

# Order Processing with Valuation

Release R/3 Enterprise

WCM GmbH

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**wcm**

# Motivation



Maintenance works in complex installations often require high level security measurements.

However, there are also maintenance works without security measurements.

Valuation gives to the maintenance-planner the possibility to decide himself about the necessary security measurements.

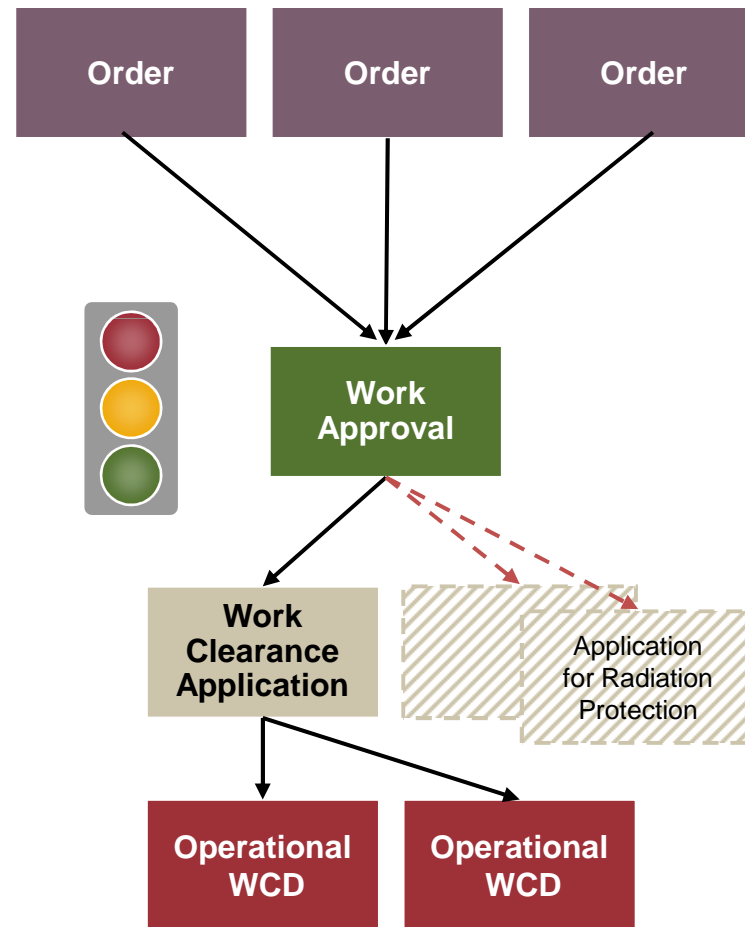
Furthermore the necessary security measurements shall be created automatically.

## Process Description

- The feed water pump needs maintenance. The necessity of a lockout/tagout is linked to the respective object.
- The person in charge for maintenance plans an order.
- On the basis of the respective technical object, the system realizes that additional security measurements are necessary.
- Valuation is active.
- The maintenance-planner decides that a lockout/tagout is necessary.
- Fire protection measurements are not necessary.
- A working plan will be allocated to the maintenance order. A work process contains a WCD template.
- When WCM objects are created automatically the system proposes a choice according to the valuation. At the same time an Operational WCD is created from the WCD template.
- The WCM objects are linked with the order.

# Model

We use the enhanced model for this process.



# Roles

These user roles are involved in this process:

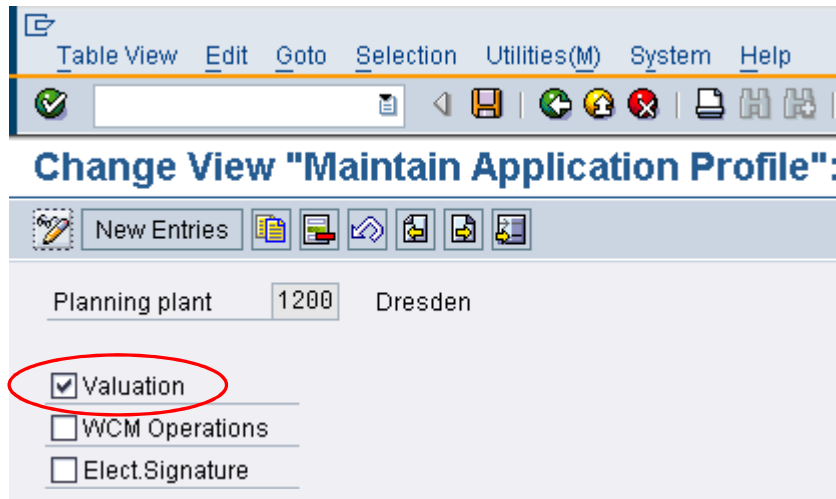
- Maintenance planner



- Safety planner



# Detailed Process Customizing Setup „Valuation active“



In the customizing the valuation for the planning plant 1200 is activated.

# Detailed Process

## Create an Order



Function: Structure List

Functional loc.	80	Valid From	06.10.2008
Description	Unit 8		
▶ 80HFC10	Coal Mill 1		
▶ 80HFC20	Coal Mill 2		
▶ 80HFC40	Coal Mill 4		
▼ 80HTC10	Flue Gas Blower		
80HTC10CF001	Discharge Flue Gas REA Blower		
▼ 80HTC11	Additional Blower REA		
80HTC11CF002	Discharge Lubricant Motor-Bearing		
▼ 80LAC20	Feedwater Pump System 1		
80LAC20AA004	Valve before Feedwater Pump		
WCM	Work Clearance Management	X	

For the feed water pump system 1 an order is created.

# Detailed Process Valuation Required



Order Edit Goto Extras Environment System Help

Valuation

**Create Maintenance Order : Central Header**

Order PM01 %00000000001 Maintenance Feedwater Pump Sys 1

Sys.Status WCM CRTD MANC NTUP

HeaderData Operations Components Costs Partner Objects Additional Data

Person responsible

PlannerGrp 100 / 1200 Hr. Reuter

Mn.wk.ctr MECHANIK / 1200 Mechanical maintner

Person Resp

Notifctn

Costs EUR

PMActType 103 Repair

Due to the activated valuation the button „valuation“ is shown in the order.



# Detailed Process Order - Valuation



Valuation

Application	Valuation	Signature	Created on
WC Application			
Fire Protection Application			

Navigation: [Left Arrow] [Right Arrow] [Search Box] [Left Arrow] [Right Arrow]

Buttons: [Checkmark] [Print] [Copy] [Yes] [No] [Info] [Close]

The security planner is shown the possible security measurements. He has to define which security measurements are needed (Yes or No). This will be filed in the system.

# Detailed Process Valuation – Lockout/Tagout Necessary



Valuation

Application	Valuation	Signature	Created on
WC Application	+	CHWOBBE	06.10.2008
Fire Protection Application			

Navigation: [Left Arrow] [Right Arrow] [Search Box] [Left Arrow] [Right Arrow]

Buttons: [Checkmark] [Print] [Add (+) Yes] [Remove (-) No] [Info (i)] [Close (X)]

The safety planner decides that a lockout/tagout (work clearance application) is necessary.

# Detailed Process

## Valuation – Fire Protection Certificate not Necessary



Valuation

Application	Valuation	Signature	Created on
WC Application	+	CHWOBBE	06.10.2008
Fire Protection Application	-	CHWOBBE	06.10.2008

Yes No

A fire protection certificate is not necessary for the operations.

# Detailed Process

## Save Order



Order Edit Goto Extras Environment System Help

Change Maintenance Order 817500: Central Header

Work Approval Valuation

Order PM01 817500 Maintenance Feedwater Pump Sys 1

Sys.Status WCM VAL CRTD MANC NMAT

HeaderData Operations Components Costs Partner Objects Additional Data

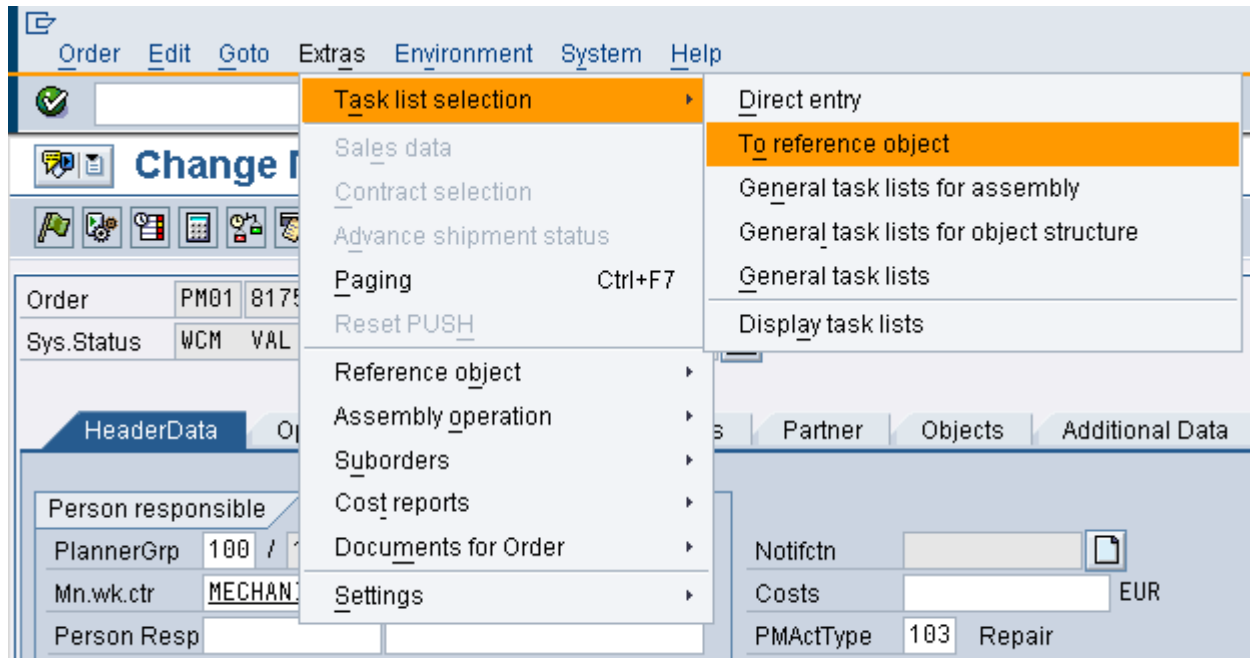
Person responsible

PlannerGrp	100 / 1200	Hr. Reuter	Notifctn	
Mn.wk.ctr	MECHANIK / 1200	Mechanical mainter	Costs	EUR
Person Resp			PMActType	103 Repair

Order saved with number 817500

The order is saved.

# Detailed Process Allocate Task List



A working plan is allocated to the maintenance order. For the feed water pump there are already ready-made task lists which can be chosen.

# Detailed Process Choose Task List



Group 19 WCM Feedwater Pump System 1 Grp. Countr 2  
Func. Loc. 80LAC20 Feedwater Pump System 1

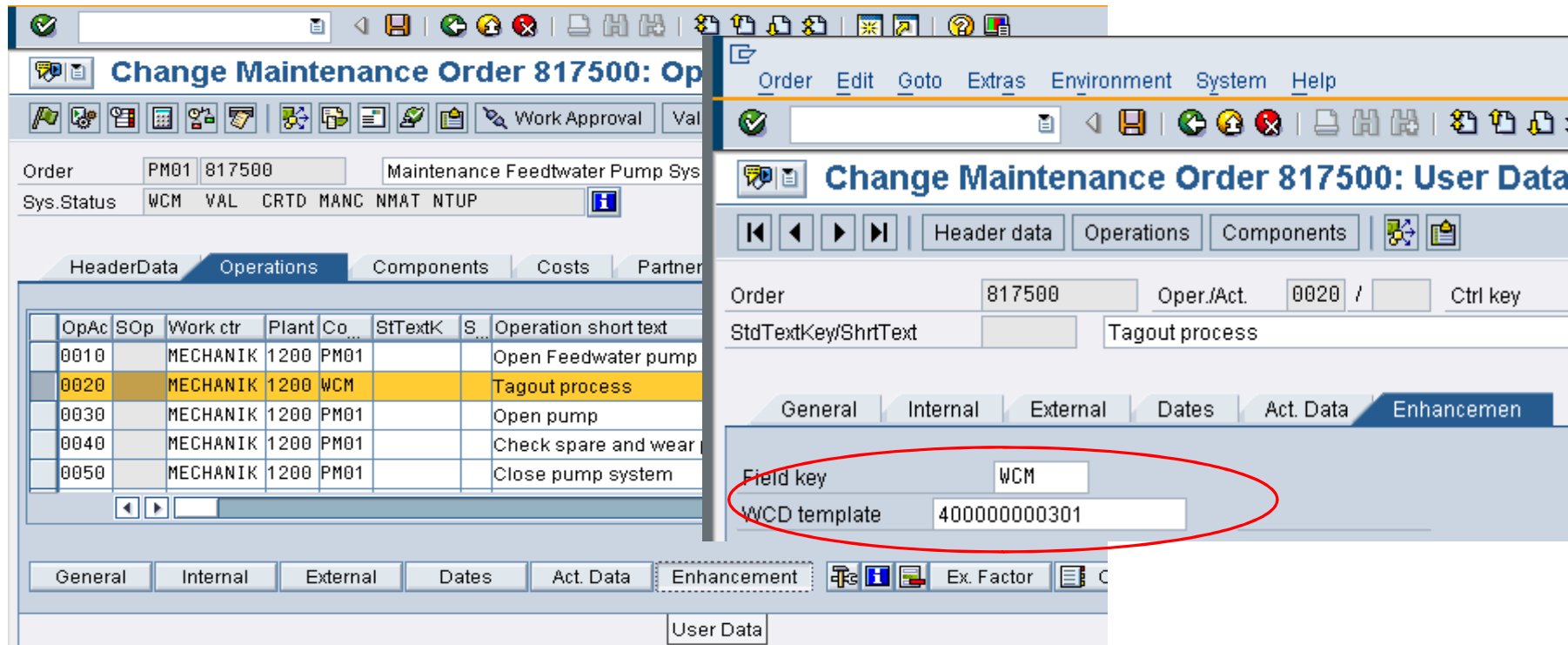
Task list factor 1

I	Fct	OpAc	SOp	Work ctr	Ctrl	Operation short text
<input type="checkbox"/>	1	0010		MECHANIK	PM01	Open Feedwater pump system Encasement
<input type="checkbox"/>	1	0020		MECHANIK	WCM	Tagout process
<input type="checkbox"/>	1	0030		MECHANIK	PM01	Open pump
<input type="checkbox"/>	1	0040		MECHANIK	PM01	Check spare and wear parts
<input type="checkbox"/>	1	0050		MECHANIK	PM01	Close pump system

Buttons: All, Selected, Work center, etc.

The maintenance planner chooses the desired task list. The task list contains a working process with the control key "WCM" (conduct lockout/tagout).

# Detailed Process Task List – Enhancement/User Data



The screenshot displays the SAP 'Change Maintenance Order 817500: User Data' interface. The 'Operations' tab is active, showing a table of operations. The 'Enhancement' tab is also visible, with the 'WCD template' field highlighted by a red circle.

OpAc	SOp	Work ctr	Plant	Co...	StTextK	S...	Operation short text
0010		MECHANIK	1200	PM01			Open Feedwater pump
0020		MECHANIK	1200	WCM			Tagout process
0030		MECHANIK	1200	PM01			Open pump
0040		MECHANIK	1200	PM01			Check spare and wear
0050		MECHANIK	1200	PM01			Close pump system

Order: 817500, Oper./Act.: 0020 / , Ctrl key: Tagout process

Field key: WCM  
WCD template: 400000000301

In the user data of the work process it is possible to allocate a WCM template if the key „WCM“ is used. This WCD template is used later during the automatic creation of WCM objects.

# Detailed Process

## Automatic creation of WCM objects



Order PM01 817500 Maintenance Feedtwater Pump Sys 1

Sys.Status WCM VAL CRTD MANG NMAT

Assignments - Change Work Approvals


HeaderData

WAP Short Text Long Text  
Equipment ObjList Catalog  
Approvals System status UserStatus

List contains no data

Selection

WCM Object	Valuation
<input checked="" type="checkbox"/> Work Approval	
<input checked="" type="checkbox"/> WC Application	+
<input type="checkbox"/> Fire Protection Application	-
<input checked="" type="checkbox"/> Operational WCD	

The maintenance planner chooses the allocation of a work permit. With the button  an automatic creation of the WCM objects is started. The system proposes WCM objects which are necessary on the base of the valuation.





# Detailed Process WCM Objects have been Created

Assignments - Change Work Approvals

WAP	Short Text	Long Text
	Equipment ObjList Catalog	
	Approvals System status	UsrStatus

1000000000200 Maintenance Feedwater Pump Sys 1

CRTE

Operational WCD was saved with number 3000000000300

The system has now created a work approval, a work clearance application and an Operational WCD and has linked these to the order.

# Detailed Process Overview with Multilevel Lists

The screenshot displays a software interface for editing multi-level lists. At the top, there is a menu bar with options: List, Edit, Goto, System, Help. Below the menu is a toolbar with various icons for file operations and editing. The main window title is "Multi-Level List Editing - Change". Below the title is another toolbar with icons for navigation and editing, and a set of buttons labeled "Orders", "Work Approvals", "Applications", "Operational WCDs", "Edit", and a list icon. The main area shows a hierarchical tree structure. The root node is "1200". It has three children: "817500 Maintenance Feedwater Pump Sys 1 06.10.2008-24.10.2008 80LAC20 Valuation", "100000000200 Maintenance Feedwater Pump Sys 1 06.10.2008-24.10.2008 CRTE", and "100000000300 Maintenance Feedwater Pump Sys 1 06.10.2008-24.10.2008 CRTE". The "100000000300" node has a child "300000000300 80LAC20 Isolate Feedwater Pump System 06.10.2008-24.10.2008 CRTE". A "Color Legend" dialog box is open, showing a list of categories with corresponding color swatches: Orders (orange), Work Approvals (green), Applications (yellow), Operational WCDs (red), Valuation (light green), and Catalogs (light blue). A checkmark icon is visible at the bottom of the dialog box.

The further process is equivalent to the standard process.

# Questions and Answers



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