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In This Session

- Learn the basics of internal orders, these high flexible tools within CO are often ignored by consultants and users alike as they appear esoteric.
- Once the basics are learned they offer broad functionality for planning, budgeting, cost and revenue analysis.
- Learn the critical configuration to make the functionality work for your company.
- See an end user example of how internal orders provided a standard solution for assets under construction as opposed to the custom solution the end users envisaged.

Rohana Gunawardena

- Rohana Gunawardena heads the SAP practice division at Exium Inc.
- Rohana has been working with SAP since 1992
- Rohana is a Fellow of the Institute of Chartered Accountants in England & Wales.





What We'll Cover

- Introduction
- Overview
- Configuration
- Planning and Budgeting
- Reporting and Analysis
- Settlement
- Wrap up



Introduction



Introduction

- Some common problems that occur when a new reporting requirement is found:
 - Shoehorn a solution into modules you know
 - Users unaware of all the modules in SAP
 - Poor system performance due to the wrong module
 - E.g., using Profitability Analysis (CO-PA) when Material Ledger would be the best choice
 - Unwilling to learn or invest in new modules



Introduction (cont.)

- At one customer site, a user thought Profitability Analysis (CO-PA) and Profit Center Accounting (EC-PCA) were different names for the same module
 - At that time, EC-PCA was called CO-PCA. Changing module names can be confusing to users.
 - At different times, FI-SL has been referred to as GLX, FI-GLX, SPL, or SL
 - CO-BPM → CO-EIS → Executive Information System (EC-EIS)
 - Flex Ledger → New G/L → SAP G/L
 - SAP white papers give a very high-level view of modules, which makes it hard to distinguish what each module is best suited for

Case Study

- User requirements
 - At a client site, I was requested to investigate how to add data to a Purchase Order (PO) and have this data appear in the assignment field of the FI posting for indirect purchasing

Case Study (cont.)

- Actual requirement
 - On further investigation, I found the users were recording costs for a Research and Development (R&D) process using manual Journal Vouchers (JVs)
 - The costs were charged to a balance sheet account
 - The assignment field was used to store the specific R&D project
 - They had recently started indirect purchasing for these R&D projects and wanted to apply the same logic to POs

Case Study (cont.)

Solution

- Record costs using an internal order
- Enter the internal order in the PO account assignment
- The internal order settles to an asset under construction
- Once the R&D project is finished, the cost is amortized over five years using fixed asset functionality

Benefits

- This is a simple solution
- Uses standard SAP
- Low development cost



Overview



Internal Orders (CO-OM-OPA)

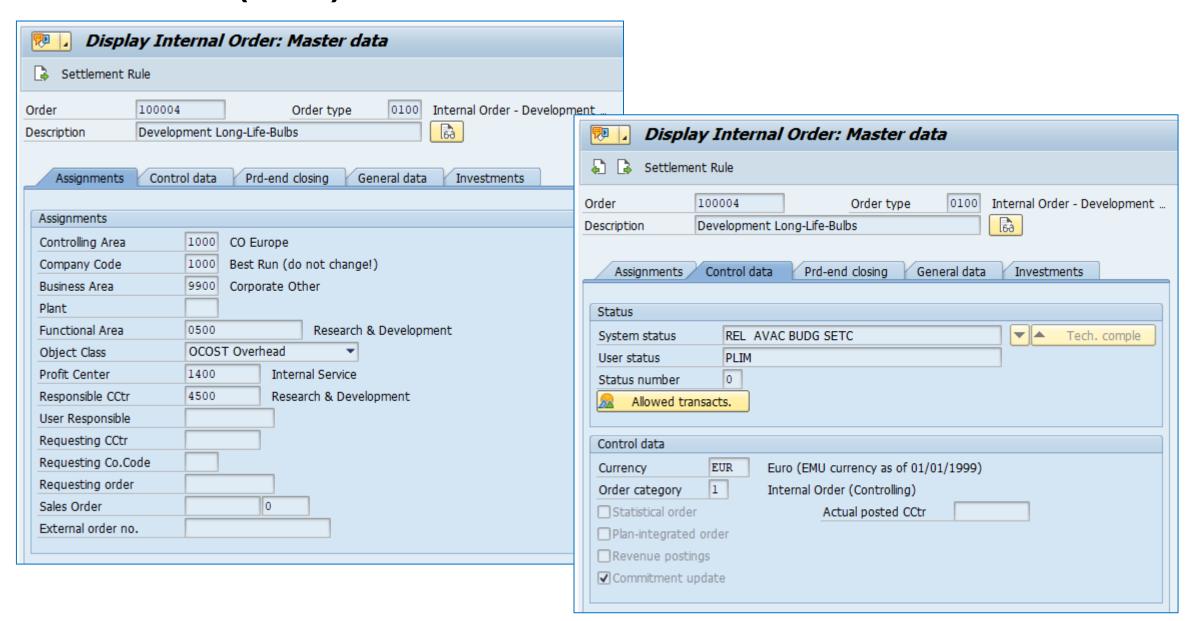
- Objective: Where in the enterprise have costs occurred at a granular level?
- Usage: Used to track costs at a lower level than a cost center
 - Has highly flexible functionality
 - Multiple types of internal orders exist
 - Functionality is often underutilized
 - Can be used for planning and revenue tracking, as well

Overview

- What is an Internal Order?
 - Cost object within the CO environment
 - Acts much like a cost center in its ability to track and monitor costs
- Similar to functionality found in other order types, such as:
 - Production Orders
 - Maintenance Orders
- Key benefits in using Internal Orders
 - Free you from tedious, detailed information assimilation
 - Allow better cost tracking and budget management
 - Enable dynamic control over project-related spending



Overview (cont.)



Order Types

- The word "Order" is used by several objects in SAP
- Many have the same CO functionality as an internal order
 - But different operational functionality

Service Order

Same CO Functionality	Different CO Functionality
Internal Order	Purchase Order
Investment Order	Sales Order
Manufacturing Order	Stock Transport Order
Overhead Order	Transfer Order
Plant Maintenance Order	
Production Order	



Internal Order Types

- Overhead Orders: Track costs for a particular purpose, such as conducting a trade fair or tracking costs for maintenance and repair work
- Investment Orders: Track costs for the creation of a fixed asset, e.g., construction of a building
- Accrual Orders: Used to offset postings of accrued costs (costs calculated in CO) to cost centers
- Orders with Revenue: Track both costs and revenues, e.g., non-core business miscellaneous income
- Additional order types exist outside CO, e.g., Production Order

Internal Order – Use Cases

- Three most popular uses for internal orders
 - Capital/expense project management
 - Plant maintenance activity
 - Overhead management Special Projects
- Scenarios
 - Capital tracking at an apparel manufacturer
 - Machine maintenance at automotive supplier
 - Marketing Project tracking at a consumer goods manufacturer



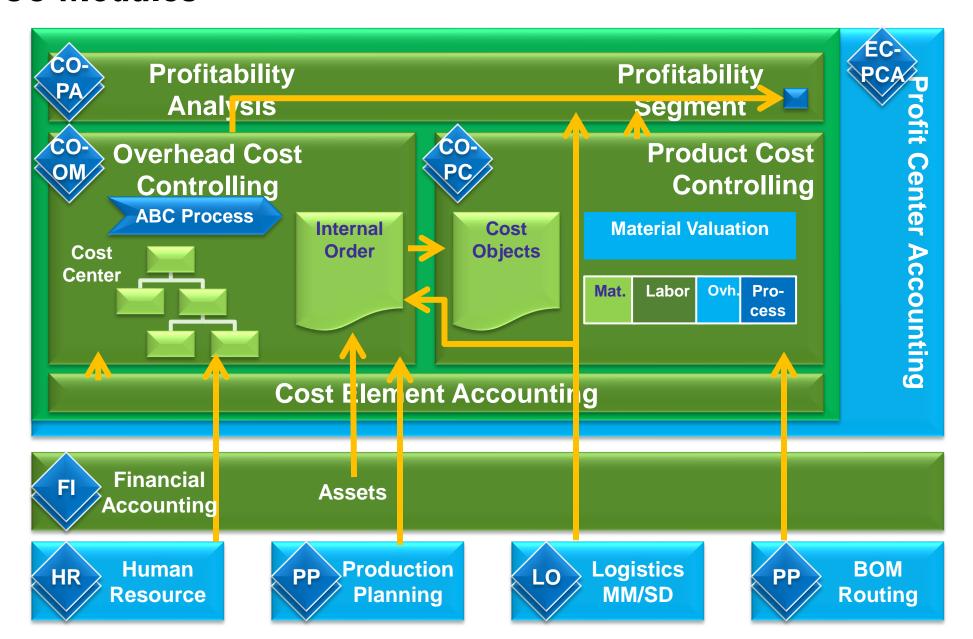
Overview (cont.)

- What are the biggest mistakes companies make with orders?
 - Not designing purposefully-built, unique order types
 - Not using order planning properly, if at all
 - Not taking advantage of the commitment management/availability control functionality to monitor and manage project costs
 - Not taking the time to understand how the uniqueness of the order can be leveraged in reporting and analysis (classification/summarization)





CO Modules

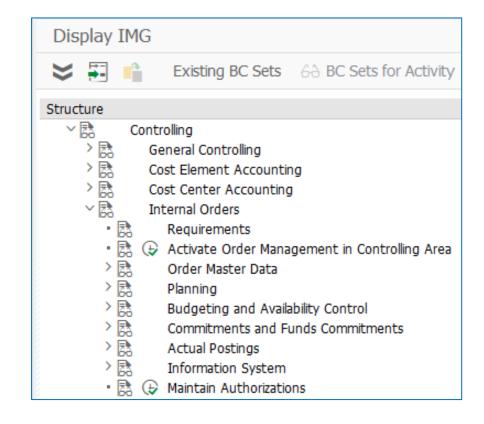


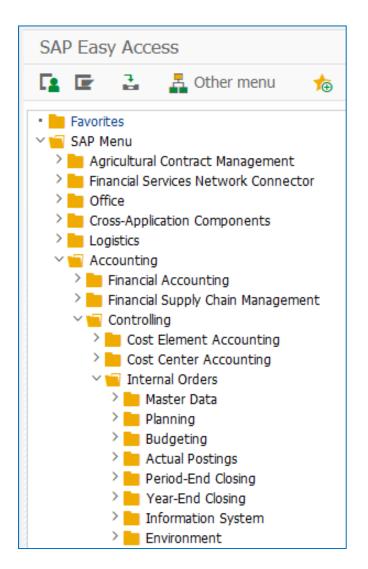
Configuration





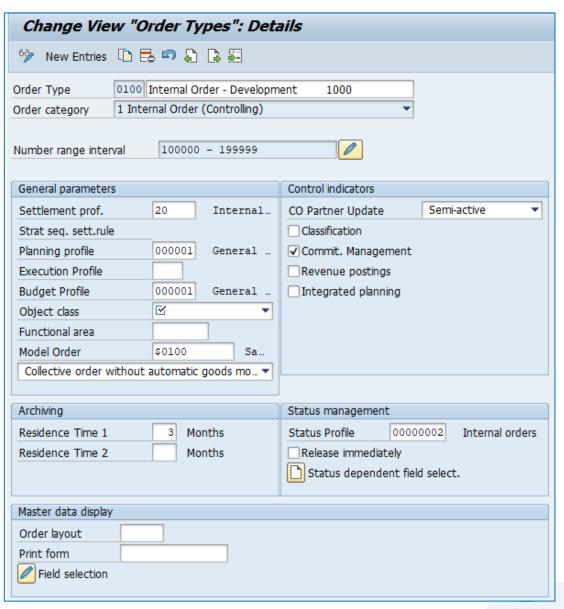
Internal Orders in IMG and SAP Menu





Define Internal Order Type

- Choose an internal order type to match your business process
- OK to create your own internal order type
- You can use many different types within one controlling area
- Transaction KOT2_OPA

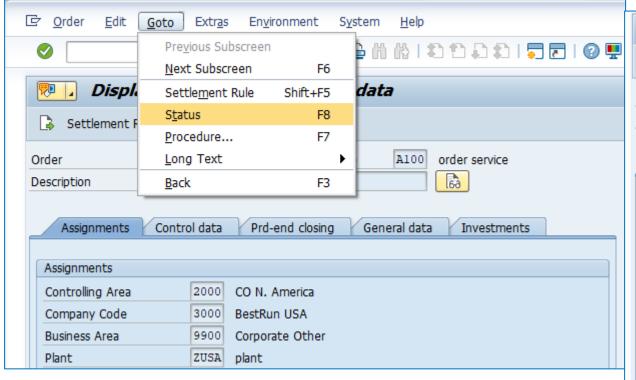


Status Profiles

- Controls valid transactions during an orders lifecycle
 - Design the status profiles to meet the purpose of the order type
- Options for status profiles
 - System status delivered option
 - Created, Released, Technically Complete, Close
 - System status can go it alone
 - User-defined status more flexible option
 - Allows you to control at transaction level
 - Works with system statuses
- Transaction OK02

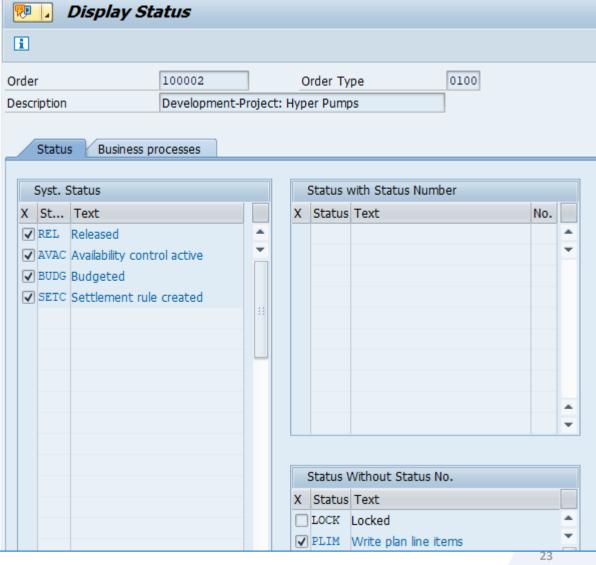


Status Display in Internal Order



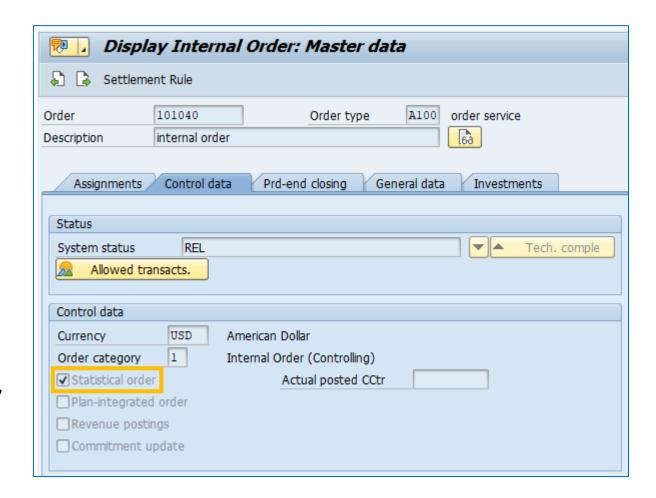
Transaction KO03





Statistical Internal Orders

- Statistical Internal Order
 - Cannot be posted to or acted upon independently; only in conjunction with another real CO object (cost center, order, etc.)
 - Not part of double entry accounting
 - Used for cost collection and reporting only
 - Planning and budgeting are allowed
- Real Internal Order
 - Considered by SAP to be a primary receiver, thus it can be acted upon independently
 - Used to collect and redistribute costs
 - Settlement is allowed





Internal Orders: Real vs. Statistical

- When should you consider using a statistical internal order?
 - When redistribution of costs is not important or desired
 - When simple project tracking and reporting is all that is necessary
 - When you do not anticipate having to directly manipulate the project's posting activity
- When should you consider using a real internal order?
 - When cost collection and distribution of costs is important
 - When isolation of costs from cost center accounting is important for monthly reporting and analysis
 - When tracking alternative project types



Planning and Budgeting



Planning Overview

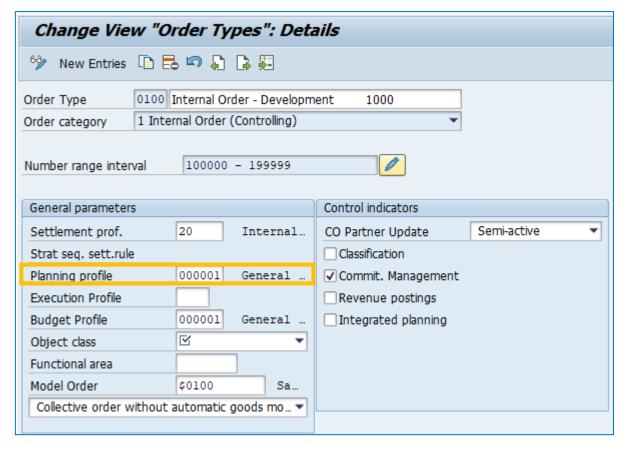
- Internal orders have a robust planning package
 - However, with such a robust package, there is some complexity
 - There are multiple planning options
- Many of the planning options can be used together
 - Primary cost planning with overall planning
 - Unit costing with overall planning
 - Statistical key figure planning with primary cost planning
 - Overall planning with budgeting
- What approach should you take to planning?
 - Think of planning in terms of process
 - How an order type will be used should determine the type of planning

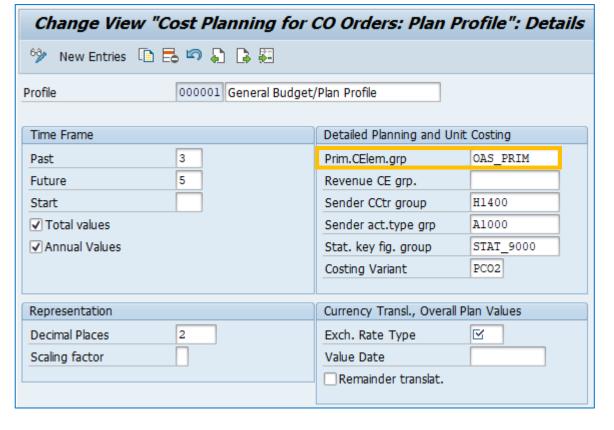
Planning Profile

- The planning profile is the cornerstone to order planning capabilities
 - Understanding its basics will allow for greater planning flexibility and control
- A popular approach to order planning is to combine high-level oversight with detailed, account-level planning
 - Accomplished by leveraging overall planning with primary cost planning
- Begin by creating/updating your order type's planning profile

Planning Profile

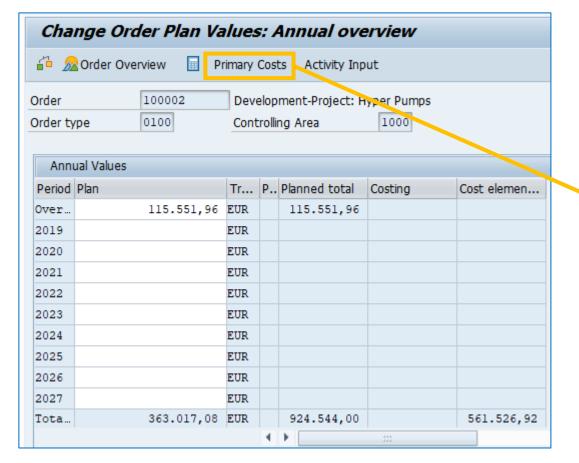
- Assign the planning profile to the order type
- Maintain the Primary Cost Element Group field on the planning profile

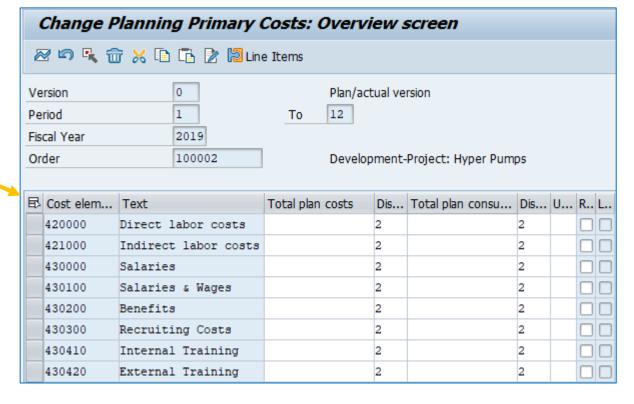




Overall Planning

- Transaction KO12
- Primary Costs button takes you to cost element planning





Reporting and Analysis

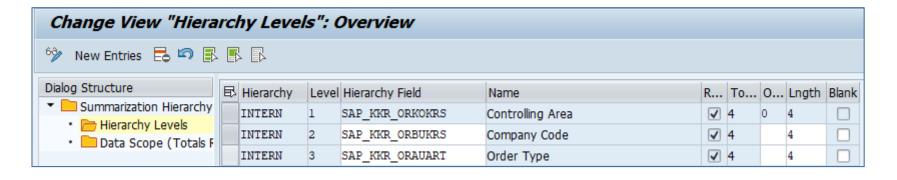


Reporting and Analysis

- SAP delivers a number of standard reports that will attempt to meet your needs
- If necessary, you have at your disposal a number of reporting tables that you can access through Report Painter/Writer
- In addition to Report Painter, consider leveraging summarization hierarchies to meet some of your analysis needs

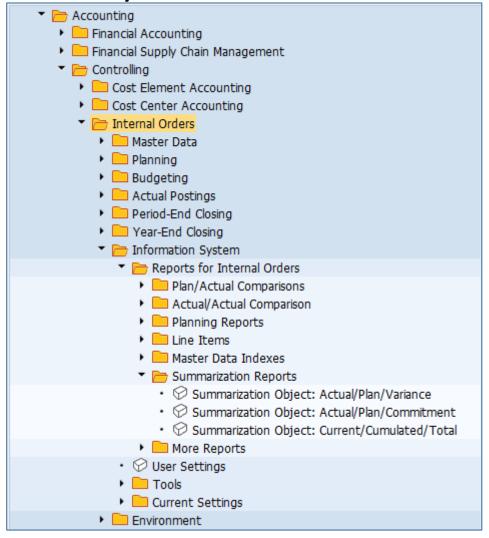
Summarization

- Summarization hierarchies are not employed that often, in part due to lack of awareness of their availability due to:
 - Consulting team that completed the initial implementation and did not explain it properly
 - Not easy to understand in SAP documents
- Summarization using summarization characteristics
 - Uses the master data fields from the object it is summarizing

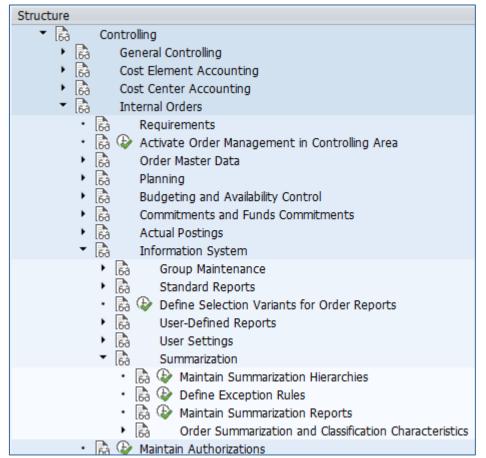


Summarization Menus

SAP Easy Access Menu



• IMG Menu

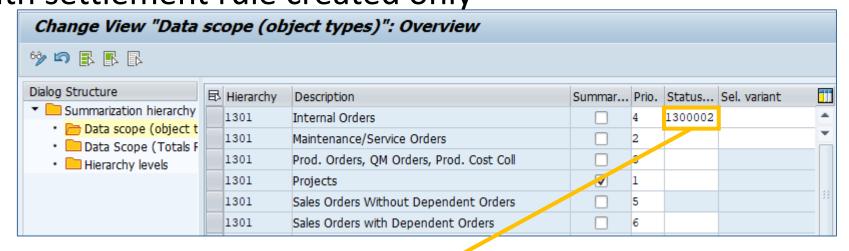


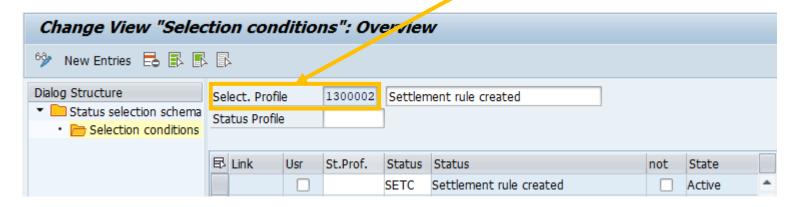
Summarization Characteristics

- Advantages of using summarization characteristics:
 - Cleaner data structures
 - Less configuration required to build/maintain
 - Possible to summarize internal orders, projects, and production orders into a single hierarchy
- Minimize data volumes by including a status selection profile in the hierarchy definition
- During summarization, only objects that meet this status will be summarized

Summarization Example

 Defining reporting hierarchy with selection status for internal orders with settlement rule created only





Settlement



Typical Settlement Scenarios

Manufacturing

Production Order General Ledger

Cost Collection

Internal Order Cost Center

Asset Under Construction

Internal Order Fixed Asset



Results Analysis

 Results analysis is a tool used to calculate WIP and cost of sales for cost objects

Production Orders WIP calculation

Sales Orders Revenue/Cost recognition

Project/WBS Revenue/Cost recognition

- Results analysis calculates values at period end in secondary cost elements (type 31) as "notes"
 - Settlement posts these values to the General Ledger



Results analysis prepares data to be settled, but does not post directly to FI

Settlement Transactions — Individual Object

- The following transactions can be used to settle an individual cost object:
 - CJ88 Settle Projects and Networks
 - FO8C Real Estate CO Indiv. Settlement
 - KK87 Actual Settlmnt: Prdn Cost Collector
 - KK88 Actual Settlement: Cost Objects
 - KO88 Actual Settlement: Order
 - VA88 Sales Order Settlement



In practice, will use collective settlement transactions and batch jobs at period end

Settlement Posting

- Moves cost and/or revenue from one cost object to another
 - Uses same cost element for Dr and Cr postings

	Date Document Header Text CO object name	Cost Elem	RT RefDocNo Cost elem.name	User Name ValCOArCur
© 600020466 01/1 1 ORD 810421 2 CTR 4110			R 17255 ORS Material ORS Material	SCHULZET 6,483.18- 6,483.18

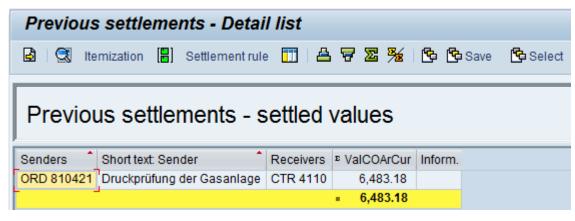
Internal Cost Center 1000-4110

Sender Object

Receiver Object

Document View

Display from settlement transaction





Use transaction KSB5 to display any CO document

Display from KSB5



Primary vs. Secondary Cost Element

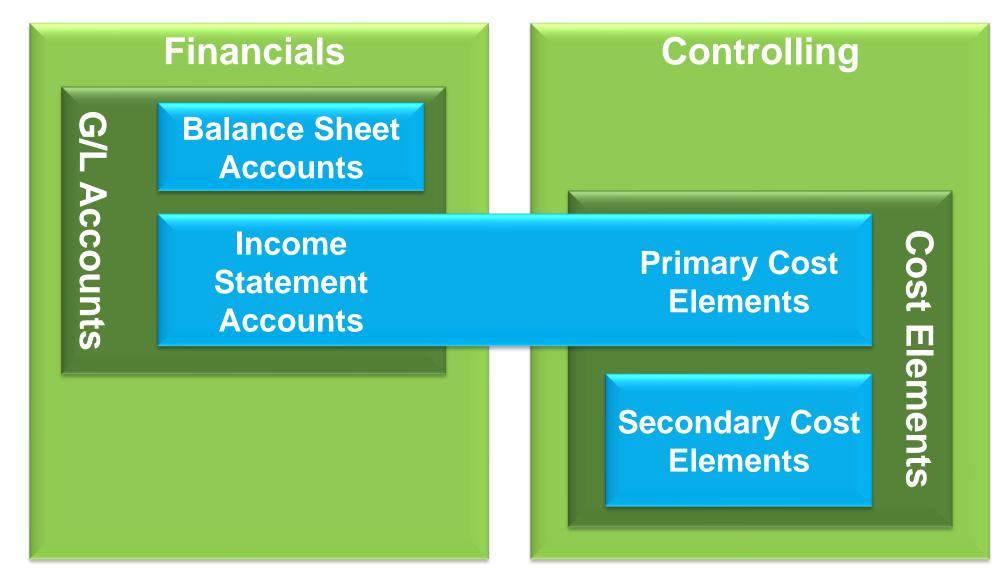
- Primary Cost Element Cost to be reflected in FI
 - E.g., marketing expense posting
- Secondary Cost Element Cost is internal to CO
 - E.g., settlement, allocation, distribution
 - A secondary CE posting will always Dr and Cr the same account, but with different cost objects



This reflects the GPK accounting philosophy that management accounts and financials accounts serve different purposes



G/L Accounts vs. Cost Elements



Cost Element Categories for Settlement

- Every cost element has a cost element category
- The following are relevant for settlement:

• 21 Internal Settlement CO → CO Secondary

• 22 External Settlement CO → FI Primary

Cost Elem.	C0Ar	CECt	Short text
6 50000	1000	21	ORS ORDER SETTLEMENT
651000	1000		ORS MATERIAL
811000	1000		CAPITALIZED ACTIVITY



SAP S/4HANA Finance



SAP S/4HANA Finance — Basics

- Moves ECC from traditional disk-based database to the much faster HANA in-memory database
 - Database indexing by all columns provided automatically

- Consolidation of FI and CO posting data into a single universal journal
 - Simplifies FI/CO reconciliation
 - Simplifies table structure



SAP S/4HANA Finance — Naming

- Three stages in the naming of SAP S/4HANA Finance
 - 1. SAP Accounting powered by SAP HANA
 - 2. SAP Simple Finance
 - 3. SAP S/4HANA Finance



SAP S/4HANA Finance — Settlement

- SAP S/4HANA Finance incorporates the Accelerated CO Close
- To accelerate the close complex calculations such as WIP, Results
 Analysis and settlement are pushed down to the SAP HANA database
 to be performed at the line
 item level
 - There are no periodic aggregate tables in SAP S/4HANA Finance anymore
- In addition, the selection of the relevant data for processes such as overhead calculation and settlement has been adjusted to take advantage of the SAP HANA database

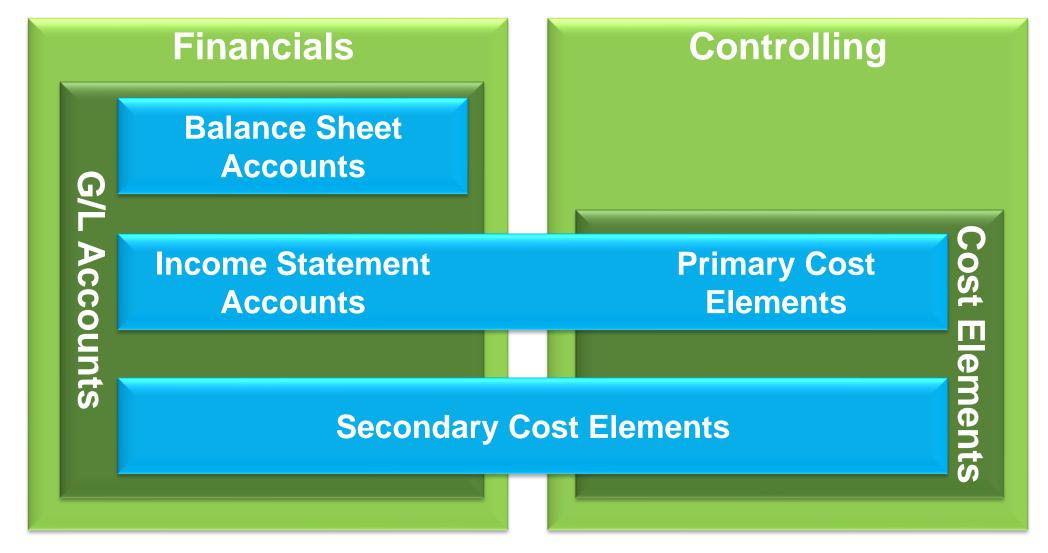


SAP S/4HANA Finance — HANA-Optimized Transactions

Description	Classic CO	S/4HANA
Actual Settlement: Production/Process Orders	CO88	CO88H
Actual Settlement: Sales Orders	VA88	VA88H
Actual Settlement: Internal/Maintenance Orders	KO8G	KO8GH
Actual Settlement: Projects/Networks	CJ8G	CJ8GH
Results Analysis (POC method or revenue-based)	KKAK	KKAKH
WIP Calculation at Actual Costs	KKAO	ККАОН
Variance Calculation w. Full Settlement	KSS1	KSS1H
Variance Calculation for Cost Centers	KSS1	KSS1H



SAP S/4HANA Finance — G/L Accounts vs. Cost Elements



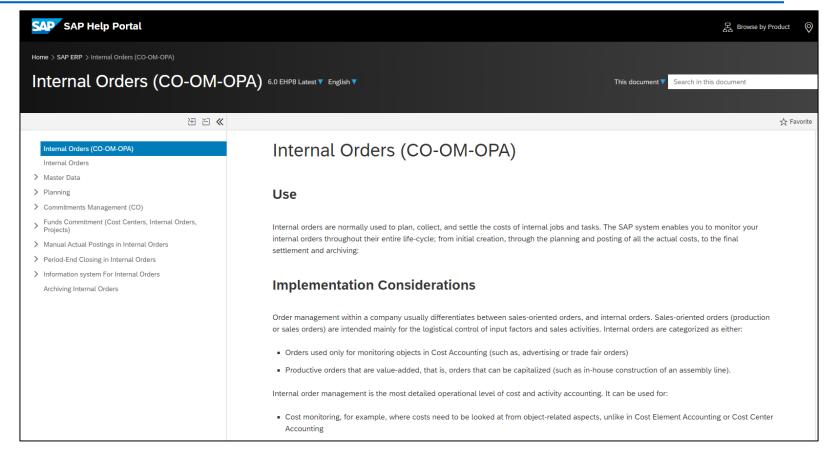


Wrap Up



Where to Find More Information: SAP Help

- SAP Help Poral Internal Orders
 - https://help.sap.com/docs/SAP ERP/344eeec6ef34438dbce0a2cb90701130/baa8d6520c794a4ee10000000a423f68.html?version=6.18.latest



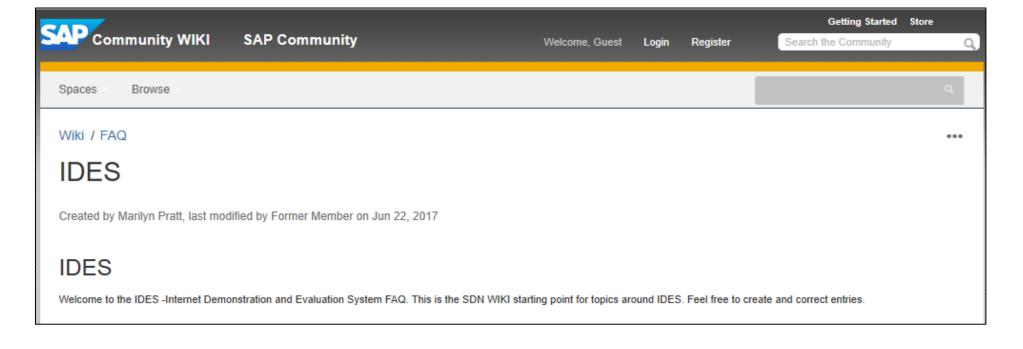


SAPinsider

Where to Find More Information: IDES

- IDES Internet Demonstration and Evaluation System
 - https://wiki.scn.sap.com/wiki/display/HOME/IDES
 - https://launchpad.support.sap.com/#/notes/799639 *
 - SAP system with sample transactions and configuration
 - Website and note explains how to get an IDES system

* Requires login credentials to the SAP Service Marketplace



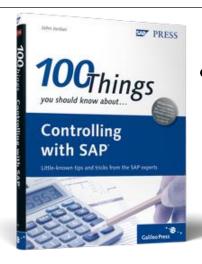


Where to Find More Information — SAP Experts

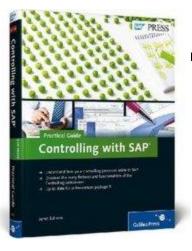
- Rohana Gunawardena, "Reasons to Perform a Controlling Area Reorganization" (Financials Expert, February 2013).
 - https://sapinsider.org/reasons-to-perform-a-controlling-area-reorganization//



Where to Find More Information (cont.)



- SAP PRESS
 - John Jordan, 100 Things You Should Know About ... Controlling with SAP (SAP PRESS, 2010).
 - Tips and Tricks on working with Controlling



SAP PRESS

- Janet Salmon, Controlling with SAP Practical Guide (SAP PRESS, 2011).
 - Understand how your controlling processes relate to SAP

Key Points to Take Home

- Consider all of the options within CO
 - Don't shoehorn a solution into what you know
- Internal Orders are one of the most underused parts of CO
 - Highly flexible functionality
 - Good integration to operations modules
 - Good reporting tools
- Allow yourself the flexibility to create order types to meet specific needs
 - It's often difficult to create a universal design

Key Points to Take Home (cont.)

- CO is highly integrated to operational modules
 - CO receives most of its data from operational transactions
- Controlling areas can be reorganized after go-live
 - It is difficult, but possible
 - Allows the most effective use of CO
- There are many forms of order planning available to you
 - Choose the planning type based on the purpose of the order
- Reporting and analysis capabilities mirror those of cost center accounting
 - For added detail and analysis, activate summarization hierarchies

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