

## New Developments



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**WCM Info Day**

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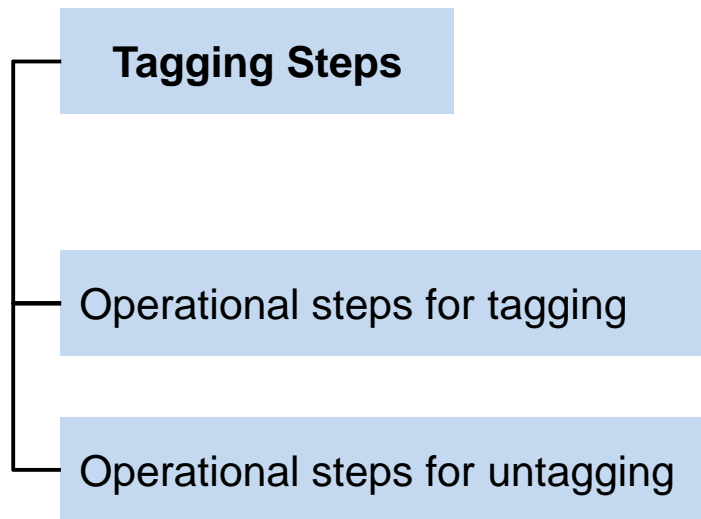
**International Conference on SAP Enterprise Asset  
Management & SAP EHS Management 2010**  
05 - 07 October 2010, Amsterdam



# Agenda

- 1. Stepwise Tagging**
2. Work Permit Management
3. New IMG Activities
4. New BAdls

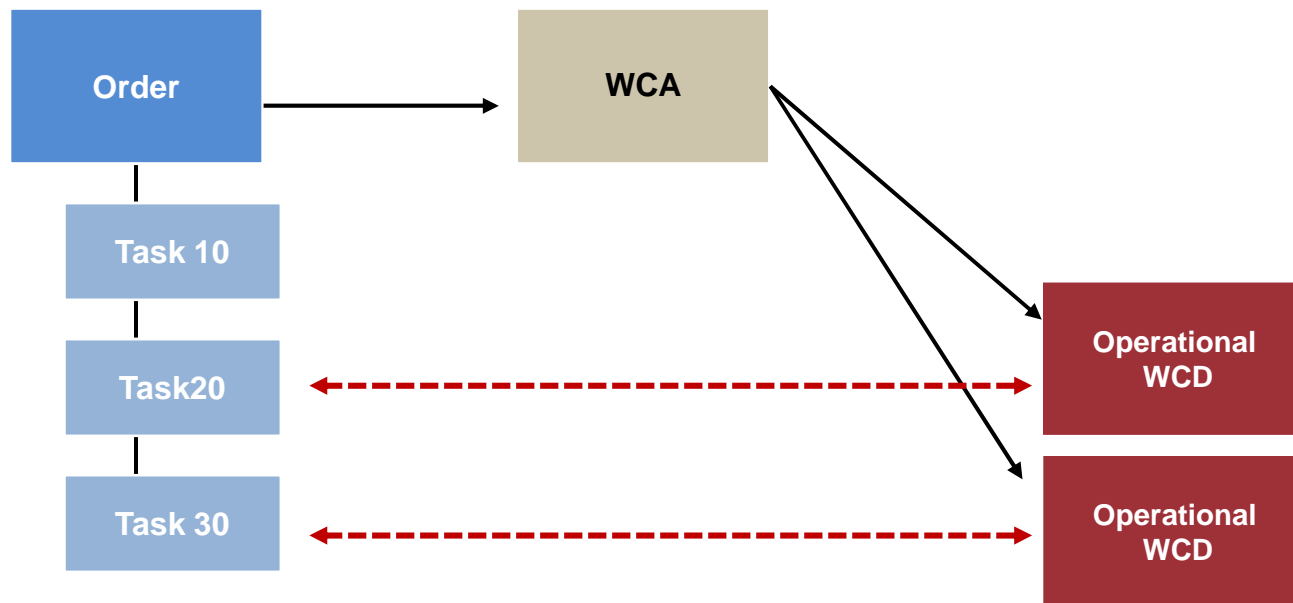
# New Process: Stepwise Tagging



## Operational step

An operational step can be a group of items or an operational WCD.

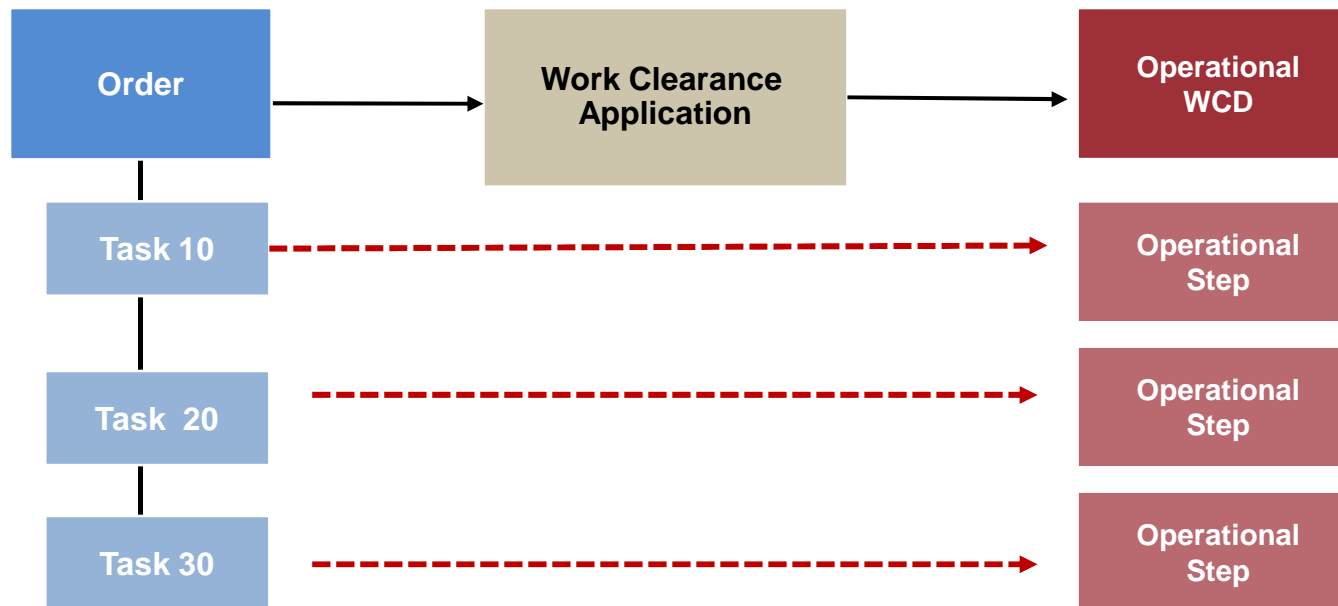
# Stepwise Tagging I



You can define dependencies in both directions (Task <-> Operational WCD) using a BAdI Implementation (BAdI\_WCM\_Order) like:

- Tasks must be completed (Status „Work Completed“) before you can start an isolation.
- An isolations must be confirmed before you can start a task (Status „Released for Execution“).

## Stepwise Tagging II



These operational steps are assigned to the individual operations. As soon as the tagging of an operational step has been confirmed, the corresponding operation can be carried out.

# Operational WCD – Assign Tagging Steps

Operational WCD Edit Goto Extras Switch System Help

Create Operational WCD: Maintenance Screen

WC Document: Isolation Pump Station 1

Status: CRTE

1	2	Item	IC	Technical Object	Short Text	OG	Tag. Cond.	TT	TSt	TS	Untag. Cond.	UT	USt
		10	F	01-B01-1	Pump set 1!	E	OFF	A	FSA	ON	A	NSA	
		20	F	01-B01-1A	Valve 1	M	CLOSED	A	FSB	OPEN	A	NSA	
		30	F	01-B01-1B	Valve 2	M	OPEN	A	FSB	CLOSED	A	NSA	
		40	E	10000959	Pumpe, Etanorm 200-100	E	OFF01	A	FSC	ON01	A	NSA	

**Important: It is only possible to enter operational steps on the single-line maintenance screen.**



# Agenda

1. Stepwise Tagging
- 2. Work Permit Management**
3. New IMG Activities
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# Work Permit Management

- Approval Process
- Different Levels of Work Permits
- Assignment of different Work Permits to an order
- Temporal Control of Work Permits
- Integration into Maintenance Processes





# Different Levels of Work Permits

## ■ Work Permits of Level 1

- High Risk
- Short Time Frame



The image shows a 'HOT WORK PERMIT' form. The front side (left) has a red header with 'HOT WORK PERMIT' in yellow. Below it, there is a paragraph of text in German. The back side (right) has a table with 10 rows and 2 columns. The first column is labeled 'ITEMS' and the second column is labeled 'PERMIT'. The table contains the following items: 1. Hot work permit, 2. Work area and equipment have been made safe, 3. Hot work permit, 4. Hot work permit, 5. Hot work permit, 6. Hot work permit, 7. Hot work permit, 8. Hot work permit, 9. Hot work permit, 10. Hot work permit. The form is for a 'HOT WORK PERMIT' and is used for high-risk work.

## ■ Work Permits of Level 2

- Lower Risk
- Long Time Frame



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## New IMG Activity for Applications (WAPIs) Define Work

- In this IMG activity you define the settings for work.
- You can use groupings to group work and distribute it to different subscreens.

The screenshot displays a software interface for defining work. At the top, there are four tabs: 'Asset Data', 'Responsibilities', 'Work Description', and 'Requirements'. The 'Work Description' tab is currently selected. Below the tabs, the interface is divided into two main sections, 'Work (1)' and 'Work (2)', each containing a list of work items with checkboxes.

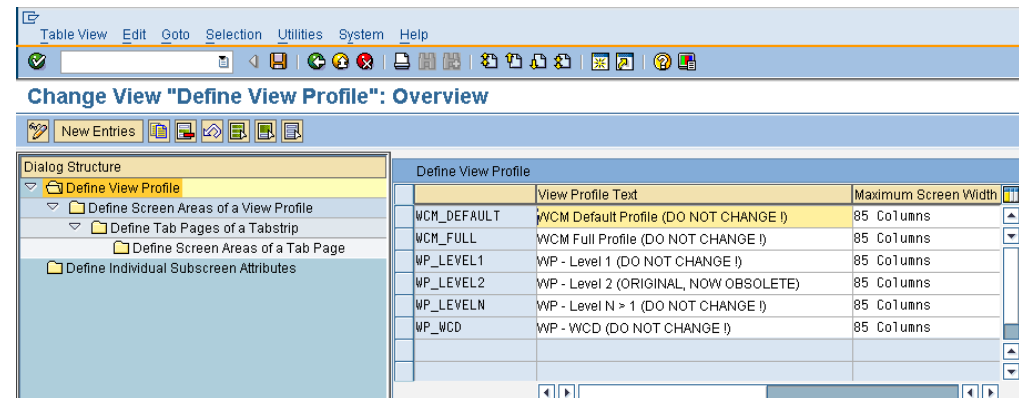
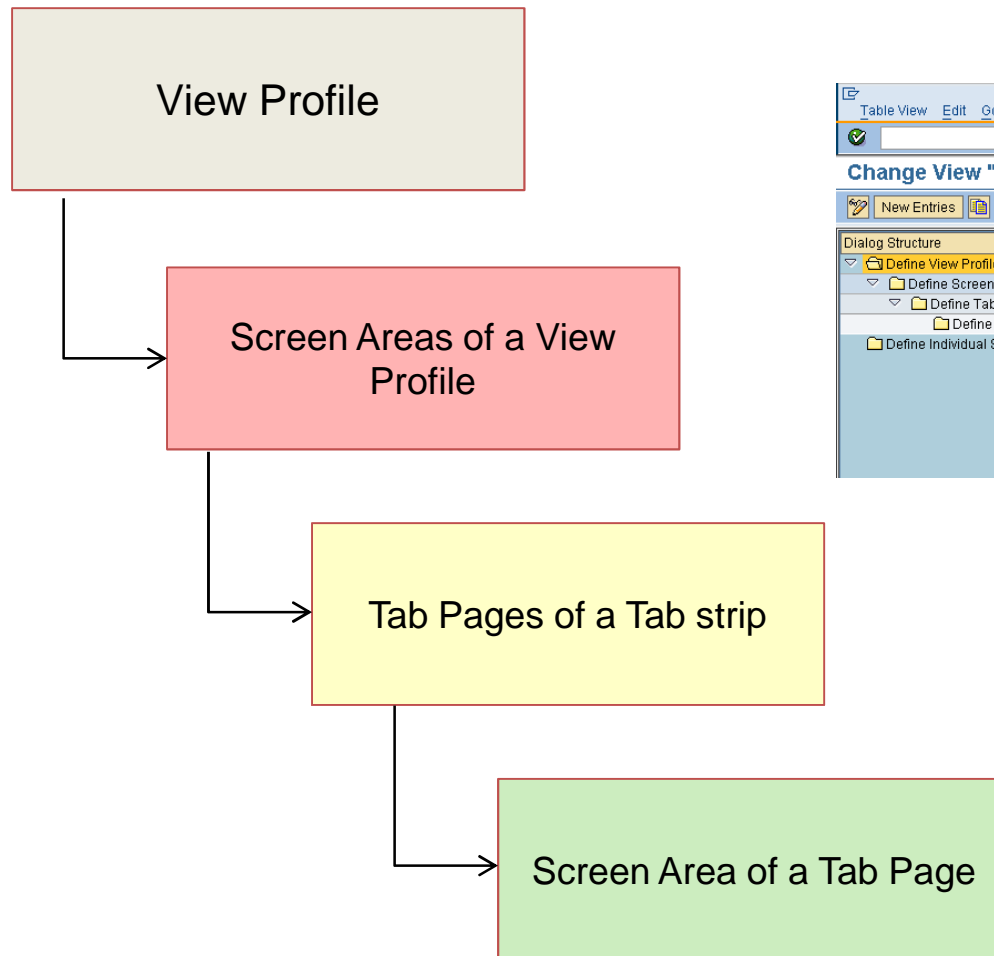
Work (1)	Work (2)
<input type="checkbox"/> Hot Work A	<input type="checkbox"/> Pressure Testing
<input type="checkbox"/> Hot Work B	<input type="checkbox"/> Wells
<input type="checkbox"/> CmHn Systems	<input type="checkbox"/> Lifting Operations
<input type="checkbox"/> Radioactive Material	<input type="checkbox"/> Other Activities

## New IMG Activity for Applications (WAPIs) Define Requirements

- In this IMG activity you define the settings for requirements.
- You can use groupings to group requirements and distribute them to different subscreens.

Asset Data	Responsibilities	Work Description	Requirements
<div><div>Requirements (1)</div><ul style="list-style-type: none"><li><input type="checkbox"/> Guard/Radio</li><li><input type="checkbox"/> Barriers/Signs</li><li><input checked="" type="checkbox"/> PA Announcements</li><li><input type="checkbox"/> Job Safety Analysis</li><li><input checked="" type="checkbox"/> Lockout/Tagout</li></ul></div> <div><div>Requirements (2)</div><ul style="list-style-type: none"><li><input checked="" type="checkbox"/> Depressurization</li><li><input checked="" type="checkbox"/> Draining/Emptying</li><li><input type="checkbox"/> Prevent Oil and Gas</li><li><input type="checkbox"/> Radioact. Radiation</li><li><input type="checkbox"/> Fire Prevention</li></ul></div>			

# View Profiles



# New Features for the Use of Applications (WAPIs)

## ■ Offset in Days

You can shift the start of an application's validity. You therefore have the option of creating the applications earlier.

## ■ Validity of WCM Object in Hours / Validity Extension in Hours

You define both the duration of the validity and the extension of the validity.

## ■ Maximum Extension of Validity in Hours

You also decide on the maximum extension for an application.

Planning Plant	3200
Usage	001
Descript. Usage	Usage 001

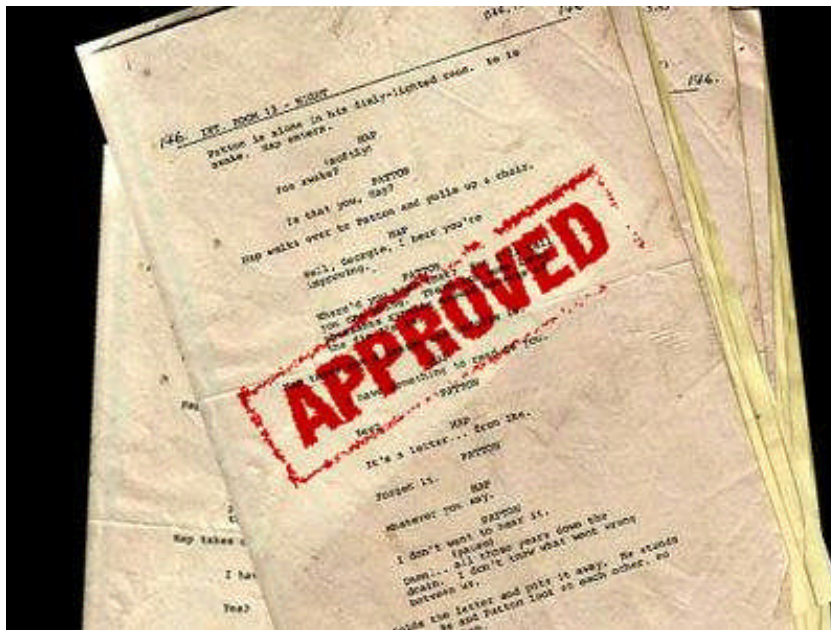
Maintain Usages	
Offset	1
ValidFrm Time	08:00:00
Validity	8
Extension	4
Max. Extension	4

# New Features for the Approvals

## Automatic Assignments of Approvals

You can determine that approvals are assigned automatically when the status PREP (Prepared) is set for a WCM object.

- Approval determination from a **reference object**:
- Approval determination from **operational steps**:  
(Only for Operational WCDs)



# New Features for the Approvals

## Automatic Assignments of Approvals

- **Approval determination from **work** or **requirements**:**  
(Only for Operational WCDs)

➤ **If this is not sufficient yet...**

- **Business Add-Ins BADI\_WCM\_APPROVAL**

You can use the method AUTOMATIC\_ASSIGNMENT to automatically assign approvals to a WCM object.




# New Features for the Approvals


## Block Issuing of Approvals

- New IMG Activity – Define Depending on Validity
- In this IMG activity, you make the settings with which you can couple the issuing of approvals to the validity of WCM objects. This means that the issuing of these approvals is only possible if the WCM object is valid.

Change View "Define Depending on Validity": Overview



Define Depending on Validity						
PIPI	Typ	Typ	Permit	Permit Text	Validity Reqd	
3200	WA	1	ACTIVE	Active		<input type="checkbox"/>
3200	WA	1	APPROVED	Pre_Approved		<input type="checkbox"/>
3200	WA	1	HSE_FCT	HSE_Function		<input type="checkbox"/>
3200	WA	1	OPR_SUP	Operation Supervisor		<input type="checkbox"/>
3200	WA	1	SEN_APP	Senior Approver		<input type="checkbox"/>
3200	WA	1	SJA_EXEC	SJA Executed		<input type="checkbox"/>
3200	WA	1	TAGGED	Tagging Confirmed		<input type="checkbox"/>
3200	WA	2	ACTIVE	Active		<input type="checkbox"/>
3200	WA	2	APPROVED	Pre_Approved		<input type="checkbox"/>
3200	WA	2	OPR_SUP	Operation Supervisor		<input type="checkbox"/>










# Enhanced IMG Activity Application Profile

## Processing Rule for Automatic Creation of WCM Object

- Defines whether a WCM object for a WCM-relevant order is created automatically **on saving**.
- You can also define whether the WCM object is to be **prepared** immediately.


Change View "Maintain Application Profile": Details

 New Entries      

Planning Plant  Atlanta

☐ Valuation  
☐ WCM Operations  
☐ Electric Signature

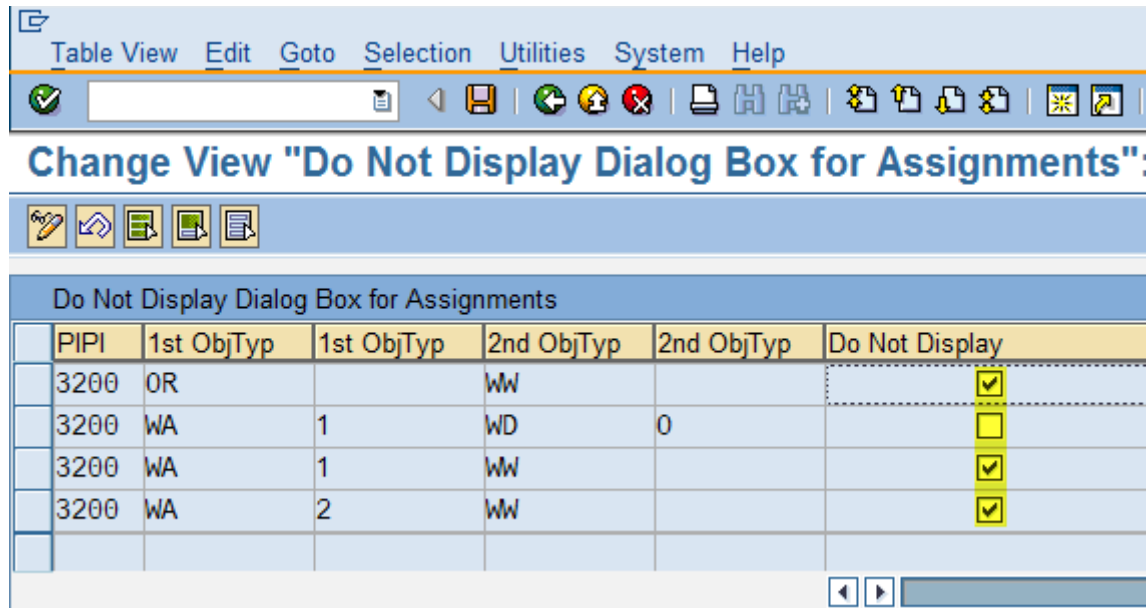
WCM Object



# New IMG Activity

## Do Not Display Dialog Box for Assignments

- In this IMG activity you define whether the dialog box for assignment is displayed.
- If you work with work permits, we recommend that you hide the dialog box for assigning work approvals.



The screenshot shows the SAP IMG configuration screen for the activity 'Do Not Display Dialog Box for Assignments'. The title bar includes 'Table View', 'Edit', 'Goto', 'Selection', 'Utilities', 'System', and 'Help'. Below the title bar is a toolbar with various icons. The main area displays a table with the following data:

	PIPI	1st ObjTyp	1st ObjTyp	2nd ObjTyp	2nd ObjTyp	Do Not Display
	3200	OR		WW		<input checked="" type="checkbox"/>
	3200	WA	1	WD	0	<input type="checkbox"/>
	3200	WA	1	WW		<input checked="" type="checkbox"/>
	3200	WA	2	WW		<input checked="" type="checkbox"/>

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## **New Business Add-Ins**

### **BAdIs to Extend the List Processing**

- BAdI: List Editing for Work Approvals (WAPs)
- BAdI: List Editing for Applications (WAPIs)
- BAdI: List Editing for Work Clearance Documents (WCDs)
- BAdI: List Editing for Operational Lists (Tagging-/Untagging Lists)
- BAdI: Selection of Work Clearance Documents
- BAdI: List Editing for Lineups
- BAdI: List Editing for Work Permits
- BAdI: Assignment of Orders
- BAdI: Assignment of Work Approvals
- BAdI: Assignment of Applications
- BAdI: Assignment of Operational WCDs
- BAdI: Multilevel List Editing

## **New Business Add-Ins**

### **BAdIs to Extend the Menu for List Processing**

- BAdI: List Editing for Work Approvals
- BAdI: List Editing for Applications
- BAdI: List Editing for Work Clearance Documents
- BAdI: List Editing for Operational Lists
- BAdI: Selection of Work Clearance Documents
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- BAdI: List Editing for Work Permit
- BAdI: Assignment of Orders
- BAdI: Assignment of Work Approvals
- BAdI: Assignment of Applications
- BAdI: Assignment of Operational WCDs
- BAdI: Multilevel List Editing

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