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•	SEPTEMBER 21-24 · SAN DIEGO

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

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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 <u>cost objects</u> just like Cost Centers and Internal Orders
  - They hold value and can be senders and receivers of overhead allocations

### 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

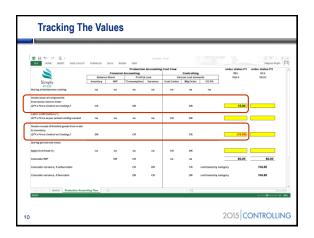
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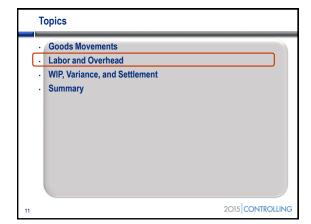
## Topics Material Movements Labor and Overhead WIP, Variance, and Settlement Summary

## Material Movements To/From An Order When any material movements occur Financial Accounting receives a posting Account determination is automatic Raw Mat Inventory Consumption Controlling receives a parallel posting Primary cost element Order

### 

# 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 1 pc purple widget \$ 15 Order -\$ 15 Order -\$ 15





	Activity Confirmations					
	As order activities are confirmed by production     Overhead is allocated from the sender to the order     The sender is usually a cost center     Account determination is taken from the activity type master record     These are secondary cost elements					
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### 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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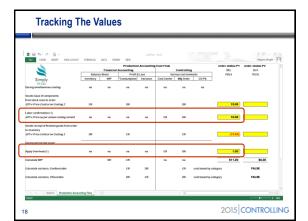
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- Overhead Costing sheets are commonly used and can be
  - · Quantity based
  - · Percentage based
- · Executed as periodic processing
- · The main components of a percentage based sheet are
  - · Base- determines the basis for the calculation
    - · 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

What Is The Calculation for the Overhead?					
	Base x Rate     The costing sheet is determined by the actual valuation variant     Dependencies can be used to apply actual vs plan rates     Base x Rate, credit to sender cost object				
	400000 raw matl cons x 10% \$ 1 (widget @ \$10 x 10%)				
	Cost Ctr -\$1 Order +\$1				
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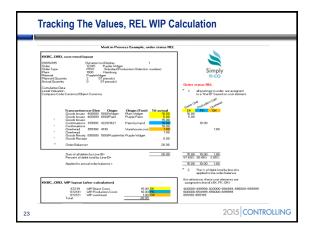
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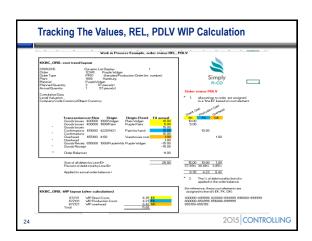
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Topics	
Material Movements     Labor and Overhead	
WIP, Variance, and Settlement Summary	
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Work in Process	
The Results Analysis key determines     If various calculations (methods) are allowed, only 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	

## What is the calculation for Work In Process? Order status REL, PDLV The RA Key considers balance of the order, and applies the capitalization requirements= WIP Order status DLV, TECO No WIP calculation No postings until settlement The calculations can be repeated





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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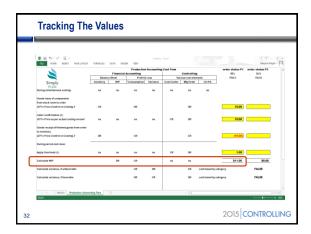
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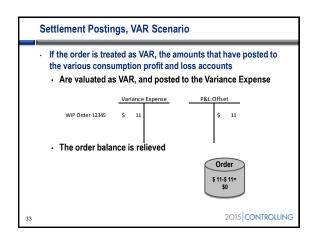
### Settlement (cont.)

- 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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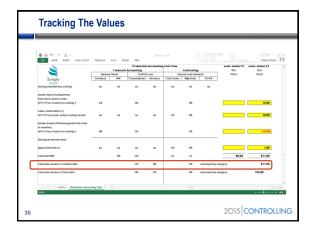
Settlement Postings, WIP Scenario					
If the order is treated as WIP, the amounts that have posted to the various consumption profit and loss accounts					
Are valuated as WIP, and posted to the Balance Sheet  WIP Inventory PRL Offset(*)					
WIP Order 12345 \$ 11	\$ 11				
(*) not a cost element	·				
The order value is not decreased the order next period	I, assuming we will complete				
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### Settlement Postings, VAR Scenario (cont.) Profit Center Accounting is updated (Classic GL) For any profit center relevant variance GL account/profit center/ \$11 Review via a PCA report Material Ledger is updated At the material/plant/controlling level \$11 Review in CKMSN Profitability Analysis is updated Cost based CO-PA can be updated with details by variance category \$ 8 material variance \$ 2 labor variance \$ 1 overhead variance

· Review in a cost based CO-PA margin analysis report by segment





	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.)	
38	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	2015 CONTROLLING
	Resources	
	John Jordan, Product Cost Controlling with SA 2012).     ISBN 978-1-59229-399-5     https://www.sap-press.com/product-cost-cosap_2888/     John Jordan, Production Variance Analysis in ISBN 978-1-59229-381-0	ontrolling-with-
	<ul> <li>https://www.sap-press.com/production-vari sap-controlling_2544/</li> </ul>	ance-analysis-in-

· SAP Best Practice Library

https://help.sap.com/bp\_bl604/BL\_DE/html/Content\_Library\_BL\_EN\_DE.htm
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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



### **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->KKAO 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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