and credit postings in real time.

In order to make corrections, the system reposts costs from one object to another during the internal repostings. It is therefore possible, in the current business period, to make accurate statements about cost occurrences and flows on the cost centers.

The following functions are available:

Manual Reposting of Costs [Page 300]
Reposting of Line Items [Page 302]
Time Sheet [Page 311]
Direct Activity Allocation [Page 312]
Reposting Internal Activity Allocations [Page 315]
Entering Sender Activities [Page 324]
Manual Actual Price [Page 325]
Manual Cost Allocations [Page 328]
Entering Statistical Key Figures [Page 331]

For more information, see Period-Based Allocations [Page 342] under Period-End Closing [Page 332]
Primary Costs in Business Processes

Use

Primary Costs [Ext.] from other components, like Financial Accounting (FI), and Material Management (MM), can be directly transferred to business process. For more information on account assignments in controlling, go to Account Assignment of Controlling Objects [Ext.].

The primary posting generates two documents:

- an original document in financial accounting
- a duplicate created in controlling is used for data that is relevant in this component (line items).

The line items are grouped according to the criteria for cost element/controlling object and saved as a Totals record.

A central interface program controls the transfer of primary data. For more information on this topic, go to Interface to Other R/3 Components [Ext.].

Features

You can use the business process as an object for an additional account assignment.

- in financial accounting
- in purchasing for material management
- in inventory management for material management

Activities

Primary costs from financial accounting

While making postings in the financial accounting, you can also assign business processes to accounts. The system displays the field Business Process in the entry screen of the posting. You can ensure this by setting the status of field Business Process as an optional entry while you are in the IMG of financial accounting. Follow these steps:

- Decide which accounts the additional account assignment should be enabled for.
- You can find information on which field status group these accounts belong to by following path: Financial Accounting → General Ledger → Master Data → Individual Processing → Central, Tab Entry/Bank/Interest. Otherwise, go to the G/L account list (Financial Accounting → General Ledger → Information System → General Ledger Reports → Master Data → G/L account list).
- While in the IMG for financial accounting, you should decide whether to set the Business Process field as “Optional entry” for each posting key [Ext.] (Financial Accounting → Financial Accounting Global Settings → Document → Line Item → Controls → Define Posting Keys [Ext.]).
- You also decide for which field status groups (see: Definition of Field Status [Ext.]; this will also determine for which G/L accounts) the additional account assignment in the business process will be possible (Financial Accounting → Financial Accounting Global Settings → Document → Line Item → Controls → Maintain Field Status Variant [Ext.]).
Primary costs from material management

Purchase orders and purchase requisitions

In the material management, you can use an additional account assignment to a business process while handling purchase orders, purchase requisitions, goods received and goods issued.

For purchase orders and purchase requisitions, the field for Business Process of at least one account assignment category [Ext.] must be set as an Optional entry in the IMG for material management. You can reach the relevant IMG point by using path: Material Management → Purchasing → Account Assignment → Maintain Account Assignment Categories [Ext.] (see: Account Assignments [Ext.]).

When you enter a purchase order or a purchase requisition, provide an account assignment category containing the business process that is defined as Optional entry. After entering the item you can go to the account assignment, and enter the number of the business processes there (see: Manually Creating Purchase Orders [Ext.] and Creating Orders [Ext.]).

Goods received and issued

The business process must be defined as Optional entry for goods movements. Do this for each movement type in the IMG for material management using path: Material Management → Inventory Management and Physical Inventory → Goods Issue / Transfer Posting → Define Screen Layout [Ext.]. You can also use path: Material Management → Inventory Management and Physical Inventory → Goods Receipt → Define Screen Layout [Ext.]. Choose a movement type, and use the additional account assignment to set the business process as Optional entry.

For entries of goods received or issued, choose a movement type that can be assigned to an account to a business process; then enter the number of the business process in the area account assignment.

More information is available under Goods Issue [Ext.] and Goods Receipt [Ext.].
Editing Manual Actual Postings

Use

In Controlling, all manual actual postings are structured according to the same principle. You can enter data using either individual entry (for complex allocations) or list entry, where large quantities of data are involved.

The R/3 System assists you in making manual actual postings, through the provision of Entry [Page 296], Display [Page 295], and Reversal [Page 299] functions.

You can use these functions for the following postings:

- Reposting Costs Manually [Page 300]
- Reposting Revenues Manually [Page 300]
- Direct Activity Allocation [Ext.] [Page 300]
- Manual Cost Allocation [Page 328]
- Entering Statistical Key Figures [Page 331]
Displaying Manual Actual Postings

1. On the upper screen area, enter the number of the document that you want to display.
   You can locate the document number by choosing input help for the document date or by searching per document date, period or fiscal year.

2. If you wish, you can display further information on the posting such as the user or the exchange rate type.
   To do so, choose the tab strip *Additional information* in the upper screen area.

   ![Tab strip](image)

   If you wish, you can display or hide particular screen areas. To do so, use the icon *Compress data areas* on the left edge of the relevant screen area.

3. Specify whether you want to display data using *List entry* or *Individual entry*.
   a. If you choose *List entry*, the system displays all posting rows for the selected document and business transaction.
   b. If you choose *List entry*, the system displays all posting rows for the selected document and business transaction on the *List entry* screen.

   Below the individual entry screen, the system displays a list to which you can transfer every line item.

   To navigate between these line items, select the line item that you want to move up to/down to. The system displays the data on the selected line item on the individual entry screen.

4. To branch to the corresponding document in Financial Accounting, choose *Goto → FI/CO documents*.

   You can branch to the following documents:

   - Profitability Analysis documents
   - Profit Center Accounting documents
   - Special Purpose ledger documents
Entering Manual Actual Postings

1. On the upper screen area, enter the document date and the posting date.
   The system defaults the current date, which you can however overwrite.

2. Choose Extras → Number ranges to display the external or internal number ranges set for the given transaction-based allocation.
   a. If you have defined a number range with internal number assignment for the sender and you do not enter a document number, the system assigns a number automatically (see: Number Ranges [Ext.]).
   b. If a number range with external number assignment is defined for the sender, enter a (free) document number from the number range interval.
      This allows you to use the external number assignment universally. This also ensures that the Controlling documents can be adapted to the numbering conventions of the feeder systems (for example, entry of operations in the production department).

3. To avoid needing to reenter the same business transaction repeatedly, you can use existing documents as a template for further postings.
   To do so, enter the number of the reference document.
   a. You can get the document number of this document by choosing F4 help for the document date or by searching per document date, period or fiscal year.
   b. To display the data for the reference document, choose Display reference document.
   c. To use (and later change) this data, choose Confirm.

4. If you wish, you can display further information on the posting such as the user or the exchange rate type.
   To do so, choose the tab strip Additional information.
   If you wish, you can display or hide particular screen areas. To do so, use the icon Compress data areas on the left edge of the relevant screen area.

5. Choose a screen variant.
   If you do not enter a screen variant, the system uses the standard variant intended for the given allocation.
   You define your own screen variants for manual actual posting in Customizing (per business transaction). This screen variant is effectively a collection of settings that determines which fields appear on the entry screen.
   For more information, see the Implementation Guide (IMG) for Cost Center Accounting, under Actual Postings → Manual Actual Postings → Define Own Screen Variants for Postings in Controlling [Ext.]

6. Specify whether you want to enter data using List entry or Individual entry.
   a. If you choose List entry, you can enter more than one posting row for the selected document and business transaction.
b. If you choose Individual entry you can only enter one posting row at a time for the document and business transaction selected.

Below the individual entry screen, the system displays a list to which you can transfer every posting row.

To navigate between these posting rows, select the posting row that you want to move up to/down to. The system displays the data on the selected posting row on the individual entry screen.

7. Enter the data for your posting.

The list entry columns and the ready-for-input fields on the individual entry screen are set in line with the selected screen variant.

You can execute repostings between the individual Controlling objects, such as cost centers or orders, in any currency stored in the system. Repostings are made automatically at the average rate set in Customizing (see: Currencies [Ext.]).

In the Currency field, enter the currency in which the given documents are to be posted.

When entering quantities, you do not need to specify units of measure. The R/3 System automatically adopts the units of measure from the totals transaction data.

8. On the list screen, you can take advantage of the following functions:

   **Copy posting row**
   - Select the row you wish to copy.
   - Choose Copy.
   - Mark the row before which you want to insert the copied row.
   - Choose Insert.

   **Cut out one or more posting rows and insert them elsewhere**
   - Select the affected row(s).
   - Choose Cut.
   - Mark the row before which you want to insert the copied row.
   - Choose Insert.

   **Delete one or more posting rows**
   - Select the affected row(s).
   - Choose Delete row.

   **Use an existing value for the posting rows that follow**
   - To do so, position your cursor on the value you want to transfer to the empty column fields.
   - Choose Fill column.
Entering Manual Actual Postings

The value now appears in all the previously empty rows in the relevant column. If, for example, you enter several postings for the same receiver, you then do not need to repeat entry of the receiver.

To reset the fields, position your cursor on the column and choose Reset column.

**Total of all posted positive and negative items per currency or unit of measure**

- To display this figure, use the Show/hide totals line icon.

9. On the individual entry screen, you can take advantage of the following functions:

**Transfer posting record to navigation list**

Enter the data and choose Confirm.

**Delete posting record**

Choose Delete.

**Copy posting record**

Choose Copy.

**Copy an existing value to empty fields of a column**

- To do so, position your cursor on the value you want to use in further postings.
- Choose Hold data.

  The value appears in the relevant field in all other posting records that you enter. If, for example, you enter several postings for the same receiver, you then do not need to repeat entry of the receiver.

  To reset the fields, position your cursor on the appropriate value and choose Reset data.

You can branch to the overview list from both the list entry and individual entry screens by choosing Goto → Overview list.

The overview list contains all posting records created for a document.
Reversing Manual Actual Postings

1. On the upper screen area, enter the number of the document that you want to reverse.
   You can locate the document number by choosing input help for the document date or by searching per document date, period or fiscal year.

2. Choose Enter.
   The system automatically adds the document date and the posting date of the original document.

3. If you wish, you can display further information relating to the original document such as the user or the exchange rate type.
   To do so, choose the tab strip Additional information in the upper screen area.

   If you wish, you can display or hide particular screen areas. To do so, use the icon Compress data areas on the left edge of the relevant screen area.

4. To display the reversal document, choose List entry or Individual entry.
   a. If you choose List entry, the system displays all posting rows for the selected reversal document in a list.
   b. If you choose List entry, the system displays all posting rows for the reversal document on the Individual entry screen.
      Below the individual entry screen, the system displays a list to which you can transfer every line item.
      To navigate between these line items, select the line item that you want to move up to/down to. The system displays the data on the selected line item on the individual entry screen.

5. To reverse the document, choose Post.
Reposting Costs and Revenues Manually

Use

You can repost primary costs [Ext.] manually using transaction-based repostings, whereby the original cost element is always retained. This function is designed mainly to adjust posting errors.

You should always adjust posting errors in the application component where they occurred. This ensures that external and internal accounting are always reconciled. You can only adjust posting errors involving one cost accounting object (a cost center or internal order for example) using a transaction-based reposting in Controlling (CO).

To repost collective postings from one cost center to other cost centers at period end, you can use periodic repostings (see: Periodic Repostings [Page 340]).

In Activity-Based Costing, you can only repost costs.

You can only post revenues as statistical items to cost centers - these revenues cannot be included in periodic allocations.

You mistakenly assigned the amount of 10,000 USD for the cost element External services to cost center 4210. The costs should have been posted to cost center 4220. In transaction-based reposting, you can repost the full amount to the correct cost center under the same cost element. This transaction affects only CO, since the costs are debited (to cost center 4220) and credited (to cost center 4210) using the same cost element.

<table>
<thead>
<tr>
<th>4210</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personnel costs</td>
</tr>
<tr>
<td>Raw materials, supplies, and expendables</td>
</tr>
<tr>
<td>Other costs</td>
</tr>
<tr>
<td>Telephone</td>
</tr>
<tr>
<td>Shipping</td>
</tr>
<tr>
<td>. .</td>
</tr>
<tr>
<td>External services 10,000 EUR</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>4220</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Sender: 4210</td>
</tr>
<tr>
<td>* Cost element: External services</td>
</tr>
<tr>
<td>* Amount: 10,000</td>
</tr>
</tbody>
</table>

CO line items

Totals
Reposting Costs and Revenues Manually

If you are working with transfer prices [Ext.] (parallel value flows), you cannot repost costs or revenues for parallel valuations. You need to use the function for reposting line items (see: Reposting Line Items [Page 302]).

For more information on transfer prices, see Multiple Valuation Approaches [Ext.] in Overhead Cost Controlling, and the SAP Library under Financials → EC Enterprise Controlling → EC Profit Center Accounting → Transfer Prices → Multiple Valuation Approaches/Transfer Prices [Ext.].

Activities

- To repost costs, from the area menu of the relevant application component, choose Actual postings → Manual reposting of costs → Enter.
- To display repostings of costs, from the relevant application component menu, choose Actual postings → Manual reposting of costs → Display.
- To reverse repostings of costs, from the relevant application component menu, choose Actual postings → Manual reposting of costs → Reverse.
- To repost revenues, from the area menu of the relevant application component, choose Actual postings → Manual reposting of revenues → Enter.
- To display revenues that have been reposted, from the relevant application component menu, choose Actual postings → Manual reposting of revenues → Display.
- To reverse repostings of revenues, from the relevant application component menu, choose Actual postings → Manual reposting of revenues → Reverse.

See also:
- Entering Manual Actual Postings [Page 296]
- Displaying Manual Actual Postings [Page 295]
- Reversing Manual Actual Postings [Page 299]
- Receivers of Manual Actual Postings [Ext.]
Reposting Line Items

Use
Reposting line items enables you to adjust posting errors of costs and revenues. You can repost specific line items from CO documents. This enables you to track the primary postings, for example, from Financial Accounting (FI) through to the account assignment object in Cost Center Accounting (for example, a cost center [Ext.], an order [Ext.], or a real estate object [Ext.]).

Prerequisites
The CO documents contain a reference to the primary posting document.

Features
Reposting line items corresponds to a reversal posting on the sender object. This is because the system takes the debit/credit indicator from the line item and updates it immediately for the sender and receiver account assignment objects.

You select the line items that are to be reposted on a selection screen and then process them. This makes it possible, for example, to:

- Select the line items to be reposted from the CO document corresponding to the FI document. The system then reposts the selected line items as follows: The given amount is reassigned from the account assignment object (for example, a cost center) of the selected line item to one or more new CO objects.
  
  If specify multiple CO objects, you must ensure that the total amount to be reposted does not exceed the overall value of the line items for the sender object.

- Select all corresponding documents, for example, using account assignment objects. The system then offers these documents for collective processing.

- Repost a primary cost posting, previously allocated to one CO object, to two CO objects.

- Repost a portion of the posted line item.
  
  To do this, you post the portion of the line item to a new account assignment object, and the remainder to the source object.

- Post a line item to a different account assignment object.
  
  The changed document rows are checked by the system, and the data, provided it contains no errors, is updated in one go.

The system uses a reference document number to create a link between the document of the original line item and the adjustment document.

Activities
You repost line items in two steps:

1. Select the line item that you want to repost (see: Selecting Line Items [Page 304]).
2. Enter the repostings and execute them (see: Reposting Line Items [Page 306]).

See also
Receivers of Manual Actual Postings [Ext.]
Selecting Line Items

Procedure

1. To select the line items you want to repost, from the relevant application component area menu, choose Actual postings → Repost line items → Enter.

2. If the fields offered by the R/3 System on the initial screen for selecting line items for reposting are not sufficient, you can show more fields.
   a. Choose Change selection parameters
   b. Choose New field selection
   c. In the Field choice for dynamic selections dialog box, mark the field you need for selecting account assignment objects, data or accounting documents.
   d. Choose Copy selected items.
      The fields are transferred to Dynamic selections on the right-hand side of the screen.
   e. To undo your selections, select the fields in question and choose Delete selected objects.
   f. You can make entries in the Dynamic selections selection screen. These selections are adopted by the system when you return to the initial screen.
   g. Save your entries.
      The initial screen is now displayed. This screen now includes the fields that you selected.

3. To save the selected fields to your use master record, choose Save field selection. The system then always displays these fields.
   If you want to display a standard field selection for all users, choose Edit → General standard and confirm the security prompt with Yes. Your selection is offered to all users who have not entered their own selections.

4. Enter the following data on the initial screen:
   a. The criteria for the Account assignment objects
   b. The general criteria, by which the data is to be selected for the reposting.
   c. A document number
      You can enter one or more individual values, intervals or groups for each of the fields offered by the system. The only exceptions are accounting documents, cost centers, activity types and orders.

5. The following functions are also available on the initial screen:
   a. Selection options offers you more options for entering selection criteria (see: Specifying Selection Options [Page 495]).
   b. You can delete entries for individual selection rows or all entries for the selection (see: Deleting Selections [Page 508]).
Selecting Line Items

c. By choosing Goto → Variants, you can save your entries on the initial screen as a variant, enabling you to use these values again when you next call up the initial screen (see: Processing Variants [Page 509]).

6. Choose Execute.

**Result**

The system displays a list of all the line items that meet your selection criteria.

**See also:**

Reposting Line Items [Page 306]
Reposting Line Items

Prerequisites
You have selected the line items that you want to repost (see: Selecting Line Items [Page 304]).

Procedure
1. To execute repostings, you can overwrite the values in the ready-for-input fields within the document list.

   The following options exist:
   
   Post values previously allocated to one account assignment object (such as a cost center) to two account assignment objects
   
   i. Reduce the value allocated to the previous cost center.
   
   ii. Choose Enter. The R/3 System displays the difference for the posted value quantity in a new row, using the current account assignment object.
   
   iii. Enter the new account assignment object to which you want to repost the difference.

   You cannot increase the value posted previously. The sum of the amounts for all the document items entered for one line item must correspond to the amount from the original line item.

   Posting Line Items to a Different Account Assignment Object
   
   i. Change the CO account assignment object of the prior primary cost posting.
   
   ii. If required, overwrite the Object Type [Ext.].

   Using Auxiliary Account Assignments During Line Item Reposting.
   
   i. Enter the object types and the account assignment objects for the auxiliary account assignments (statistical postings) in the list.

       You can select from four account assignment objects. The system always makes a true posting for one of these objects, enabling you to make additional statistical postings for up to three objects.

2. To repost more than one document to the same account assignment object:
   
   a. Select the affected row(s).

       To make your selections, you can use the functions Select all, Select block and Delete all selections.

   b. Choose Change acct assignment

       Enter the new account assignment object in the dialog box.

   c. Choose Continue to leave the dialog box.

3. To undo the entries in one row or for several rows,
   
   a. Select the necessary rows
To make your selections, you can use the functions Select all, Select block and Delete all selections.

b. Choose Reset row

4. To sort the documents listed by column,
   a. Select a column by clicking on the column header
   b. Choose Sort or Sort descending or, from the menu, choose Edit → Sort or Edit → Sort descending

5. To switch to single processing of a document,
   a. Position your cursor on the relevant line item.
   b. Choose either Edit row, Goto → Edit row, or double-click on the item.

You can get more information for your document row in Individual processing and make changes, if required.

From the individual processing, you can go to the document list, the document header and the display for the old document rows.

6. To return to the list of documents, choose List.

7. To reach the document header,
   a. Position your cursor on the relevant line item.
   b. Choose Header

In the document header you enter the posting date and the document date, plus a description for the reposting.

The posting date must be in the same fiscal year as the document you want to repost.

If, for line item postings, you have set external number assignment in the IMG, you can enter the document number in the document header. Choose Number ranges to display the available document numbers.

If you selected internal number assignment, the system assigns the document numbers automatically.

To return to the list of documents, choose List.

8. Choose Old document rows to branch to the source document.

9. To check the total quantities reposted per quantity unit,
   a. Enter your repostings
   b. Choose Check total

10. To execute the reposting, choose Post.

Result

The system executes the repostings and outputs the generated document number.
Reposting Line Items
Displaying Line Item Repostings

Prerequisites
The CO documents contain a direct or indirect reference to the document of a primary posting.

Procedure
1. From the application component area menu, choose Actual postings → Repost line items → Display.
2. In the initial screen, enter the criteria for the account assignment object and, if required, for the general criteria for which the system selects data for the reposting; or enter a document number (see: Selecting Line Items [Page 304]).
3. Choose Execute.
   The system displays a list of repostings, which meet the criteria you entered.
4. If you want to sort the documents in a list by a column,
   a. Mark the column header
   b. Choose Sort or Sort descending.
5. To display the individual processing of a document,
   a. Position your cursor on the appropriate row
   b. Choose Edit row, or Goto → Edit row or double-click on the row.
      The system gives you additional information for the document row.
6. To display the document header for a document
   a. Position your cursor on the given row
   b. Choose Header
Reversing Line Item Repostings

Prerequisites

The CO documents contain a direct or indirect reference to the document of a primary posting.

Procedure

1. From the application component area menu, choose Actual postings → Repost line items → Reverse.
2. In the initial screen, enter the criteria for the account assignment object and, if required, for the general criteria for which the system selects data for the reposting; or enter a document number (see: Selecting Line Items [Page 304]).
3. Choose Execute.
   The system displays a list of repostings meeting the criteria you entered.
4. To sort the documents in a list by column,
   a. Mark the column by clicking on the column header
   b. Choose Sort or Sort descending.
5. To reverse a document,
   a. Mark the appropriate document row
   b. Choose Reversal indicator.
6. Post the reversal.

If you have reposted line items and then want to reverse the source document, the system displays an error message informing you that you must first reverse the reposting. In Customizing, you can change this error message to a warning by choosing General Controlling → Change Message Control [Ext.].
Time Sheets

Use

The time sheet lets you create uniform, cross-component personal time records. It unifies the existing personal time keeping functionalities from the individual components. The time sheet can provide you with information about the working time used for internal activity allocation in Controlling (CO).

For more information, see the SAP Library under CA Cross-Application Components → Time Sheets [Ext.] and the Implementation Guide (IMG) under Cross-Application Components → Time Sheets [Ext.].
Direct Activity Allocation

Use

In direct internal activity allocation, the activity output is measured, entered, and assigned. To do so, you must create the corresponding measurable tracing factors (units of measure for cost occurrence) in the R/3 System. In the Cost Center Accounting component (CO-OM-CCA), these tracing factors are known as activity types. For example, activity allocation starts through the confirmation of work operations or recording activity data. Thereupon the R/3 System multiplies the resulting activity by the price rate defined for the activity type.

This requires, for the corresponding cost centers or business processes, activity type planning using a manually-set price or an iteratively calculated price (see also Plan Price Calculation [Ext.]).

If the receiver of the activity allocation is not a cost object (for example, cost center, business process or internal order) and no manually set price exists, then the plan price is used. If you do not make iterative price calculations, the R/3 System uses the manually-set price of the activity type or business process for direct activity allocation; that is, the price of the version plan/actual (000).

If the receiver of the activity allocation is a cost object (for example, a production order or a product cost collector), then the prices used in the valuation are determined based on the valuation variant. In this case, the valuation variant is linked to the cost object through the costing variant for the simultaneous costing. If the receiving cost object is not tied with a costing variant for the simultaneous costing, then the planned price for the period is used for the valuation.

The inland purchasing process consumed 600 employee hours from cost center purchasing. An employee hour costs 50.- DM. The result is 600 * 50.- DM = 30,000.- DM. The process is debited and the cost center is credit with this amount. The foreign purchasing process produces an amount of 20,000.- DM.
As a rule, the following cost accounting approach applies to direct activity allocation:

- **Standard costing**
  - Static standard costing
  - Flexible standard costing
- **Activity-Based Costing**
- **Direct costing**

Whether the total costs or only the variable costs are allocated during the internal activity allocation depends on the receiver. This is the case if you enter the internal activity allocation together with the pre-distribution of fixed costs (see: [Pre-distribution of Fixed Costs][Page412]), and the sender takes part in the redistribution of fixed costs.

- If both sender and receiver are used in pre-distribution of fixed costs, and the receiver accepts real postings, internal activity allocation applies to the variable costs. The fixed proportion is ignored.
- If the sender is used in pre-distribution of fixed costs, but not the receiver accepting real postings, internal activity allocation applies to both the fixed and the variable costs.
- If other receivers used in pre-distribution of fixed costs accept statistical postings, internal activity allocation applies to the variable costs only.
Direct Activity Allocation

If other receivers not used in pre-distribution of fixed costs accept statistical postings, internal activity allocation applies to both the fixed and the variable costs.

The surface of internal activity allocation always shows the true value flow.

If you use transfer prices (multiple value flows), internal activity allocations use the operational valuation. The plan price drawn upon during allocation then applies to all valuations.

For more information on transfer prices, see EC - Profit Center Accounting [Ext.] and Parallel Valuations [Ext.].

You can also use the Internet component Internal Activity Allocation in Intranets to enter direct activity allocations via the Internet. For more information, see Internal Activity Allocation in Intranets (CO-OM-CCA [Ext]).

Activities

- To enter direct activity allocation data on the Cost Center Accounting screen or the Activity-Based Costing screen, choose Actual postings → Activity allocation → Enter.

  To allocate activities from business process on orders, business processes, or cost center, go to the field Screen variant and select the variant SAP10 with the name SAP: BProc to Ord/BProc/CCtr.

- To display direct activity allocation data on the Cost Center Accounting screen or the Activity-Based Costing screen, choose Actual postings → Activity allocation → Display.

- To cancel direct activity allocation data on the Cost Center Accounting screen or the Activity-Based Costing screen, choose Actual postings → Activity allocation → Cancel.

See also:

Enter Manual Actual Postings [Page 296]
Display Manual Actual Postings [Page 295]
Reversing Manual Actual Postings [Page 299]
Reposting Internal Activity Allocation

Use
You repost internal activity allocations [Ext.] to adjust any incorrect postings arising during the internal activity allocation.

Repostings enable you to adjust an internal activity allocation without the need to reverse the document first and then make an adjustment posting.

Prerequisites
You can only repost an internal activity allocation if you have already allocated activities that you now want to adjust.

Features
You select the internal activity allocations that are to be reposted on a selection screen, and then process them. This makes it possible, for example, to:

- Process together all the activity allocations of a receiver
- Repost to two receivers an activity quantity that was previously allocated to only one receiver
- Repost a portion of the posted activity quantity
- Post an activity allocation to a different receiver

The changed document rows are checked by the system, and the data, provided it contains no errors, is updated in one workstep.

Through a reference document number, the system creates a reference between the document from the source activity allocation and the adjustment document.

You can only post direct internal activity allocations that have been posted in Controlling. You cannot repost activity allocations that were not posted in Controlling.

- Project confirmation
  You can only repost those project confirmation documents in CO, which are related to activity allocation.

- Time recording using cross-application time sheets
  You can only repost the documents from time recording using cross-application time sheets (CATS) in CO, which relate to activity allocation. You can use background processing to post the time records to CO (see: Time Sheets [Page 311]).

  You have the option of reposting the internal activity allocation in a different period. Due to the negative activity flow between the old receiver and the sender, the old receiver may contain a negative quantity.

  For non-period-related internal activity allocations, you should therefore use a cumulative price, as other price calculations would lead to incorrect results (see: Actual Price Calculation [Page 319]).
Reposting Internal Activity Allocation

If you are using reposting of internal activity allocations together with predetermination of fixed costs (see: Predetermination of Fixed Costs [Page 412]) and the sender is participating in the predistribution, it depends on the receiver whether the overall costs or only the variable costs should be allocated (see: Direct Activity Allocation [Ext.]).

Activities

You repost internal activity allocation in two steps:

1. Select the internal activity allocations that you want to repost (see: Selecting Internal Activity Allocations [Page 317]).
2. Enter the repostings and execute them (see: Reposting Internal Activity Allocations [Page 319]).

See also

Receivers of Manual Actual Postings [Ext.]
Selecting Internal Activity Allocations

Procedure

1. To select internal activity allocations [Ext.] for reposting, from the relevant application component area menu, choose Actual postings → Repost activity allocation. → Enter.

2. If the fields offered by the system on the initial screen for entering IAA reposting are not sufficient, you can show more fields required for your selection.
   a. Choose Change selection parameters.
   b. Choose New field selection
   c. In the Field choice for dynamic selections dialog box, mark the field you need for the selection of sender, data, or receiver.
   d. Choose Copy selected items.
      The fields are transferred to Dynamic Selections on the right-hand side of the screen.
   e. To undo your selections, select the fields in question and choose Delete selected objects.
   f. You can make entries in the Dynamic selections selection screen. These selections are adopted by the system when you return to the initial screen.
   g. Save your entries.
      The initial screen is now displayed. This screen now includes the fields that you selected.

3. To save the selected fields to your use master record, choose Save field selection. The system then always displays these fields.
   If you choose Selection: Reposting IAA (without receivers) the system saves all fields except for the receivers. If you choose Selection: Reposting IAA (only receivers) the system saves the fields for the receivers. Select both if you want to save all fields.
   If you want to display a standard field selection for all users, choose Edit → General standard and confirm the security prompt with Yes. Your selection is offered to all users who have not entered their own field selection.

4. Enter the following data on the initial screen:
   a. Sender
   b. Receiver
   c. General criteria, by which the data for the reposting is to be selected.
      You can enter one or more individual values, intervals or groups for each of the fields offered by the system.

5. The following functions are also available on the initial screen:
   a. Selection options offers you more options for entering selection criteria (see: Specifying Selection Options [Page 495]).
   b. You can delete entries for individual selection rows or all entries for the selection (see: Deleting Selections [Page 508]).
Selecting Internal Activity Allocations

c. By choosing Goto → Variants, you can save your entries on the initial screen as a variant, enabling you to use these values again when you next call up the initial screen (see: Processing Variants [Page 509]).

6. Choose Execute.

Result

The system displays a list of the internal activity allocations that meet your selection criteria.

See also:

Reposting Internal Activity Allocation [Page 319]
Reposting Internal Activity Allocations

Prerequisites
You have selected the internal activity allocations that you want to repost (see: Select Internal Activity Allocations [Page 317]).

Procedure
1. To execute repostings, you can overwrite the values in the ready-for-input fields within the list of documents.

   The following options exist:
   - **Post an activity quantity to two receivers that was previously allocated to only one receiver**
     i. Reduce the quantity to be allocated to the previous cost center.
     ii. Choose Enter.
        The system display the difference for the posted quantity in a new row, together with the receiver.
     iii. Enter the receiver to which you want to repost the difference.

     The number of working hours allocated from cost center 4200 to cost center 4205 should be reduced from 200 hours to 150 hours. You post the difference of 50 hours to cost center 4210.

     It is not possible to increase the activity quantity compared to the previously posted activity quantity. The sum of the amounts for all the document items entered for one line item must correspond to the amount from the original line item.

   - **Post an activity allocation to a different receiver**
     i. Change the receiver of the previous activity allocation.

     20 working hours produced by cost center 4200 were posted incorrectly to cost center 4205 instead of cost center 4210.

   - **Post an activity allocation to a different receiver category**
     i. Position your cursor on the relevant line item.
     ii. Choose Change receivers.
     iii. Enter the new receiver under the corresponding receiver type.

     The 20 working hours produced by cost center 4200 should be posted to an order and not to cost center 4205.
Reposting Internal Activity Allocations

Using Auxiliary Account Assignments for Activity Allocations

i. In the list, enter the receiver categories and the receivers for the auxiliary account assignments.

Up to three auxiliary account assignments are possible (receiver 2 to receiver 4) depending on the activity allocation method.

2. To repost more than one document to the same receiver,
   a. Select the affected row(s).

To make your selections, you can use the functions Select all, Select block and Delete all selections.

b. Choose Change receivers

Enter the new receivers in the dialog box. Choose Continue to leave the dialog box.

3. To undo the entries in one row or for several rows,
   a. Select the necessary rows

To make your selections, you can use the functions Select all, Select block and Delete all selections.

b. Choose Reset row

4. To sort the documents listed by column,
   a. Select a column by clicking on the column header

b. Choose Sort or Sort descending

5. To switch to single processing of a document,
   a. Position your cursor on the relevant line item.

b. Choose either Edit row, Goto → Edit row, or double-click on the item.

You can get more information for your document row in Individual processing and make changes, if required.

From the individual processing, you can go to the document list, the document header and the display for the old document rows.

6. To return to the list of documents, choose List.

7. To reach the document header,
   a. Position your cursor on the relevant line item.

b. Choose Header or Goto → Header

In the document header you save a description for the reposting, the posting date and the document date.

The posting date must be in the same fiscal year as the document you want to repost.
If, for internal activity allocation (transaction RKL) you have set external number assignment in the IMG, you can enter the document number in the document header. Choose Number ranges to display the available document numbers.

If you selected internal number assignment, the system assigns the document numbers automatically.

To return to the list of documents, choose List.

8. Choose Old document rows to branch to the source document.
   a. If the document was created using internal activity allocation in CO, the system displays the old document just as for Actual postings → Activity allocation → Display.
   b. If the document was created using project confirmations the system displays the confirmation document.
   c. If the document was created using a time recording with Cross Application Time Sheets (CATS), the system displays the CATS document.

If the document was created by the reposting of a different document for internal activity allocation, the system cannot display the old document rows. The system issues an appropriate note.

9. To check the total quantities reposted per quantity unit:
   a. Enter your repostings
   b. Choose Check

10. To execute the reposting, choose Post.

**Result**

The system executes the repostings and outputs the generated document number.
Displaying Internal Activity Allocation Repostings

Prerequisites
You have reposted internal activity allocations (see: Reposting Internal Activity Allocations [Page 319]).

Procedure
1. From the application component area menu, choose Actual postings → Repost activity allocation → Display.
2. On the initial screen, enter the criteria for the senders, receivers and general criteria for which the system selects data for the reposting (see: Selecting Internal Activity Allocations [Page 317]).
3. Choose Execute.
   The system displays a list of repostings that meet the criteria you entered.
4. If you want to sort the documents in a list by a column,
   a. Mark the column header
   b. Choose Sort or Sort descending
5. To display the individual processing of a document,
   a. Position your cursor on the appropriate row
   b. Choose Edit row, or Goto → Edit row or double-click on the given row.
   The system gives you additional information for the document row.
6. To display the document header for a document,
   a. Position your cursor on the given row
   b. Choose Header
Reversing Repostings for Internal Activity Allocation

Prerequisites
You have reposted internal activity allocations and you now want to reverse them (see: Reposting Internal Activity Allocations [Page 319]).

Procedure
1. From the application component area menu, choose Actual postings → Repost activity allocation → Reverse.
2. On the initial screen, enter the criteria for the senders, receivers and general criteria for which the system selects data for the reposting.
   (see: Selecting Internal Activity Allocations [Page 317]).
3. Choose Execute.
   The system displays a list of repostings, which meet the criteria you entered.
4. If you want to sort the documents in a list by a column,
   a. Mark the column header
   b. Choose Sort or Sort descending.
5. To reverse a document,
   a. mark the appropriate document row
   b. choose Reversal indicator.
6. Post the reversal.

If you have reposted an activity allocation and then want to reverse the source document for the activity allocation using Actual postings → Activity allocation → Reverse, the system issues an error message informing you that you must first reverse the reposting. In the Implementation Guide (IMG) for General Controlling (section Change Message Control [Ext.]) you can change this error message to a warning.
Entering Sender Activities

Use

You can enter activities that have been marked for **indirect** allocation (activity type category 3: manual entry, indirect allocation) or as **non-allocable** (activity type category 4: manual entry, no allocation).

- You enter **indirect** allocable activity to determine the quantity flow for indirect activity allocation. You enter the activity quantity on the sender cost center or on the sender business process.
  
  Under indirect activity allocation, the activity quantity is distributed to the receiver cost centers according to their allocation bases (see also: Indirect Activity Allocation [Ext.]).

- You enter **non-allocable** activity on cost centers or business processes that cannot be credited using activity allocation. The activity quantity produced by the cost center is used as the basis for cost control. The SAP System uses the plan activity and the non-allocable activity to calculate an operating rate. It can then determine target costs and variances for the cost center.

  When entering sender activities, you can enter activities for the following **sender objects**:

  - Business processes
  - Cost Center/Activity Type

In a business organization, variable costs are incurred on a sales cost center for each product unit sold. These costs cannot be credited to a profitability segment using direct internal activity allocation. The costs remain on the cost center, unless you are using the Internal Orders component (CO-OM-OPA) or Profitability Analysis (CO-PA) which allow a credit to take place.

See also

- Entering Sender Activities [Ext.]
- Displaying Sender Activities [Ext.]
- Reversing Sender Activities [Ext.]
Manual Actual Price

Use
You can manually set an actual price for an activity price of a cost center or a business transaction, independent of the actual activity price calculation. This price is drawn for the valuation of activity relationships between cost centers or business processes. You can overwrite the price retroactively if the price is dependent on the price indicator or on the actual price calculation.

Prerequisites
To produce an actual price manually, first choose a suitable planner profile.
The standard planner profile contains planning layout 1-N01, which produces a manual actual price for activity types in cost centers, and 1-Q01, which produces a manual actual price for a business process.

Features
You can set the fixed or variable part of the actual price in cost centers for an activity type. Moreover, you can determine actual price units and actual price indicators (see Price Indicators [Ext.]).
Similarly, planning layout 1-N01 shows the data booked to the plan price.
You can define the fixed and variable parts of the actual price, actual price unit, and actual price indicator (see Price Indicators [Ext.]) for business processes.
Similarly, planning layout 1-Q01 shows the data booked to the plan price.

Activities
For more information, see:
Entering Actual Prices Manually [Page 326]
Displaying Actual Prices Manually [Page 327]
Entering Actual Prices Manually

Procedure

Initial screen
1. In the menu for Cost centers or for Processes, choose Actual postings → Actual price → Enter.
2. Then enter the relevant periods and fiscal year.
3. Also enter:
   i. for which business process or business process groups you want to define the price, or
   ii. for which cost center(s) and activity type(s) you want to define the price
4. Activate either free- or form-based.
   If you choose free, the SAP System offers an overview screen containing previously planned records available for change. The system shows the header completely, even when no values already exist. Moreover, you can enter new characteristic values in the rows.
   If you choose form-based, the SAP System produces all objects selected in the initial screen, independent of whether values exist or not. In each price setting, the same characteristic value structure appears. You cannot produce new characteristic values.
5. Choose Overview Screen or Period Screen.

Overview Screen
Follow these steps in the Overview screen:
1. Enter the price for the object you selected.
2. Check or set the price indicator.
3. Choose Book.

Period screen
To branch to the Period screen, follow these steps:
1. In the Overview screen, position the cursor on an entry and choose Period screen.
2. Accept the value suggested by the system, or enter your own period value.

You will find more information on navigating through the Overview or Period Screens under Planning Functions [Page 189].
Displaying Actual Prices Manually

Procedure

6. In the menu for Cost centers or for Processes, choose Actual postings → Actual price → Display.

7. Then enter the periods and fiscal year for the price you want displayed.

8. Also enter:
   i. for which business process or business process group you want to display the price, or
   ii. for which cost center(s) and activity type(s) you want to define the price

9. Activate either free- or form-based.
   - If you choose free, the SAP System offers an overview screen containing previously planned records.
   - If you choose form-based, the SAP System produces all objects selected in the initial screen, independent of whether values exist or not.

10. Choose Overview Screen or Period Screen.

You will find more information on navigating through the Overview or Period Screens under Planning Functions [Page 189].
Manual Cost Allocation

Use

Manual cost allocation involves posting secondary costs [Ext.] manually. The system credits a sender object (for example, a cost center) and debits a receiver object (for example, an order). Until now, you could only use automatic methods for cost allocation (such as assessment or distribution (see: Assessment [Ext.], Distribution [Ext.]).

You can use manual allocation to:

- Avoid the need for complicated Customizing settings for simple allocations
- Manually transfer external data
- Make simple adjustments to incorrect secondary postings.

Note, however, that you then lost the information regarding the value flow, as the system starts a new process chain with manual allocation (see example).

⚠️

You should not, however, confuse manual cost allocation with a reversal in the conventional sense. If you reverse automatic allocations that were subsequently manually adjusted, the system ignores the manual allocations during the reversal. You must manually reverse these manual allocations one at a time.

Features

You can use manual cost allocation to allocate primary and secondary cost element categories [Ext.]. You can use all cost element categories that may be used for allocations within Controlling. An exception to this is category 43 (allocation of activities/processes) which may only be used for activity allocation.

If you manually repots an accrual cost element, the system will ignore the corresponding values during a subsequent accrual calculation.

Restrictions

You can only use manual cost allocation for actual postings. It is not possible to copy data records that were generated using manual cost allocation into plan data.

The system does not currently support the transfer of mass data.

During an assessment, the “Energy” cost center incorrectly allocated automatically heating costs of 1,000 USD to the trade fair order. These costs should have been allocated to the “General Administration” cost center. In this case you can use manual allocation to make the necessary adjustments. You should proceed as follows:

1. Manually allocate the heating costs of 1,000 USD again, this time, however, negative, from the “Energy” cost center to the trade fair order.
2. Then allocate the 1,000 USD manually to the “General Administration” cost center. This ensures that the receiver cost center recognizes the “Energy” cost center as the sender.

If you execute an automatic assessment or allocation after executing a manual allocation, note that the cost elements used for the manual allocation must be stored in the corresponding allocation structure for assessment or accrual calculation.

If in the above example you manually allocate the heating costs of 1,000 USD directly from the trade fair order to the “General administration” cost center, the system does not recognize the “Energy” as the original sender.
The manual allocation from the trade fair order to the “General administration” cost center occurs without reference to previous postings. This means that the system cannot display internal business volume, even if the “Energy” cost center and the “General administration” cost center belong to the same cost center group.

**Activities**

- To enter a manual allocation, from the relevant application menu, choose *Actual postings* → *Manual cost allocation* → *Enter*
- To display a manual allocation, from the relevant application menu, choose *Actual postings* → *Manual cost allocation* → *Display*
- To reverse a manual allocation, from the relevant application menu, choose *Actual postings* → *Manual cost allocation* → *Reverse*

See also:
- Entering Manual Actual Postings [Page 296]
- Displaying Manual Actual Postings [Page 295]
- Reversing Manual Actual Postings [Page 299]
- Receivers of Manual Actual Postings [Ext.]
Entering Statistical Key Figures

Use

You can enter statistical key figures [Ext.] for use in reporting or as tracing factors for period-based allocations. This also occurs within a transaction-based allocation in Controlling.

The cafeteria costs are apportioned monthly to all the cost centers in the company based on the number of employees in each cost center. The statistical key figure “Employees” is used as the tracing factor for assessing (apportioning) the costs.

Features

Note the key figure category when you enter the statistical key figures:

- **Fixed values** are carried forward from the posting period to all the subsequent posting periods of the fiscal year. Changes are valid for the subsequent periods until a new value is entered (for example, number of employees).

- Key figures defined as **Totals values** are valid only in the posting period in which they are entered. When changing values, you first have to undo the existing value with a reversed +/- sign and then enter a new value (for example, number of telephone units).

Activities

- To enter statistical key figures, from the relevant application area menu, choose *Actual postings → Statistical key figures → Enter.*

- To display statistical key figures, from the relevant application area menu, choose *Actual postings → Statistical key figures → Display.*

- To reverse statistical key figures, from the relevant application area menu, choose *Actual postings → Statistical key figures → Reverse.*

See also:

- Entering Manual Actual Postings [Page 296]
- Displaying Manual Actual Postings [Page 295]
- Reversing Manual Actual Postings [Page 299]
- Receivers of Manual Actual Postings [Ext.]
Period-End Closing

Purpose

The period-end closing in Activity-Based Costing is a task that is executed at period end for the entire firm.

The tasks carried out at period end, and the sequence they are done in depends on which SAP functions are used and what cost accounting methods are implemented. Following is a description of the basic functions available in Activity-Based Costing for the period-end closing.

Features

Schedule Manager [Page 334]

The Schedule Manager facilitates the execution and control of the work needed for the period-end closing.

Reposting/Statistical Key Figures

Periodic Reposting [Page 340]

The periodic reposting also helps you to make corrections in your cost centers or business processes. It returns the same results as the activity related reposting.

Transfers of Statistical Key Figures from the Logistics Information System (LIS) [Page 388]

Statistical key figures, which are already available in the information system for Logistics, can be transferred to Activity-Based Costing.

Period-Based Allocations [Page 342]

Overhead [Page 379]

As a basic part of costing in product cost planning and cost object controlling, the system can calculate overheads periodically for business processes.

Distribution [Page 368]/Assessment [Page 369]

Distribution, assessment, and process assessment allocate costs collected on a cost center or business process during the accounting period to receivers according to pre-defined keys.

Indirect Activity Allocations [Page 370]

For indirect activity allocations, the system allocates quantities using self-defined keys.

Template Allocation in Actual: Processes/Cost Centers [Page 360]

For template allocations in actual for processes, allocation relationships of business processes are broken down and the derived quantities are periodically posted.

Target=Actual Activity Allocation [Page 375]

Target=actual allocation determines the actual activity quantities to be allocated based on the plan activity inputs of the receiver multiplied by the operating rate.

These actions take place at the end of an accounting period and thus make up period-end closing in the Activity-Based Costing component. Many of these allocations also apply to plan allocation.
After the allocations are complete, the R/3 System can determine variances and calculate actual prices on the basis of these results.

**Variance and actual prices**

**Variance Calculation [Page 391]**

Variance calculation allows you to categorize and analyze variances appearing in business processes by cost element. Variances are based on the results of the previous allocation functions and on planning.

**Pre-distribution of Fixed Costs [Page 412]**

Pre-distribution of fixed costs allocates the costs arising from the preparations for providing a plan activity, distributing them as actual costs to the business processes planning the activity input.

**Actual Cost Splitting [Page 411]**

In the Activity-Based Costing component (CO-OM-ABC), actual cost splitting related to business processes results in the division of all costs into fixed and variable portions based on the planning of the business process. Actual cost splitting, by dividing the costs into fixed and variable, allows target/actual comparisons and calculation of actual prices.

**Actual Price Calculation [Page 419]**

Actual price calculation allows you to determine cost rates based solely on actual data. You can use the actual price to reevaluate all activities in actual calculations. In this way, you can clear cost centers of all their costs and debit them accordingly to the business processes.
Individual Functions of the Schedule Manager

Use

A number of periodic tasks are executed on a regular basis (daily, weekly, or monthly) in the SAP System. An example of such a task is period-end closing. This requires the processing of a large number of individual objects at certain times. This process is supported by the individual components of the Schedule Manager.

Features

Flow definition

In a flow definition, you can link tasks to each other if they are related or if you wish to use a worklist in them. You can therefore schedule a flow definition as a task in the scheduler.

See also Using the Flow Definition [Page 339] in the SAP Library.

Scheduler

In the scheduler, you can schedule tasks in a structure tree. You can use drag-and-drop in a daily overview to enable the system to execute the tasks at a certain time.

See also Using the Scheduler [Page 335] in the SAP Library.

Monitor

The monitor gives you an overview of the scheduled tasks during and after processing. You can correct faulty objects in a worklist.

See also Using the Monitor [Page 337] in the SAP Library.

Worklist

Objects that are to be processed in a processing step sequence are managed in the worklist.

The worklist monitor presents information such as which objects were processed without errors and which objects could not be processed. You can display information on the cause of errors, and thus control the way in which the object is processed further.

The worklist ensures that when a processing step sequence is processed again, the system only processes the objects which had errors or which you manually instructed the system to reprocess. Define the processing step sequence in the flow definition.

See also Multilevel Worklist [Ext.] in the SAP Library.
Using the Scheduler

Use
In the scheduler, you can execute and monitor complex business flows, for example, period-end closing. You can define task lists if you have the corresponding authorization.

Integration

- You can group tasks that are to be executed in the background in a particular order, (and which are controlled by the workflow) into a flow definition [Page 339].
- You monitor flows and jobs during and after processing in the monitor [Page 337].
- Use the multilevel worklist [Ext.] to improve performance and reduce error processing.

Prerequisites
Before using the scheduler, you need to create a task list in which you can later insert the tasks to be scheduled.

Features

The scheduler is divided up into three areas:

- Task list
  Tasks structured into task groups in chronological order, which are executed periodically, possibly by more than one user to complete a certain process.
Individual Functions of the Schedule Manager

- **Monthly overview**
  
  An overview of the current and previous month.
  
  You can select a day from the monthly overview, which the system then displays in the daily overview in detail.

- **Daily overview**
  
  Overview of the tasks to be done during the day.
  
  Tasks created in the task list are scheduled in the daily overview. The system displays executed tasks in the daily overview with the time that they started.

**Activities**

Create a task list.

Schedule tasks in the daily overview and if required, have the system execute them.
Using the Monitor

Use
The monitor shows the information on an active or completed job that was scheduled in the scheduler.
To improve performance and facilitate error rectification, use the multilevel worklist [Ext.].

Integration
The monitor is part of the Schedule Manager [Ext.].
Other components are:

- Flow definition
  You can group tasks that are to be executed in the background in a particular order (and which are controlled by the workflow) into a flow definition [Page 339].

- Scheduler
  You can create individual tasks for business transactions (which for example, make up period-end closing) in the scheduler [Page 335] task list. By scheduling them in the daily overview, you enable the system to execute them.

Structure

For detailed information on the functions of the monitor, refer to:

- Monitor - Monitoring Active and Completed Jobs [Ext.]
Using the Monitor

- Monitor - Working with the Object List [Ext.]
Using the Flow Definition

Use

A flow definition consists of individual flow steps. These steps include scheduling programs with variants in the job control of the SAP System, and interaction with users by email.

The flow definition is a graphical summary of several steps. A step in the flow definition corresponds to a task in the task plan, except that the individual step does not appear directly in the task plan, rather it is displayed in the flow definition, which is included in the task plan.

Integration

The Schedule Manager provides a multilevel worklist [Ext.]. The multilevel worklist improves performance and facilitates error finding. To use the Schedule Manager worklist, create a flow definition and schedule it in the scheduler. For further information about this worklist, see Choosing Objects for Processing [Ext.].

Prerequisites

Workflow profiles enable you to adapt the user interface of the flow definition according to your requirements. If required, the project team can create and provide this type of profile. To make individual processing available as flow steps, you need a program which provides all the processing parameters and displays an ergonomic user interface.

If you are using the workflow builder function for the first time in the SAP System, go into Customizing and choose Basis → Business Management → SAP Business Workflow → Maintain Standard Settings for the SAP Business Workflow and then Automatic Customizing.

For more information, see Creating a Flow Definition [Ext.].
For more information on error handling in flow definitions, see: Error Handling [Ext.].

Features

You can define individual flow definitions with as many flow steps as you like, or you can link flow definitions together within an “upper” flow definition. You must assign the “upper” flow definition to an application (or application component) that is on a higher level than the applications assigned to the lower-level flow definitions.
Periodic Reposting

Use

Periodic reposting [Ext.] is posting aid that enables you to adjust postings made to your cost centers or business processes, internal orders, or WBS elements. It has the same result as transaction-based reposting. The results of transaction-based repostings have a direct effect on the actual costs of the sender and the receiver, whereas periodic repostings have a one-time effect on actual costs at period-end closing.

Postings relevant to Controlling (CO) such as telephone costs, postal charges, insurance, and so on are entered in Financial Accounting (FI) and posted to an allocation cost center or a business process. These are used exclusively for cost collection. This minimizes the number of different account assignments you have to make when entering data in FI. At the end of the period, the collected costs are reposted to the cost centers or business processes which incurred the costs by means user-defined keys (fixed values or dynamic tracing factors). The following information is passed on to the receivers:

- The original cost element (the primary cost element [Ext.]) is retained.

  During periodic repostings, you can allocate activity-dependent plan costs to receiver objects of the category “Cost center” (sender activity type is retained) or “business process”.

  You can allocate activity-independent costs to all receiver object categories, for example, cost centers, business processes, or orders.

- The allocation cost center is not important for the receiver cost centers (neither is the sender business process for the receiver processes). The SAP System therefore stores data records for periodic reposting in a way that uses less memory than, for example, distribution [Ext.]. For this reason, the sender cost center or sender process is not updated using this method. You can only analyze from which cost center or from which business process the costs originate from the line items, and not from the totals records.
If you are working with transfer prices [Ext.] (multiple valuation approaches) the periodic reposting is executed in parallel in all valuations. The costs to be allocated are taken from the corresponding valuation. The tracing factor is always taken from the values of the operational valuation. The values allocated may differ in each of the valuation methods.

Senders and receivers are displayed in the results list, differentiated according to the parallel actual versions of the various valuations.

For more information on transfer prices, see the SAP Library under:

- Financials → Enterprise Controlling (EC) → Profit Center Accounting → Multiple Valuation Approaches/Transfer Prices [Ext.]
- Financials → Controlling (CO) → Controlling → Overhead Cost-Controlling → Multiple Valuation Approaches in Overhead Cost Controlling [Ext.]

See also:
Defining Periodic Repostings or Periodic Allocations [Ext.]
Creating or Changing Cycles [Ext.]
Executing Periodic Repostings or Periodic Allocations Online [Ext.]
Displaying the Cycle Overview [Ext.]
Period-Based Allocations

Use

Distribution, assessment, and process assessment allocate costs collected on a cost center or business process during the accounting period to receivers according to pre-defined keys. Indirect activity allocation assigns activity quantities. These procedures are called indirect allocation methods because the exchanges of activities are not the basis for allocating costs/quantities, but rather the user-defined tracing factors such as percentage rates, flat amounts, statistical key figures, or posted amounts.

These procedures make the allocations more manageable; the keys as well as the sender and receiver relationships are normally defined once.

The most powerful tool for activity quantity calculations is template allocations. This method uses custom formulas and functions from an operational environment of the SAP System to determine the quantities for allocation dynamically.

Distribution, assessment, and process assessment are best suited for cost centers and business processes where direct activity allocation is not possible because the business transactions are so varied that it is impossible or difficult to define all the activity types.

Prerequisites

Allocations are carried out during period-end closing and draw upon the pre-defined parameters (keys, sender-receiver relationships).

To use multiple currencies in period-based allocations, see Currencies in Period-Based Allocations [Ext].
Differences Between Allocation Methods

The table illustrates the main differences between the allocation methods.

<table>
<thead>
<tr>
<th>Allocation Method</th>
<th>Allocation Of</th>
<th>Allocation Using</th>
<th>Line Item Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Template-Allocation</td>
<td>Actual and plan quantities of business processes and cost centers/activity types</td>
<td>Allocation (secondary) cost element</td>
<td>Item text for templates, and sender and receiver objects</td>
</tr>
<tr>
<td>Indirect activity allocation</td>
<td>Actual and plan quantities of business processes and activity types</td>
<td>Allocation (secondary) cost element</td>
<td>Sender activity type or process and receiver objects</td>
</tr>
<tr>
<td>Target-actual allocation</td>
<td>Actual and plan quantities of business processes and activity types</td>
<td>Allocation (secondary) cost element</td>
<td>Sender activity type or process and receiver objects</td>
</tr>
<tr>
<td>Assessment/process assessment</td>
<td>Primary and secondary cost elements</td>
<td>Assessment (secondary) cost element</td>
<td>Sender cost center or process and receiver objects</td>
</tr>
<tr>
<td>Distribution</td>
<td>Primary costs</td>
<td>Original cost element</td>
<td>Sender cost center, sender business processes and receiver objects</td>
</tr>
</tbody>
</table>
Template Allocation in Actual

Use

The use of template [Ext.] allocations is one method to assign overhead costs. This method is unique for several reasons:

- Costs are not just allocated, but the system also determines the quantities that the respective receiver objects consume or utilize; costs are calculated based on the quantities and prices, and therefore more accurately determined.
- Working with templates: the sender, quantities and activation time do not already exist, but can be dynamically determined through the template at the time of the calculation.
- The template uses functions [Ext.] defined by the user or already provided in the system to determine the needed data; these functions pull information already in fields or carry out complex algorithms from the operative data in the SAP system; they are created and maintained in the environment maintenance.
- Sender objects can be business processes or cost centers/activity types.

Possible receiver objects of the template allocation in actual can be:

- Product Cost Collector
- PP-Production Orders
- CO-Production Orders
- PP-Process Orders
- Sales Orders
- Service Orders
- Internal Orders
- General cost objects
- WBS Elements
- header and activity assigned network
- Profitability segment of profit and market segment analysis
- Cost centers or cost centers/activity types
- Business Processes

In order to describe the allocation quantities in actual, you can draw upon actual quantities updated in the SAP System (such as the Logistic Information System or the confirmed quantities entered in the system).

For example, the number of purchase orders per sales orders serves as the process driver of the procurement process for a sales order processor. You can configure the Logistics Information System so that it updates the appropriate key figure for this sales order for each procurement transaction related to the order. Thus, at the time of template allocation, the relevant template function uses the most recent
Template Allocation in Actual

Information on procurement occurrences for the sales order from the Logistics Information System

Template-Allocation for Cost Objects (example, production order)

**Prerequisites**

These include:

- Creating the necessary sender objects; for example Business Processes [Page 45] or Cost Center [Ext.]/Activity Types [Ext.]
- Maintaining the environment [Page 101] or functions [Ext.] necessary for your receiver object
- Providing the process drivers (for example, statistical key figures) used by the functions
- Creating appropriate templates [Page 50]
- Assigning the template to the receiver object (Cost Driver [Page 348] or Profitability Segment [Page 355]).

Price determination, planning and plan reconciliation should be carried out.

**Features**

Enter the receiver object(s) in the entry screen for template allocation to determine the overhead costs. When you carry out the allocation, the system does the following:

- Through the search rule you defined, the correct template is assigned to the receiver object
- The template finds the correct business process(es) or cost centers/activity types
- It calculates the quantities demanded/required
- It sets the time period of the allocation and checks, if necessary, the activation requirements
Template Allocation in Actual

The result is a list of receiver and sender objects of the activity quantities and relevant costs (quantity*price). The price is calculated based on the valuation variant, which is tied to the receiver cost object for the simultaneous costing using the costing variant. If the receiving cost object is not tied with a costing variant for the simultaneous costing, then the planned price for the period is used for the valuation.

Activities

You have defined your assumptions.

To carry out a template-allocation:

- Enter the template-allocation transaction for which receiver object(s) determine overhead costs
- Execute the template-allocation
- After the results are displayed (Display run results: Template Allocation) [Page 163], you can use the Template Trace [Page 164] to display a more detailed view.
- In Display Detail [Page 165] it is also possible to view the results of individual template cells.

See also:

Template Allocation in Plan [Page 243]
Executing Template Allocations

8. Choose the transaction for the template allocation in your application.

9. Enter the receiver object(s) (see Selection variant [Page 43]).

10. Enter the version [Ext.] (if more than one exists) and the periods and fiscal year for the allocation.

11. You can determine the type of processing and the preparation of results with the Test run, Background processing, and Detail list indicators.
   i. If you activate the Test run indicator, the SAP system runs the template allocations without posting the results. We recommend using the Detail list indicator together with the Test run indicator so that you may then analyze the test run results.
   ii. If you need to process large volumes of data, use the Background processing indicator for executing the allocation during periods of low system use.

12. To execute the template allocation, choose or Allocation → Execute.

13. After the results are displayed (Display run results: Template Allocation [Page 163]), you can use the Template Trace: Basic Screen [Page 164] for a more detailed/broken down view.

14. In Display Detail [Page 165] it is also possible to view the results of individual template cells.
Template-Allocation for Cost Objects

Use

With this template-allocation you can carry out job costing at the cost object level. In the SAP system, Cost objects [Ext.] represent operational job objects (for example production orders, sales orders and so on). You can couple a cost object with a product (for example, production order for a specific product), or, irrespective of product, a cost object can represent a certain job (for example, a trade fair order). Plan costs, which are periodically compared with incurred actual-costs, are recorded on cost objects.

You can use business processes or cost center/activity types as senders with template-allocation for cost objects. You can use the following cost objects as receivers (001 = number of the environment):

001: Material cost estimate/production orders (actual)
004: Network (actual)
005: WBS-Elements (plan and actual)
006: General cost objects/cost object hierarchy (actual)
007: Internal orders (plan and actual)
008: Customer orders (actual)
009: Process orders (actual)
010: Product cost collector (actual)
011: Service orders (actual)
012: CO-production orders (actual)

Prerequisites

These include:

- Creating the necessary sender objects; for example Business Processes [Page 45] or Cost Center [Ext.]/Activity Types [Ext.]
- Maintaining the Environment [Page 101] or functions necessary for your receiver object
- Providing the Process Drivers [Ext.] (for example, statistical key figures) used by the functions
- Creating appropriate Process Templates [Page 90]
- Assigning the template to the receiver object (cost object or profitability segment).

Activities

- You have completed all prerequisites.
- Execute the template allocation (see Executing template allocations [Page 347]).

See also:

Assigning Templates for Cost Objects and Calculations [Page 353]
Templates for Cost Object and Calculation

Definition

The template is a dynamic tool, which uses functions [Ext.], formulas [Page 151] and Boolean logic (true/false) to calculate values. It consists of a grid of columns and rows. Templates for cost objects are set in environments 001 or 004 to 012, and those for plan calculation in environments 001 to 003.

Structure

You can choose between six item categories. Depending on the item category you choose, you will have the following columns available for data entry.

<table>
<thead>
<tr>
<th>Item Type</th>
<th>Columns that can be edited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commentary row</td>
<td>Description</td>
</tr>
<tr>
<td>Process</td>
<td>Name, Object, Quantity Plan, Active. Plan, Quantity Actual, Activation Actual, Allocation event actual</td>
</tr>
<tr>
<td>Sub-Template</td>
<td>Name, Object, Activation Requirements Plan, Activation Actual</td>
</tr>
<tr>
<td>Cost center / activity type</td>
<td>Name, Object, Quantity Plan, Active. Plan, Quantity Actual, Activation Actual, Allocation event actual</td>
</tr>
<tr>
<td>Calculation row (Process)</td>
<td>Name, Object, Quantity Plan, Active. Plan, Quantity Actual, Activation Actual, Allocation event actual</td>
</tr>
<tr>
<td>Calculation rows (cost centers/activity types)</td>
<td>Name, Object, Quantity Plan, Active. Plan, Quantity Actual, Activation Actual, Allocation event actual</td>
</tr>
</tbody>
</table>

You have the following entry and maintenance possibility per column type.

<table>
<thead>
<tr>
<th>Column type</th>
<th>Possible Entries/Processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Type</td>
<td>Commentary row, Process, Sub-template, Cost center/activity type, Calculation row (Process), Calculation row (Cost center/activity type)</td>
</tr>
<tr>
<td>Description</td>
<td>Explanations</td>
</tr>
<tr>
<td>Object</td>
<td>Based on the item type, enter the object (such as business process). You can enter a fixed object with type process or cost center/activity type, or you can let the system determine this dynamically within an analysis period for one or more processes or cost center/activity types. For more information, see Object Determination [Page 128].</td>
</tr>
<tr>
<td>Quantity Plan/Actual</td>
<td>Enter the consumption quantities in items process or cost center/activity types. You can enter a constant value, or you can allow the SAP System to determine the appropriate value when the valuation event occurs. For more information, see Quantity Determination [Page 133].</td>
</tr>
</tbody>
</table>
### Activation requirements

**Plan/Actual**

Under *Activation*, determine the conditions, which activate the item. You can enter *Active* or *Inactive* as fixed values, or you can define a method, which allows the R/3 System to activate or deactivate the item when the valuation occurs. Ensure that the default value for the activation column is set to active. If you do not enter anything into the column, the system assumes the condition “active”.

In beer production, the business process *Reduce Alcohol Content* is required for alcohol-free beer but not for other beers. The process must be activated for alcohol-free beer and remain inactive otherwise.

For more information, see Activation [Page 139].

### Allocation event

**Allocation event**

**Actual/Plan**

You can define different process *allocation events*. You can allocate the individual business processes for multiple-period orders at the times the processes are actually utilized. This is vital in order to ensure correct calculations of work in process (WIP) because processes cannot always be confirmed on a periodic basis in these situations.

Determine the valuation events that trigger the item for allocations. By double clicking, you reach a selection window with all functions that you can use to determine the allocation event.

In beer production, ingredient testing takes place at the beginning of the production order, whereas storage of the final product takes place at the end.

By entering the corresponding valuation events, you can ensure that the SAP System takes ingredient tests into account early in the costing calculations (calculate work in process) and that costing calculations for storage take place towards the end of the production order.

If you choose item category *calculation row*, the editor cannot be called up in the object columns.

#### Column Layout, Template for Cost Object
The diagram illustrates which questions the important column entries answer.

- Which process or cost center/activity type is used?
- What quantity is pulled by the receiver object?
- Under which conditions is the item active?
- When should the item be assigned?
Assigning Templates for Cost Objects and Calculations

Use

Because templates for cost objects are dependent on materials and orders, the SAP System must select the appropriate template at the time of the valuation event. Template selection is based on the following assignment logic:

The SAP System selects the template based on the overhead structure, the distribution key, and the environment.

- When planning product costs, the R/3 System uses the overhead structure based on the valuation variant, itself selected based on the costing variant. The distribution keys are selected through the overhead cost group in the master data of the material to be costed. The SAP System selects the environment based on the costing method (direct or product costing).

- When costing cost objects and allocating to cost objects, the SAP System uses the overhead structure and distribution key taken from the master data of the cost object. The environment is also selected based on the cost object.

Procedure

4. In the Implementation Guide (IMG) of Activity-Based Costing, choose Templates → Assigning templates for cost objects and calculations, or in the menu for Activity-Based Costing Period-end closing → Current settings → Assign templates to cost objects

5. Enter the controlling area, costing sheet, overhead key and environment, and then the template to be applied.

6. Save your entries.

The costing sheet must always be entered. Without a costing sheet, the template is not pulled and costs are not calculated.

Assigning Templates - Cost Objects
Only one template will be called up for each environment.
Template-Allocation for Profitability Segment

Use

In the profit and profitability segment calculations (CO-PA), you can execute periodic reporting in controlling at product level. You can build up multi-dimensional market segments (Profitability Segment [Ext.]) distinguishable through many different characteristics. You can analyze the profitability of a product in a specific region, customer group and distribution channel simultaneously. This multi-dimensionality is especially meaningful for service industries, which often see their products as much more than one-dimensional.

You can use business processes or cost center/activity types as senders with template-allocation for profitability segments. You can define the profitability segment of the profitability analysis as the receiver: this allows the system to assign costs to the appropriate market segment. You create the template in environment PAC.

Prerequisites

These include:

- Creating the necessary sender objects; for example Business Processes [Page 45] or Cost Center [Ext.]/Activity Types [Ext.]
- Creating cost driver data in CO-PA (for example, over the SD interface)
- Completing all editing steps specified in the Implementation Guide (IMG) for profit and market segment calculation (CO-PA).

For more information, see:

Planning → Integrated planning → Transfer cost center/process planning → Set up template-allocation [Ext.].

Activities

- You have completed all prerequisites.
- Execute the template allocation (see Executing template allocations [Page 347]).
Templates for Profitability Segments

Definition

The template is a dynamic tool, which uses functions [Ext.] and formulas [Page 151] and Boolean logic (true/false) to calculate values. It consists of a grid of columns and rows. Create a template for profitability segment in environment PAC.

Structure

You can choose between six item categories. Depending on the item category you choose, you will have the following columns available for data entry.

<table>
<thead>
<tr>
<th>Item Type</th>
<th>Columns that can be edited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commentary row</td>
<td>Description</td>
</tr>
<tr>
<td>Process</td>
<td>Name, Object, Quantity Plan, Active Plan, Quantity Actual, Activation Actual</td>
</tr>
<tr>
<td>Sub-Template</td>
<td>Name, Object, Activation Requirements Plan, Activation Requirements Actual</td>
</tr>
<tr>
<td>Cost center / activity type</td>
<td>Name, Object, Quantity Plan, Active Plan, Quantity Actual, Activation Actual</td>
</tr>
<tr>
<td>Calculation row (Process)</td>
<td>Name, Object, Quantity Plan, Active Plan, Quantity Actual, Activation Actual</td>
</tr>
<tr>
<td>Calculation rows (cost centers/activity types)</td>
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</tbody>
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You have the following entry and maintenance possibility per column type.

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<tr>
<th>Column type</th>
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</tr>
</thead>
<tbody>
<tr>
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<td>Commentary row, Process, Sub-template, Cost center/activity type, Calculation row (Process), Cost center/activity types, Calculation row (Cost center/activity type)</td>
</tr>
<tr>
<td>Description</td>
<td>Explanations</td>
</tr>
<tr>
<td>Object</td>
<td>Based on the item type, enter the object (such as business process). You can enter a fixed object with type process or cost center/activity type, or you can let the system determine this dynamically within an analysis period for one or more processes or cost center/activity types. For more information, see Object Determination [Page 128].</td>
</tr>
</tbody>
</table>
### Quantity Plan/Actual

Enter the consumption quantities in items *process* or *cost center/activity types*. You can enter a constant value, or you can allow the R/3 System to determine the appropriate value when the valuation event occurs.

For more information, see [Quantity Determination](#).

### Activation requirements

**Plan/Actual**

Under *Activation*, determine the conditions, which activate the item. You can enter *Active* or *Inactive* as fixed values, or you can define a method, which allows the R/3 System to activate or deactivate the item when the valuation occurs. Ensure that the default value for the activation column is set to active. If you do not enter anything into the column, the system assumes the condition “active”.

For more information, see [Activation](#).

If you choose item category *calculation row*, the editor cannot be called up in the object columns.
Assigning Templates to Profitability Segments

Use

The corresponding templates must be selected at the time of evaluation since the template for Profitability segments is dependent on the characteristics of the objects. Template selection is based on the following assignment logic:

You set the dimensions of the profitability segment by entering the update characteristics. You can make one or more selection feature(s). These determine the criteria used to choose the receiver object in the dynamic process allocation (determine selections and fixed update characteristics).

Using a selection rule, assign a characteristic area to a specific template (maintain template search and further update characteristics). While making the allocations, enter the company code and characteristic area for which the allocation should be done. When characteristic values, which are assigned to a template through a selection rule, exist in this area, this template will be used automatically for allocations.

Activities

The assignment occurs in the Implementation Guide (IMG) of the Profit and Market Segment Calculation (CO-PA). For more information, see:

Planning → Integrated planning → Transfer cost center/process planning → Set up template-allocation → Specify Characteristics for Selection and Update [Ext.], or Maintain template determination and other update characteristics [Ext.].

or

Flow of Actual Values → Transfer of Overhead → Set Up Template Allocation → Specify characteristics for selection and update, or Maintain template determination and other update characteristics.

Example

Assigning Templates - Profitability Segments

Templates FDGK and FDKK are found through selection rule 1. The characteristics used are “Customer groups”, “Product groups” and “Product variants”. The characteristic attributes “Firms”, “Loans” and “Large credit” find template “FDGK”; attributes “Firms”, “Loans” and “Small credit” find template “FDKK”.

If the search through selection rule 1 was unsuccessful, the system uses a more general search (only two characteristics) through selection rule 2. Depending on the characteristic values, templates FD or PD are found.
Assigning Templates to Profitability Segments

CO-PA Characteristics (Dimensions)
- Region
- Branch
- Customer Group
- Prod. Group
- Prod. Variant
- ....

Derivation strategy for Templates

<table>
<thead>
<tr>
<th>Selection rule 1</th>
<th>Selection rule 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Group</td>
<td>Customer Group</td>
</tr>
<tr>
<td>Firms</td>
<td>Firms</td>
</tr>
<tr>
<td>Product Group</td>
<td>Product Group</td>
</tr>
<tr>
<td>Loan</td>
<td>Loan</td>
</tr>
<tr>
<td>Product Variant</td>
<td>Product Variant</td>
</tr>
<tr>
<td>Lg. Credit</td>
<td>Sm. Credit</td>
</tr>
<tr>
<td>Template</td>
<td>Template</td>
</tr>
<tr>
<td>FDGK</td>
<td>FDK</td>
</tr>
<tr>
<td>Firms Loan</td>
<td>Sm. Credit</td>
</tr>
<tr>
<td>Firms Loan</td>
<td>Lg. Credit</td>
</tr>
<tr>
<td>Template</td>
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</tr>
<tr>
<td>FDGK</td>
<td>FDKK</td>
</tr>
<tr>
<td>Firms Loan</td>
<td>Lg. Credit</td>
</tr>
<tr>
<td>Private</td>
<td>Loan</td>
</tr>
<tr>
<td>Product Group</td>
<td>Product Group</td>
</tr>
<tr>
<td>FD</td>
<td>PD</td>
</tr>
<tr>
<td>Template</td>
<td>Template</td>
</tr>
<tr>
<td>FD</td>
<td>PD</td>
</tr>
<tr>
<td>Template</td>
<td>Template</td>
</tr>
</tbody>
</table>

Templates
- FDGK
- FDK
- FD
- PD
Template Allocation in Actual: Processes/Cost Centers

Use

Along with profitability segments and cost objects, business processes, cost centers, cost centers/activity types receiver objects can also be used in template allocations. A template allocation can be run on such business processes, cost centers or cost centers/activity types only when these are assigned fixed allocation templates in the master data. Only one template can be referenced to each business process; to each cost center one for activity dependent and another for activity independent allocations. You can assign additional templates for the formula planning. Each business processes or cost center can appear several times as a sender in various templates.

The system calculates the actual quantity retroactively from receiver to sender objects with template allocations for business processes, cost centers or cost centers/activity types in actual. By evaluating the process flow with the plan activity price, the SAP System can assign costs to the receivers during the allocation itself.

The allocation is dependent on the period and fiscal year.

You can use business processes or cost center/activity types as senders with template-allocation for business processes/cost centers. You can use the following objects as receivers (SBP = name of the environment):

- SBP: Business process
- SCD: Cost centers/Activity types (activity dependent allocation)
- SCI: Cost centers (activity independent allocation)

Prerequisites

- These include:
  - Creating the necessary sender objects; for example Business Processes [Page 45] or Cost Center [Ext.]/Activity Types [Ext.]
  - Maintaining the Environment [Page 101] or functions necessary for your receiver object
  - Providing the Process Drivers [Ext.] (for example, statistical key figures) used by the functions
  - Creating appropriate Templates [Page 90]
  - Assigning the template to the receiver object (business process, cost center or cost center/activity type)
  - Actual quantities of the receiver objects must already exist.
  - Allocation relationships that are defined through templates must be structured hierarchically.

The allocation uses only activity types of category 1 (manual entry, manual allocation) and category 2 (indirect entry, indirect allocation) and sender business processes of category 1 and category 2 (equivalent to the activity type categories). You do not need to accept the category from the activity type or business process
master data. These are default values which you can overwrite in quantity and price planning for activity types and business process for each version and fiscal year.

Activities

In Activity-Based Costing or Cost Center Accounting, choose Period-end closing → Individual functions → Allocations → Template allocations.

For more information on template assignments and allocations, see:

- Templates for Business Processes/Cost Centers [Page 362]
- Templates for Bus. Proc./Cost Center Assignment [Page 365]
- Executing Template-Allocations [Page 347]
- Example Template Allocation Process (Actual) [Page 366]

Reversing allocations in actual

You can reverse an allocation in actual. In the screen for template allocations, choose Extras → Reverse (normally not necessary, as corrections are made in the delta postings).

Additional business posting transactions while executing allocations in actual

You can also make a manual posting in the template allocation. This allows you to make additional postings for extraordinary cases manually; namely for business processes, cost centers or cost center/activity types.
Templates for Business Processes/Cost Centers

Definition

The template is a dynamic tool, which uses functions [Ext.] and formulas [Page 151] and Boolean logic (true/false) to calculate values. It consists of a grid of columns and rows.

- Create a template in environment SBP for allocations in business processes.
- Create a template in environment SCI for allocations in cost centers.
- Create a template in environment SCD for allocations in cost centers/activity types.

Structure

You can choose between six item categories. Depending on the item category you choose, you will have the following columns available for data entry.

<table>
<thead>
<tr>
<th>Item Type</th>
<th>Columns that can be edited</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commentary row</td>
<td>Description</td>
</tr>
<tr>
<td>Process</td>
<td>Name, Object, Activation condition, Plan quantity factor variable (only SBP and SCD), Plan quantity fixed, Actual quantity factor variable (only SBP and SCD), Actual quantity fixed</td>
</tr>
<tr>
<td>Sub-Template</td>
<td>Name, Object, Activation condition</td>
</tr>
<tr>
<td>Cost center / activity type</td>
<td>Name, Object, Activation condition, Plan quantity factor variable (only SBP and SCD), Plan quantity fixed, Actual quantity factor variable (only SBP and SCD), Actual quantity fixed</td>
</tr>
<tr>
<td>Calculation row (Process)</td>
<td>Name, Object, Activation condition, Plan quantity factor variable (only SBP and SCD), Plan quantity fixed, Actual quantity factor variable (only SBP and SCD), Actual quantity fixed</td>
</tr>
<tr>
<td>Calculation rows (cost centers/activity types)</td>
<td>Name, Object, Activation condition, Plan quantity factor variable (only SBP and SCD), Plan quantity fixed, Actual quantity factor variable (only SBP and SCD), Actual quantity fixed</td>
</tr>
</tbody>
</table>

You have the following entry and maintenance possibility per column type.

<table>
<thead>
<tr>
<th>Column type</th>
<th>Possible Entries/Processing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Type</td>
<td>Commentary row, Process, Sub-template, Cost center/activity type, Calculation row (Process), Cost center/activity types, Calculation row (Cost center/activity type)</td>
</tr>
<tr>
<td>Description</td>
<td>Explanations</td>
</tr>
<tr>
<td>Object</td>
<td>Based on the item type, enter the sender object (such as business process). You can enter a fixed object with type process or cost center/activity type, or you can let the system determine this dynamically within an analysis period for one or more processes or cost center/activity types. For more information, see Object Determination [Page 128].</td>
</tr>
</tbody>
</table>
**Activation Requirements**

Under *Activation*, determine the conditions, which activate the item. You can enter *Active* or *Inactive* as fixed values, or you can define a method, which allows the R/3 System to activate or deactivate the item when the valuation occurs.

For more information, see *Activation* [Page 138].

**Plan/Actual quantity factor (only environment SCD and SBPI!)*

Factor for variable output quantity. Enter a factor in items *process or cost center/activity types*. The planned output quantity of the receiver object is multiplied with the factor. The result is the sender output quantity. You can enter a constant value, or you can allow the R/3 System to determine the appropriate value when the valuation occurs.

For more information, see *Quantity Determination* [Page 133].

**Plan quantity fixed/Actual quantity fixed**

Enter the consumption quantities in items *process or cost center/activity types*. You can enter a constant value, or you can allow the R/3 System to determine the appropriate value when the valuation event occurs.

For more information, see *Quantity Determination* [Page 133].

If you choose item category *calculation row*, the editor cannot be called up in the object columns.

**Example**

**Template for allocation in business processes (environment SBP).**

In the above illustration, the resource consumption chain appears with the main process at the very end, Process 3.
Whenever process HP is consumed, processes 1, 2 and 3 are also used, as well as the cost center/activity type 1.

The following table clarifies the allocation names:

<table>
<thead>
<tr>
<th>This process is used...</th>
<th>...then this object is used....</th>
<th>...with a fixed quantity that is calculated with...</th>
<th>...with a variable quantity that is calculated with...</th>
<th>...all of which is set in template.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process HP (through receiver object)</td>
<td>process 1</td>
<td>formula 1</td>
<td>factor 0.5</td>
<td>HP</td>
</tr>
<tr>
<td></td>
<td>process 2</td>
<td>20 units (fixed entry, no calculation)</td>
<td>formula 2</td>
<td>HP</td>
</tr>
<tr>
<td>Process 2 (through process HP)</td>
<td>CCtr 1/Activity type 1</td>
<td>_</td>
<td>factor 10</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>process 3</td>
<td>formula 3</td>
<td>factor 2</td>
<td>2</td>
</tr>
</tbody>
</table>

See also:

Templates [Page 30]
Executing Template-Allocations [Page 347]
Templates for Bus. Proc. / Cost Center Assignment

Use
The assignment allows the template-allocation to use the respective business process or cost center as receiver objects.

Each business process or cost center can be tied to only one template. However, each business processes, cost center and cost center/activity type can appear as a sender object in various templates.

The assignment is year-dependent. It cannot be changed within the fiscal year time frame. However, you can take shorter periods within a fiscal year into account by activating or deactivating time-based entries within the template itself.

Prerequisites
You must create one or more templates in the template environments SBP (business processes), SCD (cost center/activity types) or SCI (cost centers).

Procedure
6. In the menu for Activity-Based Costing choose Master data → Business process → Individual processing → Change; in the menu for Cost Center Accounting you can also choose Master data → Cost Center → Individual processing → Change.

7. In the initial screen for Change business process or for Change cost center, choose the business process or cost center to which you want to assign a template.

8. Choose tab Templates.

9. Choose a template in the Template field.
   i. For business processes, use field Allocation template; here you will find all templates created for environment BPP.
   ii. Cost center / activity type: choose a template in field Alloc.templ. actl. depen. Here you will find all templates for environment SCI.
   iii. Cost center: choose a template in field Alloc.templ. actl. indep. Here you will find all templates for environment SCD.

10. Choose .

From the template fields you can also:
   • Display allocation structure
   • Display templates
   • Change templates, or
   • Create templates
Example Template-Allocation Process (Actual)

Receiver business process BP1 is stored with sender processes BP2 and BP3 in template SBP1. Both sender processes are processes based on template SBP2. This template stores activity input ATYP1 from cost center CCTR1 and activity input ATYP2 from cost center CCTR2.

Receiver BP1 has a process quantity of 100 posted in actual. Sender BP2 uses a fixed actual process quantity of 10 with an actual quantity factor of 0.5. Sender BP3 uses a fixed actual process quantity of 5 with an actual quantity factor of 0.5.

Sender BP2 is stored in the process master data with an active Actual quantity indicator and a manual posting of 70.

In template SBP2, ATYP1 uses a fixed actual process quantity of 5 with an actual quantity factor of 1. ATYP2 uses a fixed actual process quantity of 5 with an actual quantity factor of 2.

---

**Actual Allocation of Process Quantities**

Allocation of process quantities results in the calculation and allocation of the following: Sender BP2: Scheduled actual quantity $60 = Fixed period quantity 10 + Variable period quantity 50 (0.5 \times 100)$ Sender BP3: Scheduled actual quantity $55 = Fixed period quantity 5 + Variable period quantity 55 (0.5 \times 100)$
Further allocation calculations result in senders BP2 and BP3 becoming receivers as well. Allocation to receivers BP2 and BP3 uses different process quantities.

Because BP2 has an active *Actual quantity* indicator, further allocations use the manual posting of 70 for the actual process quantity: BP3 receives the process quantity of 55 scheduled on receiver process BP1.

The allocation of process quantities shows that the actual quantity for ATYP 1 on CCtr 1 scheduled by receiver process BP2 equals 75. ATYP1: Scheduled actual quantity 60 = Fixed period quantity 5 + Variable period quantity 70 (1 X 70) The actual quantity scheduled through the receiver process BP2 from activity type AT2 and cost center CCTR 2 is 150. ATYP1: Scheduled actual quantity 60 = Fixed period quantity 10 + Variable period quantity 140 (2 X 70)

BP3 uses the scheduled process quantity 55 from receiver BP1: ATYP1: Scheduled actual quantity 60 = Fixed period quantity 5 + Variable period quantity 55 (1 X 55) The actual quantity scheduled through the receiver process BP3 from activity type AT2 and cost center CCTR 2 is 120. ATYP1: Scheduled actual quantity 60 = Fixed period quantity 10 + Variable period quantity 110 (2 X 55)
**Distribution**

**Use**

The distribution concept is based on primary cost allocations between controlling objects. Distribution only takes primary costs into account. The following information is passed on to the receivers:

- The original (primary) cost element is retained.
- The sender and receiver information is documented in the cost center document (line items)

Business processes can be used as sender and receiver.

You can analyze the results of the distribution according to sender and receiver relationship in the information system (see Important Standard Reports [Page 463], Business Processes: Plan Line Items [Page 504], Business Processes: Actual Line Items [Page 505]).

For more information, see the R/3 Library under Controlling → Cost Center Accounting for the following topics:

- Definition of Period-Based Re-postings or Period-Based Allocations [Ext.]
- Executing Period-Based Re-postings or Period-Based Allocations On-line [Ext.]
Assessment (Cost Centers, Business Processes)

Use

Assessment allocates both primary and secondary costs in the Cost Center Accounting component (CO-OM-CCA) and business process costs in the Activity-Based Costing component (CO-OM-ABC). The following information is passed on to the receivers:

- The original cost elements are combined in secondary (assessment) cost elements. The original cost elements are not displayed on the receivers.
- Sender and receiver information (sender cost center, receiver cost center, and so on) appears in the Controlling (CO) document.

In the cases of:

- Distribution from cost centers on business processes
- Assessment from cost centers on business processes
- Assessment from business processes on all possible valid receivers

the R/3 System writes line items per sender and per receiver. You cannot set the R/3 System to limit the recording of line items. The R/3 System reverses and overwrites line items if you repeat period-based allocations within a period. The posting date for actual allocation is always the last day of the calendar month. The posting date for plan allocation is always the first day of the calendar month.

Note that you cannot allocate consumption quantities using assessment. In order to make activity quantity assignments, you must use indirect activity allocation.

For more information, see the R/3 Library under Controlling → Cost Center Accounting for the following topics:

Definition of Period-Based Re-postings or Period-Based Allocations [Ext.]
Executing Period-Based Re-postings or Period-Based Allocations On-line [Ext.]
Indirect Activity Allocation

Use
Indirect activity allocation automatically assigns activity quantities in plan and actual. Unlike manual planning or actual activity allocation, you define keys to allocate the activities. In addition, if calculating the sender activity quantities involves too much time or expense, the R/3 System can determine this value inversely based on the receiver activity quantities.

Target=actual allocation is a special form of indirect activity allocation in actual. In contrast with the other forms of indirect activity allocation, target=actual allocation allows you to create an iterative activity input network with multiple levels using the operating rate as the tracing factor.

Features
You may use two approaches in indirect activity allocation, depending on the activity category. You define these approaches using segments, which you can combine in cycles.

- Posting activity quantities on the sender object allowed
  Certain activity types allow you to determine the total activity provided per sender. These activity types belong to category 3 (manual entry, indirect allocation). Indirect activity allocation assigns the activity quantity from the sender to the receivers defined in the segment according to the specified tracing factor.

  The segment must use the sender rule Posted quantities. Any receiver rule can be used with the exception of Fixed quantities.

- Posting activity quantities is difficult or impossible
  For those activity types where it is impractical to calculate activity quantities, the R/3 System determines the activity quantity based on:
  - Receiver tracing factors with weightings defined for each sender
  - Segment definition (Fixed quantities)

  These activity types belong to category 2 (indirect entry, indirect allocation).

  The segment must use the sender rule Quantities determined indirectly with any receiver rule or the sender/receiver rule Fixed quantities.

  If you use Quantities determined indirectly, the weightings described above are defined using Sender values.

Example
The numbers of orders executed by receiver processes (inland purchases) 1 and 2 (foreign purchases) are given in the illustration; inland 6000 orders, foreign 4000 orders.

Calculation of the consumed activity quantities: because the processing of the foreign orders is expensive, the system assigns it a weighted factor of 2. The activity quantity is calculated from sender value 0,1 h (base processing time per order), weighted factor and consumed activity (bottom, left part of the illustration).
Cost calculations: the price per hour is the result of dividing the total costs by the activity quantity. This value is then multiplied with the consumes activity.

\(600 \times 60.- = 36,000.-\), or \(800 \times 60.- = 48,000.-\).

For more information, see:

- Definition of Period-Based Re-postings or Period-Based Allocations [Ext.]
- Executing Period-Based Re-postings or Period-Based Allocations On-line [Ext.]
- Senders and Receivers in Indirect Activity Allocation [Page 372]
- Activity Quantity Valuation [Page 373]
- Requirements for Indirect Activity Allocation [Page 374]
- Target=Actual Activity Allocation [Page 375]
Senders and Receivers in Indirect Activity Allocation

Use

**Senders** in both plan and actual indirect activity allocation are always business processes or cost center/activity type, whereby you can use only activity types of category 2 or 3 in a segment. You do not need to accept the default category from the activity type master data. It is merely a suggested value that you can change during activity type planning for each version and fiscal year. If activity type planning is complete, the SAP System checks whether the activity type category matches the segment definition.

The activity type category is 1 (manual entry, manual allocation): this case does not allow indirect activity allocation.

The activity type category 2 (indirect determination, indirect allocation): the segment definition must include the sender rule *Indirectly calculated quantity* as well as a receiver rule, or *Fixed quantities* as both sender and receiver rule.

The activity type category 3 (manual entry, indirect allocation): here the segment definition must include the sender rule *Posted quantities* and any receiver rule except *Fixed quantities*.

If activity type planning and internal activity allocation has not yet taken place, indirect activity allocation is possible only for activity types of category 2 because the R/3 System has no basis for allocation (meaning plan and actual quantities) yet. In this case, determine the activity type category in the segment definition.

In actual indirect activity allocation, the activity type category is determined in segment definition or is drawn from the default value in the activity type master data.

**Receivers** for indirect activity allocation in the Activity-Based Costing component (CO-OM-ABC) are business processes and cost objects, just as in manual activity allocation (activity input planning). To do so, you must enter a delta version in the header information.

If the receiver of the activity allocation is a cost object (for example, a production order or a product cost collector), then the prices used in the valuation are determined based on the valuation variant. In this case, the valuation variant is linked to the cost object through the costing variant for the simultaneous costing. If the receiving cost object is not tied with a costing variant for the simultaneous costing, then the planned price for the period is used for the valuation.
Activity Quantity Valuation

Use

<table>
<thead>
<tr>
<th>Business Process as Receiver (Plan)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tracing factor:</td>
<td>Valuation</td>
</tr>
<tr>
<td>Output quantity</td>
<td>Completely variable</td>
</tr>
<tr>
<td>All others</td>
<td>Completely fixed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Business Process as Receiver (Actual)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Tracing factor:</td>
<td>Valuation</td>
</tr>
<tr>
<td>All tracing factors</td>
<td>Always completely variable</td>
</tr>
</tbody>
</table>

Even if the price includes variable portions, the valuation of a fixed quantity always results in fixed costs on the business process.
Requirements for Indirect Activity Allocation

Use

- You have carried out activity type planning for all category 3 activity types for all senders of the category cost center/activity type, if you are using thePosted quantities rule. Enter the plan sender activity quantities (activity category 3 manual entry, indirect allocation; allocation method 1) using activity type planning.

  You enter the actual activity quantities of category 3 by choosing Non-allocable activity.

  You can only plan activity quantities using activity type planning for activity types of activity category 3. For activity types of category 2, this field is not ready-for-input in activity type planning. This is because the system determines the activity quantities inversely from the receiver tracing factors or using fixed quantities. In this case, the system automatically determines the corresponding planning record of cost center/activity type.

- For category 2 activity types, choose Sender values in the segment definition to set a sender-specific weighting factor (not equal to zero) so that the system uses the appropriate record during indirect activity allocation [Ext.].

  If you carry out indirect activity allocation without completing planning for the combination cost center/activity type, you must select the actual price indicator in the activity type master data if you want to use actual prices.
Target=Actual Activity Allocation

Use

Target=actual activity allocation is a special form of indirect activity allocation [Ext.] for actual allocations. It enables you to determine an activity network on multiple levels and iteratively with the operating rate [Ext.] as the tracing factor.

You can use target=actual activity allocation for cost centers and for business processes. The following example is applicable to cost centers and business processes.

In target=actual activity allocation, the actual activity quantities to be allocated are not entered directly. Instead, they are calculated by the SAP R/3 System using the plan activity inputs of the receivers, based on the operating rates of the cost centers receiving the activity type.

Because target=actual allocation is intended only for allocating actual values, activity to be allocated with this method must be assigned different activity type categories for planning and actual postings.

You determine activity type categories for planning and actual allocation in the activity type master data (see: Activity Type Categories [Ext.]).

- You must use activity type category 5 (target=actual activity allocation) for actual allocations.
- You can use activity type categories 1, 2, or 3 for planning. Category 1 is most commonly used.

Features

Target=actual activity allocation is executed as follows.

- The operating rate of the receiving cost center is determined using its own actual and plan activity.
- From the operating rate and the plan activity input, the system calculates the target activity input for the receiving cost centers. This results in the target activity of the sender cost center, that is, the activity quantity which must actually be produced based on the operating rate adjustments.
- The variable portion of the plan activity quantity is adjusted to the operating rate of the receiving costs center/activity type using target=actual activity allocation. It is then updated as a variable actual activity quantity. The fixed portion of the activity quantity is transferred from the plan to the actual during target=actual activity allocation.

Planning must be fully reconciled at the planning level as a requirement for using this allocation method. Non-reconciled planning leads to incorrect operating rates, which, in turn, result in an incorrect allocation. For more information on reconciliation of planning, see: Plan Reconciliation [Ext.].
Target=Actual Activity Allocation

Example of Target=Actual Activity Allocation [Ext.]
Target=actual activity allocation is executed iteratively. This means that recursive activity relationships between cost centers are taken into account. Recursive activity relationships occur, for example, when a cost center takes activity from another cost center, to which it also provides activity.

The system generally terminates target=actual allocation if extremely high operating rates are determined for a receiving cost center. For example, if the activity quantity was planned unrealistically for the cost center, or if an activity price was set manually, and an activity quantity of 1 was entered.

If you are working with transfer prices (parallel value flows), the target=actual activity allocation is executed in the leading valuation. The plan price used for allocation thus applies to all the valuations.

For more information on transfer prices, see the SAP Library under

- Financials → EC - Enterprise Controlling → Profit Center Accounting → Multiple Valuation Approaches/Transfer Prices [Ext.]
- Financials → CO - Controlling → Overhead Controlling → Overhead Controlling → Multiple Valuations [Ext.]
Executing Target=Actual Activity Allocation

1. To execute target=actual activity allocation, go to the Cost Center Accounting menu or the Activity-Based Costing menu, and choose:

   Actual postings → Period-end closing → Allocations → Target=actual activity allocation.

2. You can limit the target=actual activity allocation to a given cost center group.

   To do so, choose Cost center group and enter the desired group.

   The default setting is All cost centers.

3. On the initial screen, enter the version, the periods, and the fiscal year for the target=actual activity allocation.

4. You can control the type of processing as well as the formatting of the results.

   Choose
   
   a. Test run

      If you select Test run, the system carries out the target=actual activity allocation, but does not post the results.

      To check the results of the test run, select the indicators Detailed list and Test run.

   b. Background processing

      If you are working with large amounts of data, execute the reconciliation in the background during periods of low system usage.

   c. Detail lists

      The default display variant settings for the detail list identify all planned activity quantities on the cost centers for each activity type. The system specifies the actual activity of the activity-receiving cost centers.

      The system calculates and displays the operating rate [Ext.] during the target=actual activity allocation using the variable actual and plan activity.

      During the update of the target=actual activity allocation, the system adjusts the variable portion of the plan activity quantity on the sender to the operating rate of the receiver cost centers/activity types. The result is updated as a variable actual activity.

5. To post the results (with update), proceed as follows:

   a. On the list screen, choose Save.

   b. When exiting this screen, choose Yes in response to the update question.

   c. On the initial screen, choose Execute (deselect the Test run indicator first).

6. To tailor the list to your own requirements, choose Current display variant.

   You can do the following:

   a. Change position and length of display fields.

   b. Include or remove fields from the list.

   c. Remove fields from the field pool and insert them in a given position in the list.

   d. Change the order of the fields already included in the list.
Executing Target=Actual Activity Allocation

7. To arrange the list according to the entries in individual columns, choose Sort ascending or Sort descending.

8. Choose Edit → Find to search the list for desired terms.

9. Choose Edit → Set filter to delimit the plan reconciliation results lists according to your defined conditions.
   
   Enter the field name that is to act as the delimiting criterion and enter an amount for this field.
   
   Choose Total plan activity as a criterion.
   
   You enter 500 to 1000 as the value for this field.
   
   The system displays only those entries in the results list where plan activity lies between 500 and 1000 units.

10. Choose List → Print to print the list.

11. When you call up the list screen for target=actual allocation, the system displays the sum of all the period values.

   Choose Period values to display the individual period values for the target=actual activity allocation.

   Choose Previous period or Next period to scroll through the individual periods.

   The same functions are available here as in the totals display for periods.

12. To display the activity flows in the system, in the period display, choose Activity analysis.

   Based on the selected cost center activity type, you can follow the activity flow though multiple cost centers. By clicking on the symbols in the Activity network column, you can summarize the activity relationships or expand them again. The system displays closed relationships in the activity network using lines in the activity network column. Members of closed relationships are marked in red.
Overheads

Purpose
You use overhead costing to allocate overhead through percentage-based or quantity-based overhead rates. The basis for the allocation are the primary cost elements that you post as overhead costs. In the manufacturing industry, for example, these are usually the labor and material costs.

Integration
To make an overhead costing, you need to define control data in customizing for the corresponding application, and include this in a Costing sheet [Page 385].

Features
You can apply overhead to both plan and actual costs, or on the basis of commitment data.

Business processes do not use commitments.

If you debit a cost center with overhead rates, then they also apply to all the activity types in this cost center.

You can make an overhead costing:
• For one or several objects
• Without updating the calculated overheads, for test and forecasting purposes

Constraints
You start Overhead Calculation [Page 380] using its own transaction. This means that you cannot carry out transaction-based overhead calculation.
Calculating Overheads

Use
You can allocate overheads using percentage-based or quantity-based overhead rates for plan or actual data, alternatively you can use commitments data.

Prerequisites
To make an overhead costing [Ext.], you need to define control data during customizing and include this in a costing sheet [Page 385].

Features
You can calculate overhead for single or multiple objects. Collective processing is based on selection variants that are individually definable.

You can start overhead costing for test and forecast purposes without updating the overhead calculation. The system then calculates the overhead, without you having to update the object (such as, internal order, cost center, business process). This enables you to identify and correct any errors before the actual calculation (such as, an invalid overhead costing sheet in the master data, or missing percentage rates).

You can run overhead costing online or in the background without a display.

The following reports are also available for overhead calculation:

- **RKAZCO43**: Overhead: Manufacturing orders and Product cost collectors
- **RKAZKPPJ**: Cost object hierarchy, general cost objects
- **RKAZVA44**: Actual overhead: Sales orders
- **RKAZKSI4**: Actual overhead: Cost centers incl. activity types
- **RKAZPZI**: Actual overhead: Business processes
- **RKAZKGI4**: Actual overhead: Internal and maintenance orders
- **RKAZCJ45**: Actual overhead: Projects/WBS elements/Networks
- **RKAZKSP4**: Planned overhead: Cost centers including activity types
- **RKAZCPZP**: Planned overhead: Business processes
- **RKAZKGP4**: Planned overhead: Internal and maintenance orders
- **RKAZCJ47**: Planned overhead: Projects/WBS elements/Networks
- **RKAZKSO9**: Commitment overhead: Cost centers including activity types
- **RKAZKGO4**: Commitment overhead: Internal and maintenance orders
- **RKAZCJO9**: Commitment overhead: Projects/WBS elements/Networks

You can use the dialog display to check the overheads that the system calculates based on the costing sheet.
You can create an overhead costing as often as required for each period. If any of the object values (for example, internal order, cost center, business process), or overhead costing values change themselves, the system updates the difference (can be a positive or a negative value).

**Date Determination**

The system determines the date during overhead costing as follows:

- **Posting date:**
  - *Plan processing of line items:* First day of the period
  - *Actual processing:* Last day of the period
  You can enter a posting date for overhead calculation. However, the posting date must be within the period for which you are calculating the overhead. To enter the posting date, choose *Accounting → Controlling → Internal orders → Period-End Closing → Single functions → Overhead rates → Actuals - individual processing → Extras → Posting date.*
  - *Commitments:* The system does not write any line items

- **Document date:**
  Today’s date

- **Overhead calculation:**
  With posting date

- **Currency translation:**
  - *Actual:* With the entered value date, otherwise posting date
  - *Planning data:* With the entered value date, otherwise with the value entered in the version for planning data in Customizing under *Controlling → Internal Orders → Planning → Basic Settings → Maintain Versions → Maintain Settings of Version in Controlling Area → Settings by Fiscal Year → Details → Tab Page: Planning → Currency translation.*

**Results List and Error Log**

The system displays the results of the overhead calculation in a list for all objects, for which it has determined values. This list contains the following information:

- **Basic list** with information on current processing and number of objects processed.
- **Detailed list** with the amounts for each sender and receiver when you enter the credit cost element. If you already performed the overhead costing for the given period, the system only displays variances from the overhead already costed.
- **Period drilldown** in the planning data, should the overhead costing or simulation occur over several periods.

If errors occur during processing, the system refers you to an error log that contains an error listing.

You can print both the results list and the error log.
Calculating Overheads

**Activities**

Enter the costing sheet required for overhead costing in your object (such as a cost center, business process, internal order, project or costing reference object).

To calculate the overhead rates, choose Accounting → Controlling → Internal orders → Period-End Closing → Single Functions → Overhead Rates → Actuals - Individual Processing.

- To run the overhead calculation in the background without a display, select Background processing.
- To simulate the overhead calculation, choose Test run.
- To check overhead calculations using the costing sheet, select Dialog display.

⚠️

The dialog display always shows the current data from the database, even if the system updated them already. The Detail list shows whether the data were updated already.

The Detail list only displays differences to the overheads already updated. If the overhead is already updated, the Dialog display shows the results of the overhead calculation, and the Detail list is empty. No dialog display is issued for a reversal.

- To create a worklist for objects that do not have overhead applied to them, select Worklist (in Collective processing).

⚠️

If the credit object is an internal order, you need to deactivate the partner update and avoid settling the credit orders, as this enables you to avoid performance problems.

The system will only contain plan overheads for projects and WBS elements in individual or collective processing for one more fiscal year only. If the overhead is to be applied for more than one fiscal year, you need to calculate overhead separately for each fiscal year. This is the only way that you can guarantee an update to the profit center and the special purpose ledger. You do not need to enter a To-fiscal year.
Validity Periods for Master Data

Overhead costs are only applied to cost centers and business processes if valid master data exists in the processing period for the overhead calculation.

The processing period consists of:

- In the **actual**: One period of a fiscal year
- In the **plan**: One period or period interval of a fiscal year
- In **commitments**: All periods

Note the following during overhead calculation:

- If you want to apply overhead to a cost center or a business process in the **actual**, the cost center or the business process must be defined at least on the last day of the period for which you are executing the overhead calculation.

- If you want to apply overhead to a cost center or a business process in the **plan**, the cost center or the business process must be defined at least on the first day of the period for which you are executing the overhead calculation.

- If you apply overhead to a cost center as a **commitment**, the R/3 System executes the overhead calculation in all periods in which the cost center is defined on at least one day.

If no valid master data exists for the cost center or the business process in the entire processing period, the R/3 System issues an error message.

If, however, the above-mentioned conditions are met for at least one period of the processing period, the system does not issue an error message.

You want to carry out overhead calculation in the plan for periods 1 to 6 (= January to June).

If the cost center is defined as of 1 July, the R/3 System does not apply overhead to it. The system issues an error message.

If the cost center is defined from 1 Jan to 31 March, the R/3 System applies overhead to this cost center in the plan for periods 1 to 3. The system does not issue an error message.

If the cost center is defined from 1 Jan to 2 June, the R/3 System applies overhead to this cost center in the plan for periods 2 to 6. The system does not issue an error message.

- A cost center is defined on 15 Jan. The R/3 System should apply overhead to the cost center in period 1 of the plan, actual and commitments.
  - In the plan you get an error message, because the cost center is not defined on 1 Jan.
  - In the actual you get an error message, because the cost center is not defined on 31 Jan.
  - In the commitments, the R/3 System executes the overhead calculation.
Validity Periods for Master Data

- A cost center is defined on 15 Jan. and on 1 Feb.. The R/3 System should apply overhead to the cost center in period 1 and 2 of the plan and commitments. In the plan, the overhead calculation is only executed in period 2, because the cost center is defined on 1 Feb., but not on 1 Jan.. No error message is issued by the R/3 System. In the commitments, the overhead calculation is executed in periods 1 and 2.
Costing Sheet

Definition
The costing sheet combines all parts of the overhead costing, and determines the rules for calculating the values to be posted.

Structure
The costing sheet links the control data for the overhead costing.

<table>
<thead>
<tr>
<th>Calculation Base</th>
<th>B000</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoElem</td>
<td>Origin</td>
</tr>
<tr>
<td>From</td>
<td>to</td>
</tr>
<tr>
<td>400</td>
<td>419</td>
</tr>
<tr>
<td>A</td>
<td>G</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Calculation Base</th>
<th>B001</th>
</tr>
</thead>
<tbody>
<tr>
<td>CoElem</td>
<td>Origin</td>
</tr>
<tr>
<td>From</td>
<td>to</td>
</tr>
<tr>
<td>432</td>
<td>439</td>
</tr>
<tr>
<td>H</td>
<td>P</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Costing Sheet</th>
<th>A00001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Base</td>
<td>Overhead</td>
</tr>
<tr>
<td>B000</td>
<td>C010</td>
</tr>
<tr>
<td>B001</td>
<td>C011</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Credit</th>
<th>E01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid until</td>
<td>CoElem</td>
</tr>
<tr>
<td>30.06.1999</td>
<td>621000</td>
</tr>
<tr>
<td>31.12.1999</td>
<td>622000</td>
</tr>
<tr>
<td>Object</td>
<td>CCtr</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Credit</th>
<th>E02</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid until</td>
<td>CoElem</td>
</tr>
<tr>
<td>30.09.1999</td>
<td>621001</td>
</tr>
<tr>
<td>30.04.2000</td>
<td>621002</td>
</tr>
<tr>
<td>Object</td>
<td>CCtr</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Costing Sheet

<table>
<thead>
<tr>
<th>Overhead rate:</th>
<th>Dependency:</th>
<th>OH type</th>
<th>OH rate</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid from</td>
<td>Valid until</td>
<td>Actual</td>
<td>SAP</td>
<td>25</td>
</tr>
<tr>
<td>Actual</td>
<td>Plan</td>
<td>Plan</td>
<td>SAP</td>
<td>20</td>
</tr>
<tr>
<td>Actual</td>
<td>Commit.</td>
<td>Commit.</td>
<td>SAP</td>
<td>25</td>
</tr>
</tbody>
</table>

• **Calculation Base**

This defines the primary cost elements to which a particular overhead is to be applied.

This represents a group of cost elements to which you want to apply overhead. For each controlling area, you can assign individual cost elements or cost element intervals and individual origins as well as origin intervals to the calculation bases.

• **Overhead**

The overhead rate determines to what extent the percentage-based or quantity-based overhead rate should be applied to the direct costs. It also specifies under which conditions (dependencies) the overhead rate is to be applied. For example, you can calculate a defined overhead rate for each plant by specifying a plant dependency.

• **Credit**

A credit specifies the credit object and the credit cost element.

If an object in actual data is debited with overhead, then another object (such as, a cost center, or order) is credited at the same time. You allocate the overhead using a special overhead cost element (category 41).

Only debits are posted in commitments (no credits).

A costing sheet comprises multiple rows that are processed from top to bottom during the overhead calculation.

• **Base Rows**

You define these by assigning a calculation base, so that they contain the direct costs that are to have overhead applied to them during the overhead costing.

• **Overhead Rows**

These are defined by the assignment of an overhead rate.

An overhead row consists of a base row or a totals row. The overhead amount is calculated by multiplying the amount contained in these rows by the overhead percentage rate or quantity-based overhead rate determined through the overhead rates.
As well as overheads, the overhead rows contain credit keys. These credit keys determine which object (such as a cost center or order) is to be credited under which cost element during overhead rate determination.

- **Totals Rows**
  
  Totals rows are used to generate subtotals or final totals.

**See also:**

[Calculating Overhead][380]
Transfer StKF. from Logistics Information System (LIS)

Use
You can transfer statistical key figures defined in the Logistics Information System (LIS) to the Controlling component (CO).

Prerequisites
The requirements include:

- The LIS is active and the Logistics components (LO) feed data to the LIS database.
- You must create statistical key figures in the Controlling component, such as number of invoice verifications, and created the corresponding key figure link to the LIS (Page 32).
  In the master data, specify the LIS statistical key figure to be transferred, such as Number of invoices (S012 - ALFPP).
- Maintain the assignment of one or more statistical key figures to the relevant objects in Customizing or in Assignment → Maintain, along with the version and the fiscal year.
- You have entered a variant that uses an assortment of parameters to delimit the values to be taken from the LIS.

If you need more information on customizing settings, then choose the text in the Implementation Guide (IMG) Controlling → Overhead Costs-Controlling → Activity-Based Costing → Planning → R/3 internal Plan Data Transfer → Transfer stat. Key Figure from LIS → Assigning Business Process - Maintain Key Figure [Ext.]; or Controlling → Overhead Costs-Controlling → Activity-Based Costing → Actual Postings → R/3 Internal Actual Data Transfer → Transfer stat. Key Figure from LIS → Assigning Business Process - Maintain Key Figure [Ext.].

Features
You can transfer to a single business process, a business process group, or to all business processes in a controlling area.

Transfer from LIS
The settings illustrated above help the user accomplish the following:

- process "Orders/Inland" only calculates costs for inland orders
- process "Orders/Foreign" only calculates costs for foreign orders

How is this accomplished?

The following prerequisites are fulfilled in the illustration:

- the statistical key figure "number of inland/foreign orders" is created in Activity-Based Costing
- the link to the corresponding LIS key figure ("number of orders") is produced
- the statistical key figure is assigned to processes "inland orders" and "foreign orders"

Before the process can allocate the correct quantity from LIS, the system must be able to identify which data record belongs to which process. The "inland" and "foreign" variants, which works with parameter "Delivery number", serve this purpose. The data records with delivery numbers 1 to 1000 belong to variant "inland"; those with numbers 1001 to 2000, to variant "foreign".
Transferring Statistical Key Figures

Prerequisites
Create the necessary statistical key figures and connect them to the Logistics Information System (LIS). Assign the business process and key figure(s) with variants in Customizing, or by choosing Assignments → Maintain.

Procedure
4. Choose Period-end closing → Single functions → Transfer → Statistical key figures from LIS or Planning → Planning aids → Transfer → Statistical key figures from LIS.
5. You can activate LIS reference and enter the reference and the fiscal year if, for example, you want to transfer actual data from a previous fiscal year to use as plan data in the current year.
6. In any case, define the following parameters:
   – Version
   – Period
   – Fiscal year
5. Activate or deactivate the appropriate indicators:
   – Reset and overwrite
   – Do not change
   – Processing parameters:
     • Background processing
     • Test run
     • Detailed list
7. Afterwards, start the transfer transaction by choosing Execute.
   After you post data records, they are available as statistical key figures on the object.
8. You can enter or transfer statistical key figures for the following objects:
   – Cost center
   – Cost center / activity type
   – Business process (only if the Activity-Based Costing component is active)
   – Cost Objects
Variance Calculation

Use

Variances in the Controlling component (CO) at period-end closing can be due to several causes:

- Planning was overshot/undershot
- The actual costs [Ext.] on the cost center or business process differ from the target costs [Ext.]
- Over-/under-absorption occurs on the cost center or the business process

Variance calculation [Ext.] lets you analyze the causes of these variations.

Variance calculation is based on the reconciled planning of internal activity between cost centers and business processes and the costs thereby incurred. Variances are the differences between actual costs and plan costs [Ext.] or target costs. They are displayed separately for a cost center, for an activity type of a cost center or business process, divided into fixed and variable portions. Where possible, they are classified by cost element.

Variance calculation distinguishes between cost centers with activity types (such as production cost centers) and those without (such as administrative cost centers). Actual costs are always posted as activity-independent. To determine the activity input, you therefore need to split the actual costs and the activity-independent plan or target costs of cost centers with activity types on the activity types (see: Actual Cost Splitting [Ext.]). In this way, you can analyze the reasons for the variances [Ext.] for a given cost center activity. Variance calculations compare detailed planning on the activity type level with the corresponding actual costs.

In order to compare plan with actual costs, you must determine the actual activity produced by the cost center or business process in contrast with planning. Variance calculation is therefore carried out on the basis of target costs.

Variance calculation allows you to analyze the actual balance. The system determines the variances of the target costs from the actual costs split on the activity types, as well as from the allocated actual costs in the different variance categories by cost element for each cost center/activity type or business process.

Cost center or business process variances can result from the following situations:

- Too few or too many costs were debited (see: Input-Side Variances [Page 398])
- Too few/too many costs were allocated (see: Output-Side Variances [Page 402])

Input and Output Side

These causes can occur separately or together, meaning that variances can originate on both the input and output side of a cost center or business process (see: Variance Categories [Page 396]).
Variance Calculation

Output side variance
Input side variance
Total variance

Actual costs: Input side | Target costs | Actual credit postings through activity allocation

Variance Causes

Input Side Variances

What caused the under-/overabsorption?

Cost variances?

- Have the prices changed?
  - 40 cents
  - Input price variance
  - 50 cents

- Have the consumption quantities changed?
  - 40 cents
  - Input quantity variance
  - 80 cents

- Have we used different materials?
  - 40 cents
  - Resource-usage variance
  - 60 cents
Output Side Variances

What caused the variance?

Due to varying allocation?

- Were incorrect prices used?
- Was the activity quantity allocated correctly?
- Has the operating rate changed?

Features

Variance calculation is one of the functions performed at period-end closing. Variance calculation uses all the values resulting from all transactions in the Cost Center Accounting (CO-OM-CCA) and Activity-Based Costing components (CO-OM-ABC).

The SAP R/3 System

- Calculates the target costs first
- Splits the actual costs on the activity types [Ext.]
- Calculates variances by cost center, activity type, or business process based on the data

In special periods, variances are calculated on the basis of the target or plan costs of the prior periods. This means that in special periods variance calculation can only be carried out cumulatively. To do this, the system imports, the plan and targets costs of the special period in addition to the actual costs, as well as the actual costs of the prior periods. These costs are used to recalculate the overall variances of the analysis period.

You cannot allocate variances further within the Cost Center Accounting or Activity-Based Costing components. You can only credit a cost center or business process completely by using actual price calculation or through settlement to Profitability Analysis (CO-PA).

You can use reporting tools to further analyze the variance calculation results. These means that you can display relevant data divided into fixed and variable portions, or as totals:

- Plan costs and quantities
Variance Calculation

- Operating rate [Ext.]
- Target costs and quantities
- Actual costs and quantities
- Variance categories [Ext.]

In addition, the R/3 System also displays:

- The calculation basis for the individual values (for instance, the distribution base for actual cost splitting)
- How the individual values are made up (for example, individual variance categories)

You can also use the functions Splitting explained, Target costs explained and Variance explained to call up the results in different formats.

As well as changing the list formats, you can also use the totaling and sorting functions. There is also a detail display by cost element for individual objects.

The individual processing steps can be followed successively and you can choose F1 to call up information for the given values.

You can display an overview of the different variance categories in a hierarchical structure. To do so, choose Variance explanation and then Variance categories. You can branch move from this tree structure to the individual variance categories or to the online help. The list for a variance category displays the variances and the relevant formula used for calculating the variance.

**Actions**

To start variance calculation:

1. Choose Actual postings → Period-end closing → Variances
2. Select Cost center, Cost center group, or All cost centers (in Cost Center Accounting) or Business process, Business process group, or All business processes (in Activity-Based Costing), and enter the appropriate object.
3. Enter the period and fiscal year.
4. Select one or more of the following processing indicators.
   - Background processing
   - Test run
   - Detail list

For more information about variance calculation and the functions of the explanation tool, see: Calculating Variances [Ext.].
Variance Categories

Use

The SAP System assigns variances to variance categories, according to the cause of the variance. The system distinguishes between the input and output sides of the cost center or business process.

Features

The table lists the different variance categories and their causes.

<table>
<thead>
<tr>
<th>Input Side Variance Categories</th>
<th>Cause of Variances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Input price variances</td>
<td>Change in price of the material component</td>
</tr>
<tr>
<td>Input quantity variance</td>
<td>The plan quantity differs from the actual quantity consumed</td>
</tr>
<tr>
<td>Resource-usage variance</td>
<td>No actual or target costs exist for a cost element</td>
</tr>
<tr>
<td>Remaining input variance</td>
<td>You chose not to calculate input quantity, input price, or resource-usage variances</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Output Side Variance Categories</th>
<th>Cause of Variances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output price variance</td>
<td>You entered a price manually (such as for an activity type)</td>
</tr>
<tr>
<td>Output quantity variance</td>
<td>You manually posted a quantity that differs from the quantity leading to the credit posting on the cost center or business process</td>
</tr>
<tr>
<td>Volume Variance</td>
<td>The operating rate for a cost center or business process has changed</td>
</tr>
<tr>
<td>Secondary fixed cost variance</td>
<td>A portion of the target fixed costs are dependent on the operating rate</td>
</tr>
<tr>
<td>Remaining Variance</td>
<td>You chose not to calculate volume-, fixed cost- or output price variances</td>
</tr>
</tbody>
</table>
Idle capacity cost variance is not a variance category. You can, however, determine idle capacity cost variance in certain cases, based on the volume variance and the output price variance (see: Output Side Variances [Page 402]).
Input Side Variances

Use
The input side [Ext.] consists of all debits and credits on the cost center or business process, other than credits due to activity allocations. The input side compares actual costs [Ext.] with target costs [Ext.]. Input side variances [Ext.] include additional costs, reduced costs, and changed consumption of the individual cost elements, divided into fixed and variable portions. The input side variance categories include:

- Input price variances [Ext.]
- Input quantity variances [Ext.]
- Resource-usage variance [Ext.]
- Remaining input variances [Ext.]

The variance categories of the input side are determined periodically for each cost element.

Features

Input price variances
Input price variance indicates changes in costs due to prices. Variances caused by price and quantity differences are also assigned to input price variances.

If you planned 10 labor hours worth 1000 USD for a cost element, and posted 10 hours worth 2000 USD in the actual, the price variance for the 2000 USD equals 1000 USD. Based on the plan data, 10 hours should cost 1000 USD. The difference between actual and plan data is due to higher prices (wages in this case) because there is no difference in activity quantity consumed.

The R/3 System calculates and posts the input price variances for primary postings by business transaction, as described in the Implementation Guide (IMG) under “Determining Primary Data Price Variances”. You can display input price variances in the information system.

The R/3 System calculates the input price variances again if you specify quantities long with costs in the postings.

If the quantities are incomplete or missing, the R/3 System takes the input price variances from the posting rates of actual costs as calculated on a percentage basis during postings by business transaction. If no percentage rates exist, the R/3 System cannot calculate input price variances.

In target/actual comparisons, the input price variances are defined by the following formulas:

Input price variance = (Actual price – Plan price) X Actual input quantity
Fixed input price variance = (Fixed actual price – Fixed plan price) X Actual input quantity
Input quantity variance

Input quantity variance indicates under- and over-consumption for cost elements. Variances arising from both price and quantity differences appear as input price variances.

To support the activity type *Machine Hours*, you plan the consumption of 10 liters of lubricant in proportion to the activity quantity produced. For an operating rate of 110%, the actual lubricant consumption is 12 liters. The input quantity variance amounts to one liter. To produce the cost center activity, there was an over-consumption of one liter of lubricant when compared to the plan. Consumption based on the operating rate should be only 11 liters.

For target/actual comparisons, the quantity variances are defined by the following formulas:

- **Input quantity variance** = (Actual input quantity – Target input quantity) × Plan price
- **Fixed input quantity variance** = (Actual input quantity – Target input quantity) × Fixed plan price

Calculation of input quantity variances is possible only if complete consumption quantities exist in both target and in actual.

For activity relationships using *predistribution of fixed costs*, the system uses the difference between target costs and actual costs, minus the input price variance, as the input quantity variance (see: *Predistribution of Fixed Costs* [Page 412]).

**Hints for Cost Center Accounting:**

- To determine input price or input quantity variances, the SAP System requires consumption quantities as well as plan and actual costs. In this way variance calculation can determine cost and consumption influences and display them. It is often sufficient, however, to plan consumption quantities only for those cost elements that are subject to price fluctuations and also represent important costs. Enter a unit of measure in the master data for the given cost element. You can also use units of measure for which a conversion is possible. Additionally, if you select *Record quantities* in the cost element and cost center master data, the R/3 System issues a warning if you do not post quantities. The deciding factor for the separate calculation of quantity and price variances is the unit of measure.

- If recording consumption quantities is difficult or impossible, you can still determine input price variances. To do so, you must store percentage input price variances for individual cost elements during Customizing. The R/3 System uses these input price variances based on transaction for primary postings and for period-end closing during variance calculation. The system displays the resulting input quantity variance in the remaining input variance (see: For more information, see the IMG for Cost Center Accounting, under *Actual Postings* → *Variances* → *Specify Primary Data for Input Price Variances* [Ext.]).
Input Side Variances

**Resource-usage variance**

Resource-usage variance indicates changes in the plan consumption of cost elements. It occurs if you post an unplanned cost element in actual, or if no actual data exists for a plan cost element.

The resulting difference between plan and actual postings cannot be assigned to either input price or input quantity variance. The R/3 System has no basis for comparing plan and actual data postings. They are thus identified as variances in resource usage.

You post plan costs of 100 USD on a cost center under cost element 400.000. You make the corresponding actual posting under cost element 410.000. Variance calculation identifies both entries as resource-usage variances equal to the amount of the posted costs.

The system determines resource-usage variances if either no controllable costs, or no target costs exist for a cost element.

In target/actual comparisons, the resource-usage variances are defined by the following formulas:

Resource-usage variance = Actual costs – Target costs – Input price variance

Fixed resource-usage variance = Fixed actual costs – Fixed target costs – Fixed input price variance

**Remaining input variance**

Remaining input variance includes all the variances occurring on the input side which cannot be assigned to any of the following categories:

- Input price variances
- Input quantity variance
- Resource-usage variance

This can be due to several causes:

- You planned cost elements and made actual postings, but did not record consumption quantities. The SAP R/3 System therefore cannot determine input price or input quantity variances.
- A user deactivated variance calculation for one of the listed categories. The resulting variance amount is assigned by the system to the remaining input variance.

For many organizations, remaining input variance is often the classic consumption variance (input quantity variance). Cost elements that react quickly to price changes are recorded by quantity, which ensures an exact calculation of input price and input quantity variances for these cost elements. For cost elements with little or no price sensitivity, the difference between actual and target costs is usually caused by greater consumption. This procedure reduces the requirements for entering plan and actual data, but lets you display results for individual cost elements.

If you specified in the variance variant that the system does **not** calculate input price, input quantity, or resource-usage variances, the system displays only the remaining input variance on the input side.
Input Side Variance Categories

- Price variance
- Target costs
- Quantity variance

- Actual price vs. Target price
- Target qty vs. Actual qty
- Quantity
Output Side Variances

Use

The output side [Ext.] consists of all the credits for a cost center or business process that are due to activity allocations. On the output side, the system compares the allocated actual costs [Ext.] with the target costs [Ext.] or plan costs [Ext.]. The output side variance categories include:

- Output Price Variance [Ext.]
- Output Quantity Variance [Ext.]
- Fixed Cost Variance [Ext.]
  - Volume Variance [Ext.]
  - Secondary Fixed Cost Variance [Ext.]
- Remaining Variance [Ext.]
- Idle-Capacity Cost Variance [Ext.]

Features

Output Price Variance

An output price variance occurs if you use a price that differs from the plan price, which is calculated iteratively each month, based on plan activity. The target credit posting (= plan price x actual activity) varies from the actual credit posting (= allocation price x actual activity) on the affected cost center or business process. Output price variance can be due to several causes:

- If you use average prices instead of period-based prices
- If the capacity of the activity type is used as the basis of the price calculation.
- If you set a price manually

Output price variances are determined by the following formula:

Output price variance = actual activity x (plan price - actual price)

You plan 100 hours of an activity on a cost center/activity type with plan costs of 1000 USD. The plan price is 10 USD/hr. In the actual, you use a manually-set price of 12 USD/hr. Actual activity of 110 hours produces an actual credit posting of 1320 USD (= 110 hours X 12 USD/hour) on the cost center. The target credit, however, equals 1100 USD (110 hours X 10 USD/hour). The output price variance is therefore 220 USD.

If the given activity type of a cost center or a business process participates in the predistribution of fixed costs [Ext.], the fixed target credit is not dependent on the operating rate, but corresponds to the plan fixed costs (see: Fixed Cost Distribution [Page 412]).
Output Side Variances

If you have manually entered the actual quantity for the given activity type of the cost center or business process, the system calculates the output price variance corresponding to the input price variance.

Output price variance =
Target credit x (manual actual qty/output qty) - allocated Act. costs

Fixed output price variance =
Fixed target credit x (manual actual qty/output qty) - allocated Act. costs

Output Quantity Variance
The output quantity variance is the difference between the actual credits and the target credits, which is the difference between the manually-entered actual costs and the allocated actual quantities.

Variance calculation determines output quantity variance by cost element on a period basis.

Output quantity variance is based on the formula
Output quantity variance = (actual qty - manual actual qty) x plan price
Fixed output quantity variance = (actual qty – manual actual qty) x fixed plan price

Variances arising from both price and quantity differences appear as output price variances.

If the corresponding activity is part of predistribution of fixed costs, the fixed target credit is not proportional to the operating rate (see: Predistribution of Fixed Costs [Page 412]).

Fixed Cost Variance
Fixed cost variances occur when the actual operating rate varies from the plan operating rate and some of the planned fixed costs are either underabsorbed or overabsorbed due to the credit postings.

The fixed cost variance is displayed by cost element and calculated periodically.

The fixed cost variance comprises:
  – The volume variance
  – The secondary fixed cost variance

The fixed cost variance is based on the following formula:

Fixed cost variance =
Plan fixed costs X (1 - operating rate) + fixed target costs - plan fixed costs
Output Side Variances

The system only determines the fixed cost variance if the operating rate varies from 100%.

Volume Variance

Volume variance shows for each cost element the over/underabsorption of fixed plan costs for each activity type or business process. It shows whether the fixed costs are covered by the actual activity. The cause of this variance category is always an actual activity varying from the plan activity — not, for example, a manually-set fixed allocation price. The results for the covering fixed costs are also affected by a manually-set allocation price. However, the cause of the variance is not the activity, but rather the structuring of the allocation price.

Volume variance is based on the formula

\[
\text{Volume variance} = \text{fixed plan costs} \times (1 - \text{operating rate})
\]

The following data is given:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed planned costs</td>
<td>1,000 USD</td>
</tr>
<tr>
<td>Plan activity</td>
<td>100 hours</td>
</tr>
<tr>
<td>Calculated plan price</td>
<td>10/hr</td>
</tr>
<tr>
<td>Actual activity</td>
<td>200 hours</td>
</tr>
</tbody>
</table>

Based on actual activity of 200 hours, you allocate fixed costs of $2,000 (= $10/hour \times 200 hours).

Because the fixed plan costs equal only $1,000, the volume variance equals – $1000 (= $1,000 – $2,000), being the overestimated portion of fixed costs due to actual activity.

If an activity type or a business process take part in the predistribution of fixed costs, the volume variance is not calculated (see: Predistribution of Fixed Costs [Page 412]).

Secondary Fixed Cost Variance

Secondary fixed cost variance is the difference between fixed plan costs and fixed target costs. It occurs only if a cost center or a business process carries out an activity-dependent activity input. Part of the fixed target costs (= fixed price \times variable target quantity) is dependent on the operating rate. The result is a difference between the planned fixed costs and the target fixed costs.

If an activity type or a business process take part in the predistribution of fixed costs, the secondary fixed cost variance is not calculated. In this case, the target fixed costs correspond to the plan fixed costs (see: Predistribution of Fixed Costs [Page 412]).
Remaining Variance

Remaining variance indicates a difference between target costs and allocated actual costs that cannot be assigned to any of the following variance categories:

- Output price variance
- Output quantity variance
- Fixed cost variance

This can be due to the following causes:

- You deactivated calculation of variance categories on the output side.
- You deactivated all variance categories. If this is the case, the sum of all variances determined is displayed in the remaining variance.

The system does not calculate and display the remaining variance by cost element, but does so for the entire Controlling object.

The following special cases are also possible:

- Minor differences appear as remaining variance if you wish.
- If no target costs exist for the Controlling object, this also results in all variances appearing under remaining variance.

Idle Capacity Cost Variance

The system cannot determine idle capacity cost variance directly. However, you can also calculate it from the volume variance and the fixed portion of the output price variance if the following prerequisites are fulfilled:

- The system calculated period-based prices for the activity on the basis of capacity.
- No subsequent adjustment occurs in the actual.

In this case, the idle capacity cost variance is calculated as follows:

Idle capacity cost variance = volume variance + fixed output price variance

To display the idle capacity cost variance, you have two options:

- Variance calculation determines the volume variance and the output price variance
  You can then use a report to display the two variance categories together and identify them as idle capacity cost variance.
- Idle capacity cost variance appears as the sole variance category on the output side
  If this is the case, you must deactivate all variance categories on the output side with the exception of remaining variance. The idle capacity cost variance then appears to the remaining variance.
  However, you must define the variance variant for the entire controlling area.
Output Side Variances

Output Side Variance Categories

- Output price variance
- Target costs or target credit
- Output quantity variance
- Volume variance

Price

Allocated actual costs

Activity

Plan activity
Manually posted actual activity
Scheduled actual activity
System Settings for Variance Calculations

Use

Variance calculation [Ext.] is carried out in several steps. You must differentiate between system configuration in Customizing, which is a prerequisite for variance calculation, and the further steps executed within variance calculation itself. These include:

- Target cost calculation
- Cost splitting

Once you complete these steps, the system can calculate the variances.

You can perform cost splitting and target cost calculation without calculating variances. However, if you calculate variances, the system performs these steps automatically.

Features

For more information on Customizing, see the Implementation Guide (IMG) for the Activity-Based Costing component (CO-OM-ABC) under:

- Actual postings → Variances → Maintain target versions [Ext.]
- Actual postings → Variances → Maintain variance variants [Ext.]

See also the IMG for Cost Center Accounting, under:

- Actual postings → Period-end closing → Activity allocations → Splitting [Ext.]

Creating Target Versions

Before you can calculate variances, you must set up a target version for the relevant controlling area. The target version determines the following.

- The versions the system uses for plan and actual data
- The version to which the system posts split actual costs and the variances

Moreover, you must specify the cost element group for which the first stage of actual cost splitting is performed, and the variance variant for which the variances are calculated.

Version 000 is the only version permitted for all plan, actual, and target versions. The system automatically sets any plan or actual versions to version 000. The target version is necessary nevertheless for standardization of variance calculation in the Cost Center Accounting and Product Cost Controlling components.

Assigning Variance Variants to Target Versions

The variance variant controls which variance categories are to be calculated.
System Settings for Variance Calculations

**Determining Splitting Rules in Splitting Structures**

You assign splitting rules to a splitting structure. You save the splitting structure in the cost center master data (see: Cost Center Master Data [Ext.]). The splitting rules you define determine the criteria for actual cost splitting on the activity types of a cost center.

See also:

- Target Cost Calculations [Page 409]
- Actual Cost Splitting [Ext.]
Target Cost Calculation

Use
To achieve useful comparisons of the plan [Ext.] and actual costs [Ext.] of a period, you need a consistent basis. Plan and actual costs are compared on the basis of actual activity.

The system uses the operating rate [Ext.] to adjust the plan costs of a period to the actual activity.

The operating rate is based on the following formula:

\[
\text{Operating rate} = \left( \frac{\text{Actual activity}}{\text{Plan activity}} \right) \times 100
\]

The plan costs adapted to actual costs in this manner are called target costs. In variance calculation, the system calculates target costs for each cost center and business process in each period. The values are calculated according to the following formulas:

- **For activity-dependent costs that were not incurred through internal activity allocations [Ext.]:**
  The value-based viewpoint is in the foreground here, even if you enter additional quantities during planning.
  - Fixed target quantity = Fixed plan quantity
  - Variable target quantity = Variable plan quantity \times \text{Operating rate}

  \[
  \begin{align*}
  \text{Fixed target costs} &= \text{Fixed plan costs} \\
  \text{Variable target costs} &= \text{Variable plan costs} \times \text{Operating rate} \\
  \text{Total target costs} &= \text{Fixed plan costs} + \text{Variable plan costs} \times \text{Operating rate}
  \end{align*}
  \]

  For these costs, the emphasis is on value-based calculation, even if additional quantities are entered when planning.

- **For credit records from internal activity allocations:**
  - Fixed target costs = Fixed plan costs \times \text{Operating rate}
  - Variable target costs = Variable plan costs \times \text{Operating rate}
  - If an activity type or a business process participate as senders in predistribution of fixed costs [Ext.], the fixed costs are not corrected with the operating rate (see: Predistribution of Fixed Costs [Page 412]). In this case:
    - Fixed target costs = Fixed plan costs

- **For all activity-independent costs:**
  - Fixed target costs = Fixed plan costs
  - Variable target costs = Variable plan costs

- **For activity-dependent costs from internal activity allocation.**
Target Cost Calculation

Fixed target quantity = Fixed plan quantity
Variable target quantity = Variable plan quantity $\times$ Operating rate

Fixed target costs = Fixed target quantity $\times$ Fixed price
  + Fixed target quantity $\times$ Variable price
  + Variable target quantity $\times$ Fixed price

Variable target costs = Variable target quantity $\times$ Variable price.

Here, the emphasis is on quantity-based calculation because allocation takes place via activity quantities. The target costs can vary with the operating rate because the variable target quantity is included in the fixed target costs.

If during activity allocation you assigned the fixed costs using predistribution of fixed costs, (see: Predistribution of Fixed Costs [Page 412]), the target costs are calculated as follows:

Fixed target costs = Fixed plan costs
Variable target costs = Variable plan costs $\times$ Operating rate

In this case, the fixed costs are not dependent on the operating rate.
Actual Cost Splitting

Use

In the Activity-Based Costing component (CO-OM-ABC), splitting of actual costs on business processes results in the division of all costs into fixed and variable portions based on the planning of the business process.

Actual cost splitting, by dividing the costs into fixed and variable, allows target/actual comparisons and calculation of actual prices.

The costs appear by cost element in fixed and variable portions based on target costs and quantities.

If a cost element has no target costs, the SAP System calculates the target costs of the corresponding cost element group. If target costs exist here, they serve as a basis for the first splitting step into fixed and variable portions. If no splitting basis exists, the R/3 System treats the costs as fixed.

Primary cost splitting proceeds on the basis of target costs, and the splitting of activity relationships on the basis of target quantities.

Activities

Executing Actual Cost Splitting

To carry out actual cost splitting independently of the price and variance calculations, go to the initial screen for Activity-Based Costing and choose

Month-end closing → Single functions → Splitting

Note that, for price and variance calculation, you do not need to make default settings for variance calculation. To carry out price calculation, activate the Execute actual splitting internally indicator in the Maintain Price Calculation Settings screen.
Predistribution of Fixed Costs

Use

You use Predistribution of Fixed Costs [Ext.] as part of marginal costing. You can use predistribution of fixed costs for Cost Centers [Ext.] and Business Processes [Ext.].

It is also useful in marginal costing, as part of overall costing, to determine cost of goods manufactured [Ext.] based on full costs. As a result, along with allocation of variable (marginal) costs via internal activity allocation, you must also allocate fixed costs from sender cost centers or sender business processes on the cost objects [Ext.]. Because the fixed preparation costs are not proportional to the operating rate, you should not allocate them based on the activity output of the sender cost centers/sender business processes.

Predistribution of fixed costs solves this problem by distributing the fixed costs in their entirety on the cost centers or business processes that plan the activity inputs. This enables you to prepare the activities of sender cost centers or sender business processes within the framework of a reconciled activity plan. Remember: the sender cost center or sender business process did not cause the fixed costs for the provision of these activities because the activity input was planned by other cost centers or business processes.

Features

For each activity type of a sender cost center or for each business process, the system distributes the fixed plan costs of version 0 as actual costs on the cost centers or business processes that planned the activity inputs.

Senders of fixed cost predistribution can be cost centers/activity types or business processes, if, for the given activity type or business process you set the indicator Predistributed fixed costs in the master data or under planning. See also: Predistribution of Fixed Costs [Page 416].

Receivers of predistribution of fixed costs can only be CO objects of the type cost center, cost center/activity type, or business process. No other CO objects can function as receivers.

If, however, you settle plan-integrated orders or projects on a cost center in plan, fixed cost predistribution takes place on the receiver cost center (see under “Order Settlement” below).

The distribution of the fixed costs on the receiver cost centers or business processes is proportional to the fixed portion of the plan activity input quantities. The amount of the fixed cost predistribution equals the plan activity input on the receiver cost center or receiver business process multiplied by the fixed plan price of the sender cost center or sender business process. This amount is posted in the actual.

This ensures the absorption of activity-independent costs by the cost centers or business processes planning the given activity input, regardless of the operating rate.

The following graphic illustrates the predistribution of fixed costs:
Integration

If you use fixed cost predistribution for activity types belonging to a cost center or for business processes, this affects actual allocations and period-end closing.

Actual Activity Allocation

For activity types or business processes used in predistribution, the receiver category determines whether the actual activity allocation assigns the total costs or only the variable costs to the receivers (cost center or business processes).

The system thereby prevents activity receivers from being debited twice with fixed costs.

- If, for the sender, the indicator *Predistributed fixed costs* is set and the receiver is of category cost center, cost center/activity type, or business process, only variable costs are allocated under internal activity allocation. The fixed portion is ignored.
- If the sender participates in the predistribution of fixed costs, but the receiver does not (because it is not a CO object of the category cost center, cost center/activity type, or business process) the system allocates the fixed and the variable costs.
- If the indicator *Predistributed fixed costs* is not set for the sender, the system allocates both fixed and variable costs, regardless of the receiver.

This applies to all actual activity allocations, whether or not fixed cost predistribution actually posts fixed costs on the receivers.

Order settlement

You cannot used plan-integrated Orders [Ext.] or projects as receivers. The system always debits these with fixed and variable costs.

If orders and projects settle on cost centers or business processes participating in predistribution of fixed costs, the system prevents these cost centers or business processes from being debited twice with the fixed costs. The fixed costs from activity allocation are in this case reallocated from
Predistribution of Fixed Costs

the order back to the sender cost center (assuming this cost center predistributed its fixed costs). This occurs whether or not fixed cost predistribution actually posts fixed costs on the receivers.

⚠️

The reversed posting of fixed costs occurs only during period-based order settlement, not during full settlement. Therefore, you may not settled orders in the actual using full settlement, if they have used activities whose fixed costs have been predistributed.

The following graphic illustrates the predistribution of fixed costs with planning integrated orders:

Target Cost Calculations

When you use predistribution of fixed costs, the system uses other target cost formulas to determine Target Costs [Ext.] (for more information, see Target Cost Calculation [Page 409]).

Actual Price Calculations

⚠️

In the SAP System, revaluation during actual price determination should not carried out in conjunction with predistribution of fixed costs, because the former overwrites the latter's data.
Variance Calculation

**Input Side [Ext.]:**

If the sender activity type or sender business process predistributes fixed costs, you cannot calculate prices in target nor in actual. The total quantities in the relevant data records then refer solely to the variable portion of costs.

⚠️

Because you cannot calculate prices based on the actual cost rates with predistributed fixed costs, any earlier calculations of input price- [Ext.] or input quantity variance [Ext.] will produce false results.

**Input quantity variances [Ext.]** exist for activity inputs only if you implement actual price calculation without revaluation, meaning you use the same price in both plan and in actual. If you revaluate activity inputs in actual, you must update the input price variances [Ext.] for variance calculation in the actual data records.

**Output Side [Ext.]:**

If the cost center or business process in question predistributes its fixed costs, this will not result in volume variances [Ext.], but it will produce over- or under-absorption of the fixed costs. This variance arises if the cost center or business process allocates activities in actual (and, thus, fixed costs) to objects outside of Cost Center Accounting or Activity-Based Costing. The variance is thus displayed as **remaining variance [Ext.]**.

The system multiplies the plan costs of the input side by the operating rate [Ext.] in order to calculate the target credit for variance calculation [Ext.]. This is equivalent to multiplying the plan price by the actual activity. As the result thereby includes the operating rate variance, the difference between target and actual credit equals the **output price variance [Ext.]**.

In the case of fixed cost predistribution, the system corrects the fixed portion of the target credit so that the operating rate variance is no longer included. The difference between target and actual credit then includes the allocation price variance and the over-absorption of fixed costs described above. The over-absorption of fixed costs then becomes part of the fixed allocation price variance (see **Variance Calculation [Page 391]**).

**Activities**

For more information on carrying out predistribution of fixed costs, see **Executing Predistribution of Fixed Costs [Page 416]**.
Executing Predistribution of Fixed Costs

Prerequisites

- You can define fixed cost predistribution for each activity type of a sender cost center or sender business process. It does not matter whether the relevant indicator is set for the receiving cost centers or business processes.

  You can store a default value for this purpose in the activity type master data (see: Processing Activity Types [Ext.]). For business processes, you can store a default value in the business process master data or define a value for the business process category (see: Fields in the Business Process Master Record [Page 53]).

- The final determination of the predistribution of fixed costs [Ext.] occurs in activity type planning or process output planning.

  You can overwrite the default value there (see Activity Type Planning [Ext.]) or Planning Process Outputs (Quantities and Prices) [Page 178]. In planning itself, you can change the fixed cost predistribution indicator only if no actual cost postings exist.

- You carry out predistribution after finishing planning.

  You can carry out fixed cost predistribution either as part of plan price calculations [Ext.] or in a separate allocation for selected cost centers or business processes, for cost center groups or business process groups, or for the entire controlling area [Ext.].

Procedure

Executing Predistribution of Fixed Costs as Part of Plan Price Calculation

You can execute the actual postings for fixed cost predistribution as part of your plan price calculations.

1. Choose Accounting → Controlling → Cost Center Accounting (or Activity-Based Costing) → Planning → Allocations → Price calculation.

2. Select the indicator With fixed cost predistribution (see Plan Price Calculations [Ext.]).

   Executing predistribution with price calculation results in better system performance because the corresponding plan allocations already exist. Activity types with manually-set prices also take part in fixed cost predistribution when executed with plan price calculations.

Executing Predistribution of Fixed Costs as a Separate Allocation

1. To carry out predistribution of fixed costs in a separate allocation run, choose Accounting → Controlling → Cost Center Accounting (or Activity-Based Costing) → Period-end closing → Single functions → Predistribution of fixed costs.

2. You can limit predistribution of fixed costs to the following objects:

   a. Cost center or business process
   b. A certain number of cost centers or business processes
   c. Cost center group or business process group
   d. All cost centers or business processes in a controlling area
Executing Predistribution of Fixed Costs

e. All cost centers or business processes belonging to a given selection variant

You save selection criteria for cost centers in a selection variant [Ext.]. You can use the variant to select all cost centers with the same entries in one or more master data fields.

To create new selection variants, choose Goto → Selection variant → Create.

i. In the list of fields, enter the criteria to be used for selection. For example, you can select all cost centers belonging to a given company code.

ii. Save your entries.

iii. Enter a name and a description for your variant.

iv. Save your entries.

To change an existing selection variant, choose Change selection variant.

To display an existing selection variant, choose Display selection variant.

3. Choose one of the objects.

4. Enter the version, periods and fiscal year for which you want to carry out predistribution of fixed costs.

5. If you wish, you can run predistribution of fixed costs as a test run only. To do so:

a. Use the default settings for test run and detail list

b. Choose Execute.

The detail list display uses the ABAP list viewer [Ext.].

6. To execute predistribution of fixed costs as an update run (as opposed to a test run):

a. Return to the initial screen.

b. Deactivate Test run.

c. Choose Execute.

Reversing Predistribution of Fixed Costs

⚠️ Reversing fixed cost predistribution is useful only if an error occurred during the posting. Carry out the reversal only if you really want to reverse all postings.

To reverse predistribution for the period entered, on the Predistribution of Fixed Costs: Cost Centers screen, choose Extras → Reset.

Result

The system allocates the plan fixed costs in version 000 as actual costs on the plan receivers (cost center or business process) for the activity types of a cost center or for the sender business processes participating in predistribution of fixed costs.

You can repeat predistribution of fixed costs as often as you wish. If you do so, the system updates only the difference between the old and new allocation. If the values do not vary from the previous allocations, the system does not update any values.
Actual Price Calculations

Use

During actual price calculation, the system calculates iterative prices for activity types [Ext.] or business processes [Ext.] based on actual costs and actual activities. The calculation takes into account all activity exchanges between cost centers [Ext.] or business processes.

Price calculation [Ext.], which you can carry out during planning, is based on planned costs and activity. The resulting prices are used to valuate actual activity.

After running actual price calculation, you can choose to revalue actual activity at actual prices. This revalues the activity using the difference between plan and actual prices. By revaluing the actual activity with actual prices, you can fully balance sender cost centers and sender business processes.

A reposting of internal activity allocation can also be carried out in a different period (see: Reposting Internal Activity Allocation [Page 315]). Due to the negative activity flow between the old receiver and the sender, the old receiver may contain a negative quantity.

During reposting of internal activity allocations in other periods, then, use cumulated price calculation because other types of price calculations will produce inconsistent results (see Price Calculation Methods [Page 429]).

If you are working with transfer prices (parallel value flows) actual price calculation and recalculation are possible in all valuations. In the output list of the price calculation, you can choose to display the prices in all valuations.

For more information on transfer prices, see Multiple Valuation Approaches in Overhead Cost Controlling [Ext.] and also the SAP Library under Financials → EC Enterprise Controlling → EC Profit Center Accounting → Multiple Valuation Approaches/Transfer Prices [Ext.]

Prerequisites

You must meet the following requirements before you can recalculate actual activity at actual prices:

- Activate the relevant indicator in the version

In the fiscal year parameters for the version [Ext.], you can specify the method of price calculation (see Price Calculation Methods [Page 429]), or whether to allow recalculation of actual activities with actual prices, and how the recalculation is to be executed. The Recalculation field controls the recalculation of actual activity at actual prices. See Planning → Basic Settings → Versions → Maintain Versions [Ext.] in Customizing for Cost Center Accounting or Planning → Maintain Versions [Ext.] in Customizing for Activity Based Costing.

You have the following options:

- Recalculation in a special business transaction [Ext.]
Actual Price Calculations

The system posts the difference between the plan and actual allocation valuations using a separate business transaction (actual price calculation). This makes it easier to track variances between valuations using actual and plan prices.

- **Recalculation in the original transaction**
  The system posts the recalculation in the original transaction. The variances between calculations at actual and plan prices can then no longer be tracked. Use this option if you do not have plan prices, meaning the original allocation was not valuated.

- **Maintain the price indicator in activity type planning or process output planning**
  The system takes default values from activity type master data for the plan and actual price indicators (see Activity Type Category [Ext.] and Processing Activity Types [Ext.]) or the business process master record (see Price Indicators [Ext.]). You can change both indicators when planning, providing no plan values exist. However, you must use a planning layout with the characteristics **Actual price indicator** and **Plan price indicator** (see Standard Planning Layout [Ext.]).

  If you do not fill the **Actual price indicator** field, the system automatically valuates activity using the plan price.

  >

  If you need to split the costs on activity types or business processes and divide them into fixed and variable portions (say, for reporting), you should carry out actual splitting with update before you carry out the actual price calculation (see Actual Cost Splitting [Ext.]).

  You can also carry out splitting during actual price calculation. To do so, select **Execute actual splitting internally** in the Settings for Price Calculation. Note, however, that this procedure does not post the splitting data.

  >

  If the activity receivers are orders, you must recalculate the orders before you carry out the price calculation with recalculation using actual prices. To do so, go to the **Internal Orders** initial screen and choose **Period-end closing → Single functions → Recalculation at actual prices → Individual processing.**

**Activities**

To carry out actual price calculation, from the Cost Center Accounting menu or Activity Based Costing menu, choose:

**Period-end closing → Single functions → Price calculation**

**See also:**

- Executing Price Calculation [Page 422]

  >

  For more information on how to calculate actual prices and interpret the results, see also:

  - Example of Price Calculation [Page 427]
Calculating Actual Activity at Actual Prices [Ext.]
Price Calculation Methods [Page 429]
Price Calculation With Cost Component Split [Page 433]
Plan Price Calculation [Ext.]
Calculating Prices

Procedure

You can use price calculation (see also Plan Price Calculation [Ext.]) for Cost Center Accounting and Activity-Based Costing.

To calculate prices:

5. Choose:
   a. Accounting → Controlling → Cost Center Accounting or Activity-Based Costing and
   b. Planning → Allocations → Price calculation

6. Choose either
   a. Cost center group/business process group (To ensure correct results, the group must consist of a closed activity network)
   b. All cost centers/all business processes
   c. No cost center/business process

7. Enter the following parameters:
   a. Version
   b. Periods
   c. Fiscal year

Iterative prices cannot be calculated for special periods, since no plan values exist for these periods.

8. Maintain the following processing parameters:
   a. Background

      You can carry out price calculation either online or in the background.

      Online calculation should be used only when you do not expect excessively long run times, such as due to large activity networks.

      If you set up complex activity networks you should always use background processing. By starting a background job during times of low system use, you avoid processing bottlenecks during peak times.

      To plan background processing, check off the appropriate indicator in the Price Calculation initial screen and enter a job name in the subsequent dialog box.

   b. Test run

      If you do not want to update immediately, you should select Test run. The SAP System does calculate the price, but it does not post any data. It only generates the detail list.

   c. Detail lists
Calculating Prices

If you want to check your results, you should select Test run together with Detail lists. The detail lists shows the prices calculated by the system for each cost center / activity type combination. You can make the posting later from the list.

To post the price calculation from the list display, choose Price calculation → Post.

Alternatively, in the Price Calculation initial screen, choose Price calculation → Execute. Deselect Test run to allow updating of the results.

d. With predistribution of fixed costs

If you are using marginal costing, yet still wish to work with allocation rates based on full costs, you should select With predistribution of fixed costs. The SAP system predistributes the fixed costs during the plan price calculation (see also: Predistributing Fixed Costs [Page 416]).

Ensure that your planning is reconciled by checking that the scheduled activity quantity is not greater than the planned activity quantity for the sender cost center. If this is the case, the SAP System displays the error and does not update the values (see Plan Reconciliation [Ext.])

Result

The detail list contains the following information:

- The calculated prices (total and fixed) for each cost center and activity type or for each business process, per period
- The number of warnings and errors

Choose Edit → Format in the list display to change the display format of the prices to suit your own requirements.

- Currency
  
The Currency function enables you to determine in which currency (object currency or controlling area currency) your prices should be displayed.

  If you want to display and post your prices in both controlling area currency and object currency, you must select All currencies when you maintain the control data for your controlling area.

- Values
  
  You can select from the following display options by choosing Values for your prices:
  
  - Overall/Fixed
  - Overall/Variable
  - Fixed/Variable

- Activity price
  
  If you use manually set prices as well as iteratively calculated prices, choose Price to display the following prices:
Calculating Prices

- Iteratively calculated prices, for which the manually set prices were considered by the system.
  This is the allocation price, whereas the fully iterative price can only be determined for control purposes.

- Prices calculated iteratively only (manually set prices are ignored in this calculation).
  To calculate fully iterative activity prices, you must activate the appropriate checkbox in your version. Activate activity price By calculating fully iterative activity prices as well as those which also consider manually-set prices, you can see the effect of the manual-set prices on your complete price calculation. Purely iterative prices can be calculated and displayed, but they cannot be used for allocations.

- Price unit
  You can select from the following values when displaying the Price unit:
  - 1
  - Optimized
    The price unit indicates how many units of measure the price for the activity type refers to. The SAP System optimizes the price unit to minimize rounding differences. The optimized value of the prices with the price units are then posted.
    The system displays the prices by period in the detail lists. Choose Previous period and Next period to scroll between periods. Choose Select to display the period values of the selected list rows.

The following additional functions are available in the detail list:

- Period screen/basic list
  This function enables you to switch between a display of individual period values for all activity types and cost centers and a complete display of all periods for one specified activity type and cost center.

- Messages
  You get a list of all errors and warnings with corresponding explanations, as well as notes on how to correct the errors.

- Technical statistics
  This provides you with an overview of the amount of master data processed, as well as links, table entries and iteration steps.

- Sender analysis
  This function identifies and displays the part of the activity network from which the selected cost center is receiving an activity. When you select a list line, the system displays the corresponding activity types, the activity input quantity for the cost center, the overall price, the fixed price, and the price unit.

- Settings
  You can maintain control parameters defaulted by SAP for the process flow for price calculation. You can set the following parameters:
  - Generation
This controls the generation of the program for iterative price calculation. Before you can calculate prices, the SAP System generates the report required for running the program. The system generates the number of entries in the relevant internal tables, as well as in the parallel-processed field groups. This improves system storage requirements and run times.

As the generation itself also takes time, this indicator should be activated only for large-scale processing.

- **Number of senders/receivers**
  The system sets the appropriate number of entries in the internal tables when you select *Generation*.

- **Number of relationships between senders and receivers**
  The system sets the appropriate number of entries in the internal tables when you select *Generation*.

- **Number of cost centers in the controlling area**
  The system sets the appropriate number of entries in the internal tables when you select *Generation*.

- **Number of significant digits of the price unit**
  To increase the accuracy of the results, the SAP System optimizes the price unit during price calculation. The price refers not to unit 1, but to the units 10, 100, 1000 or 10000. If the price per unit is already relatively high, but you still want to use the price unit to increase the accuracy of your prices, this leads to still higher values for your prices. You can limit this by specifying the significant digits. Places will be shifted only until this number of significant digits has been reached.

  If the price per unit is exactly 1033.33333333, with six significant digits the price unit remains 1 and the price would be %1033.33. With 12 significant digits and a price unit of 10,000 the price is $10,333,33.3333.

- **Indicator for deactivating price unit optimization**
  Deactivates the optimization of price units as explained above. If this indicator is selected, the price unit always has the value 1.

- **The tolerance percentage rate for reconciliation of actual and scheduled activity**
  When you call up price calculation, the activity type planning should be reconciled. This means that the planned activity of the activity type should correspond to the scheduled activity quantity of the receiver. Only then can you determine meaningful prices. Therefore, price calculation checks all activity types for matching values and generates warnings or error messages if necessary.

  However, minor deviations can occur due to rounding differences in planning, in particular when distributing plan values to individual periods.

  Enter the allowable percentage difference (+ and -) between plan and scheduled activity.
Calculating Prices

- Post anyway

  Activate this indicator if the results of price calculation should be posted even if they contain errors.

  Exceptions are serious system errors resulting in a software crash and errors occurring during posting preparation (problems with integration or document number assignment).

  Usually, results are not posted when there is an error in price calculation. You can carry out the update online at a later time using the result list. This does not apply to background processing. For background processing, activate Post anyway so that prices will be posted automatically even if errors occur.

You can display the results of price calculation in the price report (see Price Report [Page 491]).
Example of Price Calculation

Sender A has the following plan and actual values:

<table>
<thead>
<tr>
<th>Costs</th>
<th>Activity</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>$100</td>
<td>10 hrs</td>
</tr>
<tr>
<td>Actual</td>
<td>$110</td>
<td>9 hrs</td>
</tr>
</tbody>
</table>

The following activity input is performed:

<table>
<thead>
<tr>
<th>Senders</th>
<th>Primary costs</th>
<th>Receivers</th>
<th>Activity input</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan</td>
<td>A</td>
<td>B</td>
<td>10 hrs</td>
<td>$10 /hr</td>
</tr>
<tr>
<td>Actual</td>
<td>A</td>
<td>B</td>
<td>9 hrs</td>
<td>$10 /hr</td>
</tr>
</tbody>
</table>

The actual activities are valuated with plan activity prices: 9 hrs X $10 /hr, resulting in allocated actual costs of $90.

If actual price calculation is performed, the following values result:

<table>
<thead>
<tr>
<th>Sender credit</th>
<th>Sender balance</th>
<th>Sender revaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan 10 hrs * $10/hr = $100</td>
<td>0</td>
<td>-</td>
</tr>
<tr>
<td>Actual 9 hrs * $10/hr = $90</td>
<td>$110 - $90 = $20</td>
<td>9 hrs * ($12.33/hr - $10/hr) = $20</td>
</tr>
</tbody>
</table>

If the actual sender activity of 9 hours is revalued with the difference between plan and actual prices, sender A receives a further $20 and is fully cleared. Without actual price calculation and revaluation, the residual amount of $20 (110 - (9 * 10)) remains on the sender.
Valuating Activity Quantities

Use

Indirect Activity Allocation in the Actual

For actual indirect activity allocation [Ext.], all quantities are posted as total quantities. The quantity is split into fixed and variable portions using actual cost splitting (see: Actual Cost Splitting [Ext.]).

You are using indirect activity allocation in the actual together with predistribution of fixed costs [Ext.], and both sender and receiver are participating in the predistribution. The system reduces the valuation on the sender and receiver side by the amount of the sender fixed costs.

- **On the sender side**, the portion of the fixed costs is zero. The overall costs therefore contain only variable portions.

- **On the receiver side**, the overall costs also contain only variable costs. The fixed costs are zero, due to the fully variable activity input. This is because the sender fixed costs are allocated using the predistribution of fixed costs.

Indirect Activity Allocation in the Plan

For indirect activity allocation in the plan, the system determines the fixed and variable quantity portions according to the receiver type and its tracing factor in the given segment.

- The system posts all quantities as variable if the receiver type is a cost center/activity type combination or a business process and if the receiver tracing factor is determined on the portions of the plan or actual activity quantities of the receiver.

- The system posts all quantities as variable if the receiver type is an order, cost object or WBS element.

- In all other cases, that is, for other receiver types or other receiver tracing factors, the system posts the quantities as fully fixed.

  If a price exists for a sender object, the R/3 system uses this to valuate the activity quantity for the sender and corresponding receivers. This amount is split into fixed and variable debits and credits in the same way as the valuation of activity-dependent activity input planning (see: Planning Secondary Costs [Ext.]).
Price Calculation Methods

Use
You can use the following price calculation methods in the plan and in the actual:

Price calculation can be based on:

- Period-based price
- Average prices
- Cumulative price

Features

Period-Based Prices
The system divides the costs arising in each period by the activity. This can result in different prices in each period. If your fixed costs remain constant throughout the fiscal year but the activity quantities fluctuate, the activity input valuation uses a relatively high price in those periods with lower activity quantities (see period 2 in the example). An activity input in a period with a higher activity quantity is valued with a relatively low price, because the fixed costs draw on the higher activity quantity (see period 1 in the example).

<table>
<thead>
<tr>
<th></th>
<th>Fixed costs</th>
<th>Variable Costs</th>
<th>Activity</th>
<th>Period-Based Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period 1</td>
<td>$1,000</td>
<td>$1,000</td>
<td>1,000 hrs</td>
<td>$2.00/hr</td>
</tr>
<tr>
<td>Period 2</td>
<td>$1,000</td>
<td>$100</td>
<td>100 hrs</td>
<td>$11.00/hour</td>
</tr>
</tbody>
</table>

The activity receivers in period 2 are disadvantaged compared with the activity receivers of period 1. The period-based price is higher in period 2 than in period 1, due to the lower activity quantity. The price in period 2 contains a higher proportion of fixed costs than the price in period 1. This is because the fixed costs in period 2 are related to a lower activity quantity. The variable unit cost, that is, the variable portion of the period-based price, is the same in both periods ($1/hour).

Average Prices
The average price is based on the total costs from all periods divided by the total activity quantity of an activity type from those periods. This ensures that the activity inputs of all receivers are valuated with the same price, regardless of the period in which the activity input occurs.

<table>
<thead>
<tr>
<th></th>
<th>Fixed costs</th>
<th>Variable Costs</th>
<th>Activity</th>
<th>Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Period 1, period</td>
<td>$1,200</td>
<td>$1,000</td>
<td>1,000 hrs</td>
<td>$2.20/hr</td>
</tr>
</tbody>
</table>
Price Calculation Methods

<table>
<thead>
<tr>
<th>Period 2, period</th>
<th>$1,000</th>
<th>$100</th>
<th>100 hrs</th>
<th>$11.00/hr</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average</td>
<td>$2,200</td>
<td>$1,100</td>
<td>1,100 hrs</td>
<td>$3,300 ÷ 1,100 hours = $3.00/hr</td>
</tr>
</tbody>
</table>

This method does not result in a complete crediting (clearing) of costs in the individual periods. This means:

- Too much is credited (Period 1: Credited with $3,000 compared with $2,200)
- Too little is credited (Period 2: Credited with $300 compared with $1,100)

You can clear a cost center or business process completely only by totaling across all periods.

**Cumulative Prices**

In cumulative price calculation the price for a period is based on the accumulated total costs and activity of all previous periods (the period entered in the To period field). In this way, price calculation allows for cost fluctuations in the periods.

When revaluation is carried out under the cumulative procedure, all the sender objects are fully credited in those periods that you specified for actual price calculation. In this process, the activity inputs are valuated with the new price in each selected period. Clearing entries are made in these periods to ensure that this equal valuation.

The cumulative price calculation method requires that all activity receivers can be posted to in all periods in the interval specified, i.e. the period cutoff indicator must not be active for these objects. This is to ensure that receivers in the first period can still receive clearing entries in the last period.

**Example 1: Differences between cumulative price and price per period**

Periodically differentiated prices: The costs per period are divided by the activities; prices can vary widely.

<table>
<thead>
<tr>
<th>Period</th>
<th>Cost per period</th>
<th>Activity per period</th>
<th>Price per period</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,000 USD</td>
<td>100 hours</td>
<td>10 USD/hour</td>
</tr>
<tr>
<td>2</td>
<td>2,000 USD</td>
<td>50 hours</td>
<td>40 USD/hour</td>
</tr>
<tr>
<td>3</td>
<td>1,000 USD</td>
<td>250 hours</td>
<td>4 USD/hour</td>
</tr>
</tbody>
</table>

Cumulative price: The price is calculated from the total of the current and previous periods. For example, the price for period 2 is calculated from the costs of periods 1 and 2 (1,000 USD + 2,000 USD) divided by the activities for these periods (100 + 50). The price variances are not so marked.

<table>
<thead>
<tr>
<th>Period</th>
<th>Cumulative costs</th>
<th>Cumulative activity</th>
<th>Cumulative price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,000 USD</td>
<td>100 hours</td>
<td>10 USD/hour</td>
</tr>
<tr>
<td>2</td>
<td>3,000 USD</td>
<td>150 hours</td>
<td>20 USD/hour</td>
</tr>
</tbody>
</table>
Example 2: Revaluation at actual prices

Under revaluation, activity allocations are valued at actual prices and the difference as against the values already posted is then subsequently allocated.

If, for actual price calculation, you enter a number of periods, the system revaluates for each period; the sender objects are fully credited in each period.

If you enter one period only, subsequent allocation is carried out for this period only and this is then the only period that is fully credited.

Entry: Periods 1 to 3

<table>
<thead>
<tr>
<th>Per</th>
<th>Actual costs</th>
<th>Activity</th>
<th>Cum.actual price</th>
<th>Plan costs</th>
<th>Plan price</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1,000 USD</td>
<td>100 hours</td>
<td>10 USD/hour</td>
<td>500 USD</td>
<td>5 USD/hour</td>
</tr>
<tr>
<td>2</td>
<td>3,000 USD</td>
<td>150 hours</td>
<td>20 USD/hour</td>
<td>750 USD</td>
<td>5 USD/hour</td>
</tr>
<tr>
<td>3</td>
<td>4,000 USD</td>
<td>400 hours</td>
<td>10 USD/hour</td>
<td>2,000 USD</td>
<td>5 USD/hour</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Period</th>
<th>Difference between plan/actual costs</th>
<th>Revaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>500 USD</td>
<td>+ 500 USD</td>
</tr>
<tr>
<td>2</td>
<td>2,250 USD</td>
<td>+ 1,250 USD</td>
</tr>
<tr>
<td>3</td>
<td>2,000 USD</td>
<td>- 1,000 USD</td>
</tr>
</tbody>
</table>

- Period 1:
The difference between actual and plan costs is 500 USD; the amount by which the receivers are debited. The sender objects are fully credited in period 1.

- Period 2:
The difference between plan and actual costs is 2,250 USD. As calculation takes place using cumulative values here, the receiver objects are only debited with 1,250 USD. The sender objects are still credited in full, because 1,000 USD were already allocated to the receivers from the first period.

- Period 3:
Revaluation results in the receivers being debited by 1,000 USD too much. This amount is credited to the receivers, so that the sender objects are credited in full (and correctly). Where does this figure come from? The difference between plan costs and actual costs is 2,000 USD. In periods 1 and 2 the receivers were debited with 1,250 USD plan costs and 1,750 USD revaluation, a total of 3,000 USD. The difference between plan and actual is however only 2,000 USD, meaning that the receivers were debited by 1,000 USD too much.

Entry: Periods 3 to 3

If, for actual price calculation you enter period 3 only, allocation is correct, but the senders are fully credited in this period only. This is because the price calculation program posts only in the period(s) that were entered under From period/To period. Here, 750 USD is revaluated because
Price Calculation Methods

although the plan costs for periods 1 to 3 are included in the calculation (3,250 USD) no revaluation took place in periods 1 and 2.

<table>
<thead>
<tr>
<th>Per</th>
<th>Actual costs</th>
<th>Activity</th>
<th>Cum.actual price</th>
<th>Plan costs</th>
<th>Plan price</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>4,000 USD</td>
<td>400 hours</td>
<td>10 USD/hour</td>
<td>2,000 USD</td>
<td>5 USD/hour</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Period</th>
<th>Difference between plan and actual costs</th>
<th>Revaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>2,000 USD</td>
<td>+ 750 USD</td>
</tr>
</tbody>
</table>

Unlike the average price, which you can also define for individual cost centers/activity types or business processes, cumulative calculation can be selected for all sender objects. You can make this setting in the version settings (see Maintaining Versions [Ext.]).

The cumulative method is only useful if the costs and/or the activity quantities are subject to wide-ranging fluctuations. In particular, this would apply if the time of activity output is not identical to the time of the cost occurrence. Compared to average price calculation (which also ensure a proportionate debiting of receivers) the advantage of cumulative prices is that the cost center or business process is fully credited at any given time. For average prices, this is true only for the entire period.
Price Calculation With Cost Component Split

Use

Price calculation [Ext.] with cost component split provides a breakdown of the price of an activity type [Ext.] or a business process [Ext.] that has been determined iteratively on the basis of all costs and activity relationships. You can determine, for example, the proportions of material costs and wage costs in the price.

During activity allocation the cost component split for the sender is retained on the receiver, provided you did not define different cost components [Ext.] for the target object in the switching structure. This applies only to price calculation. Internal activity allocation [Ext.] in the actual is not affected by this.

Prerequisites

Before you can display the cost component split for the prices (the splitting into cost components [Ext.]) you must fulfill several requirements on the system side.

- **Create a cost component structure [Ext.]**
  You save the cost component structure used for price calculation in the version [Ext.]. Cost component splitting is not carried out if a cost component structure does not exist in the version.

- **Assign cost components to the cost component structure**
  The cost component encompasses all costs of the assigned cost element range. You assign cost components to the cost component structure based on your organizational requirements.

  You assign the following cost components to cost component structure 01:
Price Calculation With Cost Component Split

- 1 Raw materials
- 2 Personnel
- 3 Production
- 4 Energy

• Assign cost elements [Ext.] to the cost components

By assigning cost elements, you specify which costs (primary or secondary) flow to which cost component and how the costs are updated during price calculation. The cost component calculations occur in separate iterative calculations. This retains the cost component split for activity allocation.

You assign cost elements 400.000 through 410.000 to the cost component Raw Materials in cost component structure 01.

• Switching structure

If you want to use a different component split for the sender than that used for the receivers, create a switching structure for your cost component structure. The switching structure determines which sender cost component flows to which receiver cost components. You assign switching structures to cost center/activity type combinations within activity type planning.

The Energy cost center allocates activity to several production cost centers. All costs from the energy cost center (labor and materials) flow into the receiver cost component Energy.

You assign switching structure 2 to cost component structure 01. The switching structure contains the following information:

Labor costs assigned to cost component 2 Personnel flow to the target cost component 4 Energy during activity allocation.

Materials assigned to sender cost component 1 Raw Materials also flow to cost component 4 Energy during activity allocation.

The target cost component Energy contains costs from the cost components Personnel and Raw Materials.

For more information about price calculation or cost component splitting for Cost Center Accounting, see the Implementation Guide (IMG), under Controlling →

- Cost Center Accounting → Planning → Allocations → Activity Allocation → Price Calculation [Ext.] or
- Actual Postings → Period-End Closing → Activity Allocation → Price Calculation [Ext.] or
- Planning → Basic Settings → Maintain Versions [Ext.]

For more information about price calculation or cost component splitting for Activity-Based Costing, see the Implementation Guide (IMG), under Controlling → Overhead Cost Controlling →

- Planning → Allocations → Price Calculation [Ext.] or
Price Calculation With Cost Component Split

- Actual Postings → Period-End Closing → Price Calculation [Ext.] or
- Planning → Maintain Versions [Ext.].

See also:
Actual Price Calculation [Page 419]
Activity-Based Costing Information System

Purpose

The SAP System offers an extensive and flexible information system for analysis of the cost and quantity flows in your organization. You can repeat standard evaluations as well as create reports for unique questions and situations. The interactive design of the information system allows you to analyze all costs directly after their entry in the SAP System and to follow their development down to the document level. You can execute all reports available on-line in the background, which is especially useful for large volumes of data.

In the information system for the Activity-Based Costing Component (CO-ABC), you can use reports to analyze cost and quantity flows. To evaluate the cost and quantity flows from business processes to cost objects, you can use the reports from the information system in the Product Cost Controlling component (CO-PC). The assignments to profitability segments are documented in the profitability and market segment analyses (CO-PA).

Features

The information system includes all functions for:

- Report call up
- Report maintenance
- Report definition with the Report Painter and Report Writer tools

You can have an overview of the contents and the requirements of the report under Interactive Information System [Page 438] or under Important Standard Reports [Page 463].

PC Interface

The SAP System supports report downloads to PC workstations. You then have the option of working further on reports with other tools, such as Microsoft® Excel.

Report/Report Interface

You can use the report/report interface from a report display for interactive call up of any rows or columns in other reports. This permits you to view entire "analysis chains" – for example, you can branch from a business process report to a line item report, or to a display of posting documents, in order to examine cost origins in detail.
### Processes

<table>
<thead>
<tr>
<th></th>
<th>Actual</th>
<th>Plan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advertising</td>
<td>20000</td>
<td>17000</td>
</tr>
<tr>
<td>Sales planning</td>
<td>50000</td>
<td>12000</td>
</tr>
<tr>
<td>Shipping</td>
<td>45000</td>
<td></td>
</tr>
<tr>
<td>Order entry</td>
<td>70000</td>
<td>68000</td>
</tr>
</tbody>
</table>

#### Report/Report Interface

**Layout**

You can change the report layout flexibly. For presentation purposes, you can display numbers easily in graphical form.

**Report List**

The SAP System offers a great number of standard reports for common evaluations. You can use Report Painter for simple, quick definition of customer-specific reports.
Interactive Information System

Use

In the interactive information system you can evaluate all business transactions directly on the screen. The R/3 System offers a wide variety of standard reports that you can change or adjust to include other analysis functions. The advantages of the interactive information system include the real-time access to posted data and the corresponding analysis with the aid of totals, summarization, and creation of key figures.

Features

The ABC reports are made up of eight sections.

- Plan/Actual Comparison [Page 467]
- Target/Actual Comparison [Page 477]
- Planning Overview [Page 484], also see Planning Overview for Processes [Page 486]
- Price Report [Page 491], also see: Price Report for Business Processes [Page 492]
- Master Data Index [Page 533]
- Business Process Attributes [Page 535]
- More Reports [Page 545]

Activities

- For more information on how to use reports on Planning, Prices, Line Item Postings and Master Data, go to:
  - Execute Online Planning Overview [Page 487]
  - Display the Price Reports [Page 497]
  - Execute Online Line Item Reports [Page 506]
  - Calling Up Master Data Indexes [Page 534]
- For information on how to use Report-Painter Reports (Plan/Actual and Target/Actual Comparisons, Reports on Business Process, and other reports) see Report-Painter-Reports [Page 440].

⚠️ Report-Writer and Report-Painter Reports are available only in the delivery clients. You must transport reports to the target client and generate them there. To do so from the Implementation Guide (IMG) for the Activity-Based Costing component (CO-OM-ABC), choose Information System → Standard Reports → Import standard reports [Ext.], or Generate standard reports [Ext.].
You require custom report definitions only if the standard report structures do not satisfy your individual requirements.
Report Painter Report

Use

You can use a Report Painter [Ext.] to create a report for analyzing all quantities and values posted during planning and actual data allocation. You can create the reports using either original data from the database or data from extracted files.

If you create reports using original data, it must be sorted and retrieved first on the basis of your desired criteria. Depending on the volume of data, this can be very time-consuming. This is the case, for example, with cost center area reports involving numerous cost elements [Ext.] and activity types [Ext]. A data selection from the original database is only recommended when a near-time and current review of data is absolutely necessary in Controlling (CO).

For most other purposes, you should create temporary or period-based extracts [Ext.] for analyses, especially for those involving larger data volumes such as area reports. For example, you can create daily or weekly area reports based on the data stored in a given extract.

Features

If extracts exist that match your selection criteria when you call up the report, the system offers the extracts for your selection.

When you leave reports based on selections from the database, the system indicates that you have the option of saving the report data as an extract.

You can analyze the reports saved in extracts at any time without undue strain on the system performance.

⚠️ The system deletes the extracts if the release status is changed (for example from Release 4.0 to 4.5). Once a maintenance level has been changed (for example from Release 4.5A to 4.5B), the extracts that you saved previously are available once again.

You can use the Implementation Guide (IMG) to make user settings [Ext.] for selected or all users that ensure the display of the most current extract during report callup. In addition, you can determine the selection parameters for report callup for individual users or for all users per component. If extracts exist that match the selection parameters given during report callup, and if you arranged to have the most current extract automatically displayed each time, you do not need to use the selection screen before report callup.

⚠️ You should run extensive reports in the background or during off-peak periods (see Period-Based Information System [Ext.]).

The system includes a variety of standard reports. You can find an overview of all standard reports in the standard report tree of the relevant Controlling component (CO). The most important reports are described in Important Standard Reports in Cost Center Accounting [Ext.].

⚠️ Do not change the structure of the predefined standard reports. If you wish to change reports, create new reports by copying the standard reports and make the
appropriate changes to the new reports. For more information on creating your own reports, see the SAP Library under AC - Financials → FI - Financial Accounting → FI Special Purpose Ledger → FI-SL-Sets [Ext.] and Report Writer [Ext.].

If you use transfer prices (multiple value flows), the information system for the Overhead Cost Controlling component (CO-OM) can access all valuations. The selection field for valuation appears after you activate the multiple valuations. In reporting, you can make target/actual comparisons between plan values in the operational valuation and the actual values in other valuations.

You can enter a default in the user settings under report currency (see the Cost Center Accounting IMG under Information system → User Settings → Specify User Settings [Ext.]).

If you do not use transfer prices, the valuation field does not appear in the selection screen.

For more information on multiple valuation approaches/transfer prices, see Multiple Valuation Approaches [Ext.] and also the SAP Library under EC Enterprise Controlling → EC Profit Center Accounting → Transfer Prices [Ext.].
Executing Report Painter Reports

1. Most of the standard reports that you can call up in Cost Center Accounting are Report Painter [Ext.] reports. To access a Report Painter report, choose Cost Center Accounting → Information system → Reports for Cost Center Accounting.

2. Select the report group and the report required, and start it using a double-click.

   If the following prerequisites are fulfilled, the system does not display the selection screen, but either the selection screen for extracts [Ext.] or the most current extract matching the selection criteria (see step 10):
   - User-specific selection criteria is stored in all the components within Overhead Cost Controlling for all the selection screen fields (see Customizing for Cost Center Accounting under Information System → User Settings → Specify User Settings [Ext.]).
   - Extracts exist that match these selection criteria or a variation that encompasses the selection criteria.
   - In the implementation guide (IMG) in the settings for extract management, the settings for your user or the standard settings require that existing extracts are used when you call up reports (see: IMG for Cost Center Accounting, under Information System → Specify Settings for Extract Management [Ext.]).

   You can also store settings in the IMG which automatically call up the most current extract. In this case, the system does not display the extract list.

3. In the Report Painter report selection screen, enter the report parameters under Value selection. Report parameters are:
   - Controlling areas [Ext.]
   - Fiscal year [Ext.]
   - From period
   - To period
   - Version [Ext.]

   Under Set selection, enter the report objects for which you want to call up a report. You can enter individual values, value intervals, or groups. To enter multiple individual values or intervals, choose Multiple selection.

   The order of the report parameters and report objects on the selection screen is specified in the library (that uses the report painter report) by entering the position for each characteristic (see: Library [Ext.]).

   If you created a selection variant [Ext.] for the report objects (see: Selection Variant [Page 43] and the Cost Center Accounting IMG under Define Selection Criteria [Ext.]) call up the report for this selection variant. To do so, enter the <name of the selection variant> under Group +.

   The selection screen is dependent on the corresponding report. Some reports require more parameters than others.
You can save default selection criteria for calling up Report Painter reports. You can define these either as user-specific or as standard settings (see the Cost Center Accounting IMG under Information System → Specify User Settings [Ext.]).

4. Create extract

If no extracts exist that match your selection criteria, you should save the report in an extract. You can evaluate the dataset again at a later time by choosing the corresponding extract (see: Managing Extracts [Page 449]).

To do so, choose Extract parameters.

Enter the following in the dialog box that appears:

- Activate the Create extract indicator.

- Description:

  Enter a descriptive text for the extracts. At a later time, you can display the report without having to repeat your entries in the selection screen. To do so, select the corresponding extract.

You cannot use the description to find the extract in the system. The system uses the selection criteria you enter and the report group to find the extract.

- Password

  One password, which you must enter twice, protects your saved selection data from unwanted access by other users. If, later on you wish to display an extract for which you created a password, you need to enter the password.

- Expiration date

  If you want to delete the extract automatically after a given time, enter the number of days in the Expires in field, or the date in the Expires on field.

  If you do not want the extract to be deleted, choose No expiration date. This is useful, for example, if you are require report at an unspecified later date, or if the report run takes an extremely long time.

  The system deletes the extracts if the release status is changed (for example from Release 4.0 to 4.5). Once a maintenance level has been changed (for example from Release 4.5A to 4.5B), the extracts that you saved previously are available once again.

- Choose Continue to close the dialog box and save your entries.

If you wish to execute a report that does not have an extract matching the selection criteria, the system inquires (when you leave the report) whether you want to save the report in an extract. If you choose Yes, the Create Extract dialog box appears.
Activity-Based Costing (CO-OM-ABC)

If you change a report without it changing the selection screen, then the system is still able to locate previously saved extracts for the report. If by changing the report, you change the selection screen, then the system can no longer locate the saved extracts using the selection criteria. However, these are still available in Extract Management (see: Managing Extracts [Page 449]).

5. Output parameters

Choose **Output parameters** to make further settings for data output.

- **Dates for reading master data**

  You can assign time-based dependencies to the master data texts as well as the Controlling objects. You therefore decide whether the system reads the master data on the current date or on a fixed date that you entered. The system checks whether the Controlling objects have valid master data records.

- **Output medium**

  Under **Output medium** you enter the medium in which the report should be output. The following methods are available:

  - You can display the report on the screen or print it.
  - You can display the report on the screen or print it using the departmental printer. If a departmental printer is defined in the master data and can be located by the system for the current report, the printer will be used by default.
  - You can release the report as a text file. Enter a file name in the dialog box that appears. This is the name of the text file to which the Report Painter output is downloaded, on either the application server or the presentation server. Decide whether to save the report in a **Local PC file** or as a file on a **Network server**. If you save the report on a server, enter the export format (spreadsheet or word processing). If you save the report on your PC, enter the format, and the relevant program to be started with the report, or enter other parameters for the application.

  You can release your report in Microsoft® Excel format.

  You can release your report to the Executive Information System (EIS).

  You can send your report to a selected user. Enter the name of the SAPOffice user and set the indicator to specify the recipient type (such as P for **Personal distribution list**).

  You can decide not to release the report at all. In this case, the system only saves the selection data. If you choose **Execute** after you leave the dialog box, the system gives you an overview of the number of selected, processed, and summarized records in a selection log. You have the option of selecting your report at a later time from the list of existing extracts (see step 10).

6. Data source

You can choose the following options under **Data source**:

- **Display extract**

  If you choose **Display extract**, the callup of the Report Painter report offers a list of existing extracts that match the selection criteria.

  The standard system default is **Display extract**. You can save standard and custom extract management settings in the Implementation Guide (IMG) under **Information**
Executing Report Painter Reports

System → User Settings → Determining Extract Management Settings [Ext.]. In the IMG, you also specify whether the system displays a list of all matching extracts or whether it displays the most current extract automatically.

– New selection

Choose New selection if you want the report to call up the current data from the database, as long as the user has the authorization. This is useful if you need the most current, second-by-second data available.

– Read data from archives

This option applies only to those reports allowing you to read standard reports from archived data [Ext.].

7. If you saved the option for variations in the report definition, variation maintenance appears when you execute the report. To make entries, choose Variation.

In the dialog box, determine for which group nodes (such as Cost Center Groups [Ext.]) and/or individual values (such as Cost Centers [Ext.]) of a selected group a report is to be issued.

The default is based on the given report definition.

– The indicator Do not expand causes only one report to be issued for the highest node of the selected group.

– The indicator Expand causes reports to be issued for all nodes and individual values in the selected group.

– The indicator Individual values causes reports to be issued only for individual values in the selected group.

Choose Detail for further variation settings (see Variations [Page 453]).

If you enter an object group in the selection screen (such as cost center group or cost element group [Ext.]), and you activated the variation in the report definition, the system automatically carries out variation by choosing Breakdown. If you do not want to use variation, change the setting under Variation.

8. The following functions are also available on the selection screen:

– You can delete entries for individual selection rows or all entries for the selection (see: Deleting Selections [Page 508]).

– You can save your entries in a variant in the initial screen fields and get them again when you next call up the initial screen (see: Processing Variants [Page 509]).

9. To run the report, select either Execute or Program → Execute.

10. If there are already extracts in the system for your selection criteria, and if you chose Display extract under Data source (but did not set the indicator Display current extract in the IMG), then the system displays a list of the existing extracts in the Choose Extracts in the dialog box, before executing the report.

– Select the extract that you wish to access.
Executing Report Painter Reports

The dialog box list also appears if an extract exists for a variation that encompasses a report matching your selection criteria. The system directly calls up the report in the variation matching the selection data.

– If you do not want to display any of the existing extracts, leave the dialog box by choosing Cancel and change the Data source setting to New selection (see step 6).

The following ABAP list viewer functions are available in the extract list: (see: ABAP List Viewer [Ext.])

  Sorting Ascending or Descending Lists [Ext.]
  Setting and Deleting Filters [Ext.]
  Defining Current Layouts [Ext.]
  Finding Terms [Ext.]
  Printing Lists [Ext.]

If, in the IMG activity Determining Extract Management Settings [Ext.], you selected the Display current extract indicator, the system displays the current extract without displaying the list.

Result

• When you select the report based on your entries in the selection screen for the first time, the system searches for the data in the database using your selection criteria and prepares and presents the data based on the report definition. When you leave the report, the system inquires whether you want to save an extract for this report. If you choose Yes, the Create Extract dialog box appears (see step 4: “Create extract).

• When you call up the report via an extract, the system uses the data from the extract during report execution.

For more information on the functions available in your report, see Functions for Output of Report Painter Reports [Ext.].
Functions for Report Access

Use

The graphic lists the steps required for executing a report.

Use

The graphic lists the steps required for executing a report.
User Settings

Use
Under user settings, you enter which values the selection screens are to contain when you call up the reports. These user settings include:

- Selection criteria
- Planning period
- Reporting timeframe
- Reporting currency
- Other details (actual valuation for example)

In Customizing for the relevant Controlling application component or in the relevant area menu, you can define these settings per user or enter standard settings. The standard settings apply to all users for whom no user-specific settings apply.

For more information, see Customizing for Cost Center Accounting under Information System → User Settings → Specify User Settings [Ext.].
Managing Extracts

Use

If you save reports in extracts, you can access this data at any time without an additional selection run in the database.

You can create extracts:

- Before you execute the report, by choosing Extract parameters in the selection screen and selecting Create extract in the dialog box
- When you leave a report, by choosing Yes when the system inquires if you want to create an extract for the report

With extract management you can:

- Display extracts
- Delete extracts
- Print extracts
- Change the expiration dates of extracts

If you make changes to a report definition that affects the selection screen, then the system cannot use the corresponding selection criteria to locate extracts already saved. However, these are still available in Extract Management.

Prerequisites


Procedure

1. From the menu of the relevant Overhead Cost Controlling component (such as Cost Center Accounting) or in Cost and Revenue Element Accounting, choose Information system → Tools → Extract directory.

2. On the selection screen for extract maintenance, enter the criteria according to which you want to select extracts.
   - If you are searching for a given extract, enter the extract name.
   - Decide whether to display only those extracts created by you or another user, or whether you want to display extracts regardless of creator.
   - Decide whether to display extracts from past time frame, or whether you want to display all extracts regardless of creation date.
   - You can select extracts from a particular Report Group [Ext.] or from a report group interval.
   - If you want to limit the extract selection further (such as by characteristic, value, or group), choose Further selection criteria. You can extend the number of selection criteria as you desire, or delete criteria you already entered.
Managing Extracts

3. Choose **Execute**. The system displays a list of all extracts that meet your selection criteria.

4. **Display extract**
   
   To display an extract, select the extract and choose **Display**. The system displays the relevant extract.

5. **Delete extracts**
   
   To delete the extract, select it and choose **Delete**. If you choose **yes** when the system inquires if the selected extracts are to be deleted, the system then deletes those extracts.

   The system deletes the extracts if the release status is changed (for example from Release 4.0 to 4.5). Once a maintenance level has been changed (for example from Release 4.5A to 4.5B), the extracts that you saved previously are available once again.

6. **Print extracts**
   
   – To print the extract, select it and choose **Print**.
   
   – Enter the printer from which you want to print the extract.
   
   – Under **Spool control data**, decide whether to print immediately or whether to create a spool order.
   
   – If you chose **Background printing** then you need to enter the start time for the print request.
     
     To do this, either choose **Start request immediately** or enter the start date and the start time for the print request.
   
   The system prints the selected extracts.

7. **Change expiration dates of extracts**
   
   – To change the expiration dates of extracts, select the extracts from the extract tree that you wish to set to the same date.
   
   – Choose **Change expiration date**.
   
   – If you want to delete the extract automatically after a given time, enter the number of days in the **Expires in** field, or the date in the **Expires on** field.

   If you do not want the extract to be deleted, choose **No expiration date**. This is useful when, for example, you are going to run the report at an unspecified later date, or if the report run takes an extremely long time.

   – Choose **Confirm** to close the dialog box and save your entries.

   Before you execute a report, you can call up extract management from the corresponding selection screen by choosing **Environment → Extracts**. This enables you to have all the functions available:

   – Display
   
   – Print
   
   – Print in the background
Managing Extracts

- Change the expiration date
- Delete
- Select/Deselect

For information on extract management, see Customizing for Cost Center Accounting under Information System → User Settings → Specify Settings for Extract Management [Ext].
Report Call-up with Extract Management and User Settings

Purpose

System administration can execute reports for business processes at period-end closing for the persons responsible and save the reports in extracts. Reports with data selected for individual business processes or business process groups appear with a variation limiting the report information to an individual/group report.

System administration can set user parameters for the persons responsible so that the reports automatically access the latest extracts.

Each person responsible sees only the relevant data. Report selection need not be run repeatedly, leaving the SAP System performance significantly improved.

In addition, the persons responsible cannot navigate in other extract areas without authorization.

System administration would have the authorization to select the data for the extract. However, it will not be able to display reports without authorization.

The managers responsible for the business processes would have the authorization to display reports relating to the responsibility area. However, they will not have the authorizations to select data or create extracts.

Process Flow

1. Your organization assigns authorizations for system administrators and the responsible persons for business processes.
2. System administration decides to provide all users the reports in EURO.
3. The system administration generates the report with the variation and saves it in extracts.
5. The responsible persons save the report selection criteria in their user-specific settings.
6. The person responsible calls up the report.

Result

Each person responsible for a business process can display the relevant reports quickly and easily.

See also:

Example Process: Report callup with Extract Administration [Ext.]
Variation

Use

Variation makes it possible to create an individual report for each element of a group, which you defined in the general data selection. When you call up the report, the variation makes the selection for the entire group. You can then navigate interactively during the report output within the hierarchical structure of the group to display a report for every element in the group.

You can decide whether individual characteristics in the general selection are to be displayed only with a totals report, only individual reports for the characteristic values, or both total reports and individual reports.

Variation is only possible in reports for which at least one general selection characteristic is a group or a variable for a group.

The advantage of variations is that you only need to carry out the selection once.

For example, you can create an individual report for each group node and end node in a cost center hierarchy.

The cost center hierarchy is used here as an example for variation. However, you can carry out variation for any group for which you select a report.

Variation is useful especially for executing reports for an entire cost center group in a background run, so that you can move quickly between the various cost center reports.

In addition, you can use variation at period-end closing to create and print a complete report for the cost center group or the organization itself, without having to create reports one-by-one for each cost center.

Variation is possible only if you activate it in the report definition. The procedure is described in General Selections. For activation in the Report Writer report, see the SAP Library under AC - Financials → FI - Financial Accounting → FI Special Purpose Ledger → Report Writer.

If you enter an object group in the selection screen (such as cost center group), and you have activated a variation in the report definition, the SAP System automatically executes variation. If you do not want to use variation, change the setting under Variation.

If you decided to generate extracts before calling up the variation, the system generates an extract for each report in the variation (see Executing Report Painter Reports).

We recommend you execute variation for the entire organization or for large areas only in an off-peak period in a background job.
Variation

Activities

To set up a variation using general selections for a report, choose Edit → General selections → Variation.

If you decide on several characteristics, determine the sequence they should appear on selection screen using the characteristic name indicator.

In the dialog box Variation/Eliminate Internal Business Volume, the system displays the general selection characteristics that have an interval, group, or variable as characteristic value. You can define a variation for each of these characteristics.

The default setting is Do not break down. No variation is carried out for the characteristic. The system displays a report in which the intervals and groups of the characteristic are totaled.

If you choose Individual value for a characteristic, the system performs a variation for the characteristic down to individual values. The system displays a report for all the individual values of the interval or of the group.

If you choose Expand, the system displays a report for all nodes and individual values in the interval or group.

If you wish to select a particular variation area for report generation, or decide on the release of reports for individual values, choose the selection screen for report call-up.

In the report you can then display individual reports for the groups or individual values in the variation area. (See Variation [Ext]).
Executing Variations

Procedure

1. On the Cost Center Accounting initial screen, choose Information system → Reports for Cost Center Accounting.
2. Select the desired report and start it.
3. Make entries in the selection screen as described in Executing Report Painter Reports [Page 442].
4. If you activated variation in the report definition, the Variation screen appears for variation maintenance.
5. In the dialog box Additional Entries: Variation you decide which nodes and/or Cost Centers [Ext.] from the selected Cost Center Group [Ext.] are released. The default settings from the dialog box are based on the entries from report definition:
   - If you choose the indicator Do not breakdown, only one report for the highest node of the selected group is released.
   - If you choose the indicator Breakdown, reports are released for all nodes and cost centers.
   - If you choose the indicator Individual values, reports are released exclusively for the individual cost centers in the group.
6. If you wish to make additional special settings for variation, choose Detail.
7. Enter the variation area in the following dialog box.
   The variation area contains the hierarchy levels in the report. A hierarchy level represents a level in the cost center group which you have selected for the report. The top node in the cost center group is located on hierarchy level 1. Cost centers represent the lowest level. They are always on a hierarchy level that has a value greater than 1. By setting an interval of 1-3, you establish a variation executed for the highest three hierarchy levels in the cost center group.
   The numbering of the variation levels goes from highest to lowest (top-down). The summarization levels in a report, on the other hand, are numbered from lowest to highest (bottom up). The number of asterisks (*) before a report row identifies the summarization level. The manner of viewing a variation is thus different from that for the summarization levels. Summarization Level [Ext.]
8. Activate or deactivate the Individual value indicator.
   The Individual value indicator determines whether the variation should be carried out to the cost center level.
   - If the indicator is activated, a report will be generated for each cost center.
   - If the indicator is inactive, only cost center group data will be reported and a summarized report comprising the cost centers will be generated.
   The following relationship exists for variation indicators and variation area/individual value.
Executing Variations

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Variation Area</th>
<th>Individual value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakdown</td>
<td>1 to 99</td>
<td>Active</td>
</tr>
<tr>
<td>Individual values</td>
<td>1</td>
<td>Active</td>
</tr>
<tr>
<td>Do not breakdown</td>
<td>1 to 1</td>
<td>Inactive</td>
</tr>
</tbody>
</table>

If the entry from report definition or the last entry for the variation is identical to one of the indicators, the dialog box is displayed with the corresponding indicator when variation maintenance is called up.

If *Individual values* was chosen, this setting is displayed in the variation maintenance dialog box and in the corresponding detailed screen, but this cannot be changed. The reports will always be executed only for the cost centers in the selected cost center group.

If the entry from report definition or the last entry for the variation is identical to one of the indicators, the dialog box will be displayed with the corresponding indicator when variation maintenance is called up.
Example: Variation

The following graphic shows a section of a Cost Center Hierarchy [Ext.] as an example.

Step

<table>
<thead>
<tr>
<th>Step</th>
<th>Nodes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>ACME INC.</td>
</tr>
<tr>
<td>2</td>
<td>Admin, Production</td>
</tr>
<tr>
<td>3</td>
<td>Warehouse, Buildings, Motor Pool, Production: Unfinished, Production: Finished Products</td>
</tr>
<tr>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Selection Object: Acme Inc.

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakdown</td>
<td>All group nodes and individual values</td>
</tr>
<tr>
<td>Individual values</td>
<td>200 to 510</td>
</tr>
<tr>
<td>Do not breakdown</td>
<td>Acme Inc. only</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Variation Area</th>
<th>Individual Value</th>
<th>Report</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 to 4</td>
<td>Inactive</td>
<td>As above, but excluding cost centers 200 to 510</td>
</tr>
</tbody>
</table>
Multiple Selection

Multiple Selection

Use

Multiple selection allows you to process multiple combinations of data entry fields (that is, characteristics from the initial screen) in a single run. Multiple selection lets you combine several selections and create specific summarized reports for individual group nodes for your Cost Centers [Ext.], Cost Center Group [Ext.], or for other parameters such as Fiscal Year [Ext.] or Controlling Area [Ext.].

Multiple selection and variations simplify the creation of multiple reports of the same type using numerous different data entries. The following table lists the differences between multiple selection and variation:

<table>
<thead>
<tr>
<th>Multiple Selection/Variation</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Multiple selection</td>
<td>Variation</td>
</tr>
<tr>
<td>No direct report output</td>
<td>Direct report output following variation</td>
</tr>
<tr>
<td>No individual value detail</td>
<td>Individual value detail</td>
</tr>
<tr>
<td>Poor runtimes because a selection is required for each group node</td>
<td>Better performance because only one selection is required</td>
</tr>
<tr>
<td>All characteristics, value, or set variables can be varied</td>
<td>Only characteristics in general selections can be varied</td>
</tr>
<tr>
<td>No changes to report definition required</td>
<td>Must be activated in report definition</td>
</tr>
</tbody>
</table>

With multiple selection you can control the degree of detail for a group and the subordinate subgroups by means of a fixed indicator and a hierarchy indicator.

Fields in the Initial Screen for Multiple Selection

<table>
<thead>
<tr>
<th>Controlling area</th>
<th>From 0001 To 0003</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiscal year</td>
<td>From 1991 To 1992</td>
</tr>
<tr>
<td>Version</td>
<td>......</td>
</tr>
<tr>
<td>Cost center</td>
<td>......</td>
</tr>
<tr>
<td>Cost element</td>
<td>......</td>
</tr>
</tbody>
</table>

As a result of a multiple selection with these input values, the system saves the following combinations of controlling area and fiscal year:

<table>
<thead>
<tr>
<th>Combination</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
</table>
All other criteria remain unchanged. With multiple selection you create six different selections for six different reports of the same report type. These reports are not immediately visible on the screen. You receive a listing of the data entry values (such as cost element groups) for which reports were generated. You can view the report data in the spool file. For further information, see the SAP Library Financials → FI Financial Accounting → FI - Special Purpose Ledger → Report Writer [Ext.].
Executing Multiple Selections

1. To carry out multiple selection from the Cost Center Accounting initial screen, choose Information system → Tools → Report Painter.


3. Enter the required Report Group [Ext.] in the initial screen. User F4 help to choose from the list of available report groups.

4. Choose Multiple selection or Utilities → Multiple selection.

5. In the initial screen of multiple selection you vary the data selection criteria by entering value intervals and by activating or deactivating indicators.

   **Fixed Values:**
   If you enter fixed values such as From period and To period, you cannot carry out multiple selection.

   **Vary Values:**
   Interval values in the Controlling Area [Ext.], Fiscal Year [Ext.], and Version [Ext.] fields enable you to create multiple reports involving all possible combinations of fiscal year, version and controlling area.

   **Vary Sets:**
   For cost center and cost element groups you activate/deactivate the fixed and hierarchy indicators.

   a) If the fixed indicator is activated, a report is generated only for the entered cost center or cost element group. When the fixed indicator is deactivated, the group detail is expanded. The degree of detail is determined by the hierarchy indicator.

   b) If the hierarchy indicator is active, the system generates reports for all subordinate groups in addition to the selected cost center group or cost element group. If the hierarchy indicator is inactive, the system generates reports only for the lowest cost center or cost element groups in the hierarchy.

6. Choose Output parameters to select further parameters. Choose Create extracts to make the necessary settings for Extracts [Ext.]. See the options under Executing Report Painter Reports [Page 442] and steps 4 and 5 above.

7. Test run:

   If the indicator Test run is active, variations executed online will only generate a log of the variations in values posted for the report output.

   If you do not activate the indicator, the system releases reports based on the entries you made. Depending on the output medium, the output lists are written to the spool file or exported to a sequential file.

Because multiple selection is very time-consuming, you should check before report output whether the reports were given the correct entry values. This is especially important if value intervals are among the entry values to be canceled. To do so, activate the Test run indicator.
8. Menu Entries and Functions Menu entries and functions in the initial screen for multiple selection have the same functional capabilities as those in the initial selection screen. See: Executing Report-Painter Report (Page 442).

9. Display and Print Reports

You can review and print files which have been created in multiple selection in the spool file.

To do so, choose:

*System → Services → Print request*

- In the *Spool* initial screen, choose *Joto → Overview*.

  You receive a list of the print jobs contained in the spool file.

- Highlight a report and choose *Spool request → Display*, to display the corresponding report on your screen.

- Select a report and choose *Spool request → Print* to go to the initial screen for printing entries. Enter an output device as well as the number of copies and choose *Print*.

⚠️

If you wish to print one or more reports for which you have multiple selected data entry values, you must activate the *Output reports* indicator in the initial screen of multiple selection and deactivate the *Test run indicator*. 
Example: Multiple selection

The following cost center groups are available:

- Warehouse
- Buildings
- Motor Pool
- Production: Unfinished
- Production: Finished Products

The table shows the various possible combinations of fixed and hierarchy indicators. The value entered is Acme Inc.

### Fixed/Hierarchy Indicator

<table>
<thead>
<tr>
<th>Fixed</th>
<th>Hierarchy</th>
<th>Selected Groups/Values</th>
<th>No. of Reports</th>
</tr>
</thead>
<tbody>
<tr>
<td>x</td>
<td>&quot; &quot;</td>
<td>Acme Inc.</td>
<td>1</td>
</tr>
<tr>
<td>&quot; &quot;</td>
<td>x</td>
<td>All groups</td>
<td>8</td>
</tr>
<tr>
<td>&quot; &quot;</td>
<td>&quot; &quot;</td>
<td>“Warehouse”, “Building”, “Motor pool”, “Production: Unfinished”, “Production: Finished Products”</td>
<td>5</td>
</tr>
</tbody>
</table>
Important Standard Reports

Use
The SAP system provides a list of useful standard reports for each phase of the implementation as well as for the continued and successful management of a productive Activity-Based Costing. Users can modify these reports to meet their needs, even if they deal with exceptional issues. The interactive interpretation of the system's reporting allows you to follow all costs to their origin, even down to the document level. The system categorizes the reports into three large themes.

- Reports to verify the process model
- Reports for process and resource analysis
- Reports for production cost and profitability analysis

Reports to verify the process model
A series of reports serves to check process models built up in the SAP System; focus is on completeness and consistency. The principle questions are addressed by the reports listed below:

**How do I verify the process model?**
- Planning Overview for Bus. Processes
- Comparison of Scheduled/Planned Process Quantities
- Price Report for Business Processes
- Business Processes Plan Line Items
- Master Data Report for Processes
- Master Data Report for Cost Elements
- Master Data Report for Statistical Key Figures
- Hierarchy Explosion for Processes

**What are the Sender/Receiver Dependencies/Relationships?**
- Hierarchy Explosion for Processes

**How do I ensure a consistent enterprise process plan?**
- Planning Overview for Bus. Processes
- Comparison of Scheduled/Planned Process Quantities

**How do I generate and verify an Activity-Based Budget?**
- Planning Overview for Bus. Processes
- Comparison of Scheduled/Planned Process Quantities
- Price Report for Business Processes
Important Standard Reports

Reports for process and resource analysis

One of the goals of Activity-Based Costing is to optimize the business processes. With unused resource capacity must either be reduced step by step to effect cost savings potential, or they are applied to value-added activities to cope with future growth. Both scenarios increase the value of the enterprise in the medium term. To cover the potentials to optimize in these areas, the following reports are provided:

Where is the potential to optimize?

- Process List Plan/Actual Costs
- Target-Actual Comparison for Processes
- Process List Target/Actual
- Variance Analysis for Business Processes
- Comparison Plan-Actual Prices
- Business Process: Value Added Partner
- Process: Value-Added Development

What Does a Process Cost?

- Plan-Actual Comparison for Processes
- Process List Plan/Actual Costs
- Business Process: List With Partners (per cost elements)
- Business Process: List With Partners
- Process List Target/Actual Costs

What resources are causing these costs?

- Plan-Actual Comparison for Processes
- Business Process: List With Partners (per cost elements)
- Business Process: List With Partners
- Business Processes Plan Line Items

Does the resource consumption concur with plan?

- Plan-Actual Comparison for Processes
- Process List Plan/Actual Costs

Data for Benchmarking?

- Price Report for Business Processes

Is outsourcing possible?

- Price Report for Business Processes

What are the utilization and efficiency of my resources like?

- Cost Centers: Actual-Plan Variance
Important Standard Reports

What is the efficiency of the process in the enterprise like?
- Cost Centers: Actual-Target Variance
- Target-Actual Comparison for Processes
- Process List Target/Actual
- Variance Analysis for Business Processes

How is the process utilized?
- Plan-Actual Comparison for Processes
- Process List Plan/Actual Costs
- Business Process: List With Partners (per cost elements)
- Business Process: List With Partners
- Business Process Actual Line Item
- Business Processes Plan Line Items

Does the resource utilization agree with plan?
- Plan-Actual Comparison for Processes
- Process List Plan/Actual Costs
- Business Process: List With Partners (per cost elements)
- Business Process: List With Partners

Reports for product/service costs and profitability analysis
The third group of reports provides information regarding the cause of the assignment/consumption of the process through its process driver.

They can serve as a base for decisions at the operational as well as at the strategic levels. The high integration of the Activity-Based Costing in the SAP System allows you to constantly trace the costs and profitability of individual customers and products. This information allows you to take corrective measures immediately when needed. The results of these calculations also serve strategic aims in pricing of products and services. Furthermore, this information also impacts the profitability planning for the range of products and the enterprises' commitment to specific market segments.

Reporting in other CO areas, such as Product Costing, or Profitability Controls, also offers detailed answers to the following questions:

How are individual processes utilized?
- Plan-Actual Comparison for Processes
- Process List Plan/Actual Costs
- Business Process: List With Partners (per cost elements)
- Business Process: List With Partners
- Business Process Actual Line Item
- Business Processes Plan Line Items
Important Standard Reports

**Does the resource utilization agree with plan?**
- Plan-Actual Comparison for Processes
- Process List Plan/Actual Costs
- Business Process: List With Partners (per cost elements)
- Business Process: List With Partners

**What has placed the processes in demand?**
- Business Process: List With Partners (per cost elements)
- Business Process: List With Partners
- Business Process Actual Line Item
- Business Processes Plan Line Items

**How do I determine fair prices for shared services?**
- Price Report for Business Processes

**How do processes influence the costs of my products or services, or the market segments?**
- Business Process Actual Line Item
Plan/Actual Comparison

Use

The plan-actual comparisons are all Report-Painter Reports [Page 440]. You answer questions regarding process and resource analysis, including:

- How expensive are my processes?
- What resources are causing these costs?
- Does the resource consumption concur with plan?
- How is the process utilized?
- Does it agree with the plan?

The following reports are available:

- Process List: Plan/Actual Costs [Page 468]
- Plan/Actual Comparison for Processes (per Cost Elements) [Page 470]
- Business Process: List with Partners (per cost elements) [Page 472]
- Business Processes: List with Partners [Page 474]
- List Cost Component Split [Page 476].
Process List Plan/Actual Costs

Use

The report, the initial one for business process analysis, shows actual and plan costs as well as their variances at level of the business process or business process groups.

It answers questions like:

- How expensive are my processes?
- Where is the potential to optimize?
- Does the resource consumption concur with plan?
- How is the process utilized?
- Does it agree with the plan?

Features

Selection

On the selection screen you can determine which data the system should evaluate.

You can control the report contents through the output parameter.

You can produce Extracts [Ext.] from this report.

For more information on working with Report-Painter reports (selecting, generating extracts, setting output parameter, and more) see Execute the Report-Painter Report [Page 442].

Output

The report has the following row and column structure:

Report rows:

In the report, every business process is assigned a row and each business process group shows a sum. You determine the row structure through the business process group.

The system then shows the debits and credits. Row Over/Under absorption balances the debits and credits.

Report columns:

The columns show the sums of actual and plan costs with their variances (absolute and percentage) per business process.

Report/Report-Interface

You can branch out to the following reports through the Report/Report-Interface [Ext.]:

- Business Process Plan Line Items [Page 504],
- Business Process Actual Line Items [Page 505]
You want to know which business process groups have the largest plan-actual variances. This information can point out whether a more detailed analysis is worth the effort.

To this end, enter a business process group in the selections. The system lists all subordinate process groups with their business processes. By using the sort function, you can sort the column Var. (abs.) or Var. (%) in ascending order: this provides a quick overview of which business process groups have the largest variance.

Assume that you want a "hit list" of your most expensive processes. To do this, produce a list of all processes and sort them in descending order in the plan or actual column.
Plan/Actual Comparison for Processes (per Cost Elements)

Use

The report compares the actual and plan figures in Activity-Based Accounting. The booked activity quantities, statistical bookings, and statistical key figures are shown next to the costs.

It answers questions like:

- How expensive are my processes?
- What resources are causing these costs?
- Does the resource consumption concur with plan?
- How is the process utilized?
- Does it agree with the plan?

The system lists the resource consumption of the chosen business process according to cost elements under Debit. These cost elements correspond to the allocation cost elements of the resources in demand.

On the Credit side you will see the provision of processes through the receiver object (for example, products, market segments) according to cost elements. You will find the values of all business processes with the same allocation cost element on the same row. If you produce a report for only a single business process, you will get only the cost elements of the chosen individual processes.

Statistical key figures often depict the resource driver quantities.

By using the sort function, you can arrange the cost elements into a "hitlist"; for example:

- you can view the cost elements in highest demand
- you can also view cost elements with the largest plan-actual variances.

Features

Selection

On the selection screen you can determine which data the system should evaluate.

The variation in this report is active.

You can control the report contents through the output parameter.

You can produce Extracts [Ext.] from this report.

For more information on working with Report-Painter reports (selecting, generating extracts, setting output parameter, and more) see Execute the Report-Painter Report [Page 442].

Output

The report has the following row and column structure:
Report rows:
The report has three sections.
1. Section: the system generates rows for each cost element and cost element group. Debits and credits are shown separately. The debit and credit bookings are totaled and balanced in row *Over/Under absorption*.
2. Section: listing of the statistical bookings according to cost elements.
3. Section: the booked statistical key figures are listed here.

Report columns:
The report shows a block of two columns for cost elements; the system displays a block for each, the statistical bookings and statistical key figures.
1. Section (cost elements), Column block 1: actual and plan costs within the analysis period, as well as the absolute and percentage variance
1. Section (cost elements), column block 2: actual and plan quantities within the analysis period, as well as the absolute and percentage variance
2. Section (statistical posting), all column blocks: statistical actual and plan costs as well as their absolute and percentage variance
3. Section (statistical key figure), all column blocks: actual and plan quantities as well as the absolute and percentage variance.

The system can show quantities only when the summed bookings in a row use the same unit of measure.

Report/Report-Interface
You can switch to the following reports through the Report/Report-Interface [Ext.]:

- **Business Process Plan Line Items [Page 504]**
- **Business Process Actual Line Items [Page 505]**
- Displaying Planning Long Text
- **Period Breakdown [Ext.]**
Activity-Based Costing (CO-OM-ABC)

Business Process: List With Partners (per cost elements)

Use

The report shows the actual and plan figures of a single business process or of a business process group with the booked partner entries (for example, business process or cost center/activity type) for each cost element. It shows debits (process consumption) and credits (process purveying).

The debit side answers questions like:
- How expensive are my processes?
- What resources are causing these costs?

On the credit side, you will find answers to questions like:
- What or who is consuming the business process?
- How is the process utilized?
- Does the process agree with planning?

Features

Selection

The report is especially informative when you produce it for a single business process. It shows the cost elements of the debits with the corresponding partner entries, and the allocation cost elements of the processes and the receiver objects.

On the selection screen you can determine which data the system should evaluate.

The variation in this report is active.

You can control the report contents through the output parameter.

Output

The report has the following row and column structure:

Report rows:

The report shows the debits along with the corresponding booked partner entries for each cost element. It shows which resources are being consumed.

The system shows the credits in a similar manner. You see which receiver objects absorbed the process, per element.

Debits and credits are balanced in row Over/Under absorption.
Report columns:
The report displays two blocks of columns:
Column block 1: actual and plan costs within the analysis period, as well as the absolute and percentage variance
Column block 2: actual and plan quantities within the analysis period, as well as the absolute and percentage variance

Report/Report-Interface
You can branch out to the following reports through the Report/Report-Interface [Ext.]:
- Business Process Plan Line Items [Page 504],
- Business Process Actual Line Items [Page 505]
- Period Breakdown [Ext.]
Business Processes: List with Partners

Use

The report shows the actual and plan costs of a single business process or of a business process group with the booked partner entries (for example, business process or cost center/activity type). It covers the sender-receiver relationship of the process, and thereby the partner-net or relationship that each process finds itself in.

It shows debits (process consumption) and credits (process purveying).

The debit side answers questions like:

• How expensive are my processes?
• What resources are causing these costs?

The credit side answers questions like:

• What or who is consuming the business process?
• How is the process utilized?
• Does the process agree with planning?

Features

Selection

On the selection screen you can determine which data the system should evaluate.

You can control the report contents through the output parameter.

You can produce extracts from this report.

Output

The report has the following row and column structure:

Report rows:

The report shows the debits along with the corresponding partner entries for each booked business process.

The system shows the credits in a similar manner.

Debits and credits are balanced in row Over/Under absorption.

Report columns:

The report displays two blocks of columns:

Column block 1: actual and plan costs within the analysis period, as well as their absolute and percentage variance

Column block 2: actual and plan quantities within the analysis period, as well as the absolute and percentage variance
Report/Report-Interface
You can branch out to the following reports through the Report/Report-Interface [Ext.]:

- Business Process Plan Line Items [Page 504].
- Business Process Actual Line Items [Page 505].
- Plan/Actual Comparison for Processes (per Cost Elements) [Page 470].
- Period Breakdown [Ext.].
List Cost Component Split

Use
This report lists the actual and plan costs as well as their variances for each of the selected business processes. The processes are listed according to cost components.

The name of the Cost Elements [Ext.] points to the source/cause of the costs (depending on how the component is maintained in the IMG).

You can see the precise assignments between cost elements and cost components through the Cost Component Structure [Ext.]

Features

Selection
On the selection screen you can determine which data the system should evaluate.

You can control the report contents through the output parameter.

You can produce extracts from this report.

For more information on working with Report-Painter reports (selecting, generating extracts, setting output parameter, and more) see Execute the Report-Painter Report [Page 442].

Output
The report has the following row and column structure:

Report rows:
For every process put out, the system itemizes the relevant cost components.

Report columns:
The report shows the actual and plan costs as well as their absolute and percentage variance.

Report/Report-Interface
You can switch to the Period Display [Ext.] through the Report/Report-Interface [Ext.].
Target/Actual Comparison

Use

The target-actual comparisons are all Report-Painter-Reports [Page 440]. You answer questions regarding process and resource analysis, including:

- How efficient is the process?
- Where can you optimize?

The following reports are available:

- Target/Actual Comparison for Processes (per Cost Elements) [Page 478]
- Process List: Target/Actual Costs [Page 480]
- Variance Analysis for Business Processes [Page 482]
Target/Actual Comparison for Processes (per Cost Elements)

Use

The report compares the actual and target figures in Activity-Based Accounting. The booked activity quantities and statistical key figures are shown next to the costs.

The report shows the target-actual variances (column \textit{Var.}), which, together with target-actual reports (\textit{Process Lists Target/Actual Costs [Page 480]}, \textit{Variance Analysis for Processes [Page 482]}) you can analyze in detail. It answers questions like:

- How efficient is the process?
- Where can you optimize?

Features

Selection

If you select just one business process, you can see which cost element(s) are causing the variance(s).

On the selection screen you can determine which data the system should evaluate.

The variation in this report is active.

You can control the report contents through the output parameter.

You can produce extracts from this report.

For more information on working with Report-Painter reports (selecting, generating extracts, setting output parameter, and more) see \textit{Execute the Report-Painter Report [Page 442]}. 

Output

The report has the following row and column structure:

\textbf{Report rows:}

The report has three sections.

1. Section: the system generates rows for each cost element and cost element group. Debits and credits are shown separately. The debit and credit bookings are totaled and balanced in \textit{row Over/Under absorption}.

2. Section: a list of booked statistical costs sorted per cost elements.

3. Section: the booked statistical key figures are listed here.

\textbf{Report columns:}

The report shows a block of six columns for costs and quantities; the system displays a block for each, the statistical bookings and statistical key figures.
1. Section one (cost elements):
   - Column block 1: actual and target costs within the analysis period, as well as the absolute and percentage variance
   - Column block 2: actual and plan costs within the analysis period, as well as the absolute and percentage variance
   - Column block 3: actual total costs, fixed and variable, as well as the percentage of fixed over total.
   - Column block 4: target total costs, fixed and variable, as well as the percentage of fixed over total.
   - Column block 5: plan total costs, fixed and variable, as well as the percentage of fixed over total.
   - Column block 6: actual and plan quantities within the analysis period, as well as the absolute and percentage variance

2. Section two (statistical bookings):
   - All column blocks: statistical actual and plan values within the analysis period, as well as the absolute and percentage variance

3. Section three (statistical key figures):
   - All column blocks: actual and plan quantities as well as their absolute and percentage variance

The system can show quantities only when the summed bookings in a row use the same unit of measure.

Report/Report-Interface

You can branch out to the following reports through the Report/Report-Interface [Ext.]:

- Business Process Plan Line Items [Page 504].
- Business Process Actual Line Items [Page 505].
- Displaying Planning Long Text
- Period Breakdown [Ext.].
Process List Target/Actual Costs

Use
The report shows the actual and target bookings for the business processes of an area in a totals row for each business process. You can get totals at the level of areas through business process groups.

It answers questions like:
- How expensive are my processes?
- Where is the potential to optimize?
- How efficient is the process?

Features
Selection
On the selection screen you can determine which data the system should evaluate.

You can control the report contents through the output parameter.

You can produce extracts from this report.

For more information on working with Report-Painter reports (selecting, generating extracts, setting output parameter, and more) see Execute the Report-Painter Report [Page 442].

Output
The report has the following row and column structure:

Report rows:
In the report, every business process is assigned a row and each node shows a sum. You determine the row structure through the business process group.

The system then shows the debits and credits. Row Over/Under absorption balances the debits and credits.

Report columns:
The report shows a block of six columns for costs and quantities:
- Column block 1: actual and target costs within the analysis period, as well as the absolute and percentage variance
- Column block 2: actual and plan costs within the analysis period, as well as the absolute and percentage variance
- Column block 3: actual total costs, fixed and variable, as well as the percentage of fixed over total.
- Column block 4: target total costs, fixed and variable, as well as the percentage of fixed over total.
Column block 5: plan total costs, fixed and variable, as well as the percentage of fixed over total.

Column block 6: actual and plan quantities within the analysis period, as well as the absolute and percentage variance

You want to know which business process groups have the largest target-actual variances. This information can point out whether a more detailed analysis is worth the effort.

To this end, enter a business process group in the selections. The system lists all subordinate process groups with their business processes. By using the sort function, you can sort the column Var. (abs.) or Var. (%) in ascending order: this provides a quick overview of which business process groups have the largest variance.

Report/Report-Interface

You can branch out to the following reports through the Report/Report-Interface [Ext.] :

- Business Process Plan Line Items [Page 504]
- Business Process Actual Line Items [Page 505]
- Target/Actual Comparison for Processes (per Cost Elements) [Page 478]
- Period Breakdown [Ext.]

April 2001
Variance Analysis for Business Processes

Use
The report lists the actual and target figures per business process group or simply business process.

The report supports the analysis of the variances, which are booked based on the Activity-Based Costing Variance Calculation [Ext]. Furthermore, the report is structured according to variance categories.

It answers questions like:

• How efficient is the process (from the input side)?
• Where is the potential to optimize (from the consumption side)?

Features

Selection
On the selection screen you can determine which data the system should evaluate.

You can control the report contents through the output parameter.

You can produce extracts from this report.

For more information on working with Report-Painter reports (selecting, generating extracts, setting output parameter, and more) see Execute the Report-Painter Report [Page 442].

Output
The report has the following row and column structure:

Report rows:
The report contains two sections:
1. All booked processes are listed for the input side; the system also displays the booked cost elements for each process.
2. The SAP-System makes a similar listing for the consumption side.

Report columns:
The report shows a block of three columns for the input as well as for the consumption sides.

• Section one, column one: actual and target activities as well as their absolute and percentage variances
• Section one, column two: actual and target activities as well as their absolute and percentage variances
• Section one, column three: Total variance, Price variance [Ext], Quantity variance [Ext], Resource-usage variance [Ext] and Remaining input variance [Ext].
• Section two, all columns: Total variance, Output price variance [Ext.], Output quantity variance [Ext.], Fixed-cost variance [Ext.] and Remaining variance [Ext.].

**Report/Report-Interface**

You can switch to the Period Display [Ext.] through the Report/Report-Interface [Ext.].
Planning Overview

Use
Planning overviews give you an overview of planning of individual objects in Overhead Cost Controlling (CO-OM), such as Cost Centers [Ext.], Business Processes [Ext.], and Orders [Ext.].

In the planning overview, you can drilldown planning by line items and periods. Planning is also structured by planning transactions, with the partner relationships displayed for secondary cost planning.

You can execute planning overviews online or in background jobs.

For more information, see:
- Executing Planning Overviews Online [Page 487]
- Executing Planning Overviews in Background [Page 488]

Features
The planning overviews offer the following functions:

<table>
<thead>
<tr>
<th>Displaying the Master Record</th>
<th>Position the cursor on the object and choose 📊.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display periods</td>
<td>The initial callup of the planning overview displays the plan value totals for the selected periods in the fiscal year. To display the planning of one line for the individual periods, position the cursor on the line of the planning overview and choose 📊. Choose 📊 to return to the basic list.</td>
</tr>
<tr>
<td>Displaying Line Items</td>
<td>The initial callup of the planning overview displays the plan value totals. To display the planning line items [Ext.] of one line, position the cursor on the line of the planning overview and choose 📊.</td>
</tr>
<tr>
<td>Call for partner</td>
<td>You can display the planning overview of a partner object if the object is a cost center, order, or business process. You must use a variant in the planning overview that displays the partner object in a column. Select the partner object and choose 📊.</td>
</tr>
<tr>
<td>Display price</td>
<td>You can call up the relevant price reports from the planning overview for a cost center or business process.</td>
</tr>
<tr>
<td></td>
<td>• To display the prices for individual activity types for a cost center in the planning overview, select an activity type in the list and choose 📊.</td>
</tr>
<tr>
<td></td>
<td>• To display the prices of a business process in the planning overview of a business process, select a business process in the activity amounts section of the screen and choose 📊.</td>
</tr>
<tr>
<td>Print</td>
<td>To print the entire planning overview, choose List→Print or 📊. To print a section of the report, choose 📊 from the toolbar section of the screen.</td>
</tr>
</tbody>
</table>
For more information of the functions available, see ABAP List Viewer (ALV): Grid Control [Ext.]

**Report currency**

You can display a report currency in the planning overviews in Overhead Cost Controlling. You can make user-specific settings determining whether the overviews display amounts in the controlling area [Ext.], object [Ext.], or transaction [Ext.] currencies, or in a freely-defined currency (such as euros). For more information on defining report currencies, see User Settings [Page 448].
Planning Overview for Bus. Processes

Use
You should always produce this report for a business process.

It shows:
- the resources used and which allocation partner they stem from
- the quantity of the business processes put into demand through the receiver object

The structure according to cost elements shows you the origin of each driver quantity. The report can play a crucial role in checking the consistency of your process planning.

The report answers questions like:
- How do I verify the model?
- How do I generate and verify an Activity-Based budget?
- How do I ensure a consistent enterprise cost plan?

Features

Output

Upper Screen Area
The debit side lists all booked cost elements for the chosen business process; the system shows the corresponding credits underneath these debits. Debits and credits are balanced in row Over/Under absorption.

Information regarding the allocation partners appears next to the cost elements: this includes, the type of allocation partners as well as their names and partner activity types. The next columns contain planned total and fixed costs and quantities as well as the quantity units of the partner activity types.

Middle Screen Area
The system shows the activity quantities given from the business process. The area contains 6 columns: process driver units of the processes, planned activity quantity and capacity, output units and output, as well as the scheduled activity.

Lower Screen Area
The statistical key figures planned in the business process are displayed. The area contains several columns, including: statistical key figure and the displayed unit of measure, planned quantity and maximum statistical quantity.
Executing Planning Overviews Online

1. To execute a planning overview, from the Controlling menu (Cost Center Accounting, Internal Orders, Activity Based Costing, and so on) choose Information system → Reports on cost center accounting or Activity based costing.

2. Choose Planning reports → Planning overview.

3. In the initial screen of the planning overview, enter the object for the report. Depending on the planning overview, this is either a cost center [Ext.], an order [Ext.], or a business process [Ext.].

4. Enter the report parameters in the selection screen.
   i. Fiscal year [Ext.]
   ii. From/to period
   iii. Version [Ext.]

5. Choose Execute to close the dialog box and execute the planning overview.

You can find information on the functions available in the planning overview display in the documentation Planning Overview [Page 484].
Executing Planning Overviews in Background

1. To execute a planning overview, from the Controlling menu (Cost Center Accounting, Internal Orders, Activity Based Costing, and so on) choose Information system → Reports on cost center accounting or Activity-based costing.

   The planning overview is found under Planning overview.

2. From the initial screen, choose Planning overview → Background job or Multiple execution.

3. In the initial screen of the planning overview, enter the object for the report.

   Depending on the planning overview, this is:
   - A cost center [Ext.] or a cost center group [Ext.]
     In addition, enter an activity type [Ext.] if you want to limit the report to a single activity type.
   - A business process [Ext.] or a business process group.

4. Enter the report parameters in the selection screen.

   - Fiscal Year [Ext.]
   - From/to period
   - Version [Ext.]

5. Depending on the planning overview, you can select various lists to be displayed in the overview.

   The standard default for all planning overviews include the lists of cost elements and statistical key figures.

   Additionally, the planning overview for cost centers includes the lists of activity types, and the planning overview for business processes includes the list of process quantities.

6. Determine the row structure of your report. You can display the rows in the planning overview by period (Period breakdown) or by line item (Line item breakdown).

7. Decide whether to display cost elements planned with value 0 (Display rows with zeros).

8. Choose one of the existing variants for the column structure of your lists.

9. Assign a name to your background job.

10. Choose Execute or Planning overview → Execute.

11. In the dialog box, enter the print parameters (printer, number of copies) for your background job, and choose Print. Your background job is now scheduled.

12. Release your background job.

   - Choose System → Own Jobs → Job overview.
   - Under Further selection criteria, choose Jobs without start dates.
   - Choose Execute.
   - Select your job in the job overview and choose Release.
Executing Planning Overviews in Background

- Enter the time you want the job to run (immediately, at a given date and time, after another job, after an event, in a particular mode, based on the factory calendar, or on a periodic basis).

- Choose Save.

The R/3 System executes the job at the selected time. Choose Refresh to check the status in the job overview.
Comparison: Scheduled/Planned Process Quantities

Use
The report checks the plan reconciliation for a business process or a business process group.
The report documents the variances from the process output side (activities of the process): that is, between the scheduled (in demand from other objects) and the planned quantities of these activities.
It covers the corresponding relationship between the scheduled and planned data in an integrated enterprise plan. You can use the scheduled activity as a reference value for the planning when you reconcile the plan manually.
The scheduled activity is used as the plan activity when you reconcile the plan automatically.
The report answers questions like:

- How do I verify the process model?
- How do I generate and verify an Activity-Based Budget (process based planning)?
- How do I ensure a consistent enterprise cost plan?

Features

Selection
On the selection screen you can determine which data the system should evaluate.
You can control the report contents through the output parameter.
You can produce extracts from this report.

For more information on working with Report-Painter reports (selecting, generating extracts, setting output parameter, and more) see Execute the Report-Painter Report [Page 442].

Output
The report has the following row and column structure:

Report rows:
In the report, every business process is assigned a row and each business process group shows a sum.

Report columns:
The columns show scheduled and planned activities next to one another for each business process or business process group. Column Sched. - Plan (scheduled minus planned activity) contains the absolute variance, and column in % contains the percentage variance.
Price Report

Use

The price report gives you an overview of the prices calculated by the system and manually entered prices [Ext.].

Price reports are available for the following components:

- Cost Center Accounting
  In Cost Center Accounting, the price report for activity types provides an overview of the activity prices for each cost center [Ext.] and activity type [Ext.]

- Activity-Based Costing
  In Activity-Based Costing, the price report provides an overview of the process prices for each business process [Ext.]

For more information on

- The entries on the initial screen and the selection options, see Executing Price Reports Online [Page 493] and Specifying Selection Options [Page 495].
- The functions for displaying the price report, see Displaying the Price Report [Page 497].

The price report in the SAP System corresponds to the internet application component Internal Price Lists. For more information, see Internal Price Lists in the Intranet (CO-OM-CCA) [Ext.].
Price Report for Business Processes

Use
For each business process chosen, this report shows the fixed, variable and total prices. This provides an overview of the prices and helps compare figures with other plants, or outside sources; it also highlights figures that vary significantly from similar types of values.

The report answers questions like:
- How do I verify the model?
- Is my business process competitive internally and externally (benchmarking)?
- How do I generate and verify an Activity-Based budget?
- Does outsourcing make sense?

Features
For information on how to use the report and on the column and row contents see Display the Price Reports [Page 497].

The default value in field Price unit is 1; you can overwrite it. If the field is blank, the system will use the price unit from the data bank price.
Executing Price Reports Online

1. To call up the price report in the relevant component of Overhead Cost Controlling (Cost Center Accounting or Activity-Based Costing), choose

   *Information system ➔ Reports for Cost Center Accounting or Activity-Based Costing* and so on.

   The price report is under *Prices*.

2. In the initial screen, enter the criteria according to which the price report selects data.

   Enter the report object.

   – In the initial screen of the price report for activity types in the Cost Center Accounting component (CO-OM-CCA), enter a *cost center [Ext.]*, a cost center interval, or a *cost center group [Ext.]*.

   Additionally, enter an *activity type [Ext.]*, an activity type interval, or an *activity type group [Ext.]*.

   – In the initial screen of the price report for business processes in the Activity-Based Costing component (CO-OM-ABC), enter a *business process [Ext.]*, a business process interval, or a business process group.

3. Enter the following selection parameters:

   – *Version [Ext.]*

   – *Fiscal Year [Ext.]*

   – Period from...to....

4. In addition, you can limit the price report to selected price indicators.

   The price indicator provides the basis of calculation for the price. The following values are allowed:

   1: The price is calculated iteratively on the basis of plan activity on the cost center or business process.

   2: The price is calculated iteratively on the basis of the capacity of the cost center or business process.

   3: The price is entered manually.

   4: The plan price is calculated purely iteratively.

   5: The actual price is calculated on the basis of actual activity.

   6: The actual price is calculated on the basis of capacity.

   7: The actual price is calculated purely iteratively.

5. Enter the price unit.

6. Decide whether you want to display all the selected prices or only those prices used in allocation.

7. The following functions are also available on the initial screen:

   – *Selection options* offers you more options for entering objects and object intervals (see: *Defining Selection Options [Page 495]*).
Executing Price Reports Online

- You can delete entries for individual selection rows or all entries for the selection (see: Deleting Selections [Page 508]).
- You can save your entries in a variant in the initial screen and retrieve them again when you next call up the initial screen (see: Processing Variants [Page 509]).

8. To display the document display online, choose *Execute* or *Execute program*.

To display the document display online and print it immediately, choose *Program* → *Execute and print*. If you execute the report, you can also print it later from the display screen.

For more information on

- Working in the selection screen, choose ![Help selection screen](image)
- Displaying the price report, see Displaying Price Reports [Page 497].
Determining Selection Options

You can define specific selection options for the relevant report objects or for report object intervals in the selection screen.

Determining Selection Options for Individual Values

1. If you entered an individual value for a report object in the selection screen, select the value and choose *Selection options* or *Edit → Selection options*.

   The dialog box has the following selection options:
   - Individual value
   - Greater than or equal to
   - Less than or equal to
   - Greater than
   - Less than
   - Not equal to

2. Choose *Select* or *Exclude from selection*.

   Choose the desired selection options.

   You enter cost center 4120 as report object. You choose *Greater than or equal to* in the selection options. The SAP system displays a report for all cost centers numbered 4120 and higher.

   If you choose *Exclude from selection*, you receive a report for all cost centers up to, but not including, cost center 4120.

3. Leave the dialog box by choosing *Confirm*.

Determining Selection Options for Intervals

1. If you entered an interval for a report object in the selection screen, select the interval and choose *Selection options* or *Edit → Selection options*.

   The dialog box has the following selection options:
   - Range of values
   - Outside the interval

2. Choose *Select* or *Exclude from selection*.

   Choose the desired selection options.

   You enter cost center interval 4100 to 4200 as report object. You choose *Outside the interval* in the selection options. You receive a report for all cost centers except for those in the interval 4100 and 4200 inclusive.
Determining Selection Options

3. Leave the dialog box by choosing Confirm.
Displaying Price Reports

Use

On the overview screen for the price report, the system displays the data as follows:

- The system displays the prices (total/fixed/variable) for each cost center [Ext.] and activity type [Ext.] or for each business process [Ext.].
- The Price unit (PUnit) gives the number of activity units for which the price applies. For example, if “Drilling” displays “10” for the activity unit “Hours”, the price applies to ten hours of drilling.
- Each price displays the Price indicator (PrIn).
- The Allocation price indicator (A) shows whether the price:
  - Cannot be used for allocation
  - Can be used for valuation of actual and plan allocations
  - Can be used for valuation of plan allocations
  - Can be used for valuation of actual allocations
- You can display the prices in controlling area [Ext.] or object currency [Ext.]. You can display the total price, the variable portion, and the fixed portion. You can change the display using display variants [Ext.].

If you use the price report for multiple periods, the system initially displays the average of the prices in all periods. The average is weighted with the quantities from the individual periods. To view individual period prices, choose Period screen.

If the price unit varies throughout the individual periods, the price appears using the smallest unit found in the periods.

Features

Within the price report, you can use the functions provided by the ALV Grid Control to change the presentation of the data in reports:

For more information, see ABAP List Viewer (ALV): Grid Control [Ext.]

The following additional functions are available:

Displaying Period Screens and Overview Screens [Page 498]
Displaying Master Records [Page 499]
Displaying Cost Components [Page 500]
Displaying Period Screens and Overview Screens

The initial calliope of the price report displays the data for the selected objects in the overview screen for the entire fiscal year.

Displaying Period Screens

To display data for an activity type [Ext.], a cost center [Ext.], or a business process [Ext.] for each period, select the corresponding row in the overview screen. Next, choose or Goto → Period screen.

The data for this object is organized according to the individual periods in the fiscal year. The columns in the period screen are identical with those in the overview screen. You can use all the overview screen functions in the period screen except Display master record, Cost components, Set filter, and Delete filter (see: Displaying Price Reports [Page 497]).

Displaying Overview Screens

To switch to the overview screen from the period screen, choose Back or Joto → Back.
Displaying the Master Record

To display the master data record for a cost center [Ext.], activity type [Ext.], or business process [Ext.], select the lead column and choose Master record or Goto → Master record.
Displaying Cost Components

Procedure

Select a row in the list and choose Goto → Cost components. This starts the report.

Result

The report displays the cost components for the relevant object, based on the cost component structure you defined in the Implementation Guide (IMG) (see also: Price Calculation With Cost Component Split [Page 433]).
Executing Price Reports in Background

1. Complete the first seven steps as explained in Executing Price Reports Online [Page 493].
2. Choose Program → Execute in background.
3. In the dialog box, enter the print parameters (printer, number of copies) for your background job, and choose Print.
4. You can check the status of your background jobs in the job overview.
   - Choose System → Own Jobs
   - Choose Job overview.
   - Choose Execute.
   - After some time, choose Update again.
Line Item Report

Use

Line Item [Ext.] reports enable you to select individual posting documents. Controlling contains line item reports for the following components:

- Cost Center Accounting
- Internal Orders
- Activity-Based Costing

Features

You can use the following line items reports for the analysis:

- Actual line item report
  You can display line item reports for archived actual costs (see: Reading Standard Reports from the Archive [Ext.]).

- Plan line item report
  You use these reports to update plan line items. To do so, in Customizing under Controlling General → Controlling, choose Organization → Maintain Versions [Ext.] and activate the Integrated planning indicator in the settings for each fiscal year.

- Commitment line item report
  You can use this report in both Cost Center Accounting and in Overhead Orders.

- CO line item report for reconciliation ledger
  To call up the selection screen, go to the Cost Element Accounting menu and choose Information system → Reports for Cost Element Accounting → Document Display → Reconciliation Ledger: CO Line Items.

For more information on cost center line item reports, see Cost Centers: Actual Line Item Report [Ext.], Cost Centers: Commitments Line Item Report [Ext.] and Cost Centers: Plan Line Item Report [Ext.].

For more information on business process line item reports, see Business Processes: Plan Line Items [Page 504] and Business Processes: Actual Line Items [Page 505].

If there are any incorrect line items, you can trigger an adjustment posting directly from the report by choosing Extras → Correction request (see Request for Adjustment Postings in the Intranet [Ext.]).

Selection

You can select line item reports according to the following parameters:

- Object (cost center [Ext.], business process [Ext.], order [Ext.])
- Range of objects (a given number)
- Object group
- Cost element
- Cost element interval
- Cost element groups
- Posting period
- Debit date for commitment [Ext.]

The selection screen enables application-wide use of the line item report. In the selection screen you can limit the selection according to object type, partner object type, and other selection criteria. You can access the line item report from the selection screen.

You can use the enhancement COOME01 to add to additional fields in the line item report. To do so, in Customizing for the relevant application component, choose Information System → Standard Reports → Enhancements for Line Item Reports [Ext.].

**Standard Variants**

You can format the list using display variants contained in the standard system. You can also define your own display variants.

For more information on displaying the line item report, see Displaying the Line Item Report [Page 514].

If you are working with transfer prices (multiple valuation approaches) you can select the required valuation approach (with which the line item report is displayed) in the initial screen for the line item report. You do this on the line item report initial screen by choosing Extras → Data source.

For more information on transfer prices, see Multiple Valuation Approaches [Ext.].

In the SAP standard display variants, the value fields in the controlling area currency were replaced with the value fields in the report currency. This enables you to display/print line item reports in any currency. For more information on report currency, see the IMG for Cost Center Accounting under Information System → User Settings → Specify User Settings [Ext].
Business Processes Plan Line Items

Use
The report shows all allocated cost elements per chosen business process. The system shows the total quantities and resulting costs per partner object. The report answers questions like:

• What resources is the process consuming?
• What resources are causing these costs?
• How is the process utilized (in plan)?
• What or who is consuming the business process?
• How do I check my model, and verify the entered steps for the plan?

Features
For more information on the reports see Line Item Reports [Page 502].

The system provides a detailed Document Display [Page 524] for a line item posting when you place the cursor on a data row and choose Environment > Original document.

Output
The report has the following row and column structure:

Report rows:
The report is structured according to the chosen business process. The system lists the allocated cost elements for each business process.

Report columns
Each row contains: the key and name of the cost element, booked total quantities and their resulting values as well as the booked quantity units. Quantities and values are summarized for each chosen business process in the last row.

Credits represent minus values and debits, the positive ones.
Business Process Actual Line Item

Use

The report shows the sender and receiver partners per chosen business process. The system shows the total quantities and resulting costs per partner object. The report answers questions like:

- What resources is the process consuming?
- How do the business processes influence the total costs of a product or the profitability of a market segment?
- How is the process utilized (in actual)?
- What or who is consuming the business process?

Features

For more information on the reports see Line Item Reports [Page 502].

Note: The system provides a detailed Document Display [Page 524] for a line item posting when you place the cursor on a data row and choose Environment > Original document.

Output

The report has the following row and column structure:

Report rows:

The report is structured according to the chosen business process. The system lists the partner objects for each business process.

Report columns

Each row contains: type, number and name of the partner object; the total quantity, booked quantity unit and the value of the position. Quantities and values are summarized for each chosen business process in the last row.

Credits represent minus values and debits, the positive ones.
Executing Line Item Reports Online

1. To execute a line item [Ext.] report, go to the menu in the relevant component of the SAP R/3 System (Cost Center Accounting, Overhead Cost Orders and Activity-Based Accounting) and choose

   Information system → Report selection, then Line Items → Actual or Commitment.

   You call up the plan line item report via the report/report interface or from the basic list for period-based allocations (see Executing Periodic Repostings or Periodic Allocations Online [Ext.]).

   You can display line item reports by controlling area [Ext.]. To change the controlling area when necessary, choose Extras → Set controlling area.

2. In the initial screen, enter the criteria according to which the line item report selects data.

   - Enter an object (cost center [Ext.], order [Ext.], business process [Ext.]), an object interval or an object group (cost center group [Ext.], business process group, order group [Ext.]).

   - If you wish to restrict the selection to particular cost elements [Ext.] enter a cost element, a cost element interval or a cost element group [Ext.].

   - For actual and plan line item reports, enter under Posting date the date or timeframe for which you want to select data.

   For commitment line items reports, enter under Expected debiting date the date or timeframe for which you want to select data. To limit the selection to open line items, choose Open items only.

   - Enter the version for the plan line item report.

3. To determine the data presentation in the line item report, choose a standard display variant under Display variant or define your own variant (see Choosing Display Variants [Ext.]).

4. If you require fast performance when calling up line item reports, choose Further settings and activate the Variant fields only indicator in the dialog box. This means that you can make only limited changes to the selected display variant in the line item report. The number of fields offered for selection in display variant definition is thereby reduced.

   If you require the full range of variant definition, leave the Variant fields only indicator deactivated.

5. You can set the number of selected entries to a maximum limit. To do so, choose Further settings and enter under Maximum number of hits the maximum number of rows to be read from the database. In this way, you can greatly reduce the waiting times for processing.

6. The following functions are also available on the initial screen:

   - You can delete entries for individual selection rows or all entries for the selection (see: Deleting Selections [Page 508]).
Executing Line Item Reports Online

- You can restrict the selection even further, by value type and other selection criteria (see: Selecting Value Types [Page 511], Setting Actual Versions [Page 510], Specifying Additional Selection Criteria [Page 512]).

- You can save your entries in the initial screen of a variant and call them back up again when you next open the initial screen (see: Maintaining Variants [Page 509]).

- If you entered an object group in the initial screen, you can display it (see: Displaying Groups [Page 513]).

- You can read line items from the archive (see: Reading Standard Reports from Archives [Ext.]). To do so, choose Extras → Data source.

7. To display the line item report online, choose Execute or Execute program.

   To display the line item report online and print it immediately, choose Program → Execute and print. If you execute the report, you can also print it later from the display screen.

For more information on displaying the line item report, see The Line Item Report Display [Page 514].
Deleting Selections

**Deleting Selections**

**Prerequisites**
You entered one or more individual values or intervals for a report object in the selection screen.
You can delete either the first selection row for this report object (meaning the first value or interval) or all selection rows.

**Deleting Selection Rows**
To delete the first selection row for a report object, select the object and choose *Delete selection* or *Edit → Delete selection row*.
The SAP system deletes the first row appearing in the selection screen. If you defined further selection rows with multiple selection, the screen displays the next selection row.

**Deleting All Selections**
To delete the all selection rows for a report object, select the row and choose *Edit → Delete all selections*.
The SAP system deletes not only all the visible rows for the report object in the selection screen; it deletes all rows for this report object created with multiple selection.
Maintaining Variants

You can save your selection screen entries in a variant. When you return to the initial screen you can call up the corresponding variants. If necessary, you can also change them. By doing this, you can avoid repeating criteria for the same reports in the initial screens.

You can also delete existing variants.

Saving Entries as Variants

1. Choose Goto → Variant → Save as variant to save your entries as a newly created variant.
2. Choose Continue.
3. Enter a Variant name and a short description under Description for your variant.
4. Save your variant.

Getting Variants

1. Choose Goto → Variant → Get to call up an existing variant.
   A dialog box displays existing variants with their names and descriptions, in addition to their relevant selection screens.
2. Select the desired variant to leave the dialog box.

Displaying Variants

1. Choose Goto → Variant → Display for an overview of existing variants for initial screens.
   A dialog box displays existing variants with their names and descriptions, in addition to their relevant selection screens.
2. Select the variant to view the selection screen objects and the hidden selection criteria for the variant.

Deleting Variants

1. Choose Goto → Variant → Delete to eliminate an existing variant.
2. Select the variant to be deleted and choose Select.
3. Specify in the dialog box whether you want to delete the variant in all clients or only in the current client.
4. Choose Continue to leave the dialog box.
Setting Actual Versions

Prerequisites
Setting actual versions is useful only for actual and commitment line item reports.

Procedure
1. To limit the selection screen to given actual versions, choose Extras → Actual version.
2. Enter the version in the dialog box.
3. Leave the dialog box by choosing Execute.
Selecting Value Types

1. To limit the selection screen to given value types, choose Extras → Select value types.

   The table lists the standard value types in the system.

### Standard Settings for Value Types

<table>
<thead>
<tr>
<th>Line Item Report</th>
<th>Standard Value Types</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plan line item report</td>
<td>01 Plan</td>
</tr>
<tr>
<td>Actual line item report</td>
<td>04 Actual</td>
</tr>
<tr>
<td>Commitment line item report</td>
<td>11 Statistical actual</td>
</tr>
<tr>
<td></td>
<td>21 Commitment from procurement</td>
</tr>
<tr>
<td></td>
<td>22 Commitment from purchase order</td>
</tr>
<tr>
<td></td>
<td>23 Commitment from reservation</td>
</tr>
<tr>
<td></td>
<td>24 Manual commitment</td>
</tr>
<tr>
<td></td>
<td>26 Commitment from fixed price agreement</td>
</tr>
</tbody>
</table>

Until Release 3.1, the line item report for actual costs defaulted all value types. In Release 4.0, the defaults were changed according to the table above.

2. The following ABAP List Viewer functions are available in the value type list:

   - Select detail (see: Select Detail [Ext.])
   - Search by (see: Searching for Terms [Ext.])
   - Mark all and Delete all markings (see: Marking Rows and Deleting Markings [Ext.])
   - Sort in ascending order and Sort in descending order (see: Sorting List in Ascending or Descending Order [Ext.])
   - Set filter (see: Setting and Deleting Filter [Ext.])
   - Define current display variants (see: Defining Current Display Variants [Ext.])

3. In the Select Value Types dialog box, select the desired value types.

4. Choose Confirm to leave the dialog box.
Specifying Additional Selection Criteria

Prerequisites
You can only use the additional selection criteria for online execution of the line item report, not for execution in the background.
The additional selection criteria provides you with more fields to enhance your selection possibilities.

Procedure
1. Choose Further selection criteria or Extras → Further selection criteria
2. Select the criteria by which you want to further limit your selection in the Field selection dialog box.
3. Choose Confirm to leave the dialog box.
4. Enter the values for the selection criteria in the subsequent screen Further selection criteria.
5. Save your values and return to the selection screen.
Displaying Groups

If you have entered a group of report objects in the selection screen, choose Display group or Goto → Display group to display the structure of the given group.
The Line Item Report Display

Use
The line item [Ext.] report display lists all the data records you selected in the initial screen. You can change the layout of this list using the following functions:

Features
You can analyze your dataset in the line item report using the following ABAP List Viewer functions (see: ABAP List Viewer [Ext.]):

Navigation
Navigating in Lists [Ext.]

Detail
Selecting Details [Ext.]

Sorting
Sorting Ascending or Descending Lists [Ext.]

Filter
Setting and Deleting Filters [Ext.]

Totaling
Totaling Values and Deleting Totals [Ext.]
Building Subtotals [Ext.]
Displaying Totals Rows Only and Breaking Down Totals [Ext.]
Displaying and Hiding Non-Totals Rows for Subtotals [Ext.]
Selecting Totals Levels [Ext.]
Determining Drilldown for Totals Levels [Ext.]

Status Display
Displaying List Statuses [Ext.]

Columns
Optimizing Column Widths [Ext.]
Fixing to Columns and Revoking Fixings [Ext.]

Layouts [Ext.]
Selecting Layouts [Ext.]
Changing Layouts [Ext.]

Basic List
Displaying Basic Lists [Ext.]

Search
Searching for Terms [Ext.]

Print
Printing Lists [Ext.]

Save
Sending Lists as Documents [Ext.]

Savings Lists in the Report Tree
Saving Lists as Files [Ext.]

The following additional functions are available:

Source documents and accounting documents
Displaying Source Documents and Accounting Documents [Page 516]

Master Data Records
Displaying Master Records [Page 518]

Selection criteria and selection logs
Displaying Selection Criteria and Selection Logs [Page 519]

Header rows
Maintaining Header Rows [Page 520]
Displaying Source Documents and Accounting Documents

Prerequisites

In the line item [Ext.] report or in the document display you see the Controlling (CO) documents created by internal repostings, allocations, and postings.

You can display the source document, as well as other documents generated from the source document, from:

- An actual line item report
- A commitment line item report
- The document display

Displaying Source Documents

To display the original document for an actual line item, a commitment line item, or a document itself proceed as follows:

1. Place your cursor on the line item or document in question
2. Choose Source document or Environment → Source document.

If a line item or document was generated by a posting process in the Financial Accounting component (FI), you will see the original FI document. You can also see additional information of cost controlling significance, such as posting date, document type [Ext.], posting key [Ext.] and author, and so on, providing the document was not deleted in FI and you have display authorization for that document.

If an actual-line item, commitment line item or the document was generated by a posting process in the Controlling component (CO), the system displays the original CO document [Ext.].

The Controlling and Financial Accounting components create separate documents. When primary postings from FI are transferred to CO, corresponding documents with unique document numbers are generated in CO. Additional CO documents are generated through internal transactions, such as internal activity allocation, assessment, and accrual calculations.

Displaying Accounting Documents

To display other documents arising from the original document for an actual line item, a commitment line item, or a document itself proceed as follows:

1. Position your cursor on the line item or document
2. Choose Environment → Accounting documents.

If the Profit Center Accounting (EC-PCA) and Profitability Analysis (CO-PA) components are active and relevant documents exist, you can display these documents as well.
Displaying the Master Record from the Line Item Report

To branch from the line item report or the document display into the master record of an object (such as, a cost center [Ext.], cost element [Ext.] or an activity type [Ext.]) position your cursor on the appropriate object in the list and choose Master record or Environment → Display master record.
Displaying Selection Criteria and Selection Logs

Displaying Selection Criteria
To display the report selection criteria from the line item report or the report display, choose Extras → Selection → Criteria.

Displaying Selection Logs
To display the report selection log from the line item report or the report display, choose Extras → Selection → Log.

The selection log lists the number of records found on the database and the runtime for each individual object.

Result
You can change the selection criteria and selection log display with the following ABAP list viewer functions:

- First/Last column and Left/right column (see Navigating Within Lists [Ext.])
- Sort in ascending order/descending order (see Sorting Lists in Ascending or Descending Order [Ext.])
- Current display variant (see Defining Current Display Variants [Ext.])
- Search by (see: Searching for Terms [Ext.])
- Printing (see: Printing Lists [Ext.])
Maintaining Header Rows

Prerequisites
In the line item report and the document display you can change existing header rows and insert new ones.

You define a header row for line item reports and document displays by display variant. The header rows are imported, transported, and copied together with the display variant for line item reports and document displays.

Procedure
1. To maintain header rows, choose Settings → Current display variant → Current header rows.
2. Change the header rows based on your requirements.
   - To insert new rows, select the area beneath the last row or the row beneath the insertion point for the new row and choose Insert row.
   - To delete entries, select the row and choose Cut.
     You can enter texts or select variables. The R/3 System fills the variables with the current values when you call up the line item report.
     - To insert general text variables, choose General variables.
       General variables include current page number, display variant name, local time, filter characteristics, and text constants displayed in the relevant logon language.
     - To insert text variables for characteristics, choose Characteristics. The characteristics appear based on the type of line item report or document display.
       A characteristic variable represents data for the characteristics used in the report definition. Characteristics include posting date, fiscal year, and controlling area. You must always enter characteristics with a text type and a value. Text type selections include the name, value, short text, or long text for a given selection parameter. Values include individual values, value/group, value "from", and value "to" for a given characteristic.
     - To define a corresponding frame, choose Frame.
3. Save your header row changes.

Executing Line Item Reports in Background

1. To execute a line item [Ext.] report, go to the menu in the relevant component of the SAP R/3 System (Cost Center Accounting, Overhead Cost Orders and Activity-Based Accounting) and choose

   Information system → Report selection, then Line Items → Actual or Commitment.

   You can display line item reports by controlling area [Ext.]. To change the controlling area when necessary, choose Extras → Set controlling area.

2. In the initial screen, enter the criteria according to which the line item report selects data.

   – Enter an object (cost center [Ext.], order [Ext.], business process [Ext.]), an object interval or an object group (cost center group [Ext.], business process group, order group [Ext.]).

   – If you wish to restrict the selection to particular cost elements [Ext.] enter a cost element, a cost element interval or a cost element group [Ext.].

   – For actual and plan line item reports, enter under Posting date the date or timeframe for which you want to select data.

     For commitment line items reports, enter under Expected debiting date the date or timeframe for which you want to select data. To limit the selection to open line items, choose Open items only.

   – Enter the version for the plan line item report.

3. In order to determine the data presentation in the line item report, choose a standard display variant under Display variant or define your own variant (see: Selecting Display Variants [Ext.]).

   You can use the display variant to determine the page breaks used when printing the report. The sorting and subtotals use the GW field for this purpose.

4. The following functions are also available on the initial screen:

   – You can delete entries for individual selection rows or all entries for the selection (see: Deleting Selections [Page 508]).

   – You can narrow down the selection further still, by value type and selection criteria (see: Select Value Type [Page 511], Set Actual Version [Page 510]).

   – You can save your entries in a variant in the initial screen and get them again when you next call up the initial screen (see: Processing Variants [Page 509]).

   – If you entered an object group in the initial screen, you can display it (see: Display Group [Page 513])

   – You can read line items from the archive (see: Reading Standard Reports From the Archive [Ext.]). To do so, choose Extras → Data source.

5. Choose Program → Execute in background.
6. In the dialog box, enter the print parameters (printer, number of copies) for your background job, and choose Print.

7. You can check the status of your background jobs in the job overview.
   – Choose System → Own Jobs → Job overview.
   – Choose Execute.
   – After some time, choose Update again.
Document Display

Use

Document display enables you to display the documents of CO actual cost postings and plan postings. You can only display documents for plan postings if plan line items are updated. To do this, you need to activate the Integrated planning indicator for each fiscal year in the default settings in the Implementation Guide (IMG) for General Controlling → Maintain Versions [Ext.].

The system always displays a complete document, regardless of which Controlling objects (cost centers [Ext.] for example) are affected.

For cost allocation, this means that you can also see the credit posting on the partner object. In the line item report you see which partner object is involved, but you do not see the posted values unless you have also selected the partner object.

For actual primary postings you can branch into the original documents in Financial Accounting. You can also view purely CO documents arising from repostings of costs and revenues, as well as activity allocation documents.

For more information on the functions in the basic list for displaying documents, see Basic List for Document Display [Page 529].

For incorrect line items, you can directly trigger an adjustment posting from the report of the document display by choosing Extras → Correction request (see Request for Adjustment Postings in the Intranet [Ext.]).
CO Plan Documents

Use
You can choose a report for the document number. It shows all the debit and credit bookings that belong to the given document number. The system shows the total quantities and resulting costs per booking row.

The report answers questions like:

• What resources is the process consuming?
• Who or what is consuming the resources?
• How is the process utilized (in plan)?
• What or who is consuming the business process?

Features
For more information on the reports see Display Documents [Page 524].

Output
The report has the following row and column structure:

Report rows:
The report is structured according to the booking rows of the document.

Report columns
Each row shows you the following:

• booking line number
• information regarding the sender and receiver
• cost element
• value of the item
• total quantity
• booked quantity unit
CO Documents: Actual Costs

Use

You can choose this report for a document number, or you can activate it from a line item report. It shows all the debit and credit bookings that belong to the given document number. The system shows the total quantities and resulting costs per booking row. The report answers questions like:

- What resources is the process consuming?
- Who or what is consuming the resources?
- How is the process utilized (in actual)?
- What or who is consuming the business process?

Features

For more information on the reports see Display Documents [Page 524].

Output

The report has the following row and column structure:

Report rows:
The report is structured according to the booking rows of the document.

Report columns

Each row shows you the following:

- booking line number
- information regarding the sender and receiver
- cost element
- value of the item
- total quantity
- booked quantity unit
Executing Document Display Online

1. To call up the document display for plan and actual postings in the Cost Center Accounting or Activity-Based Costing initial screen, choose Information System → Report selection, then Line Items → Controlling Documents, Actual Costs.

   You can display CO documents by controlling area [Ext.]. To change the controlling area when necessary, choose Extras → Set controlling area.

2. Enter the document number in the initial screen for document display, or choose Possible entries to find a number.
   
   If you use the entry help, you can search for a document number in the Document Number dialog box according to the following criteria:
   - By document date
   - By posting date
   - By posting periods in fiscal year
   - By original document number

   If you know the reference company code, you can enter this as an additional search aid.

3. In order to determine the data presentation in the document display, choose a standard display variant under Display variant or define your own variant (see: Selecting Display Variants [Ext.]).

4. If you require fast performance when calling up document displays, choose Further settings and activate the Variant fields only indicator in the dialog box. This means that you can make only limited changes to the selected display variant in the document display. The number of fields offered for selection in display variant definition is thereby reduced.

   If you require the full range of variant definition, leave the Variant fields only indicator deactivated.

5. You can set the number of selected entries to a maximum limit. To do so, choose Further settings and enter under Maximum number of hits the maximum number of rows to be read from the database. In this way, you can greatly reduce the waiting times for processing.

6. The following functions are also available on the initial screen:
   - Selection options offers you more options for entering objects and object intervals (see: Determining Selection Options [Page 495]).
   - You can delete entries for individual selection rows or all entries for the selection (see: Deleting Selections [Page 508]).
   - You can limit the selection further by value types, actual versions, and other selection criteria (see: Selecting Value Types [Page 511], Setting Actual Versions [Page 510], Specifying Additional Selection Criteria [Page 512]).
   - You can save your entries in a variant in the initial screen and get them again when you next call up the initial screen (see: Maintaining Variants [Page 509]).
   - You can read line items from the archive (see: Reading Standard Reports From Archives [Ext.]). To do so, choose Extras → Data source.
Executing Document Display Online

7. To display the document display online, choose *Execute* or *Execute program*.

To display the document display online and print it immediately, choose *Program → Execute and print*. If you execute the report, you can also print it later from the display screen.

For more information on the functions in the basic list for displaying documents, see [Basic List for Document Display](#) [Page 529].
Basic List for Document Display

Use

The basic list contains all the documents that meet your selection criteria.

The basic list is a sequential list. You can format the data for the document display using display variants.

If there are any incorrect line items, you can trigger an adjustment posting directly from the report by choosing Extras → Correction request (see Requesting an Adjustment Posting in the Intranet [Ext.]).

Features

You can analyze your dataset in the basic list for document display using the following ABAP List Viewer functions (see: ABAP List Viewer [Ext.]):

Navigation

Navigating in Lists [Ext.]

Detail

Choosing Details [Ext.]

Sorting

Sorting Ascending or Descending Lists [Ext.]

Filter

Setting and Deleting Filters [Ext.]

Totaling

Displaying and Deleting Sums [Ext.]

Creating Subtotals [Ext.]

Displaying Totals Rows Only and Breaking Down Totals [Ext.]

Displaying and Collapsing Non-Totals Rows for Subtotals [Ext.]

Choosing Totals Levels [Ext.]

Determining Drilldown for Totals Levels [Ext.]

Status Display

Displaying List Statuses [Ext.]

Columns

Optimizing Column Widths [Ext.]

Freezing to Columns and Unfreezing Columns [Ext.]

Layouts [Ext.]

Choosing Details [Ext.]
Basic List for Document Display

- Changing Layouts [Ext.]
- Saving Layouts [Ext.]
- Layout Management [Ext.]

Basic List
- Displaying Basic Lists [Ext.]

Search
- Searching for Terms [Ext.]

Print
- Printing Lists [Ext.]

Save
- Sending Lists as Documents [Ext.]
- Transferring a List to a Local File [Ext.]

The following additional functions are available:

Source documents and accounting documents
- Displaying Source Documents and Accounting Documents [Page 518]

Master data records
- Displaying Master Records [Page 518]

Selection criteria and selection logs
- Displaying Selection Criteria and Selection Logs [Page 519]

Header rows
- Maintaining Header Rows [Page 520]
Executing Document Display in the Background

1. To call up the document display for plan and actual postings, choose Information System → Report selection, then Line Items → Controlling Documents, Actual Costs in the Cost Center Accounting initial screen.

   You can display CO documents by controlling area [Ext.]. To change the controlling area when necessary, choose Extras → Set controlling area.

2. Enter the document number in the initial screen for document display, or choose Possible entries to find a number.

   If you use the entry help, you can search for a document number in the Document Number dialog box according to the following criteria:
   – By document date
   – By posting date
   – By posting periods in fiscal year
   – By original document number

   If you know the reference company code, you can enter this as an additional search aid.

3. In order to determine the data presentation in the document display, choose a standard display variant under Display variant or define your own variant (see: Choosing Display Variants [Ext.]).

4. If you require fast performance when calling up document displays, choose Further settings and activate the Variant fields only indicator in the dialog box. This means that you can make only limited changes to the selected display variant in the document display. The number of fields offered for selection in display variant definition is thereby reduced.

   If you require the full range of variant definition, leave the Variant fields only indicator deactivated.

5. You can set the number of selected entries to a maximum limit. To do so, choose Further settings and enter under Maximum number of hits the maximum number of rows to be read from the database. In this way, you can greatly reduce the waiting times for processing.

6. The following functions are also available on the initial screen:
   – Selection options offers you more options for entering objects and object intervals (see: Determining Selection Options [Page 395]).
   – You can delete entries for individual selection rows or all entries for the selection (see: Deleting Selections [Page 508]).
   – You can limit the selection further by value types, actual versions, and other selection criteria (see: Selecting Value Types [Page 511], Setting Actual Versions [Page 510]).
   – You can save your entries in a variant in the initial screen and get them again when you next call up the initial screen (see: Maintaining Variants [Page 509]).
Executing Document Display in the Background

– You can read line items from the archive (see: Reading Standard Reports From Archives [Ext.]). To do so, choose Extras → Data source.

7. Choose Program → Execute in background.

8. In the dialog box, enter the print parameters (printer, number of copies) for your background job, and choose Print.

9. You can check the status of your background jobs in the job overview.

– Choose System → Own Jobs → Job overview.

– Choose Execute.

– After some time, choose Update again.
Master Data Indexes

Use

The information system for Controlling provides you with master data indexes for business processes [Ext.], cost objects [Ext.], cost centers [Ext.], cost elements [Ext.], activity types [Ext.], and internal orders [Ext.], as well as for statistical key figures [Ext.]. This enables you to check at any time, which master data has been maintained within the system. From the master data index, you can branch to the master data records of the displayed objects. Therefore, from the information system you have access to all information relating to the Controlling (CO) master data.

See also: Calling Up the Master Data Index [Ext.]

If cost center master data is faulty or missing, you can request a master data change from the master data index by choosing Extras -> Change request for cost centers (see Requesting a Change to Master Data in the Intranet/Internet [Ext.]).
Displaying Master Data Indexes

Procedure
1. You can call up the report for Master Data indexes by going to the initial screen of the Activity-Based Costing component (CO-OM-ABC), and choosing Information system → Report Selection → Master data index.

2. Select the desired master data report. You can use the following master data reports in the Activity-Based Costing component:
   - Business Processes (see Maintaining Business Processes with Collective Processing [Page 71])
   - Cost elements (see Master Data Index [Ext.])
   - Statistical Key Figures (see Master Data Index [Ext.])
   - Explode structure for process (see Explode Structure for Business Process [Ext.]).

For more information on displaying and navigating the lists for business processes and cost elements, go to ABAP List Viewer (ALV): Grid Control [Ext.].
Process Attributes

Use

The reports of section Process Attributes are all Report-Painter-Reports [Page 440]. You answer questions regarding process and resource analysis, including:

- Where can you optimize?
- Does the purveying of processes concur with plan?
- Does the resource consumption concur with plan?
- Which costs/quantities are allocated with low or high value added in the processes?
- How large is the portion of the process with low value added? Has it increased or decreased within the report time period?

The following reports are available:

- Process: Value Added Partner [Page 536]
- Process: Value Added Development [Page 538]
- Comparison: Plan/Actual Price per Value Added [Page 540]
- List: Breakdown per Process Category [Page 541]
- List: Breakdown per Cost Behavior [Page 543].
Business Process: Value Added Partner

Use

You can display a report for internal value added as well as for external value added.

You can assign business processes to Value Added Types [Ext.] (you define these categories in the Implementation Guide (IMG) of ABC; see Set Attributes [Ext.]). This report also indicates which allocated costs or quantities belong to which value added type for each allocation partner.

The system lists actual/plan costs or quantities of a single business process or group (depending on the selection made). The list is structured according to the booked partner (for example, business process or cost center/activity type). The partner data is then organized according to value added types.

The report first shows the debit information (process consumption), under which the credit data appears (process purveying).

This report shows you which costs and quantities in the process are allocated with low or no value added. This answers questions such as:

- Where is the potential to optimize?

The plan-actual comparison and the variances address questions like:

- Does the purveying of processes concur with plan?
- Does the resource consumption concur with plan?

Features

Selection

The report is especially informative when you use it for a business process group.

On the selection screen you can determine which data the system should evaluate.

The variation in this report is active.

You can control the report contents through the output parameter.

You can produce extracts from this report.

For more information on working with Report-Painter reports (selecting, generating extracts, setting output parameter, and more) see Execute the Report-Painter Report [Page 442].

Output

The report has the following row and column structure:

Report rows:

- debits are shown, each allocation partner will show total costs and quantities, you will also see to which value added type the debited or credited business process belongs
The system shows the credits in a similar manner. You see which receiver objects absorbed the process, per element.

Debits and credits are balanced in row *Over/Under absorption*.

**Report columns:**
The report shows two column blocks for costs and quantities:

- Column block 1: actual and plan costs within the analysis period, as well as their absolute and percentage variance
- Column block 2: actual and plan quantities within the analysis period, as well as the absolute and percentage variance

**Report/Report-Interface**
You can branch out to the following reports through the [Report/Report-Interface [Ext.]]:

- [Business Process Plan Line Items [Page 504]]
- [Business Process Actual Line Items [Page 505]]
Process: Value-Added Development

Use
You can assign business processes to Value Added Types [Ext.] (you define these categories in the Implementation Guide (IMG) of ABC; see Set Attributes [Ext.]). This report displays the development of the value added for the current and the two previous years.

The report classifies the business processes based on the type of value added. The system itemizes the allocated costs for the current and the two previous years, and grouped according to the value added types. The system also provides the cost sums for the applied value added type.

The report answers questions such as:

- Which costs/quantities are allocated with low or high value added in the processes?
- How large is the portion of the process with low value added?
- Has it increased or decreased within the report time period?

Features

Selection
The report is especially informative when you use it for a business process group.

On the selection screen you can determine which data the system should evaluate.

You can control the report contents through the output parameter.

You can produce extracts from this report.

For more information on working with Report-Painter reports (selecting, generating extracts, setting output parameter, and more) see Execute the Report-Painter Report [Page 442].

Output
The report has the following row and column structure:

Report rows and columns:
The system provides a row of summed costs for each value-added type for the current and previous two years.

The last row contains totals for each column.

The first section shows the data from internal value added; the second shows the external value added.

Report/Report-Interface
You can branch out to the following reports through the Report/Report-Interface [Ext.]:

- Business Process Plan Line Items [Page 504].
- Business Process Actual Line Items [Page 505].
Comparison: Plan/Actual Price per Value Added

Use
This report lists the variances between actual and planned prices and activities for each selected business process. It has sections for external and internal Value added [Ext.]. The business processes are organized according to degree of value added within these sections.

Business processes whose value added is not maintained appear under the figure "0".

The variances indicate where the potential for optimizing lies.

Features
Selection
By generating a report for all business processes, you obtain a clearly structured report based on the degree of value added.

On the selection screen you can determine which data the system should evaluate.

You can control the report contents through the output parameter.

You can produce extracts from this report.

For more information on working with Report-Painter reports (selecting, generating extracts, setting output parameter, and more) see Execute the Report-Painter Report [Page 442].

Output
The report has the following row and column structure:

Report rows:
The report contains to sections: above is the data for external value added, and below for the internal.

The business processes are listed according to the degree of value added. All business processes with the same degree of value added are shown in a group.

Report columns:
The report shows seven columns:

- actual and plan prices as well as their variances
- the business process or type of value added
- actual and plan activities and their variances
List: Breakdown per Process Category

Use
This report lists the costs, quantities and corresponding variances for actual and plan figures of the selected business processes. The processes are structured according to the values of the process attributes (see Business Process Category [Ext.]).

The variances indicate where the potential for optimizing lies.

Features

Selection
On the selection screen you can determine which data the system should evaluate.
You can control the report contents through the output parameter.
You can produce extracts from this report.

For more information on working with Report-Painter reports (selecting, generating extracts, setting output parameter, and more) see Execute the Report-Painter Report [Page 442].

Output
The report has the following row and column structure:

Report rows:

- debits are shown,
- The system shows the credits in a similar manner.
- Debits and credits are balanced in row Over/Under absorption.

The processes are structured on the list according to process categories. All business processes that are assigned to the same category are shown as a group. When you produce a report for a business process group that contains sub-groups, additional sorts are made in the category groups.

Report columns:
The report contains two column blocks between which you can switch using the arrow icons.

- Column block 1: actual and plan costs within the analysis period, as well as their absolute and percentage variance
- Column block 2: actual and plan quantities within the analysis period, as well as the absolute and percentage variance

Report/Report-Interface
You can branch out to the following reports through the Report/Report-Interface [Ext.]:

- Business Process Plan Line Items [Page 504].
List: Breakdown per Process Category

- Business Process Actual Line Items [Page 505]
List: Breakdown per Cost Behavior

Use
This report lists the costs, quantities and corresponding variances for actual and plan figures of the selected and booked business processes. The processes are structured according to their Cost Behavior [Ext.].
The variances indicate where the potential for optimizing lies.

Features
Selection
On the selection screen you can determine which data the system should evaluate.
You can control the report contents through the output parameter.
You can produce extracts from this report.

For more information on working with Report-Painter reports (selecting, generating extracts, setting output parameter, and more) see Execute the Report-Painter Report [Page 442].

Output
The report has the following row and column structure:

Report rows:
- debits are shown,
- similarly, credits appear underneath
- Debits and credits are balanced in row Over/Under absorption.
The processes are structured on the list according to cost behavior. All business processes that have the same cost behavior are shown as a group. When you produce a report for a business process group that contains sub-groups, additional sorts are made in the cost-behavior groups.

Report columns:
The report displays two blocks of columns:
- Column block 1: actual and plan costs within the analysis period, as well as the absolute and percentage variance (actual minus plan)
- Column block 2: actual and plan quantities within the analysis period, as well as the absolute and percentage variance (actual minus plan)

Report/Report-Interface
You can switch to the following reports through the Report/Report-Interface [Ext.] :
- Business Process Plan Line Items [Page 504].
- Business Process Actual Line Items [Page 505]
List: Breakdown per Cost Behavior
More Reports

Use

The reports of section More Reports are all Report-Painter Reports [Page 440]. They address the issue of efficient resource capacity use (utilization).

The following reports are available:
- Statistical Key Figures: Monthly Display [Page 546]
- Cost Centers: Actual/Plan Variance [Page 547]
- Cost Centers: Actual/Target Variance [Page 549]
- Activity Type: Utilization [Page 551].
Statistical Key Figures: Monthly Displays

Use

The report shows the booked quantities of the statistical key figures for each reporting period and for either a single business process or a group of them. It also enables the comparison between Plan and Actual and displays the respective variances.

Statistical key figures from processes are used as resource drivers.

Features

Selection

On the selection screen you can determine which data the system should evaluate.

You can control the report contents through the output parameter.

You can produce extracts from this report.

For more information on working with Report-Painter reports (selecting, generating extracts, setting output parameter, and more) see Execute the Report-Painter Report [Page 442].

Output

The report has the following row and column structure:

Report rows:

The report rows show the bookings per key figure and per period. If the same quantities are booked in all periods, the system shows a yearly total.

Report columns:

The columns show the booked quantities with their units in actual and plan, as well as the absolute and percentage variances.
Use

The report compares the actual and plan figures in cost center accounting. The booked activity quantities and statistical key figures are shown next to the costs.

Features

Selection

On the selection screen you can determine which data the system should evaluate.

The variation in this report is active.

You can control the report contents through the output parameter.

You can produce extracts from this report.

For more information on working with Report-Painter reports (selecting, generating extracts, setting output parameter, and more) see Execute the Report-Painter Report [Page 442].

Output

The report has the following row and column structure:

Report rows:

The report has four sections.

1. Section: the system generates rows for each cost element and cost element group. Debits and credits are shown separately. The debit and credit bookings are totaled and balanced in row Over/Under absorption.

2. Section: a list of booked statistical costs sorted per cost elements.

3. Section: List of activity types.

4. Section: the booked statistical key figures are listed here.

Report columns:

The report shows blocks consisting of cost and quantity columns; the system displays a block for each, the statistical bookings, activity types and statistical key figures.

- 1. Section one (cost elements):
  - Column block 1: actual and plan costs within the analysis period, as well as their absolute and percentage variance
  - Column block 2: actual and plan quantities within the analysis period, as well as the absolute and percentage variance

- 2. Section two (statistical bookings):
  - All column blocks: statistical actual and plan values within the analysis period, as well as the absolute and percentage variance
3. Section three (activity types):
   - all columns: actual and plan activities within the analysis period, as well as the absolute and percentage variance

4. Section three (statistical key figures):
   - All column blocks: actual and plan quantities as well as their absolute and percentage variance

⚠️
The system can show quantities only when the summed bookings in a row use the same unit of measure.
Cost Centers: Actual/Target Variance

Use
The report compares the actual and target figures in cost center accounting. The booked activity quantities and statistical key figures are shown next to the costs. This helps illustrate the efficiency of the cost center resources.

Features

Selection
On the selection screen you can determine which data the system should evaluate.

The variation in this report is active.

You can control the report contents through the output parameter.

You can produce extracts from this report.

For more information on working with Report-Painter reports (selecting, generating extracts, setting output parameter, and more) see Execute the Report-Painter Report [Page 442].

Output
The report has the following row and column structure:

Report rows:
The report has four sections.
1. Section: the system generates rows for each cost element and cost element group. Debits and credits are shown separately. The debit and credit bookings are totaled and balanced in row Over/Under absorption.
2. Section: a list of booked statistical costs sorted per cost elements.
3. Section: list of the actual and plan activity quantities.
4. Section: the booked statistical key figures are listed here.

Report columns:
The report shows a block of six columns for costs and quantities; the system displays a block for each, the statistical bookings and statistical key figures.

1. Section one (cost elements):
   • Column block 1: actual and target costs within the analysis period, as well as the absolute and percentage variance
   • Column block 2: actual and plan costs within the analysis period, as well as the absolute and percentage variance
   • Column block 3: actual total costs, fixed and variable, as well as the percentage of fixed over total.
Cost Centers: Actual/Target Variance

- Column block 4: target total costs, fixed and variable, as well as the percentage of fixed over total.
- Column block 5: plan total costs, fixed and variable, as well as the percentage of fixed over total.
- Column block 6: actual and plan quantities within the analysis period, as well as the absolute and percentage variance

2. Section two (statistical bookings):
   - All column blocks: statistical actual and plan values within the analysis period, as well as the absolute and percentage variance

3. Section three (activity quantities):
   - All column blocks: actual and plan activities as well as their absolute and percentage variance

4. Section three (statistical key figures):
   - All column blocks: actual and plan quantities as well as their absolute and percentage variance

⚠️

The system can show quantities only when the summed bookings in a row use the same unit of measure.
Activity Type: Utilization

Use
The report lists the actual and planned activity types and compares them with capacity. This comparison reveals the degree of utilization (actual and plan) per period or per fiscal year.

Features
Selection
On the selection screen you can determine which data the system should evaluate. The variation in this report is active.
You can control the report contents through the output parameter.
You can produce extracts from this report.

For more information on working with Report-Painter reports (selecting, generating extracts, setting output parameter, and more) see Execute the Report-Painter Report [Page 442].

Output
The report has the following row and column structure:

Report rows:
The report has three sections.
1. Section: lists the activity types per period, with a row for each partner object. The yearly figures are summarized in a row.
2. Section: lists the actual and plan activity quantities as well as the capacity per period. The total activities are summarized in another row.
3. Section: details the degree of capacity utilization (actual and plan).

Report columns:
The report provides a block of columns per section.
1. Section one (activity per partner object):
   - Actl.Acty.: Actual activity per partner object or per period.
   - Actl./Cap.(%): Percent of the actual activity quantity of the row over the yearly capacity.
   - Plan Acty.: plan activity per partner object or per period.
   - Plan./Cap.(%): Percent of the plan activity quantity of the row over the yearly capacity.
2. Section two (period activities):
   - Actl.Acty.: actual activity per period.
   - Plan Acty.: plan activity per period.
Activity-Based Costing (CO-OM-ABC)

Activity Type: Utilization

*Capacity*: capacity per period.

3. Section three (total activity):

*Actl. (%)*: Percent of the total actual activity quantity over the yearly capacity.

*Unutilized Actl.*: percent of the total unutilized actual activity quantity over the yearly capacity.

*Plan (%)*: percent of the total plan activity quantity over the yearly capacity.

*Unutilized Plan*: percent of the total unutilized plan activity quantity over the yearly capacity.

⚠️

The system can show quantities only when the summed bookings in a row use the same unit of measure.