Internal Refurbishment Request

Transfer the following verbal description into a BPMN:

a) Upon receipt of an Internal Refurbishment request by the Maintenance department, the responsible maintenance has to create a PM Notification in SAP S/4 HANA System.
b) Then, he has to choose the notification type P1 – Maintenance Request. In the Initial screen, the notification parameters have to be defined.
   First, the responsible maintenance has to define the notification characteristics tab, which contains defining functional location, equipment, planner group and maintenance work centre. After that the entries may be confirmed and as a result the "Warranty check is performed by the system".
   Then, the responsible maintenance has to define the reference object tab, in which he can attach documentations.
   The last parameter in this step is defining malfunction data tab. In this step, if the notification is subject to a breakdown case, then the breakdown checkbox has to be marked. If on the other hand, the notification is not subject to a breakdown case, the breakdown checkbox should not be marked.
c) After entering the required parameters for the three tabs, the PM Notification has to be saved. As a result, a confirmation message containing "Notification … saved" will be displayed.
d) In the next step, the responsible maintenance has to send the notification to be approved/released. In this step, he has to define details to the receiver of the confirmation and define also the notice text at the same time.
   The entries may be then confirmed and the process can be saved afterwards. A confirmation message containing "MAIL Request … created" will appear upon saving the process.
e) The Maintenance Manager will then receive the maintenance request. At this step, he has to evaluate the request and then document/submit his decision.
f) If the decision is approved, then he has to change the PM Notification and set the notification status. The status should be changed from (0001 – Waiting for Approval) to (0002 – Approved (Maintenance)). The entries has then to be confirmed and also the maintenance manager has to select the put in process icon and save the entries. As a result, a confirmation message containing "Notification … saved" will appear upon saving.
g) If on the other hand, the request will not be approved, the maintenance manager has also to change the PM Notification and set the notification status. The status should be changed from (0001 – Waiting for Approval) to (0005 – Cancelled (Maintenace)). The entries has then to be saved and a confirmation message containing "Notification … saved" will also appear in this step.
h) The responsible maintenance is to receive the maintenance request decision now. If the request was approved, then he has to manage the work order and create an internal refurbishment order. Then the informations has to be transferred from the notification to the work order. The order type "MC04" has also to be further defined. At this stage, the responsible maintenance has to define the interval of refurbishment plants and define the valuation type at the same time. The next step is to define the operations. Common outgoing cross-reference risks in this area are Materials shortage & Capacity Overdraft.
i) In defining the operations, the responsible maintenance has to maintain Internal Operations and External Operations at the same time.

j) For the Internal Operations, planning & scheduling of the work order has to be performed by the Maintenance Planner, which produce a sub-process called Planning & Scheduling of Work Orders.

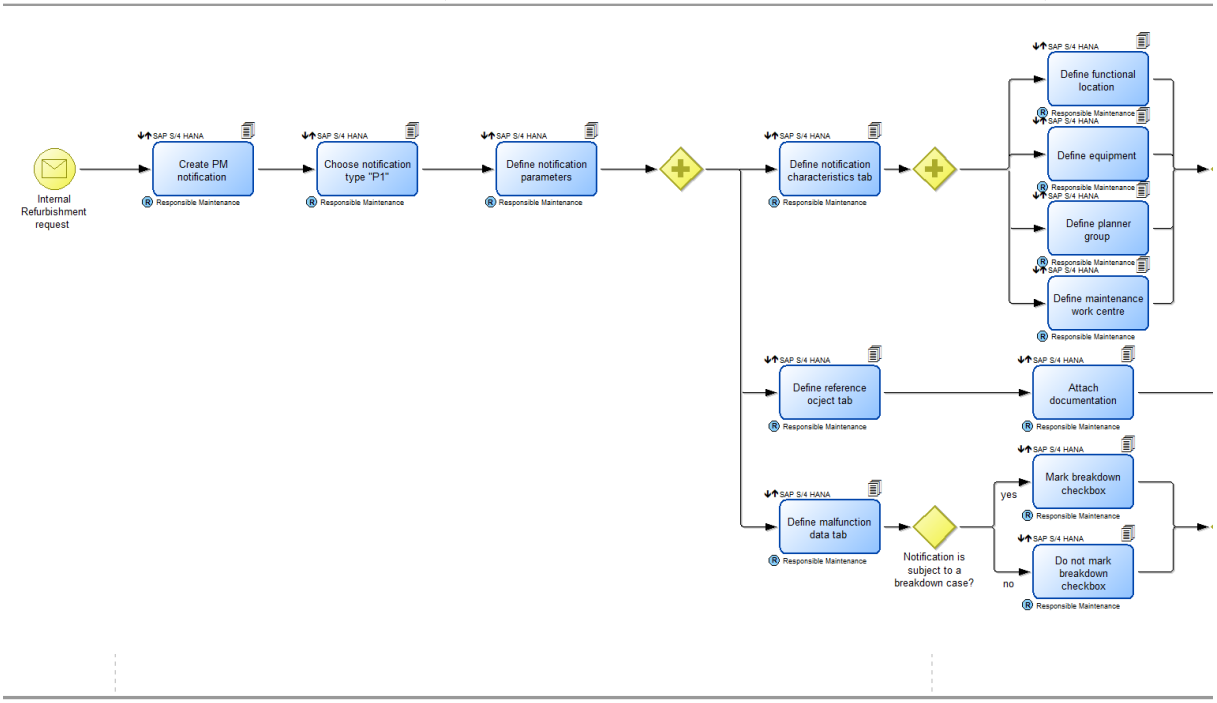
k) Receiving a Request for Planning work centre internal operations triggers this sub-process to start. In the first step, the maintenance planner has to plan the internal operations. At this step, following parameters have to be defined (based on the PM Notification and the Internal Refurbishment Order) at the same time, which are: defining the plant, the description, the control key “PM01” and the working hours. Upon entering the required parameters, the work order approval has to be created. To create this approval, one operations has to be added in the work order with “WCM” as a control key, which triggers the activation of the work approval action. After that, the maintenance planner has to plan the resources. Common risk in this area is Materials shortage. To plan the resources, the material availability (Stock/Requirements list) has to be further checked. In the Initial screen in checking the material availability, following parameters are to be entered at the same time: define plant & define the material used in the work order. After that the entries have to be executed and as a result, the list of reservations (materials) is displayed. The Maintenace planner has then to display the corresponding reservation for the work order. If the materials are at this step available, then the materials used in the work order has to be reserved. If on the other hand, the materials are not available, then the required materials have to be ordered and the request of the order has to be dispatched to the purchasing department. In the next step, the maintenance planner, has to plan the capacity (check capacity). Common risk in this area is Budget Capacity overdraft. In the Initial screen, the work order number has to be defined and the entry has to be again executed. As a result, the Capacity evaluation screen is displayed. After that the maintenance planner has to schedule the work order and finally the planning & scheduling of the work centre internal operations is successfully completed.

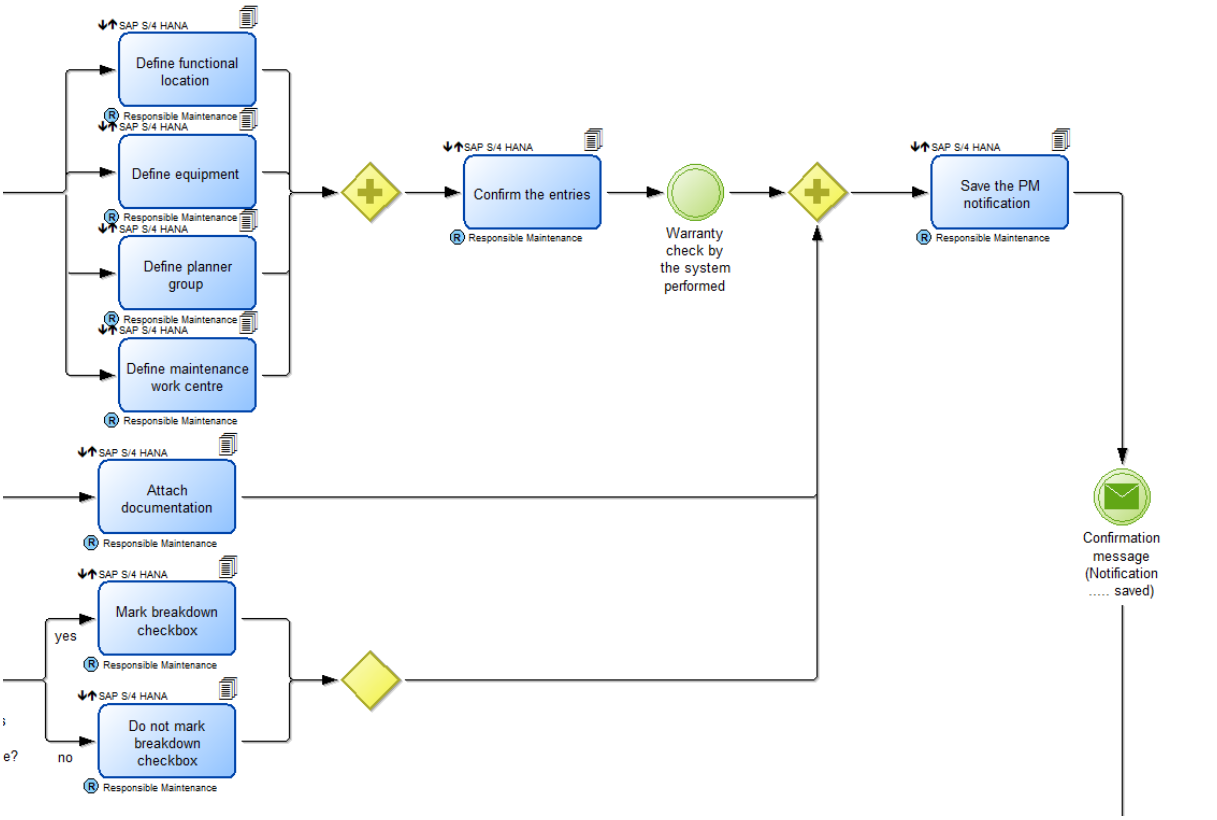
l) Returning back to the main process “Internal Refurbishment Request” and after defining the internal & external operations, the responsible maintenance may now define the estimated costs. Possible economic risk in this area is Budget overdraft.

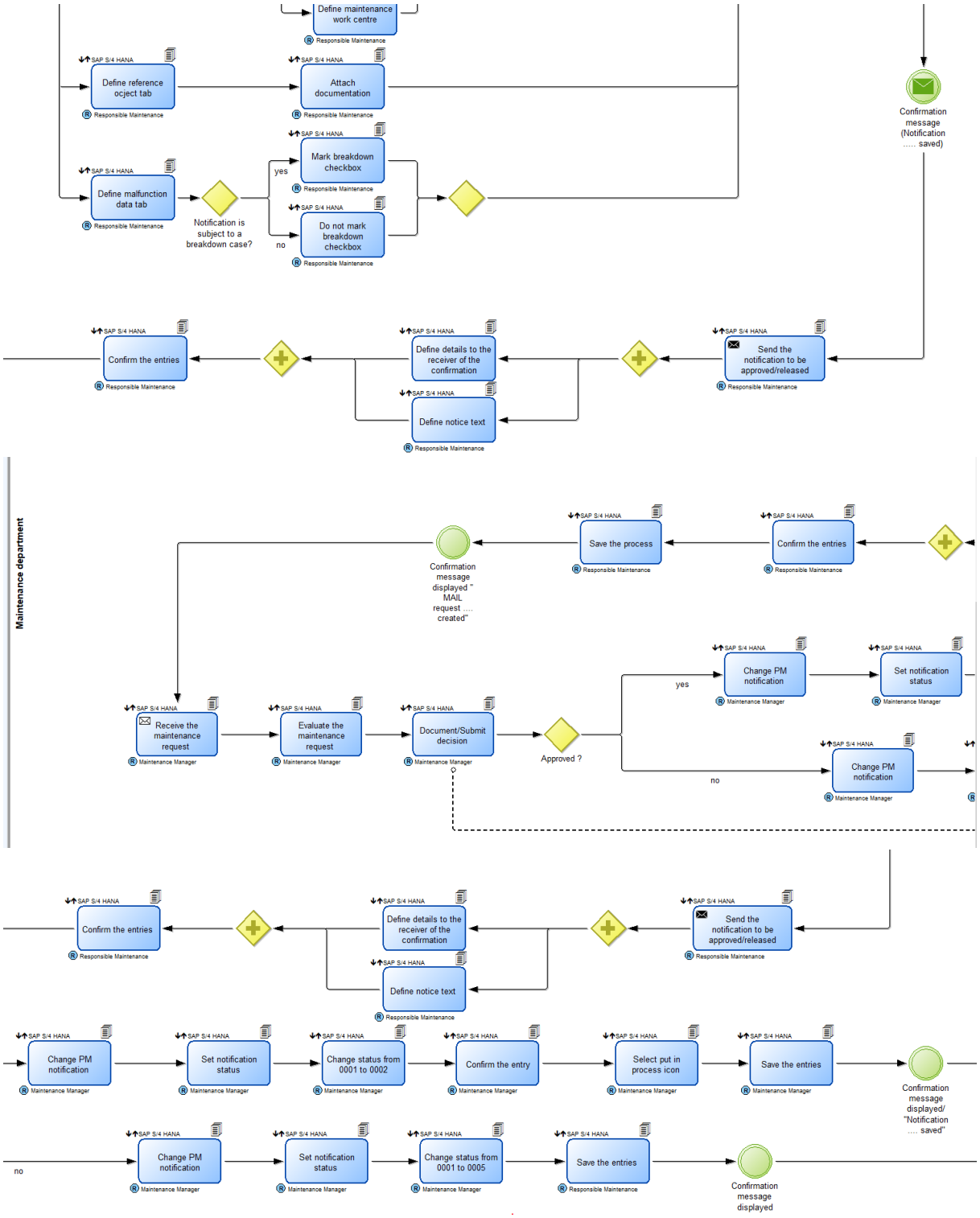
m) The involved partners (External service providers) in the work order processing may then be maintained. After that the allocated objects to the work order, the additional data and the location data have to be further defined.

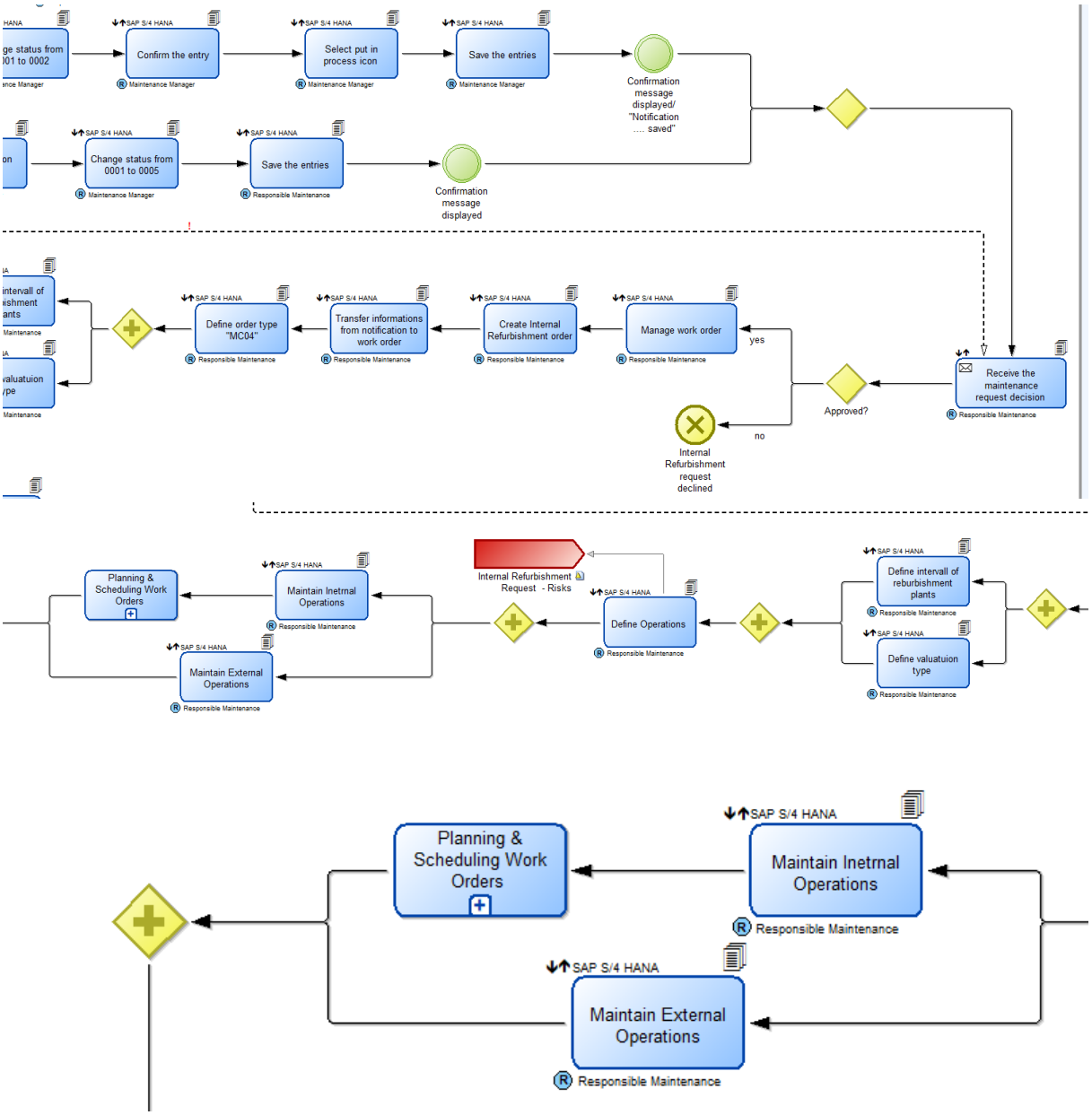
n) After defining all necessary data, the work order may be now saved, resulting in displaying a confirmation message containing “Order … saved with notification …”.

o) The last step in this process is to assign the work order to a WBS Element and finally the Internal Refurbishment request is successfully handled.

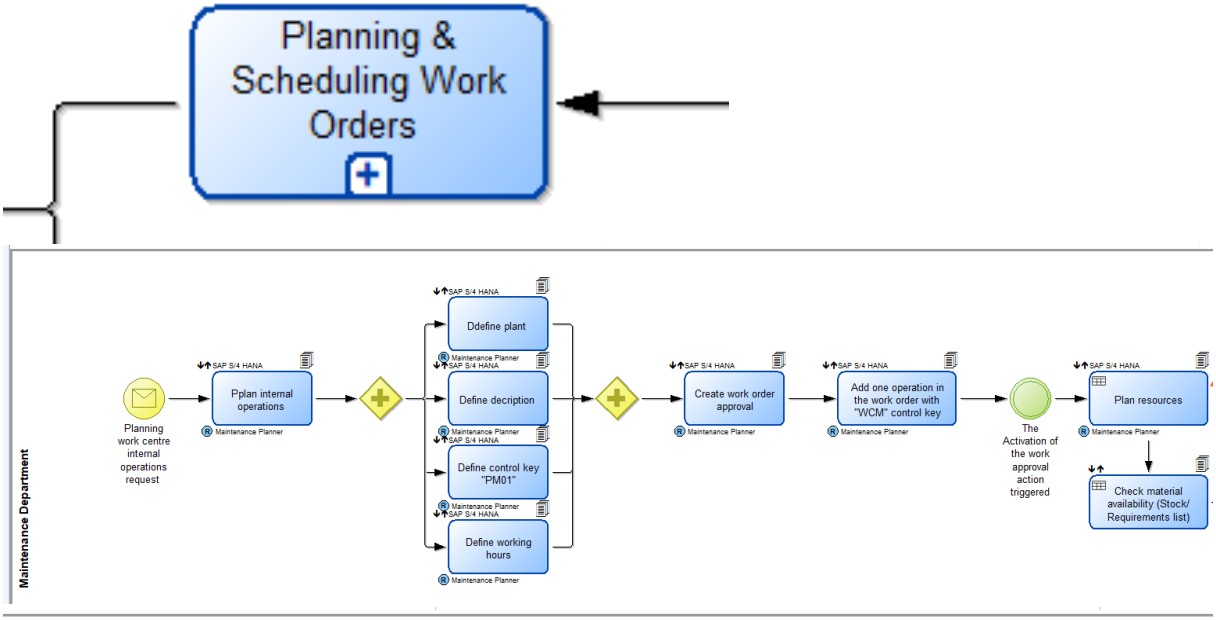

Internal Refurbishment request
SAP S/4 HANA
Create PM notification
Responsible Maintenance
Choose notification type "P1"
Define notification parameters
Define notification characteristics tab
Define functional location
Define equipment
Define planner group
Define maintenance work centre
Define reference ocject tab
Attach documentation
Define malfunction data tab
Notification is subject to a breakdown case?
yes
no
Mark breakdown checkbox
Do not mark breakdown checkbox

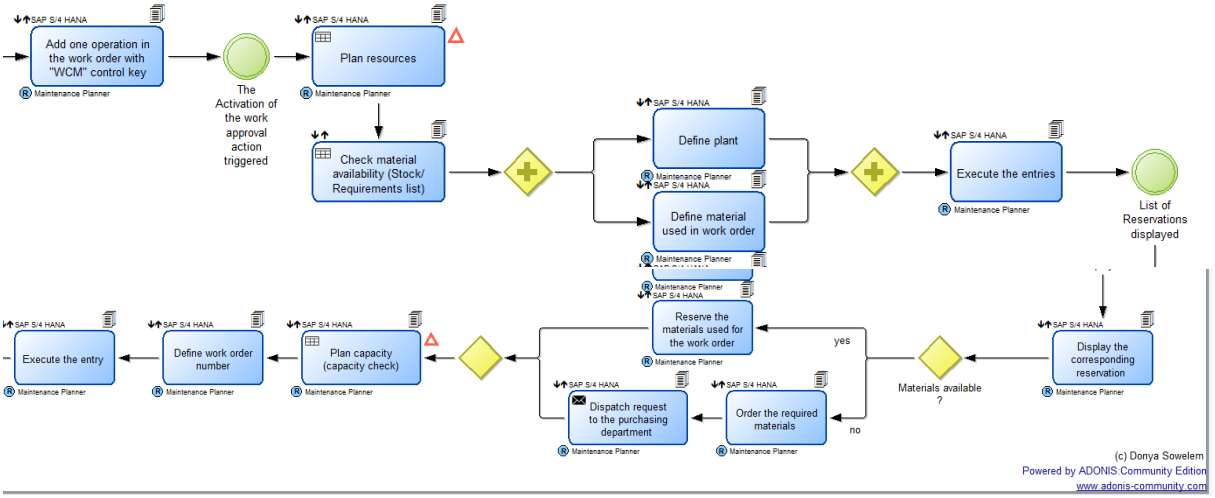

SAP S/4 HANA
Define functional location
Responsible Maintenance
Define equipment
Define planner group
Define maintenance work centre
Confirm the entries
Warranty check by the system performed
Save the PM notification
Attach documentation
Mark breakdown checkbox
Do not mark breakdown checkbox
yes
no
Confirmation message (Notification ..... saved)


Define maintenance work centre
Responsible Maintenance
SAP S/4 HANA
Define reference ocject tab
Responsible Maintenance
Attach documentation
Responsible Maintenance
Confirmation message (Notification ..... saved)
Define malfunction data tab
Responsible Maintenance
Notification is subject to a breakdown case?
yes
Mark breakdown checkbox
Responsible Maintenance
no
Do not mark breakdown checkbox
Responsible Maintenance
Confirm the entries
Responsible Maintenance
Define details to the receiver of the confirmation
Define notice text
Responsible Maintenance
Send the notification to be approved/released
Responsible Maintenance
Maintenance department
Confirmation message displayed " MAIL request .... created"
Save the process
Responsible Maintenance
Confirm the entries
Responsible Maintenance
Receive the maintenance request
Maintenance Manager
Evaluate the maintenance request
Maintenance Manager
Document/Submit decision
Maintenance Manager
Approved ?
yes
Change PM notification
Maintenance Manager
Set notification status
Maintenance Manager
no
Change PM notification
Maintenance Manager
Confirm the entries
Responsible Maintenance
Define details to the receiver of the confirmation
Define notice text
Responsible Maintenance
Send the notification to be approved/released
Responsible Maintenance
Change PM notification
Maintenance Manager
Set notification status
Maintenance Manager
Change status from 0001 to 0002
Maintenance Manager
Confirm the entry
Maintenance Manager
Select put in process icon
Maintenance Manager
Save the entries
Maintenance Manager
Confirmation message displayed/ "Notification .... saved"
no
Change PM notification
Maintenance Manager
Set notification status
Maintenance Manager
Change status from 0001 to 0005
Maintenance Manager
Save the entries
Responsible Maintenance
Confirmation message displayed


SAP S/4 HANA
Confirm the entry
Maintenance Manager
Select put in process icon
Save the entries
Confirmation message displayed/ "Notification .... saved"
Change status from 0001 to 0005
Save the entries
Responsible Maintenance
Confirmation message displayed
Define order type "MC04"
Transfer informations from notification to work order
Create Internal Refurbishment order
Manage work order
yes
no
Approved?
Receive the maintenance request decision
Internal Refurbishment request declined
Planning & Scheduling Work Orders
Maintain Inetrnal Operations
Maintain External Operations
Internal Refurbishment Request - Risks
Define Operations
Define intervall of reburbishment plants
Define valuatuion type

Planning & Scheduling Work Orders
SAP S/4 HANA
Maintain Inetrnal Operations
Responsible Maintenance
SAP S/4 HANA
Maintain External Operations
Responsible Maintenance


Planning & Scheduling Work Orders
Maintenance Department
Planning work centre internal operations request
Pplan internal operations
Maintenance Planner
Ddefine plant
Define decription
Define control key "PM01"
Define working hours
Create work order approval
Add one operation in the work order with "WCM" control key
The Activation of the work approval action triggered
Plan resources
Check material availability (Stock/ Requirements list)
SAP S/4 HANA


Add one operation in the work order with "WCM" control key
The Activation of the work approval action triggered
Plan resources
Check material availability (Stock/ Requirements list)
Define plant
Define material used in work order
Execute the entries
List of Reservations displayed
Display the corresponding reservation
Materials available ?
yes
no
Reserve the materials used for the work order
Dispatch request to the purchasing department
Order the required materials
Plan capacity (capacity check)
Define work order number
Execute the entry
SAP S/4 HANA
Maintenance Planner
(c) Donya Sowelem
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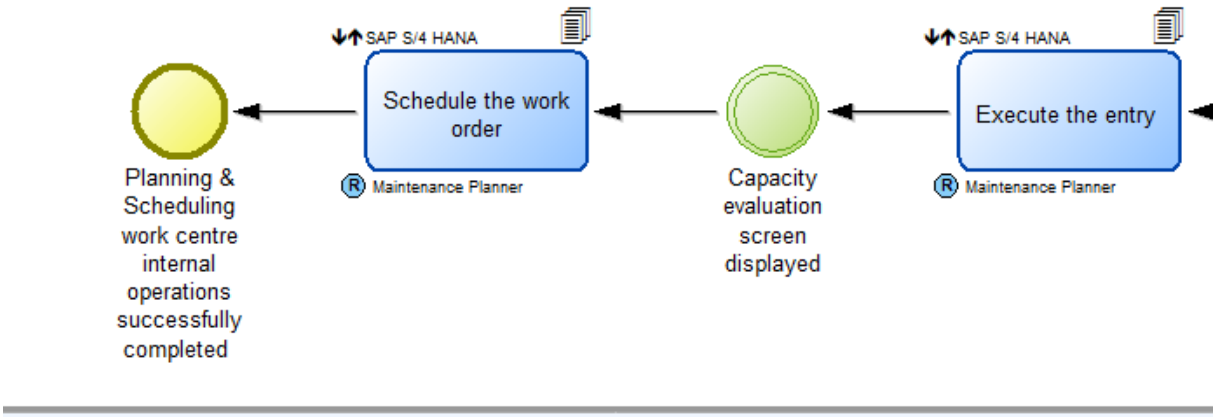
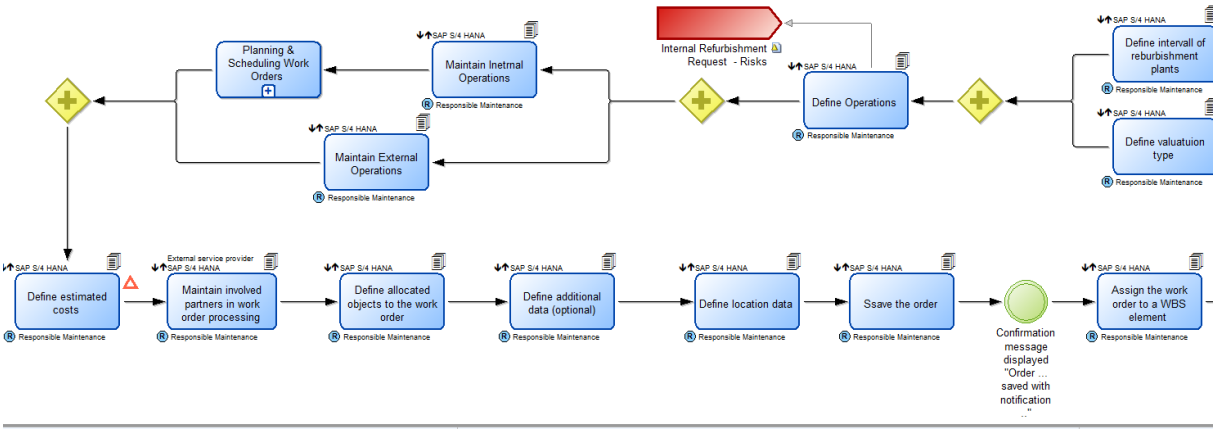
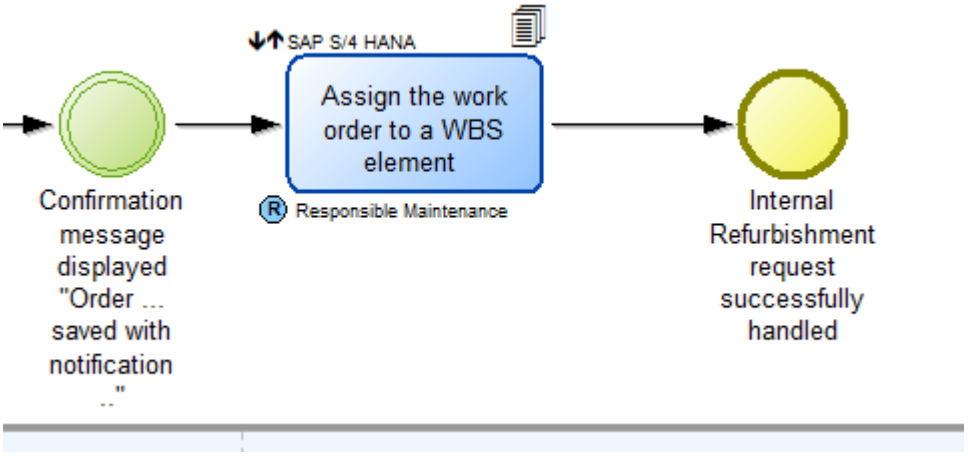

SAP S/4 HANA
Execute the entry
Maintenance Planner
Capacity evaluation screen displayed
Schedule the work order
Planning & Scheduling work centre internal operations successfully completed





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