

2015 | CONTROLLING
 SEPTEMBER 21-24 • SAN DIEGO

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**Filling in the gaps-
 FI/CO account posting
 during production
 processes in SAP**

Marjorie Wright
 Simply FI-CO, LLC

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Introduction

- In a make to stock scenario, you may have several different cost objects: Product Cost Collectors, Production Orders, and Process Orders ("orders")
 - Each supports a specific method of manufacturing
- They are cost objects just like Cost Centers and Internal Orders
 - They hold value and can be senders and receivers of overhead allocations

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Introduction

- **Tracking the flow of value for an order can be challenging**
 - When is the order posted to?
 - Is the Balance Sheet affected?
 - How are the values determined?
- **Understanding periodic processing can be confusing**
 - How are overheads determined?
 - How is Work In Process calculated?
 - How can I get Variance details?
- **Reviewing Settlement can be complex**
 - When are postings made?
 - Where can I review the effects to PCA, CO-PA, ML?

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Order Type Basics

- **Each order is created from an order type. There are several CO relevant settings on each order type, and they transfer to the order when created:**
 - **Costing Variant (preliminary and actual)**
 - Valuation Variant, Overhead Costing Sheet
 - **Results Analysis Key**
 - Work In Process calculation and account determination
 - **Settlement Profile**
 - Settlement type
 - CO-PA
- **SAP Best Practice**
 - **Each setting must support statutory financial requirements**
 - Building Block 170: Configuration: Cost Object Controlling by Order

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Topics

- **Material Movements**
- **Labor and Overhead**
- **WIP, Variance, and Settlement**
- **Summary**

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Material Movements To/From An Order

- When any material movements occur
 - Financial Accounting receives a posting
 - Account determination is automatic



- Controlling receives a parallel posting
 - Primary cost element



What Is The Calculation for Goods Issued ?

- Quantity x Price
 - The quantity is taken from the goods movement
 - The price is determined by the actual valuation variant
 - Best Practice: "valuation according to price control"
 - Material Master, Costing 2 tab, S=Standard, V=Moving Average

	Raw Mat Inventory		Consumption
1 pc widget	\$ 10		\$ 10
1 gal purple paint	\$ 5		\$ 5



What Is The Calculation for Goods Received?

- Quantity x Price
 - The quantity is taken from the goods movement
 - The price is determined by the assigned valuation variant
 - Best Practice: "valuation according to price control"
 - Material Master, Costing 2 tab, S=Standard, V=Moving Average

	Fin Goods Inventory		Production Output
1 pc purple widget	\$ 15		\$ 15



What Is The Calculation for the Activity?

- **Quantity x Price**
 - The quantity is taken from the confirmation
 - The price is determined by the actual valuation variant
 - Best Practice: "plan price for period"
 - Cost center price planning by activity type

1 hour of painting \$ 10



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What About Financial Accounting?

- Overhead allocations occur within Controlling
- Financial Accounting may have an entry, if required
 - Cross company code
 - Cross business area
 - Cross functional area
- In "Classic GL"
 - An entry is made in the reconciliation ledger, if required
 - KALC executes the periodic update
- In SAP GL
 - An entry is made in real time, if required
- Account determination is set in Customizing

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Other Overhead

- Overhead Costing sheets are commonly used and can be
 - Quantity based
 - Percentage based
 - Executed as periodic processing
- The main components of a percentage based sheet are
 - Base- determines the basis for the calculation
 - Cost elements and origin groups of resources consumed
 - Rate- how much overhead % to apply
 - Credit- determines which cost object is the sender of the overhead
 - Account determination
 - Secondary cost element

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Topics

- Material Movements
- Labor and Overhead
- **WIP, Variance, and Settlement**
- Summary

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Work in Process

- The Results Analysis key determines
 - If various calculations (methods) are allowed, only one can post to Financial Accounting
 - Best Practice: RA Version 0
 - Select relevant to settlement
 - Select transfer to financial accounting
 - Valuation method (target, actual, status control)
 - Best Practice:
 - PREL=1 WIP calc based on actual
 - REL=2 WIP calc based on actual
 - DLV=3 Cancel data of WIP
 - TECO=4 Cancel data of WIP

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Work in Process

- The Results Analysis key determines (cont.)
- Capitalization requirements
 - Mapping by "Line ID"
 - Best Practice: at least three
 - Labor costs "FK"
 - Material costs "EK"
 - Overhead costs "GK"
- Account assignment
 - For posting WIP to FI
- The Results Analysis key is assigned to the order type, and defaults to the order

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Variance (total)

- **The Variance Key determines**
 - **If scrap will be calculated**
 - Transferred to the order from Material Master, Costing 1
 - Best Practice: key 000001
- **The Variance Variant (parameter at period end) determines**
 - **Which variance categories to calculate**
 - Four on the input side, four on the output side
 - **Is assigned to the target cost version**
- **The target cost version determines**
 - **Which cost estimate(s) to measure against**
 - Best Practice: Version 0
 - Control = actual cost
 - Target = current standard cost estimate

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What Is The Calculation for Variance?

- **Order status REL, PDLV**
 - **No VAR calculation**
- **Order status DLV, TECO**
 - **As per the version**
 - Only version 0 affects FI
- **No postings until settlement**
 - **The calculations can be repeated**



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Product Cost Collectors vs. Orders

- **Product Cost Collectors can have WIP and VAR in the same accounting period**
 - **Calculate WIP based on target**
 - Remaining quantity at each operation x standard cost estimate
 - **Calculate Variance**
 - Object balance – scrap-WIP=VAR
 - **Object Status is not important**

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Product Cost Collectors vs. Orders (cont.)

- **Orders cannot have WIP and VAR in the same accounting period**
 - Calculate WIP based on actual
 - "Actual" object balance, not actual cost (ML)
 - Calculate Variance based on
 - "Actual" object balance, not actual cost (ML)
 - **Object Status is critical**
 - REL, PDLV at period end = WIP calculation
 - DLV, TECO at period end = VAR calculation

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Settlement

- **The settlement function creates postings for Work in Process and Variance to**
 - Financial Accounting
 - Profit Center Accounting (Classic GL)
 - Profitability Analysis
 - To settle variances by category to value fields in Cost Based CO-PA, you must select the indicator
 - Material Ledger

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Settlement (cont.)

- **The parameters for settlement are defined in a settlement profile, which is assigned to the order type**
 - Best Practice:
 - To be settled in full (select)
 - Allocation structure (assign one)
 - PA transfer structure (assign one)
 - Variance to cost based CO-PA (select)
 - Valid receivers- mark as optional Order; Material; Profitability Segment

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Summary

- Use standard SAP reports for analysis
 - KKBC_ORD for Orders
 - KKBC_PKO for Product Cost Collectors
 - CKM3N for Material Ledger
- Use worksheet to understand flow of values
 - CostFlow.xls

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Summary (cont.)

- Understand the calculation
 - Review your Costing Variant
 - Valuation Variant
 - Overhead Costing Sheet
 - Review your Results Analysis setting
 - Valuation of WIP
 - Requirement to Capitalize
 - Account Determination
 - Review your Variance Variant
 - Details by category
 - Review your Settlement Profile
 - CO-PA check box

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Resources

- John Jordan, *Product Cost Controlling with SAP* (SAP PRESS, 2012).
 - ISBN 978-1-59229-399-5
 - https://www.sap-press.com/product-cost-controlling-with-sap_2888/
- John Jordan, *Production Variance Analysis in SAP Controlling*
 - ISBN 978-1-59229-381-0
 - https://www.sap-press.com/production-variance-analysis-in-sap-controlling_2544/
- SAP Best Practice Library
 - https://help.sap.com/bp_bl604/BL_DE/html/Content_Library_BL_EN_DE.htm
 - 170: Configuration: Cost Object Controlling by Order

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Resources (cont.)

- SAP Community Network
 - <http://wiki.scn.sap.com/wiki/pages/viewpage.action?pagelD=187336643>
- SAP Education
 - <https://training.sap.com/shop/course/ac520-cost-object-controlling-for-mark-to-stock-manufacturing-and-sales-order-related-production-classroom-095-g-en/>
- <http://help.sap.com>
 - SAP ERP → SAP ERP Central Component (select version) → SAP ERP Central Component → Financials → Controlling (CO) → Product Cost Controlling (CO-PC) → Cost Object Controlling (CO-PC-OBJ)

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Five Key Ideas

- During simultaneous costing, values flow through the profit and loss statement, with parallel postings to the cost object
- Cost allocations may affect FI via periodic KALC processing, or real-time CO-FI integration
- Periodic calculations of WIP affect the Balance Sheet through Settlement posting
- Periodic calculation of VAR affect the Profit and Loss and cost object through Settlement
- For detailed cost based CO-PA reporting, calculate variance by category and select the box on the settlement profile

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Questions

- Now:
 - Ask questions now for immediate answers
- Later:
 - mwright@simplyfi-co.com



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Appendix 1: Application Menus and Transaction Codes

- Accounting->Controlling->Product Cost Controlling->Cost Object Controlling->Product Cost by Order-> Period-End Closing->Single Functions->....
- Overhead->KGI2 - Individual Processing and CO43 - Collective Processing
- Work in Process->Individual Processing->KKAX - Calculate and KKAY - Display
- Work in Process->Collective Processing->KKAQ - Calculate and KKAQ - Display
- Variances->KKS2 - Individual Processing and KKS1 - Collective Processing
- Settlement->KO88 - Individual Processing and CO88 - Collective Processing

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Appendix 1: Application Menus and Transaction Codes

- Accounting->Controlling->Product Cost Controlling->Cost Object Controlling->Product Cost by Order-> Information System->Reports for Product Cost by Order
- Summarized Analysis->KKBC_HOE - With Defined Summarization Hierarchy
- Detailed Reports->KKBC_ORD - For Orders
- Line Items->KOB3 - Variances, KOB8 - WIP/Results Analysis, KOB1 - Actual

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Appendix 2: Customizing Menus and Transaction Codes

- Product Cost Controlling->Cost Object Controlling->Product Cost by Order->
 - Basic Settings for Product Cost by Order->Overhead->Define Costing Sheets KZS2
 - Manufacturing Orders->Check Order Types KOT2 (as well as check costing and valuation variants OPL1, OPN2)
 - Manufacturing Orders->Define Cost-Accounting-Relevant Default Values for Order Types and Plants OKZ3
 - Period-End Closing->
 - Work in Process-> Define Results Analysis Keys OKG1
 - Variance Calculation-> Check Variance Variants OKVG
 - Settlement-> Create Settlement Profile OKO7

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