



LMS-1933

Umoja Preventive Maintenance Training



Agenda

Course Introduction

Module 1: Umoja Preventive Maintenance Overview

Module 2: Task Lists

Module 3: Maintenance Items and Plans creation and update

Module 4: Maintenance Plan scheduling

Module 5: Preventive Maintenance Service Order processing

Module 6: Reports

Course Summary

Course Assessment

Course Survey

Introduction

Please share with us:

- Your Name
- Your Section/Unit
- # Years with the UN
- Interesting Fact About Yourself



Ground Rules

Please consider the following guidelines during the training session:

- Turn your cell phone to silent mode. Please step out of the class to take any important phone call
- Please do not access your e-mail or the Internet outside of breaks
- Participate fully in the training session and respect each other's contribution
- Reference of transactional steps covered in this course are included in the User Guide. Ensure to review it to learn how to perform the transactions
- Breaks are included at the discretion of the trainer



No Phones



**Do Not Access
E-mail**



Participate



Ask Questions



User Guide



Breaks

Course Overview

The purpose of the **Umoja Preventive Maintenance process** course is to illustrate the steps required for the Preventive Maintenance Planner (SD16) in the Umoja processes, such as creating and updating task lists, creating maintenance items, creating and updating maintenance plans, scheduling plans and processing preventive maintenance service orders.

Prerequisite Review

You should have completed the following prerequisite courses:

- Umoja Overview
- Umoja Master Data & Coding Block Overview
- Umoja Services Delivery Overview
- ECC Navigation

Course Duration: 4 hours



Course Objectives

After completing this course, you will be able to:

- List the key roles and responsibilities in the Preventive Maintenance process
- Explain the high level Preventive Maintenance processes
- Describe the elements involved in the Preventive Maintenance Process (task lists, maintenance items, maintenance plans and service orders)
- Explain the process for creating and updating task lists
- Explain the process for creating maintenance items
- Explain the process for creating, scheduling and updating maintenance plans
- Explain the process for processing service orders generated by maintenance plans



Agenda

Course Introduction

Module 1: Umoja Preventive Maintenance Overview

Module 2: Task Lists

Module 3: Maintenance Items and Plans creation and update

Module 4: Maintenance Plan scheduling

Module 5: Preventive Maintenance Service Order processing

Module 6: Reports

Course Summary

Course Assessment

Course Survey

Module 1 Objectives

After completing this module, you will be able to:

- List the roles and responsibilities involved in the Preventive Maintenance process
- Explain the high level Preventive Maintenance process
- Describe the Elements involved in the Preventive Maintenance Process
- Describe the Master Data elements in the Preventive Maintenance process



Why do we need preventive maintenance?

The Preventive Maintenance (or Preventative Maintenance) is the generic term for inspections, maintenance action and planned repairs, for which the time and scope of the work can be planned in advance.

The basis of the planned maintenance initiative can be:

- Manufacturer recommendation. Preventive Maintenance is generally conducted in accordance to Manufacturer recommendations. The manufacturer of technical objects might recommend certain procedures to ensure that the objects always function optimally.
- The initiative to establish the Preventive Maintenance programme can be defined by policy of the Organization or as best practices established by the responsible stakeholders.
- Legal requirements by the host country Code. For example elevators and life safety systems.
- Environmental requirements. Well maintained objects often have less impact on the environment.

Preventive Maintenance Benefits

Some of the benefits of using the Preventive Maintenance programme:

- Prolong high availability of the equipment
- Reduces the total maintenance cost by reducing breakdowns and accidents
- Improve energy efficiency and reduces the carbon footprint for equipment that emits Carbon Dioxide (well maintained equipment reduces the emissions)
- Avoids losing warranties on equipment
- Allows more efficient budget and contract management planning



How does preventive maintenance work in Umoja

- Based on the information defined in the Maintenance Plan (where, when and what to do) and the maintenance plan schedule transaction, the system triggers automated creation of service orders for the operations associated with the task list (list of operations that need to be performed on the defined equipment record, or records), responsibility, dates, reference objects, fund management details and cost.
- The processing of Service Orders (update, confirmation, technical completion, settlement, and business completion) is the same as other types of Service Order.



Roles & Responsibilities

The following Umoja Enterprise roles are involved in the Preventive Maintenance process:

Preventive Maintenance Planner (SD16)

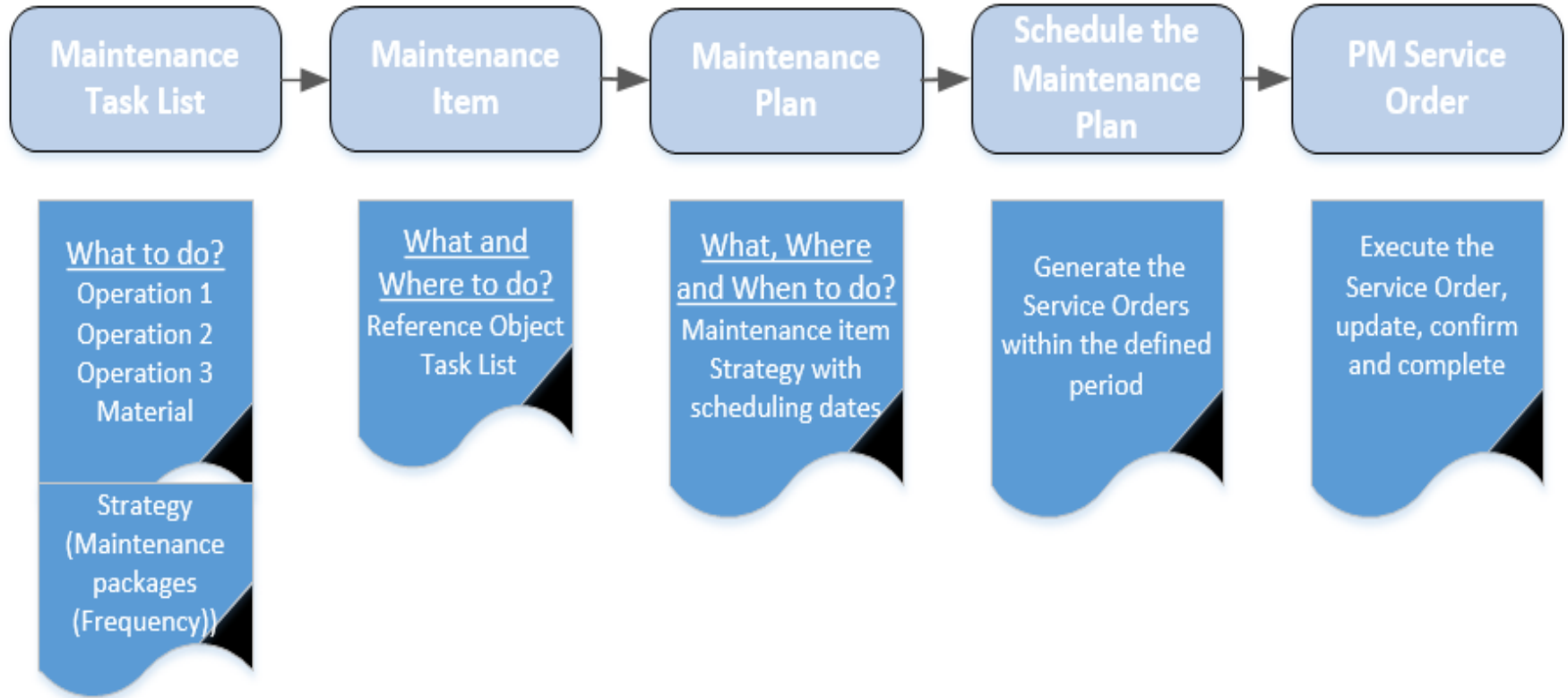
- Create, update and monitor the Task Lists
- Create, Update and monitor Maintenance Items
- Create, update, schedule and monitor Maintenance Plans
- Process Preventive Maintenance Service Orders (Type ZM02)

Service Deliver Order Releaser (SD04)

- Review and Release Preventive Maintenance Service Orders (in case the Maintenance Plan is not set up to release the Order automatically).

Preventive Maintenance Process

The high level Preventive Maintenance process is as follows:



Preventive Maintenance Components

Preventive Maintenance process consists of 4 components.

For each component there are specific processes for creation, update and processing.



Task List



Maintenance Item



Maintenance Plan



Service Order

Task List



Task List

- Task list is the group of operations (Tasks) that need to be performed as part of the required preventive maintenance programme for the specific equipment (or type of equipment). The operations are ordered chronologically.
- The Task lists do not refer to the specific technical object, but can be used for different equipment records that have similar requirements. For example, most of the AC Units within a plant can use only one Task list in one or multiple Maintenance Plans for the AC Units.
- Using general maintenance task lists, the Planner can define and manage sequences of maintenance tasks, and use them for work scheduling.
- Task lists are created within “Task list groups”, which are defined for each type of equipment.
- Task lists include the activity types to be used, amount of work to be done, detailed instructions and frequency of operations
- The Operations within the Task List can be associated with the sequences (frequencies) within the Strategy and create the Maintenance Packages.

Maintenance Item



Maintenance Item

- Maintenance Item describes which maintenance tasks should take place regularly at the technical object (equipment, functional location and so on).
- Maintenance Items contains the following:
 - i. Reference of the tech. object (Number, Location)
 - ii. Planning Data (Plant, Work Centre, Maintenance Planner Group, Maintenance Activity Type, Business Area)
 - iii. Task List
 - iv. Location data, Account assignment and Fund
- Maintenance Item contains only one technical object



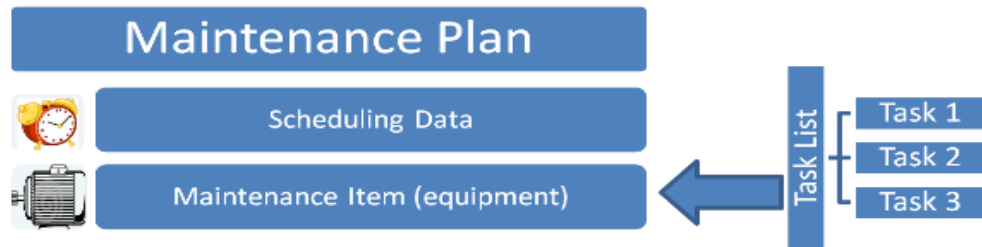
Note: A Maintenance Item can be created within the Maintenance by entering all the data directly in the plan

Maintenance Plan



Maintenance Plan

- Maintenance Plan combines the Task List, technical object and dates (scheduling parameters)
- By scheduling the Maintenance Plan the system automatically creates the Service Orders.
- A Maintenance Plan can contain multiple maintenance items (from one to hundreds).
- By scheduling the Maintenance plan the system generates a service order for each maintenance item based on the frequency (maintenance packages) defined in the task list



Service Order



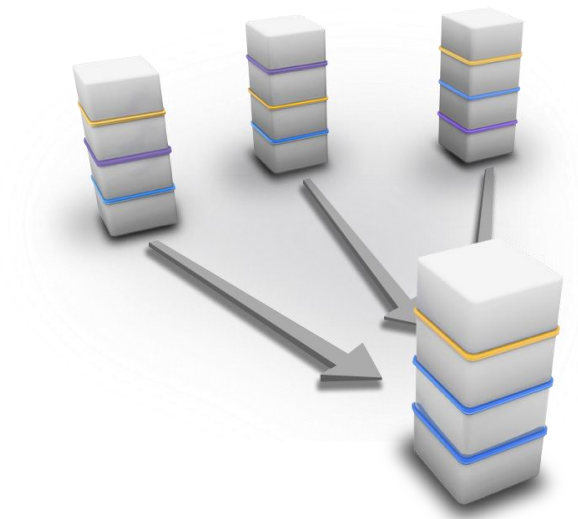
Service Order

- Preventive Maintenance Service Orders (ZM02) are created by the system once a maintenance plan is scheduled based on the information in the plan (dates, task list & maintenance packages, maintenance items)
- Once the Service Order is created, it has to be released, then can be assigned and printed (the printout includes the detailed instructions of the operations)
- Upon the task being performed the service orders have to be confirmed
- Once the orders is confirmed, it is ready to be technically completed, settled and business completed

Master Data in Preventive Maintenance

The following Master Data is used in the Preventive Maintenance process:

- **Financial information** relevant to the elements involved in the process (cost Centre, business area, fund)
- **Activity Types and Rates**, used in the task lists
- **Work Centres and Planner Groups** in charge of processing the maintenance activities
- **Equipment** records and Functional Locations as the reference object



Module 1 Summary

The key points covered in this module are listed below:

- Preventive Maintenance is a key factor in extending the life of the equipment
- The preventive maintenance process in Umoja includes the creation of the task list, the creation of maintenance items based on the existing technical object (equipment), the creation of the maintenance plan, the scheduling of the maint. plan and the processing of the service orders
- The main role of the process is SD16 Preventive Maintenance Planner
- The Master Data used in the Preventive Maintenance programme are related to Fund Management, Activity Types and Rates, Work Centres & Planner Groups, Technical Object and Functional Location.



Agenda

Course Introduction

Module 1: Umoja Preventive Maintenance Overview

Module 2: Task Lists

Module 3: Maintenance Items and Plans creation and update

Module 4: Maintenance Plan scheduling

Module 5: Preventive Maintenance Service Order processing

Module 6: Reports

Course Summary

Course Assessment

Course Survey

Module 2 Objectives

After completing this module, you will be able to:

- Explain the process for creation of task lists
- Explain the process for updating task lists



Task List - Overview



Task List

- Task list is the group of operations (Tasks) that need to be performed as part of the required preventive maintenance programme for the specific equipment (or type of equipment). The operations are ordered chronologically.
- The Task lists do not refer to the specific technical object, but can be used (should be used) for different equipment records that have similar requirements. For example, most of the AC Units within a plant can use only one Task list in one or multiple Maintenance Plans for the AC Units.
- Using general maintenance task lists, the Planner can define and manage sequences of maintenance tasks, and use them for work scheduling.
- Task lists are created within “Task lists groups”, which are defined for each type of equipment.
- Task lists include the activity types to be used, amount of work to be done, detailed instructions and frequency of operations
- The Operations within the Task List can be associated with the sequences (frequencies) within the Strategy and create the Maintenance Packages.

Strategies

- Defines the rules for the sequence (frequency) of planned tasks (operations)
- Strategy contains general scheduling information. Can be assigned to an unlimited number of the task lists and maintenance plans as required.
- A maintenance strategy contains maintenance packages that can define the frequency of the operations.
- There are two strategies used in Umoja:
 - **ZMON**, the unit of measure for the frequencies is month (monthly, bimonthly, quarterly, semiannually, annually, biannually, triennially)
 - **ZWEEK**, the unit of measure for the frequencies is week (weekly, biweekly, 4 weeks for a monthly activity, 26 weeks for a semiannual activity and 52 weeks for an annual operation)
- The following screen represents the maintenance packages within ZMON strategy

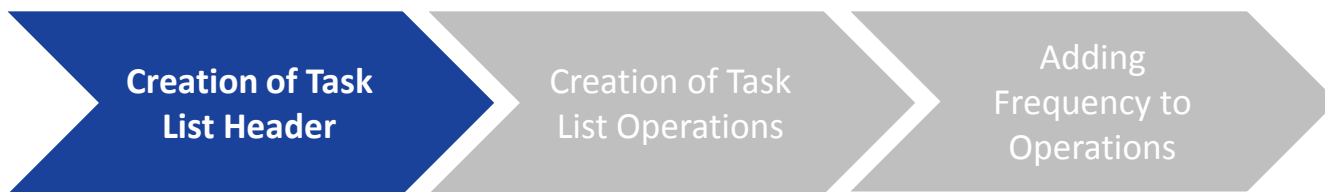
Operat. Overview Maint. Packages									
Op.	SOp	Operation Description	Z3	Z2	ZY	ZS	ZQ	ZB	ZM
0010		CHILLER Monthly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0020		CHILLER Two Month	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
0030		CHILLER Annually	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Task List Groups

- Task lists are grouped into Task List Groups
- There are 26 pre defined groups in Umoja
- The group number should be aligned with the object type number of the equipment record that will use the task list
- The 26 available groups are displayed:

Task List Group	Description
20000000	Mining and Well Drilling Machinery and Accessories
22000000	Building and Construction Machinery and Accessories
23000000	Industrial Manufacturing and Processing Machinery and Accessories
24000000	Material Handling and Conditioning and Storage Machinery and their Accessories and Supplies
24130000	Industrial refrigeration
25000000	Commercial and Military and Private Vehicles and their Accessories and Components
26000000	Power Generation and Distribution Machinery and Accessories
27000000	Tools and General Machinery
30000000	Structures and Building and Construction and Manufacturing Components and Supplies
32000000	Electronic Components and Supplies
39000000	Electrical Systems and Lighting and Components and Accessories and Supplies
39120000	Electrical equipment and components and supplies
40000000	Distribution and Conditioning Systems and Equipment and Components
40150000	Industrial pumps and compressors
41000000	Laboratory and Measuring and Observing and Testing Equipment
42000000	Medical Equipment and Accessories and Supplies
43000000	Information Technology Broadcasting and Telecommunications
43200000	Components for information technology or broadcasting or telecommunications
44000000	Office Equipment and Accessories and Supplies
45000000	Printing and Photographic and Audio and Visual Equipment and Supplies
46000000	Defense and Law Enforcement and Security and Safety Equipment and Supplies
47000000	Cleaning Equipment and Supplies
48000000	Service Industry Machinery and Equipment and Supplies
52000000	Domestic Appliances and Supplies and Consumer Electronic Products
56000000	Furniture and Furnishings
95000000	Land and Buildings and Structures and Thoroughfares

Creation of a Task List



- To Create a Task List use transaction IA05
- Select the task list group
- In the list of existing task lists in the group, select new enter (F6) to create a new task list (or Edit> New entries)
- Complete the following information in Header:
 - The name of the task list and entity, for example “Split AC Units UNON”.
 - Enter the Planning plant
 - Enter the work Centre
 - Usage - select “4”
 - Enter the Planner Group
 - Status select “4” (released)
 - System condition select “1” (in operation)
 - Maintenance Strategy select the appropriate strategy “ZMON” or “ZWEEK”

General task list Edit Goto Task list header Extrgs Environment System Help

Create General Task List: Header General View

Operation Task list

Group 40000000 AIR HANDLING UNITS ECA

Group 40000000

Group Counter 2 AIR HANDLING UNITS ECA

Planning plant ET30

Assignments to Header

Work center	FMS-A006 / ET30	HVAC Services
Usage	4	Plant maintenance
Planner group	F00	Facilities Management
Status	4	Released (general)
System Condition	1	in operation
Maintenance strategy	ZMON	Schedule Strategy - MON
Assembly		
<input type="checkbox"/> Deletion flag		

QM Data

Inspection points	
Ext. numbering	

Creation of a Task List



To enter the operations, select the “Operations” button; in the operations screen enter the following:

- Operation Description
- Un - (unit of measure is defined in the Activity Type. Generally it is .
- No – (is the number of technicians required)
- Duration
- Un – (unit of measure defined in the Activity Type. Usually is “H” for labour)
- In column “C” select 2 (calculate work)
- Select the Activity type from the drop down list. The activity type is master data assigned to Work Centre. **Select the one that start with S (Statistical).** (Note: The Statistical activity type will display the Cost but will NOT consume the budget).

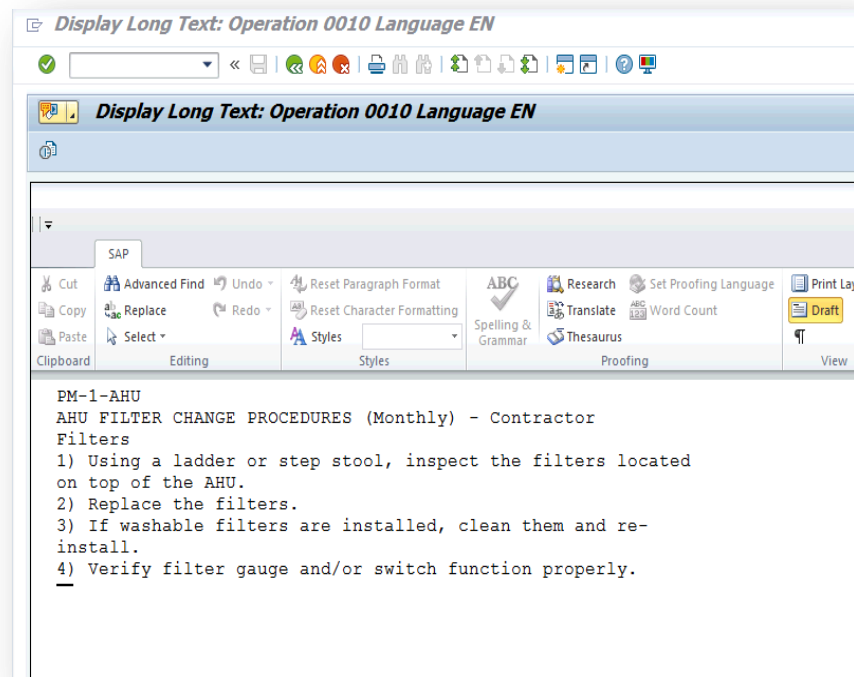
Note: repeat the process for each Operations

Op...	SOp	Work ctr	Plant	Ctr	Operation Description	LT Work	Un. No.	Duration	Un.	C/Pct	Int. det	Fac	ActTyp	St
0010	202	A016	3E00	3800	Fast Operation	<input checked="" type="checkbox"/>	4	H 2 2	H				1	SP1015
0020	202	A016	3E00	3800	Filter change	<input checked="" type="checkbox"/>	0	H 3 3	H				1	SP1015
0030	202	A016	3E00	3800		<input type="checkbox"/>								
0040	202	A016	3E00	3800		<input type="checkbox"/>								
0050	202	A016	3E00	3800		<input type="checkbox"/>								
0060	202	A016	3E00	3800		<input type="checkbox"/>								
0070	202	A016	3E00	3800		<input type="checkbox"/>								
0080	202	A016	3E00	3800		<input type="checkbox"/>								
0090	202	A016	3E00	3800		<input type="checkbox"/>								
0100	202	A016	3E00	3800		<input type="checkbox"/>								
0110	202	A016	3E00	3800		<input type="checkbox"/>								
0120	202	A016	3E00	3800		<input type="checkbox"/>								
0130	202	A016	3E00	3800		<input type="checkbox"/>								
0140	202	A016	3E00	3800		<input type="checkbox"/>								
0150	202	A016	3E00	3800		<input type="checkbox"/>								

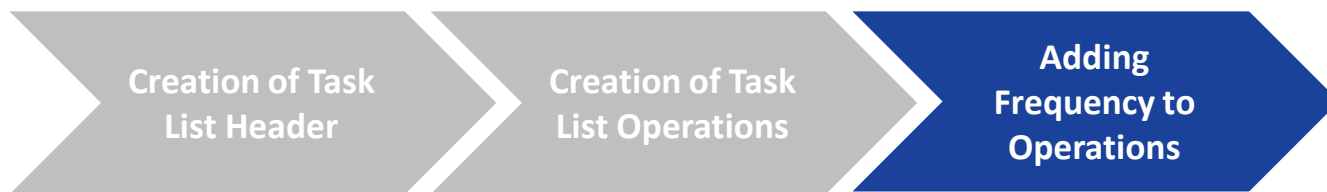
Creation of a Task List



- To enter the operations detailed tasks double click on “LT” (Long Text).
- Type the operation text in the text editor or convert (past) already prepared detailed steps of the maintenance operation. Operations will appear in the service order once the Maintenance Plan will be scheduled.
- Once entered the operation (task) text return to operations screen with the “Back” icon



Creation of a Task List



- Once all the operations have been entered, include the frequency by selecting the button MntPack (maintenance package)
- Note: The Planner is able to select one of the following periods (based on the strategy selected, in this case ZMON):
- Weekly, Biweekly, Monthly, Bimonthly, Quarterly, Semiannually, Annually, Biannually, Triennially
- Once completed, save and the task list will be created.

Task list Edit Goto Operation Extras Environment System Help

Create General Task List: Maintenance Package Overview

Maintenance package Internal External Header Task list

Group 40000000 CHILLER ECA Grp.Countr 4

Op.	SOp	Operation Description	Z3	Z2	ZY	ZS	ZQ	ZB	ZM
0010		CHILLER Monthly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
0020		CHILLER Two Month	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
0030		CHILLER Annually	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Operat. Overview Maint. Packages

Components Rel PRT Insp.Char Entry 1 / 3

Updating a Task List

- To update Task list use t-code IA06
- Select the Task list Group and Plant
- In the new screen select the Task list and update the Operation and/or Header

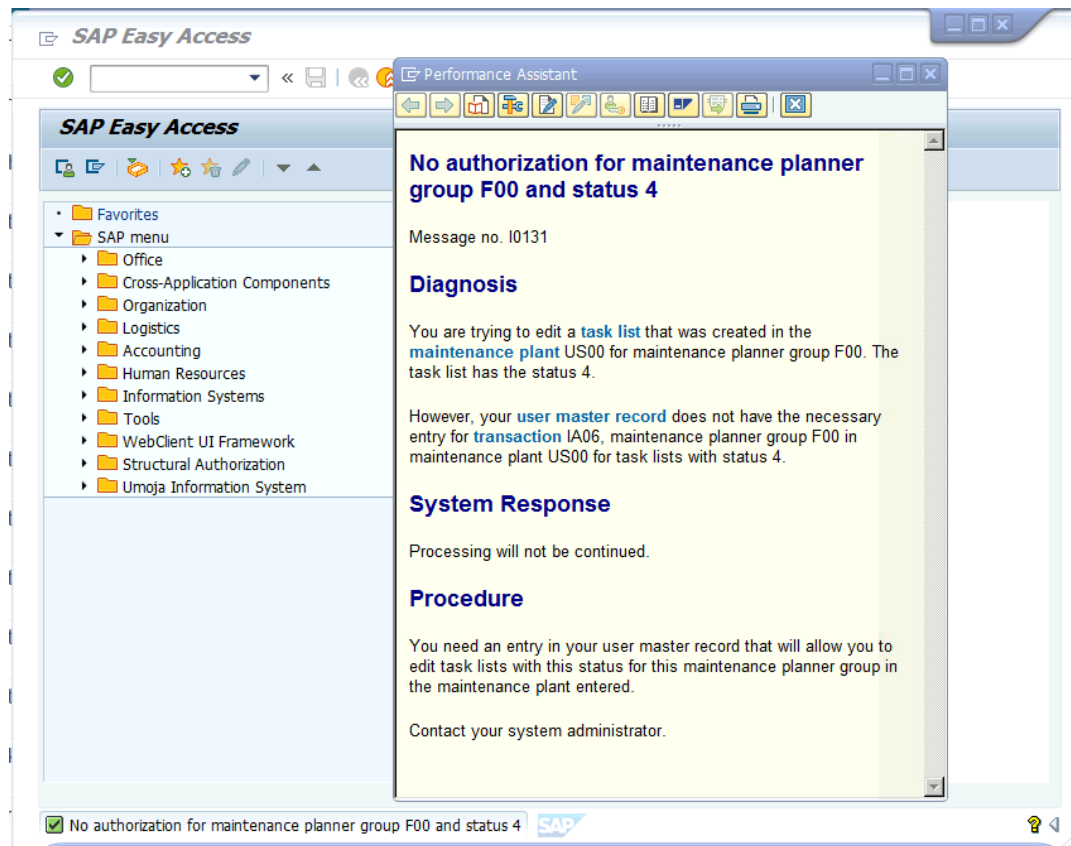
Change General Task List: Task List Overview

Group 40000000

Ctr	TL Desc.	Plnt	Del.	Strategy	Usage	PIGrp	Status	S	Assembly	IP	EH
1	Blank Task List	US00	<input type="checkbox"/>		4		4				
3	PAC Units	US00	<input type="checkbox"/>	ZSTR1	4	1	4	1			
5	Water Chiller	TH00	<input type="checkbox"/>	ZSTR1	4	1	4	1			
7	Chiller York 863kW Monthly	CH00	<input type="checkbox"/>	ZSTR1	4	1	4	1			
8	Exp Tank	CH00	<input type="checkbox"/>		4	1	4	1			
9	AC Units Nothy	LB00	<input type="checkbox"/>		4	1	4	1			
10	AC Units	CL00	<input type="checkbox"/>		4	1	4	1			
11	Exterior Boiler	CL00	<input type="checkbox"/>	ZSTR1	4	1	4	1			
12	CRAC - MDN	US00	<input type="checkbox"/>		4	1	4	1			
13	CRAC-SENT	US00	<input type="checkbox"/>		4	1	4	1			
14	CRAC-ANN	US00	<input type="checkbox"/>		4	1	4	1			

Create and Updating a Task List restriction

- **Note:** The Task List creation and update is restricted at Plant level. Therefore, if the PM Planner is not authorized to access or create the Task List in the chosen Plant the following error message will appear:



Learning Checkpoint 1

Why does the planner need to define the strategy in a task list

Select the correct option.

- A. To determine who will perform the maintenance
- B. To determine the frequency of the operations
- C. To determine the detailed tasks to be performed
- D. All of the above



Learning Checkpoint 1

Why does the planner need to define the strategy in a task list

Select the correct option.

- A. To determine who will perform the maintenance
- B. To determine the frequency of the operations**
- C. To determine the detailed tasks to be performed
- D. All of the above

Option B is the correct answer. Strategies are relevant to the frequency of the maintenance operations.

In Umoja we will use 2 strategies:

- ZMON when the strategy UoM is month
- ZWEEK when the strategy UoM is week



Module 2 Summary

The key points covered in this module are listed below:

- The process for creating task lists, including the header, the operations and the frequency
- The task list groups available in Umoja
- The Strategies available and when to use each one
- The process for updating task lists



Agenda

Course Introduction

Module 1: Umoja Preventive Maintenance Overview

Module 2: Task Lists

Module 3: Maintenance Items and Plans creation and update

Module 4: Maintenance Plan scheduling

Module 5: Preventive Maintenance Service Order processing

Module 6: Reports

Course Summary

Course Assessment

Course Survey

Module 3 Objectives

After completing this module, you will be able to:

- Explain the process for creating maintenance items
- Explain the process for updating maintenance plans



Maintenance Item



Maintenance Item

- Maintenance Item describes which maintenance tasks should take place regularly at the technical object (equipment, functional location and so on).
- Maintenance Items contains the following:
 - i. Reference of the tech. object (Number, Location)
 - ii. Planning Data (Plant, Work Centre, Maintenance Planner Group, Maintenance Activity Type, Business Area)
 - iii. Task List
 - iv. Location data and Account assignment and Fund
- Maintenance Item contains only one technical object



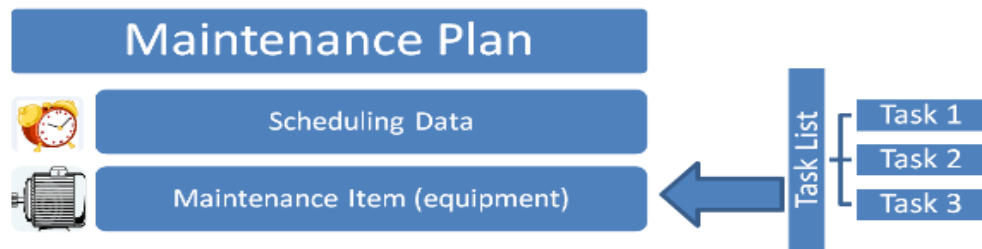
Note: : A Maintenance Item can be created within the Maintenance by entering all the data directly in the plan

Maintenance Plan



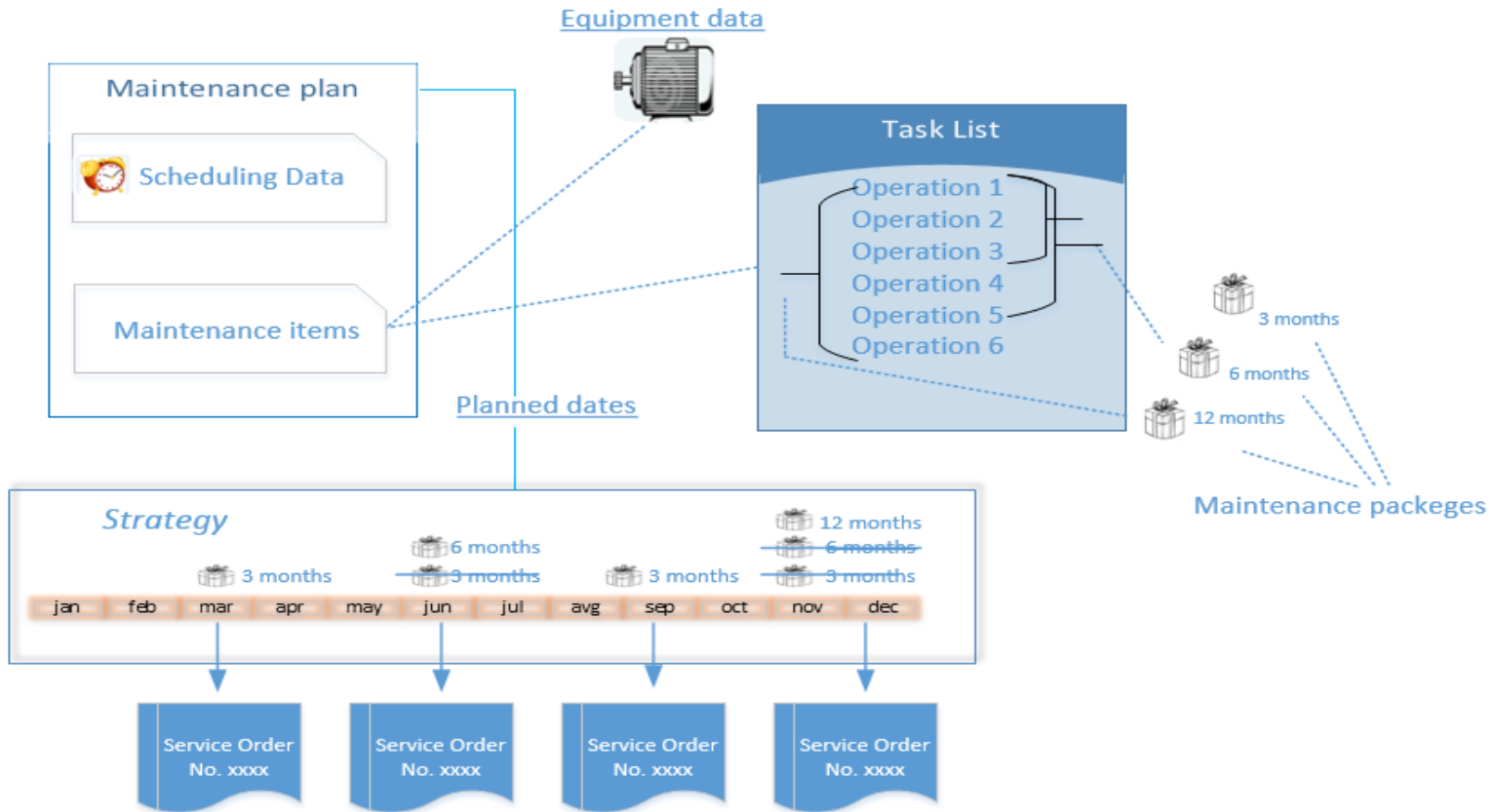
Maintenance Plan

- Maintenance Plan combines the Task List, technical object and dates (scheduling parameters).
- By the scheduling the Maintenance Plan the system automatically creates the Service Orders.
- A Maintenance Plan can contain multiple maintenance items (from one to hundreds).
- By scheduling the Maintenance plan the system generates a service order for each maintenance item based on the frequency (maintenance packages) defined in the task list



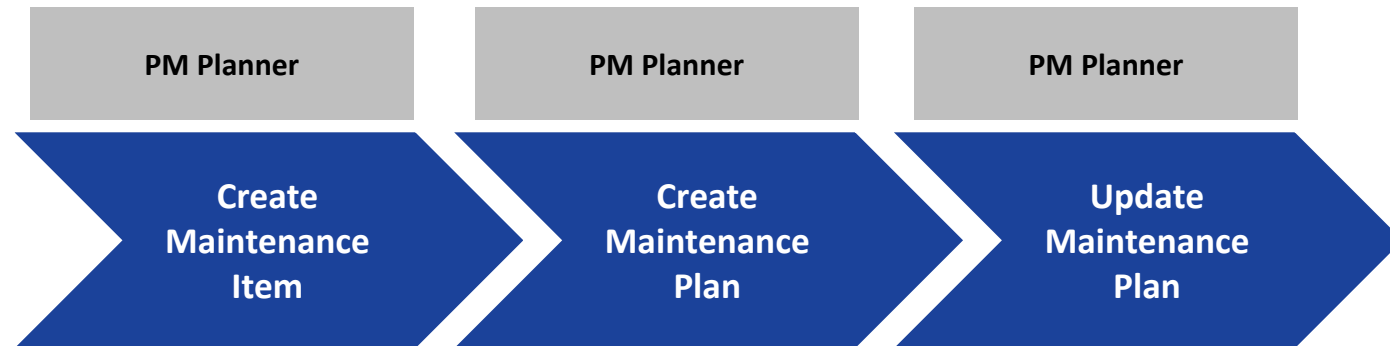
Maintenance Plans

- The following scheme explains the interaction of the task list, maintenance items and plans, and the frequency of the operations:



Maintenance Items and Plans

The PM planner is responsible for creating the maintenance items, creating the plans and updating the plans



Create Maintenance Item



Use the T-code **IP04** to create a Maintenance Item:

- In Maint Plan Category, select Maintenance Order.
- In Maintenance Strategy select ZMON or ZWEEK depending on the strategy of the task list to be used.

Maintenance Item: Initial

Maintenance item: [Yellow text box]

Maint. plan category: [Dropdown menu with checkmark]

Maintenance strategy: [Text box]



Note: Remember that ZMON uses monthly based frequencies and ZWEEK weekly

Create Maintenance Item



- Then complete the following:
 - Maintenance Item: Name of the equipment and ID
 - Equipment number
 - Planning plant
 - Order type ZM02
 - Maint Activity type 002
 - Maint Planner group (F00, L00, etc.)
 - Work Centre
 - Business Area
 - Task list type: A
 - Task list group and group counter (the ones created that apply for the Item)
 - Fund (in the Fund tab) (10UNA, etc.)

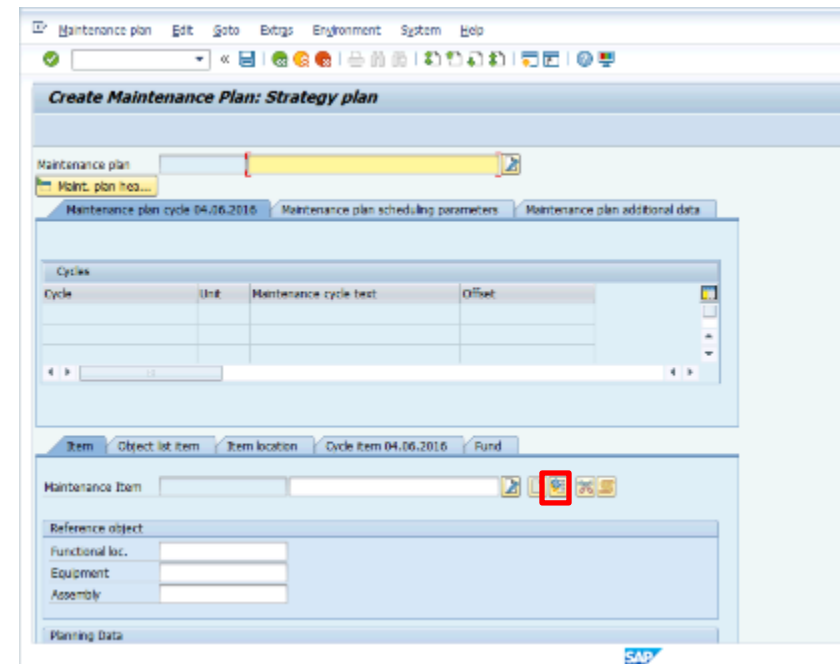
Typ	Task LetGrp	GrpCr	Description
/	/	/	

Note: One Maintenance Item has to be created for each equipment maintained

Create Maintenance Plan




- To create a Maintenance Plan with the Strategy, use transaction IP42
- In Maint Plan Category, select Maintenance Order
- In Maintenance Strategy select ZMON or ZWEEK, depending on the strategy of the task list to be used
- At the bottom, where it says “Maintenance Item” hit the “Assign more items” icon

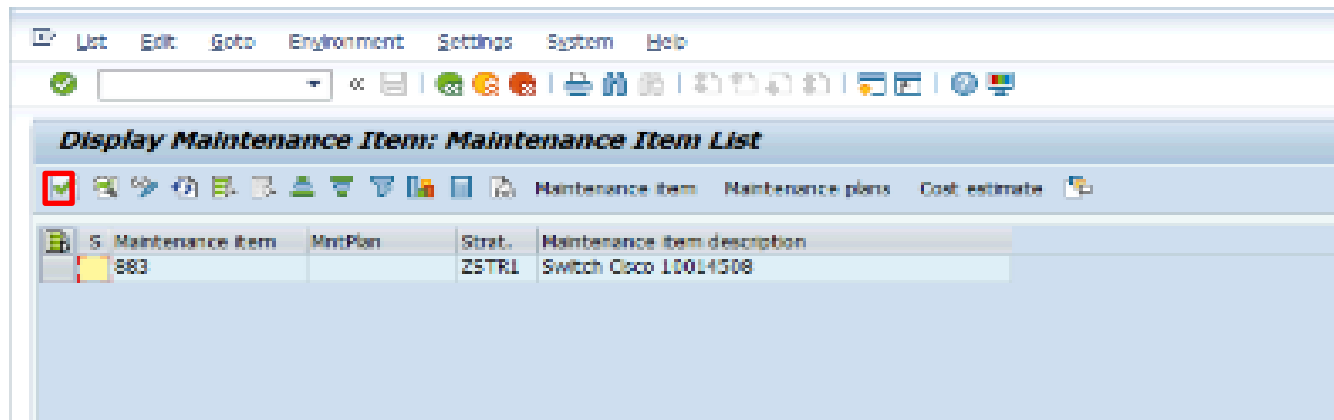


Note: When selecting the maintenance items the warning may pop-up; if this case select check icon (OK) in pop-up

Create Maintenance Plan



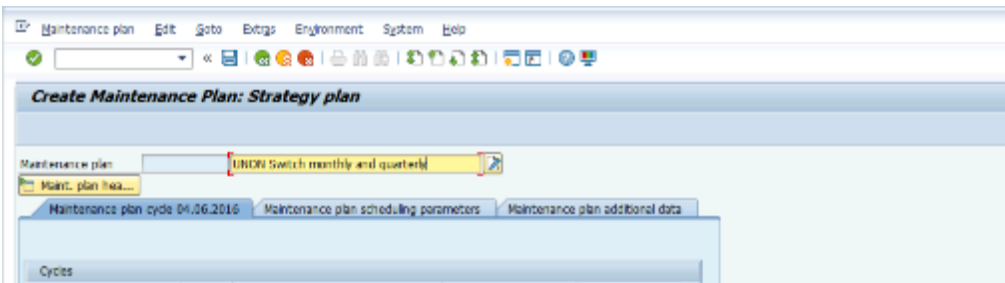
- Next, in the selection criteria, select the maintenance items that were created for the Plan
- By the filtering conditions, multiple maintenance items could be listed. Select the rows with the Items that should be part of the Maintenance Plan (these rows will be highlighted)
- Then select the check icon, 
- The system will assign the Maintenance Item in the Plan. All Maintenance item information will be included in the Plan



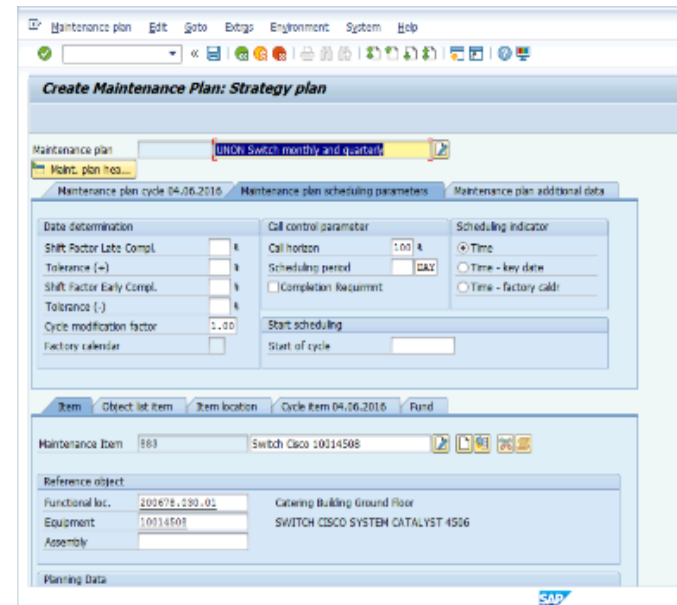
Create Maintenance Plan



- Enter the maintenance plan short name at the top



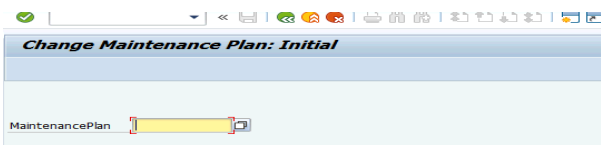
- Select the Maintenance Plan Scheduling Parameters tab
- In the Scheduling Period field, complete the information Scheduling period, which will define how long the plan will issue the orders for.... (For example one year)
- Enter the date for Start of Cycle
- Save



Update Maintenance Plan



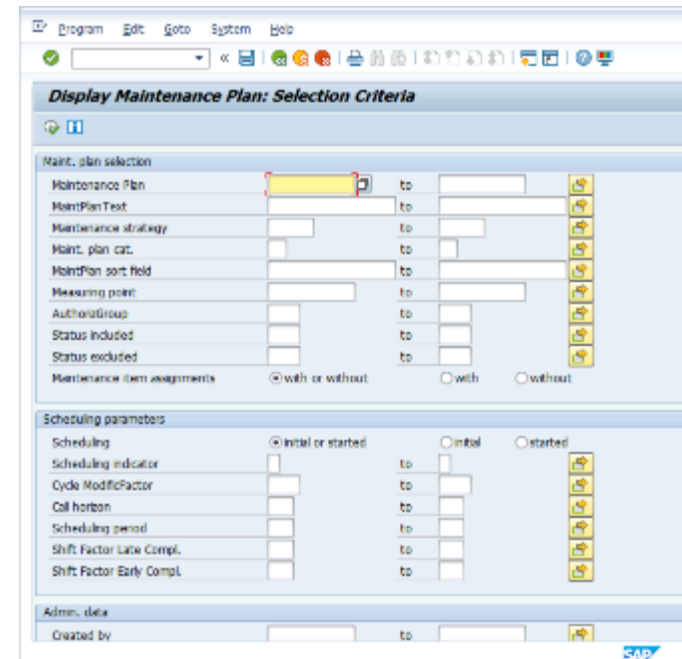
- Use T-Code IP02



- Enter the Maintenance Plan number. In case the Planner needs to review the Maintenance Plan list and select the M. Plan from the list, please follow the instruction:

- Select the Matchcode near the MaintenancePlan
- Enter selection criteria in the new screen.
- The system displays the list of the Plans that match your selection criteria.
- Select the Maintenance Plan

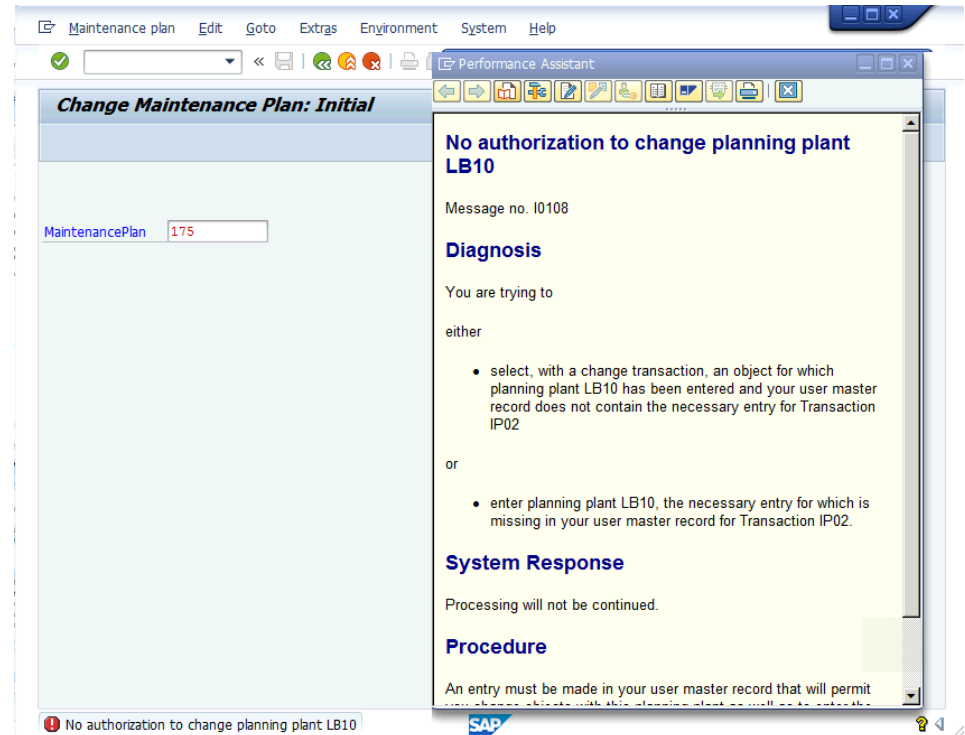
- Then update the Maintenance Plan



Maintenance Plan restriction

Maintenance Plan & Item are restricted at the Plant and Planner Group level

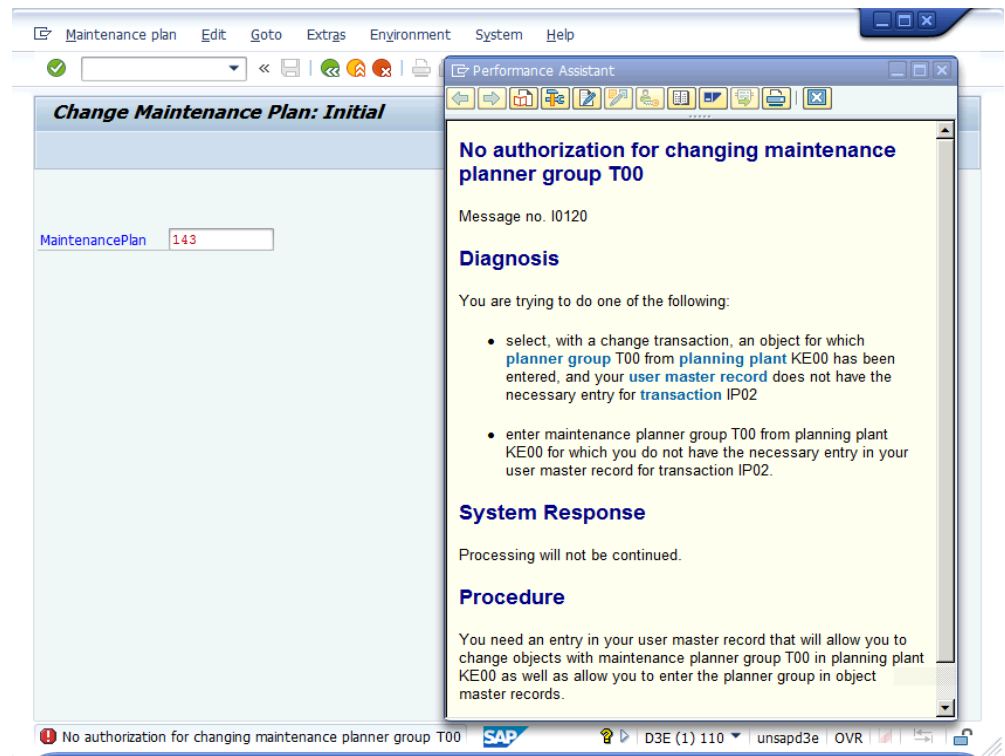
- If the PM Planner is not authorized to update the Maintenance Plan & Item in the chosen Plant the displayed error message will appear



Maintenance Plan restriction

Maintenance Plan & Item are restricted at the Plant and Planner Group level

- If the PM Planner is not authorized to update the Maintenance Plan & Item within the Maintenance Planner Group the displayed error message will appear



Learning Checkpoint 1

Which of the following is true?

Select the correct option.

- A. When a maintenance plan is created, the frequency is defined
- B. Maintenance plans cannot be updated once created
- C. There is one plan per equipment
- D. One Maintenance Plan can include multiple maintenance items



Learning Checkpoint 1

Which of the following is true?

Select the correct option.

- A. When a maintenance plan is created, the frequency is defined
- B. Maintenance plans cannot be updated once created
- C. There is one plan per equipment
- D. One Maintenance Plan can include multiple maintenance items**

Option D is the correct answer. One maintenance plan can include one or multiple maintenance items.



Module 3 Summary

The key points covered in this module are listed below:

- The process for creating maintenance items
- The process for creating maintenance plans
- The process for updating maintenance plans



Agenda

Course Introduction

Module 1: Umoja Preventive Maintenance Overview

Module 2: Task Lists

Module 3: Maintenance Items and Plans creation and update

Module 4: Maintenance Plan scheduling

Module 5: Preventive Maintenance Service Order processing

Module 6: Reports

Course Summary

Course Assessment

Course Survey

Module 4 Objectives

After completing this module, you will be able to:

- Explain the process for scheduling a maintenance plan



Scheduling Maintenance Plans

There are 2 processes that can be used to schedule maintenance plans. The Planner can schedule plans one by one, or Planner can schedule multiple plans at the same time using a batch processing

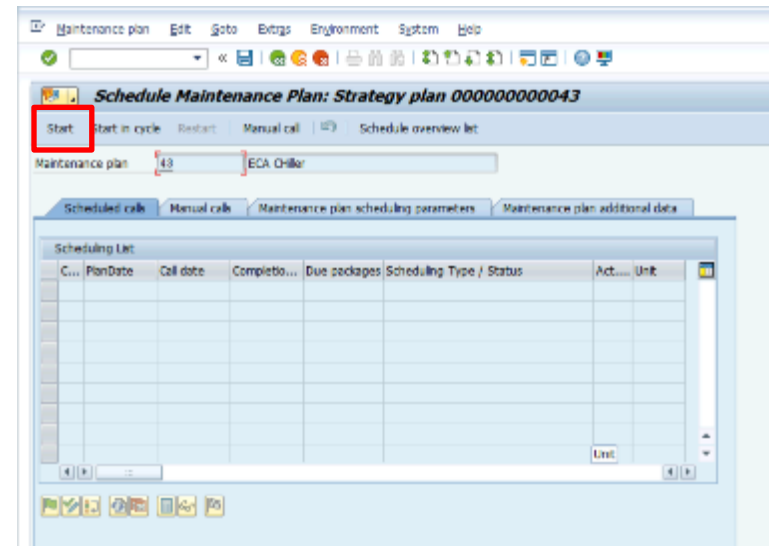


Note: The Planner should be sure which Plan will be scheduled; it is advised that until the user is fully familiar with the process, the plans are scheduled one by one

Scheduling a single plan



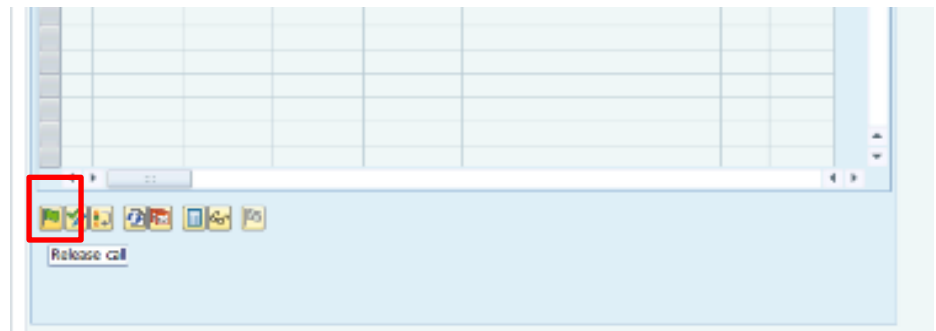
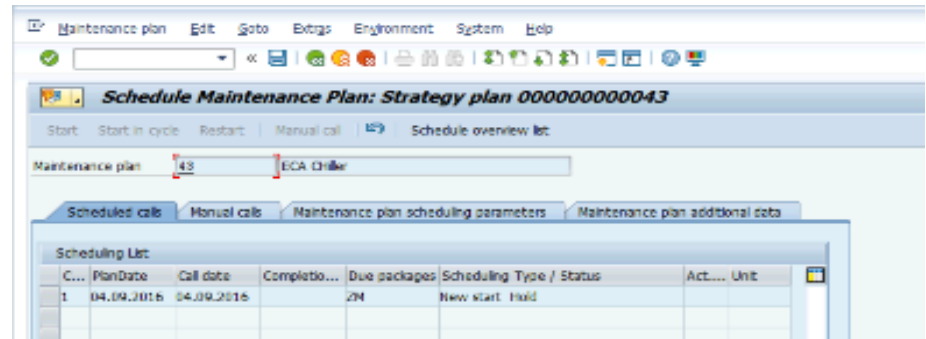
- Use transaction **IP10** to schedule a single plan
- Enter the Maintenance Plan number or using matchcode and filters which is explained
- Then select the “Start” button, the pop up will display the Start of Date created in the Maintenance Plan. The date can be updated.



Scheduling a single plan



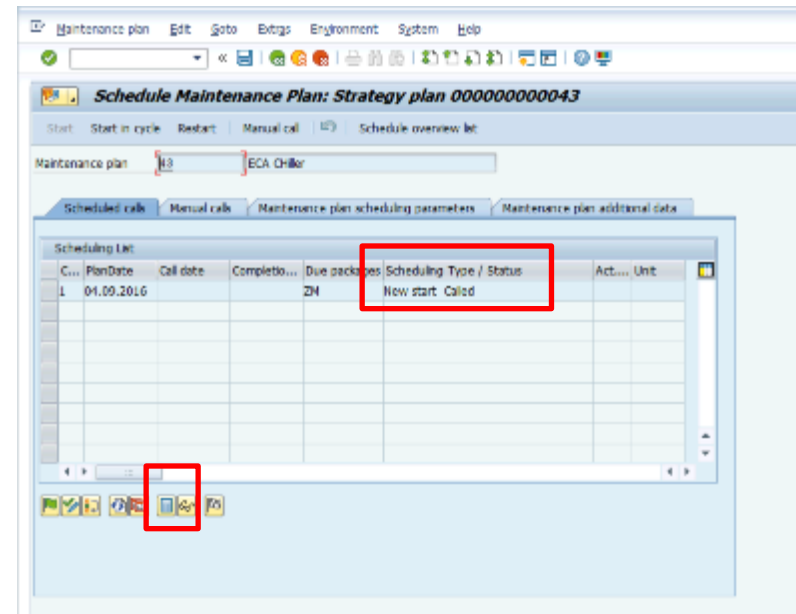
- The system will generate scheduled calls
- If the generated call (read service order) is due to be executing the status of the call will be “Save to call”
- If the date is not due, the planner can start the call early (service order) by selecting the row and clicking on the green (release) flag at the bottom
- Upon selecting the button Save , the plan is scheduled



Scheduling a single plan




- When you enter the scheduled plan again, the status of the call which is due is “New start called”
- The call has been changed to “called”. The system indicates that the Service Orders have been created
- To review the service order select the eyeglasses icon at the bottom. The service order (or list of the service orders, in case there are many maintenance items) will be displayed



Call Number	Order	Completion date	Maintenance Item
1	.0001375	130	
1	.0001376	131	
1	.0001377	132	
1	.0001378	133	

Scheduling multiple plans



- To schedule multiple Plans, use transaction **IP30**
- In the next screen select the criteria and provide the list of the plans to be scheduled
- Execute  the criteria
- Display log will provide the important messages related to the schedule and Service Orders that are being generated
- Review log and click the back arrow
- Select OK in the window. The plans have been scheduled

The screenshot shows the SAP transaction 'Deadline Monitoring for Maintenance Plans (Batch Input IP10)'. The interface includes several sections:

- Deadline monitoring for maintenance plans:** Fields for 'Maintenance Plan', 'Maint. plan cat.', 'MaintPlan sort field', and 'Maintenance strategy', each with a 'to' field and a selection icon.
- Interval for Call Objects:** A dropdown menu set to 'DAY'.
- Rescheduling options:** Checkboxes for 'Rescheduling incl.' (checked) and 'Immediate start for all' (checked).
- Log Control:** Radio buttons for 'Application Log' (selected) and 'Log (Batch Input)'.
- Mode: Call transaction / BDC session:** Radio buttons for 'Call transaction' (selected) and 'BDC session'. Under 'Call transaction', the 'Call mode' is set to 'N'. Under 'BDC session', the 'Group name' is 'IP1020160930' and the 'User ID' is 'ZVLAROVIC'.
- Save incorrect transactions:** Radio buttons for 'Save errors' (selected), 'PC file/frontend', and 'Unx file'. Below are fields for 'File name' and 'Server Name'.

The SAP logo and system information (Q3E (1) 200 | unsappq3e | INS) are visible at the bottom of the window.



Note: The Cycle start date has to be populated for all plans before processing IP30

Learning Checkpoint 1

Which of the following T-codes is used to schedule a single plan?

Select the correct option.

- A. IP10
- B. IP01
- C. IP30
- D. PLNSCHD



Learning Checkpoint 1

Which of the following T-codes is used to schedule a single plan?

Select the correct option.

- A. **IP10**
- B. IP01
- C. IP30
- D. PLNSCHD

Option A is the correct answer. T-code IP10 is used to schedule a single plan



Module 4 Summary

The key points covered in this module are listed below:

- The process for scheduling a single plan
- The process for scheduling multiple plans in a batch process



Agenda

Course Introduction

Module 1: Umoja Preventive Maintenance Overview

Module 2: Task Lists

Module 3: Maintenance Items and Plans creation and update

Module 4: Maintenance Plan scheduling

Module 5: Preventive Maintenance Service Order processing

Module 6: Reports

Course Summary

Course Assessment

Course Survey

Module 5 Objectives

After completing this module, you will be able to:

- Explain the process for updating a PM service order
- Explain the process for printing a PM service order
- Explain the process for confirming a PM service order
- Explain the process for closing a PM service order



Service Order



Service Order

- Preventive Maintenance Service Orders (ZM02) are generated once a maintenance plan is scheduled based on the information in the plan (dates, task list, maintenance items)
- Once the Service Orders are created they can be assigned to a Person responsible and printed (the printout includes the detailed instructions of the operations)
- After the work is performed, the service orders have to be confirmed
- Upon confirmation the next step is to technically complete the service order, settle and business complete

Processing a Service Order

- The SD.16 (PM Planner) can update the Service Order.
- SD04 (SD Order Releaser) can release the order.
- Once the Order is released, it can be printed out, including the detailed instructions for the operations, and then confirmed and closed.



Update Service Order



By using T-Code IW38 the PM Planner can enter filter criteria to get the list of the service orders (criteria by Plant, date Planner group and so on)

The report will be created with the Service Orders that match the criteria entered by Planner
Select the Service Order(s) from the list to update

Order status
 Outstanding In process Completed Historical Sel_profile Add

Order selection
 Order to
 Order Type ZM02 to
 Functional Location to
 Equipment to
 Material to
 Serial Number to
 Addit. device data to
 Notification to
 Main work center to
 Plant for WorkCenter to
 Period 01.06.2016 to 31.12.2016
 Partners
 Currency

General Data/Administrative Data
 Incl.object let
 Leading order to
 Superior order to
 Planning plant to
 Priority to
 Entered by to
 Created on to
 Status inclusive to
 Status exclusive to
 Description to
 Last changed by to
 Change date for order master to
 Available to date to
 Basic Start Date to
 Basic finish date to
 Maintenance Plan to
 Maintenance item to
 Revision to

Change PM Orders: List of Orders

Change PM Orders: List of Orders

S	PG	Type	Order	Subnumber	Description	BusA	Plant	PPI	Plnt	Bsc start	Resp	CCtr	Equi
L00	ZM02	10002085			Air-condition, Split Unit,12.000 BTU. OG	R500	LB30	LB30	LB30	01.07.2016	17026	7000	
L00	ZM02	10002086			Air-condition, Split Unit,12.000 BTU. OG	R500	LB30	LB30	LB30	01.07.2016	17026	7000	
L00	ZM02	10002087			Air-condition, Split Unit,12.000 BTU. OG	R500	LB30	LB30	LB30	01.07.2016	17026	7000	
L00	ZM02	10002088			Air-condition, Split Unit,12.000 BTU. OG	R500	LB30	LB30	LB30	01.07.2016	17026	7000	
L00	ZM02	10002089			Air-condition, Split Unit,12.000 BTU. OG	R500	LB30	LB30	LB30	01.07.2016	17026	7000	
L00	ZM02	10002090			Galanz AC MCR-12 12000 BTU.	R500	LB30	LB30	LB30	01.07.2016	17026	7000	
L00	ZM02	10002091			Air condition set (5 tons) 2 years warra	R500	LB30	LB30	LB30	01.07.2016	17026	7000	
L00	ZM02	10002092			Air condition set (5 tons) 2 years warra	R500	LB30	LB30	LB30	01.07.2016	17026	7000	
L00	ZM02	10002093			Air Condition Koolex Wall Type. 24,000 B	R500	LB30	LB30	LB30	01.07.2016	17026	7000	
L00	ZM02	10002094			AC KOOLEX, Floor Ceiling Type, 48,000 BT	R500	LB30	LB30	LB30	01.07.2016	17026	7000	
L00	ZM02	10002095			AC KOOLEX, split wall type, model MSG 24	R500	LB30	LB30	LB30	01.07.2016	17026	7000	
L00	ZM02	10002096			A/C KOOLEX, split wall type model MSG 1	R500	LB30	LB30	LB30	01.07.2016	17026	7000	
L00	ZM02	10002097			A/C Koolex, split, wall type, model AS	R500	LB30	LB30	LB30	01.07.2016	17026	7000	
L00	ZM02	10002098			Air conditioners, Cassette Type	R500	LB30	LB30	LB30	01.07.2016	17026	7000	
010	ZM02	10002112			Maint Plan	M027	CO20	CO20	CO20	02.07.2016	12308	1000	
010	ZM02	10002113			Maint Plan	M027	CO20	CO20	CO20	02.07.2016	12308	1000	
010	ZM02	10002114			Maint Plan	P700	B121	B121	B121	02.07.2016	12330	1000	
	ZM02	10002123			26000000 Diesel Gen Mech	R400	TH30	TH30	TH30	30.06.2016	11504	7000	
	ZM02	10002124			26000000 Diesel Gen Mech	R400	TH30	TH30	TH30	27.07.2016	11504	7000	
F00	ZM02	10002126			Essential Feeder panel Board,1000A	R100	ET30	ET30	ET30	04.09.2016	13695	7000	
F00	ZM02	10002127			Essential Feeder panel Board,1000A	R100	ET30	ET30	ET30	10.09.2016	13695	7000	
F00	ZM02	10002128			Essential Feeder panel Board,1000A	R100	ET30	ET30	ET30	10.09.2016	13695	7000	
F00	ZM02	10002130			SPLITS SPL_(8)_CPL_NC_[3]	R300	CL30	CL30	CL30	30.11.2016	13941	7000	
F00	ZM02	10002131			Passenger Elevator	R100	ET30	ET30	ET30	25.07.2016	13695	7000	
F00	ZM02	10002132			Passenger Elevator	R100	ET30	ET30	ET30	25.07.2016	13695	7000	
F00	ZM02	10002133			Passenger Elevator	R100	ET30	ET30	ET30	25.07.2016	13695	7000	
F00	ZM02	10002134			Passenger Elevator	R100	ET30	ET30	ET30	25.07.2016	13695	7000	

Update Service Order

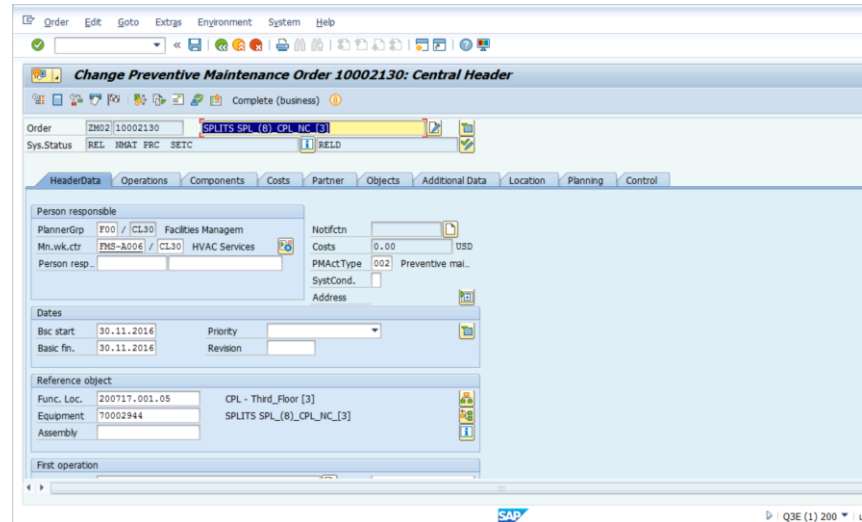


Modify the information in the service order as required

Operations – represent activities that have to be involved in the maintenance activities

Components - represents the material needed for the maintenance process

Upon modifying required fields the PM Planner then saves the order(s)




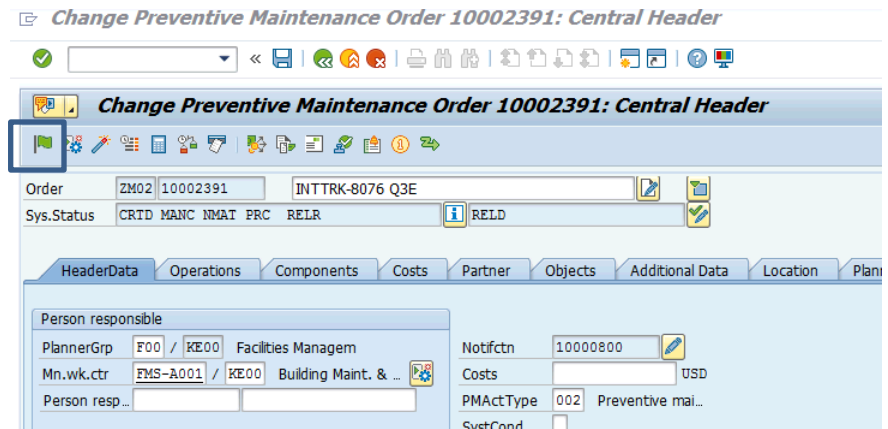
Note: IT IS IMPORTANT THAT UNTIL FURTHER NOTICE DO NOT USE the COMPONENTS TYPE L (STOCK ITEM BUDGET RELEVANT) OR N (NON STOCK ITEMS), ONLY USE TYPE Z (STOCK ITEMS NON BUDGET)

Update Service Order



In case the Service Order is not released SD.04 (SD Releaser) can release the Order by respecting the following instruction:

- Run **IW32** and enter the **Order** number
- Review Order information
- Click the **Release** icon, 
- Save

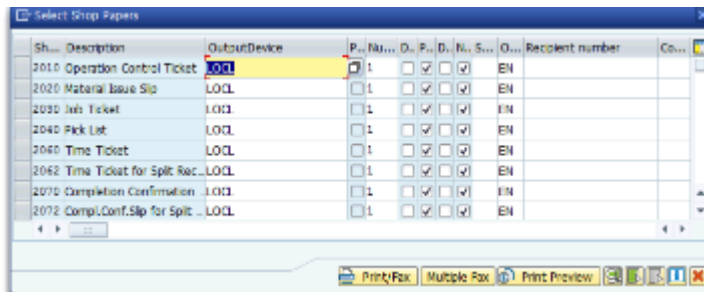


Note: There is an option to release groups of service orders by using IW38

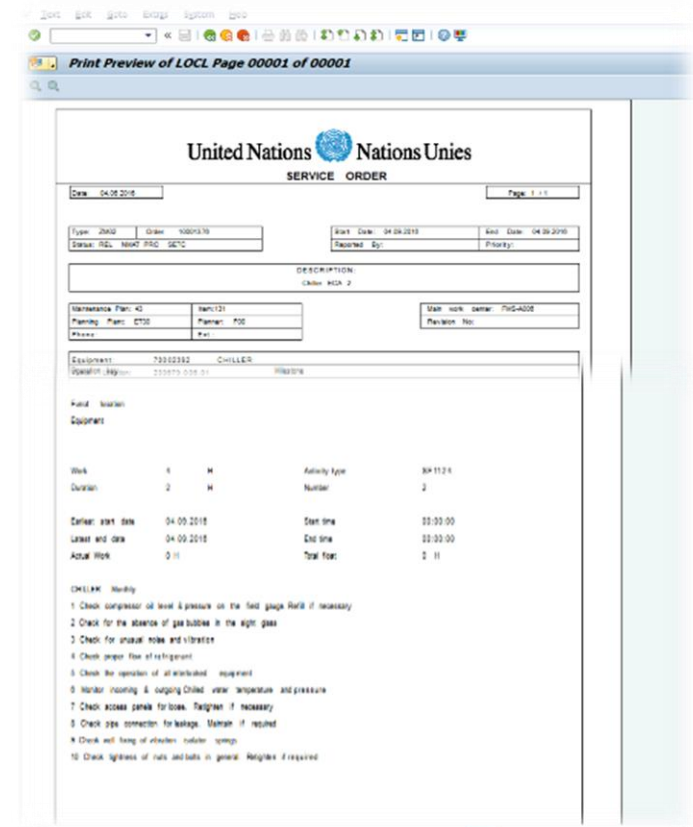
Update Service Order



- After the order has been updated and released, the PM Planner can print the Service Order
- In the menu bar, select Order > Print >



- In the pop up select Print Preview to view the order, or Print/Fax to print it
- The print out includes all the detailed operations of long text of the task list



Update Service Order



- After the work has been performed, the order needs to be confirmed (provide the actual work information that has been involved in performing the tasks)
- Use T-Code IW41
- Enter the Service Order Number



- In the screen that appears, complete the actual work field with the real data (the planned data is populated by default, enter the actual work in case it is different from planned work)
- Make sure that the “final confirmation” and “No remaining work” lines are clicked
- Complete this for all operations and save

The screenshot shows the 'Enter PM Order Confirmation: Initial Screen' in SAP. The 'Confirmation No. of Operation' field is highlighted in yellow. The 'Order' field contains the value '10001375'. Other fields include 'Oper./Act.', 'Suboperation', 'Individual Capacity', and 'Split number'. There is also a section for 'Long-term order for' with 'Functional loc.' and 'Equipment' fields.

The screenshot shows the 'Enter PM Order Confirmation: Actual Data' screen. The 'Actual Work' field is highlighted with a red box and contains the value '4'. Other fields include 'Order', 'Oper./Act.', 'System Status', 'Confirmation data', 'Work Center', 'Wage Type', 'Activity Type', 'Posting date', 'Work Start', 'Work Finish', 'Actual Duration', 'Forecast End', 'Remaining Work', 'Acctg Indicator', 'Clear Open Res.', 'Reserv.', 'Confirm. text', and 'Long text exists'. The 'Total Confirmation Data' section at the bottom shows 'Cum. Actual Work', 'Forecast work', 'Actual start', 'Actual end', 'AccDuratio', and 'Planned Dur.'.

Update Service Order



- Once the order has been confirmed, it can be technically completed
- To technically complete service orders, use t-code IW32, enter the service order number, then select the flag  and Save
- In addition, to technically complete multiple orders, use t-code IW38 and list multiple orders, select the orders you want to complete and hit the flag icon 
- The final steps are

settlement and business completion. These steps are performed by financial Users

Note: to obtain more info use Umoja Service Order Management in Umoja Training

Change PM Orders: List of Orders

S	PG	Type	Order	Subnumber	Description	BusA	Plant	PPH	Plnt	Bsc start	Resp. CCTR	Equipment	Description of technical object
	L00	ZM02	10002094		AC KOOLEX, Floor Ceiling Type, 48,000 BT	R500	LB30	LB30	LB30	01.07.2016	17026	70003256	AC KOOLEX, Floor Ceiling Type, 48,000 BT
	L00	ZM02	10002095		AC KOOLEX, split wall type, mod							70003257	AC KOOLEX, split wall type, mod
	L00	ZM02	10002096		A/C KOOLEX, split wall type, mod							70003258	A/C KOOLEX, split wall type, mod
	L00	ZM02	10002097		A/C Koolex, split, wall type, mod							70003259	A/C Koolex, split, wall type, mod
	L00	ZM02	10002098		Air conditioners, Cassette Type							70003479	Air conditioners, Cassette Type
	010	ZM02	10002112		Maint Plan							10009337	LAPTOP DELL LATITUDE E7240
	010	ZM02	10002113		Maint Plan							10009337	LAPTOP DELL LATITUDE E7240
	010	ZM02	10002114		Maint Plan							10009367	LAPTOP DELL LATITUDE E7240
		ZM02	10002123		26000000 Diesel Gen Me							70000053	Generator:SEC
		ZM02	10002124		26000000 Diesel Gen Mech	R400	TH30	TH30	TH30	27.07.2016	11504	70000053	Generator:SEC
	F00	ZM02	10002126		Essential Feeder panel Board,1000A	R100	ET30	ET30	ET30	04.09.2016	13695	70002607	ESSENTIAL FEEDER PANEL BOA
	F00	ZM02	10002127		Essential Feeder panel Board,1000A	R100	ET30	ET30	ET30	10.09.2016	13695	70002606	ESSENTIAL FEEDER CIRCUIT BRE
	F00	ZM02	10002128		Essential Feeder panel Board,1000A	R100	ET30	ET30	ET30	10.09.2016	13695	70002605	ESSENTIAL FEEDER PANEL BOA
✓	F00	ZM02	10002130		SPLITS SPL_(8)_CPL_NC_[3]	R300	CL30	CL30	CL30	30.11.2016	13941	70002944	SPLITS SPL_(8)_CPL_NC_[3]
	F00	ZM02	10002131		Passenger Elevator	R100	ET30	ET30	ET30	25.07.2016	13695	70002560	Passenger Elevator
	F00	ZM02	10002132		Passenger Elevator	R100	ET30	ET30	ET30	25.07.2016	13695	70002561	Passenger Elevator
	F00	ZM02	10002133		Passenger Elevator	R100	ET30	ET30	ET30	25.07.2016	13695	70002562	Passenger Elevator

Learning Checkpoint 1

How many Service Orders are created by each maintenance plan?

Select the correct option.

- A. Only one
- B. Only one per equipment
- C. One per equipment per frequency period
- D. None



Learning Checkpoint 1

How many Service Orders are created by each maintenance plan?

Select the correct option.

- A. Only one
- B. Only one per equipment
- C. One per equipment per frequency period**
- D. None

Option C is the correct answer. Maintenance plans create one service order per equipment for each frequency defined in the task list



Module 5 Summary

The key points covered in this module are listed below:

- The process for updating, releasing, printing, confirming and closing Preventive Maintenance Service Orders



Agenda

Course Introduction

Module 1: Umoja Preventive Maintenance Overview

Module 2: Task Lists

Module 3: Maintenance Items and Plans creation and update

Module 4: Maintenance Plan scheduling

Module 5: Preventive Maintenance Service Order processing

Module 6: Reports

Course Summary

Course Assessment

Course Survey

Preventive Maintenance Reports

These are the reports related to Preventive Maintenance:

T-Code	Name	When to use
IA08	Task List list(Change)	To generate a report of existing task lists with a defined filtering, and once the list is displayed, be able to change them
IA09	Task List list (Display)	To generate a report of existing task lists with a defined filtering.
IA10	Task list multi-level list (Display)	To generate a report of existing task lists with a defined filtering. Task lists are displayed with selected details.
IP15	Maintenance Plan list (Change)	To generate a report of existing maintenance plans with a defined filtering, and once the list is displayed, be able to change them
IP16	Maintenance Plan list (Display)	To generate a report of existing maintenance plans with a defined filtering.
IP17	Maintenance Item report (Change)	To review a list of Maintenance Items
IP18	Maintenance Item report (Display)	To review a list of Maintenance Items
IW38	Order list (Change)	To list service orders and eventually change them
IW39	Order list (Display)	To list service orders and view them.

Agenda

Course Introduction

Module 1: Umoja Preventive Maintenance Overview

Module 2: Task Lists

Module 3: Maintenance Items and Plans creation and update

Module 4: Maintenance Plan scheduling

Module 5: Preventive Maintenance Service Order processing

Module 6: Reports

Course Summary

Course Assessment

Course Survey

Course Summary

The key points covered in this course are listed below:

- The key roles and responsibilities in the Preventive Maintenance process
- The high level Preventive Maintenance processes
- The elements involved in the Preventive Maintenance Process (task lists, maintenance items, maintenance plans and service orders)
- The process for creating and updating task lists
- The process for creating maintenance items
- The process for creating, scheduling and updating maintenance plans
- The process for processing service orders generated by maintenance plans



Agenda

Course Introduction

Module 1: Umoja Preventive Maintenance Overview

Module 2: Task Lists

Module 3: Maintenance Items and Plans creation and update

Module 4: Maintenance Plan scheduling

Module 5: Preventive Maintenance Service Order processing

Module 6: Reports

Course Summary

Course Assessment

Course Survey

Course Assessment

Now that you have completed all the modules in this course, you can test your knowledge by completing the Course Assessment.

To receive credit for completing this course, you must pass this assessment with a minimum score of 90%.

To complete the assessment you must return to the Learning Management System:

1. Log into Inspira
2. Navigate to *Main Menu -> Self-Service -> Learning -> My Learning*
3. Search for the name of the course under the **My Learning Activities** section
4. Click the **Start** link of the course assessment
5. Click the **Submit** button once you have completed the assessment



Agenda

Course Introduction

Module 1: Umoja Preventive Maintenance Overview

Module 2: Task Lists

Module 3: Maintenance Items and Plans creation and update

Module 4: Maintenance Plan scheduling

Module 5: Preventive Maintenance Service Order processing

Module 6: Reports

Course Summary

Course Assessment

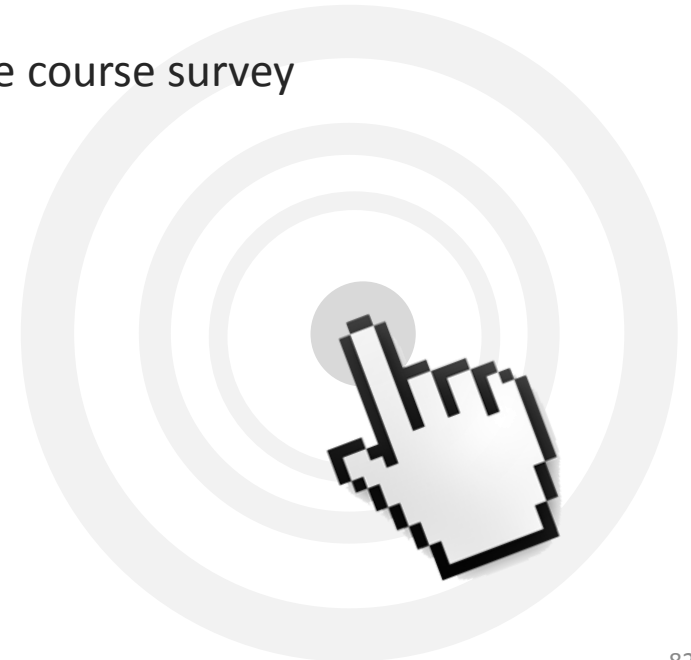
Course Survey

Course Survey

Your feedback is important to the continuous improvement of our training programme.

Please complete the evaluation for this course using the following steps:

1. Log into Inspira
2. Navigate to *Main Menu* -> *Self-Service* -> *Learning* -> *My Learning*
3. Search for the name of the course under the **My Learning Activities** section
4. Click the **Start** link of the course survey
5. Click the **Submit** button once you have completed the course survey





Congratulations! You have successfully completed the
Umoja Preventive Maintenance course.