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# Action Module with examples

Digital management starts with PLM

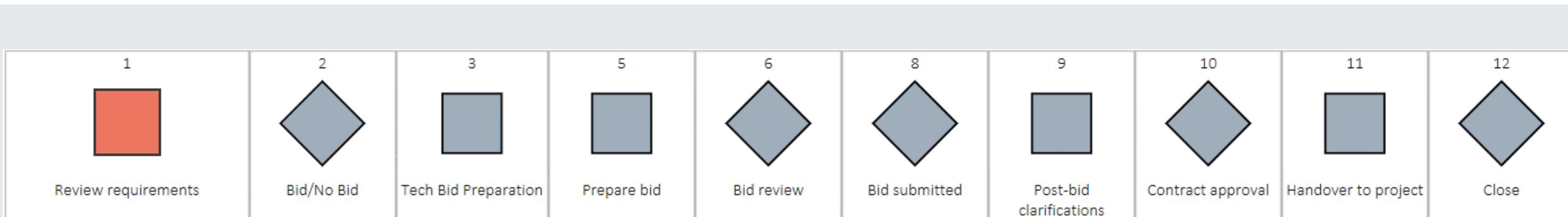


Highstage

# Scope

- **Session 1:** Presenting the Action module. A presentation only.
- **Session 2:** Defining Actions. Using XML to create and modify Actions in your own environment. Conclude with an agreed assignment after class.
- **Session 3:** Re-union with Q&A to discuss and clarify issues surfaced during the home assignment.

# A Highstage module

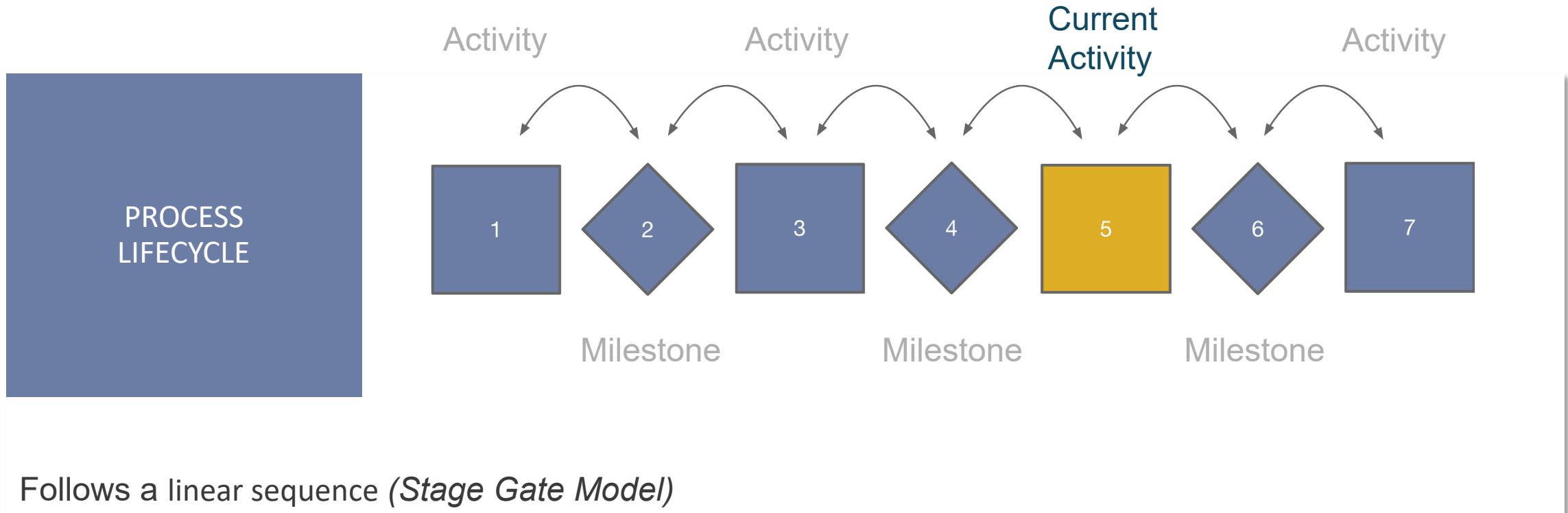


- Unlike Document, Part and Device modules the Action module can be used to **model any process** (*Change, Project, CAPA, Complaint etc.*)

# Behavior overview

	Documents	Actions
<b>Revisions</b>	×	-
<b>Reviewers/Approvers</b>	×	-
<b>Manager</b>	-	×
<b>Sequence</b>	-	×
<b>Deadlines</b>	- ( <i>schema</i> )	×
<b>Resources</b>	-	×
<b>Process</b>	- ( <i>review/appr.</i> )	×
<b>Can implement procedures (SOP's)</b>	-	×
<b>Requires document file</b>	×	-
<b>Enforce document/records production</b>	-	×

# LINEAR SEQUENCE FOR ANY PROCESS



# Manage processes

- Define steps and gates according to procedure
- Define document suggestions and requirements for each step
- Acquire metadata for each step
- Provide guidance and requirements



All defined in  
subtype schemas

# Action overview

The screenshot illustrates a software interface for managing actions, specifically focusing on a stage gate and associated details.

**Stage gate:** A horizontal timeline showing 12 steps. Step 11 is highlighted with a blue box and labeled "Step". The steps are: 1. Review requirements, 2. Bid/No Bid, 3. Tech Bid Preparation, 5. Prepare bid, 6. Bid review, 8. Bid submitted, 9. Post-bid clarifications, 10. Contract approval, 11. Handover to project, and 12. Close. The "Stage gate" label is positioned to the right of the timeline.

**Custom step details:** A detailed view for Step 11 (Handover to project). It includes:

- Review requirements:** Fields for "Customer response sent" (checkbox), "Receipt to customer" (button to "Document/GD [0]"), "Request for Quotation from Client" (button to "Document/RFQI [0]"), and a "Step to Bid/No Bid" button.
- Sales Manager:** ARVE.BADSVIK, Scope of Work: CT Tower.
- Info:** To-do actions (button to "Action/TODO [0]"), Notepad log, Progress, and Options.
- Checklists:** A list of items including "INFO: Governing and guidance documentation", "Sales process overview: QMC005", "Sales process description: QAP002", "Communication and profile instruction: QAI044", "Customer feedback instruction: QAI044", "Develop sales sign-off proxies: QAI126", "Sales Process Rac: QAI121", "Service Personnel Pricing Policy: QAI121", "Sikring av Valuta: QAI141", and "Spare Part Pricing Policy: QAI009".
- Key documents:** A list of procedure references.

**Custom information. E.g procedure refs:** A label indicating the type of data shown in the "Checklists" and "Key documents" sections.

**Associated Emails & References:** A table showing a list of documents associated with the action. The table includes columns for Item, File, Folder, Revs, Project Rev, Status, Acceptance Code, and Title.

Item	File	Folder	Revs	Project Rev	Status	Acceptance Code	Title
1 QT0034-1	.docx (.pdf)				Approved		CT Tower
2 BIDPREP17545-1A	.docx				Working		CT Tower
3 RISKREG17543-1A	.xlsx				Working		CT Tower
4 PRECALC17542-1	.xls (.pdf)				Approved		CT Tower

# Full overview and control

Action search

Data columns  Grid: sales  HELP

Options

Results

	Item	Title	ActionStatus	Type of Scope	Sales Manager	Project Type	Review requirements	Bid/No Bid	Tech Bid Preparation	Prepare bid	Bid review	Bid submitted	Post-bid clarifications	Contract approval	Handover to project	Close	Age
1	BID0020	CT Tower	open	Standard	ARVE.BADSVIK	WINS	ENDRE.GAARD; ARVE.BADSVIK	ARVE.BADSVIK	ARNE.RODESEIKE		ARVE.BADSVIK			ARVE.BADSVIK			17
2	BID0018	ACTF-351, 3D Studie for Statoil	open		OLE.ANDREAS.SOMME	Aftermarket	OLE.ANDREAS.SOMME	OLE.ANDREAS.SOMME			OLE.ANDREAS.SOMME			OLE.ANDREAS.SOMME			19
3	BID0017	Spare Parts - Island Offshore	open		OLE.ANDREAS.SOMME	Aftermarket	OLE.ANDREAS.SOMME	OLE.ANDREAS.SOMME			OLE.ANDREAS.SOMME			OLE.ANDREAS.SOMME			19
4	BID0016	RLWI	open		ENDRE.GAARD		ENDRE.GAARD	ENDRE.GAARD	TORSTEIN.TOMMSEN		ENDRE.GAARD			ENDRE.GAARD			40
5	BID0015	Cantilever Rig Apollo	open		MARTIN.LINGSTEN	WOR	MARTIN.LINGSTEN	MARTIN.LINGSTEN	MARTIN.LINGSTEN	MARTIN.LINGSTEN	MARTIN.LINGSTEN	2018-03-09		MARTIN.LINGSTEN			55
6	BID0014	Lynx	open	Standard	ARVE.BADSVIK	WINS	ARVE.BADSVIK	ARVE.BADSVIK	ARNE.RODESEIKE		ARVE.BADSVIK	2018-03-08		ARVE.BADSVIK			55
7	BID0013	anne sitt - motstrømsbasseng i hagen	open	Customized	ENDRE.GAARD	WINS	BRIT.SOMME; ANNE.BUER	ENDRE.GAARD	ARNE.RODESEIKE	BRIT.SOMME	ENDRE.GAARD	2018-03-21	BRIT.SOMME	ENDRE.GAARD	BRIT.SOMME; ANNE.BUER		60
8	BID0011	Budget Quote Milaha Cantilever	open		MARTIN.LINGSTEN	WOR	MARTIN.LINGSTEN	MARTIN.LINGSTEN	MARTIN.LINGSTEN	MARTIN.LINGSTEN	MARTIN.LINGSTEN	2017-12-04	MARTIN.LINGSTEN	MARTIN.LINGSTEN			146
9	BID0010	Test: 350 ATF rental	open		ARVE.BADSVIK	WINS	ENDRE.GAARD	ARVE.BADSVIK	ARVE.BADSVIK		ARVE.BADSVIK	2017-12-04		ARVE.BADSVIK			150
10	BID0002	asdfsdf	open		PER.ORKE	WINS	PER.ORKE	PER.ORKE	PER.ORKE	PER.ORKE	PER.ORKE	2017-11-03	PER.ORKE	BRIT.SOMME	PER.ORKE	BRIT.SOMME	2017-11-08
11	BID0000	Test Bid	open		PER.ORKE		PER.ORKE; GEIR.BERGE; METTE.HAALAND	PER.ORKE	GEIR.BERGE; PER.ORKE	PER.ORKE	PER.ORKE	2016-02-09		PER.ORKE		PER.ORKE	811

# Business Intelligence



The screenshot displays Microsoft Power BI desktop, showing a variety of data visualizations and the ribbon menu. The ribbon menu is open, with the 'External Data' tab selected. The visualizations include a map of North America and Europe, a bar chart of Profit by Segment, a line chart of Gross Sales, Discounts, and Profit by Date, and a bubble chart of Profit vs. Gross Sales by Product and Segment. The 'Visualizations' and 'Fields' panes are also visible on the right side of the interface.

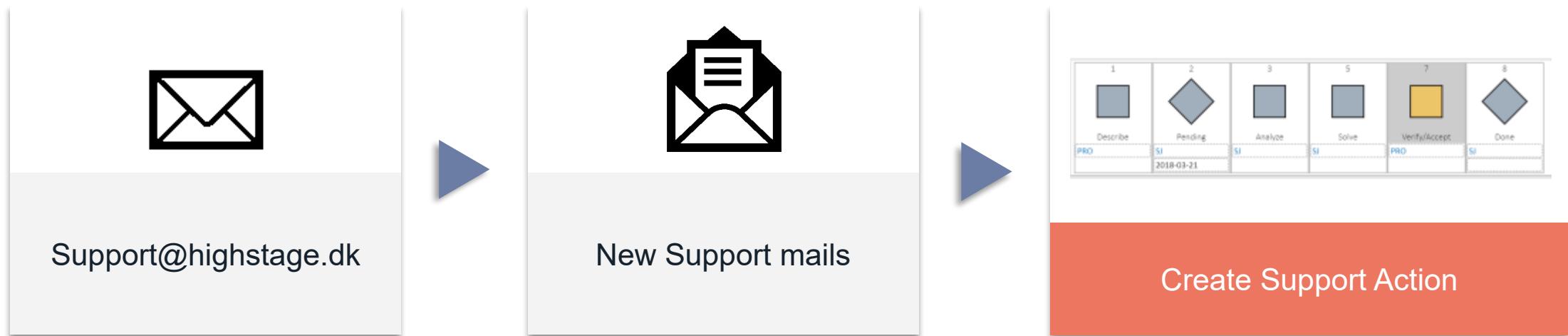


## Microsoft Dynamics 365 Business Central



# Action create from mail

## SUPPORT EXAMPLE



## Create any number of Action processes with....

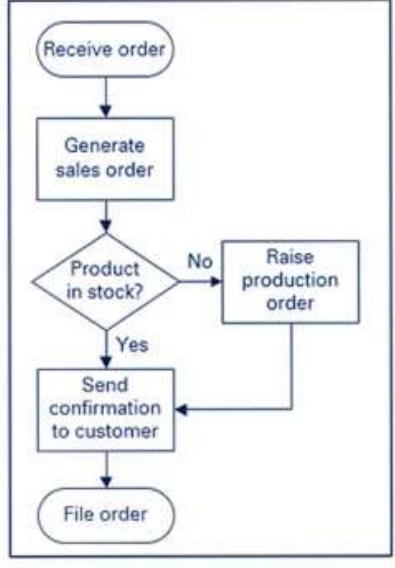
- Between 1 – 16 steps for each Action process
- Assign any number of select users to be responsible for completing each individual step with optional deadlines.
- Define whether any number of mandatory and/or optional Documents, Actions, Parts, Devices etc. should be created and completed in each individual step.
- Define any number of mandatory and/or optional fields to be filled in each step.

# Why use Actions?

- Deploy/enforce corporate best practices
- Improved overview and control
- Improved compliance
- Implement procedures

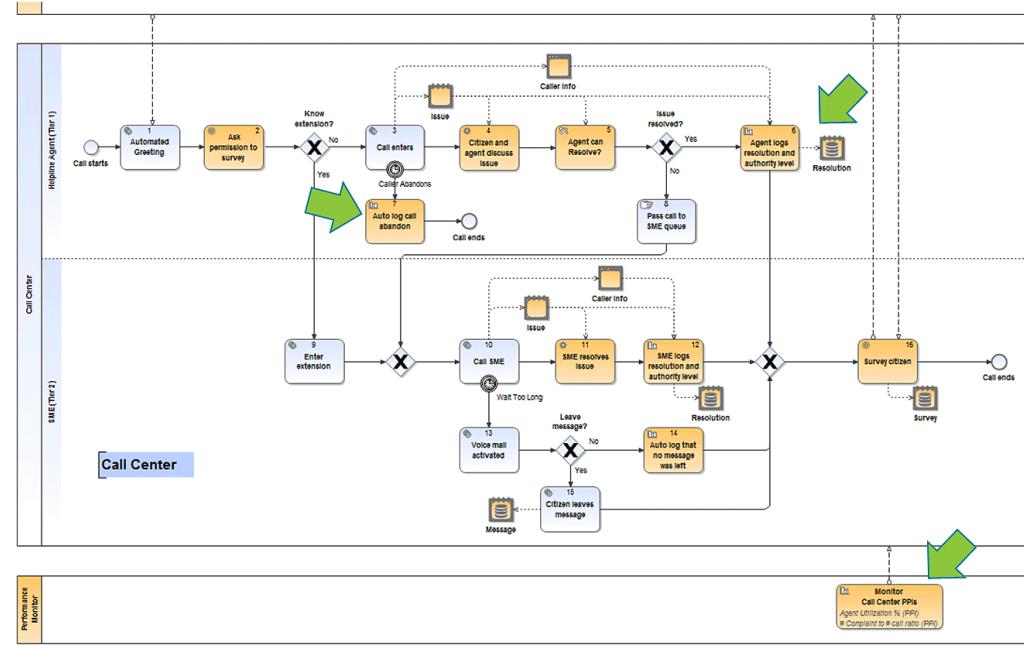


# Other common and more complex models



## Flowchart

- Decision branching
- Media
- Parallel paths



## BPML Business Process Modelling Language

- Swim lanes
- Organization and technology sensitive

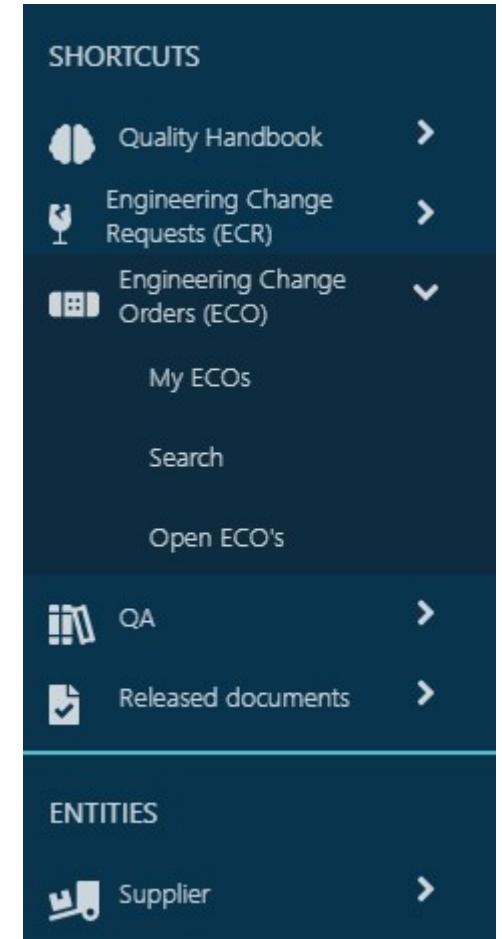
# Action Module ECO examples

Digital management starts with PLM

 **Highstage**

# ECR/ECO examples

- ECR are used to evaluate and decide on the change
- ECO is spawned from ECR if ECR is approved
- ECO can change release status of parts (may be the only way to alter release status)





## ECR sample

Process Outline		
1 	3 	7 
Change Request	Change Board	Final Closure
		
2022-12-16	2022-12-20	2022-12-22
<b>SOP regarding PR-ECO</b>		SOP10033-6 Changes
<b>Step Properties</b> <ul style="list-style-type: none"> <li>&gt; Change Request</li> <li>&gt; Change Board</li> <li>▼ Final Closure</li> </ul>		
<b>Change Board Decision</b>		Approve and initiate ECO
<b>Change Board Comments</b>		
<b>Engineering Change Orders</b> <ul style="list-style-type: none"> <li>&gt; Action/PR-ECO [4]</li> <li>Create</li> <li>Add</li> <li>Page </li> </ul>		
<b>Closure Date</b>		2023-01-18
<b>Close</b>		<input checked="" type="checkbox"/>

Item	Close	Title	Change Board	Approval Options	Consent	Close	Workspace	Change Request	Change Board	Read	Close	Age
1 PR-ECR0009	Open				Approved		CRM					2
2 PR-ECR0010	Open			Approve and initiate ECR	Approved		CRM					16
3 PR-ECR0011	Open			Approve and initiate ECR	Approved		CRM					21
4 PR-ECR0014	Open			Approve (Close ECR without ECO)	Accepted		CRM					40
5 PR-ECR0012	Open			Approve (Close ECR without ECO)	Approved		CRM					60
6 PR-ECR0017	Open			Approve (Close ECR without ECO)	Accepted		CRM					60
7 PR-ECR0018	Open	Restructuring sequencing of Supply Chain procedures		Approve and initiate ECO	Approved		CRM					61
8 PR-ECR0019	Open				Approved		CRM					61
9 PR-ECR0020	Open				Approved		CRM					61
10 PR-ECR0021	Open				Approved		CRM					61
11 PR-ECR0022	Open				Approved		CRM					61
12 PR-ECR0023	Open				Approved		CRM					61
13 PR-ECR0024	Open				Approved		CRM					61
14 PR-ECR0025	Open				Approved		CRM					61
15 PR-ECR0026	Open				Approved		CRM					61
16 PR-ECR0027	Open				Approved		CRM					61
17 PR-ECR0028	Open				Approved		CRM					61
18 PR-ECR0029	Open				Approved		CRM					61
19 PR-ECR0030	Open				Approved		CRM					61
20 PR-ECR0031	Open				Approved		CRM					61
21 PR-ECR0032	Open				Approved		CRM					61
22 PR-ECR0033	Open				Approved		CRM					61
23 PR-ECR0034	Open				Approved		CRM					61
24 PR-ECR0035	Open				Approved		CRM					61
25 PR-ECR0036	Open				Approved		CRM					61
26 PR-ECR0037	Open				Approved		CRM					61
27 PR-ECR0038	Open				Approved		CRM					61
28 PR-ECR0039	Open				Approved		CRM					61
29 PR-ECR0040	Open				Approved		CRM					61
30 PR-ECR0041	Open				Approved		CRM					61
31 PR-ECR0042	Open				Approved		CRM					61
32 PR-ECR0043	Open				Approved		CRM					61
33 PR-ECR0044	Open				Approved		CRM					61
34 PR-ECR0045	Open				Approved		CRM					61
35 PR-ECR0046	Open				Approved		CRM					61
36 PR-ECR0047	Open				Approved		CRM					61
37 PR-ECR0048	Open				Approved		CRM					61
38 PR-ECR0049	Open				Approved		CRM					61
39 PR-ECR0050	Open				Approved		CRM					61
40 PR-ECR0051	Open				Approved		CRM					61
41 PR-ECR0052	Open				Approved		CRM					61
42 PR-ECR0053	Open				Approved		CRM					61
43 PR-ECR0054	Open				Approved		CRM					61
44 PR-ECR0055	Open				Approved		CRM					61
45 PR-ECR0056	Open				Approved		CRM					61
46 PR-ECR0057	Open				Approved		CRM					61
47 PR-ECR0058	Open				Approved		CRM					61
48 PR-ECR0059	Open				Approved		CRM					61
49 PR-ECR0060	Open				Approved		CRM					61
50 PR-ECR0061	Open				Approved		CRM					61
51 PR-ECR0062	Open				Approved		CRM					61
52 PR-ECR0063	Open				Approved		CRM					61
53 PR-ECR0064	Open				Approved		CRM					61
54 PR-ECR0065	Open				Approved		CRM					61
55 PR-ECR0066	Open				Approved		CRM					61
56 PR-ECR0067	Open				Approved		CRM					61
57 PR-ECR0068	Open				Approved		CRM					61
58 PR-ECR0069	Open				Approved		CRM					61
59 PR-ECR0070	Open				Approved		CRM					61
60 PR-ECR0071	Open				Approved		CRM					61
61 PR-ECR0072	Open				Approved		CRM					61
62 PR-ECR0073	Open				Approved		CRM					61
63 PR-ECR0074	Open				Approved		CRM					61
64 PR-ECR0075	Open				Approved		CRM					61
65 PR-ECR0076	Open				Approved		CRM					61
66 PR-ECR0077	Open				Approved		CRM					61
67 PR-ECR0078	Open				Approved		CRM					61
68 PR-ECR0079	Open				Approved		CRM					61
69 PR-ECR0080	Open				Approved		CRM					61
70 PR-ECR0081	Open				Approved		CRM					61
71 PR-ECR0082	Open				Approved		CRM					61
72 PR-ECR0083	Open				Approved		CRM					61
73 PR-ECR0084	Open				Approved		CRM					61
74 PR-ECR0085	Open				Approved		CRM					61
75 PR-ECR0086	Open				Approved		CRM					61
76 PR-ECR0087	Open				Approved		CRM					61
77 PR-ECR0088	Open				Approved		CRM					61
78 PR-ECR0089	Open				Approved		CRM					61
79 PR-ECR0090	Open				Approved		CRM					61
80 PR-ECR0091	Open				Approved		CRM					61
81 PR-ECR0092	Open				Approved		CRM					61
82 PR-ECR0093	Open				Approved		CRM					61
83 PR-ECR0094	Open				Approved		CRM					61
84 PR-ECR0095	Open				Approved		CRM					61
85 PR-ECR0096	Open				Approved		CRM					61
86 PR-ECR0097	Open				Approved		CRM					61
87 PR-ECR0098	Open				Approved		CRM					61
88 PR-ECR0099	Open				Approved		CRM					61
89 PR-ECR0100	Open				Approved		CRM					61
90 PR-ECR0101	Open				Approved		CRM					61
91 PR-ECR0102	Open				Approved		CRM					61
92 PR-ECR0103	Open				Approved		CRM					61
93 PR-ECR0104	Open				Approved		CRM					61
94 PR-ECR0105	Open				Approved		CRM					61
95 PR-ECR0106	Open				Approved		CRM					61
96 PR-ECR0107	Open				Approved		CRM					61
97 PR-ECR0108	Open				Approved		CRM					61
98 PR-ECR0109	Open				Approved		CRM					61
99 PR-ECR0110	Open				Approved		CRM					61
100 PR-ECR0111	Open				Approved		CRM					61
101 PR-ECR0112	Open				Approved		CRM					61
102 PR-ECR0113	Open				Approved		CRM					61
103 PR-ECR0114	Open				Approved		CRM					61
104 PR-ECR0115	Open				Approved		CRM					61
105 PR-ECR0116	Open				Approved		CRM					61
106 PR-ECR0117	Open				Approved		CRM					61
107 PR-ECR0118	Open				Approved		CRM					61
108 PR-ECR0119	Open				Approved		CRM					61
109 PR-ECR0120	Open				Approved		CRM					61
110 PR-ECR0121	Open				Approved		CRM					61
111 PR-ECR0122	Open				Approved		CRM					61
112 PR-ECR0123	Open				Approved		CRM					61
113 PR-ECR0124	Open				Approved		CRM					61
114 PR-ECR0125	Open				Approved		CRM					61
115 PR-ECR0126	Open				Approved		CRM					61
116 PR-ECR0127	Open				Approved		CRM					61
117 PR-ECR0128	Open				Approved		CRM					61
118 PR-ECR0129	Open				Approved		CRM					61
119 PR-ECR0130	Open				Approved		CRM					61
120 PR-ECR0131	Open				Approved		CRM					61
121 PR-ECR0132	Open				Approved		CRM					61
122 PR-ECR0133	Open				Approved		CRM					61
123 PR-ECR0134	Open				Approved		CRM					61
124 PR-ECR0135	Open				Approved		CRM					61
125 PR-ECR0136	Open				Approved		CRM					61
126 PR-ECR0137	Open				Approved		CRM					61
127 PR-ECR0138	Open				Approved		CRM					61
128 PR-ECR0139	Open				Approved		CRM					61
129 PR-ECR0140	Open				Approved		CRM					61
130 PR-ECR0141	Open				Approved		CRM					61
131 PR-ECR0142	Open				Approved		CRM					61
132 PR-ECR0143	Open				Approved		CRM					61
133 PR-ECR0144	Open				Approved		CRM					61
134 PR-ECR0145	Open				Approved		CRM					61
135 PR-ECR0146	Open				Approved		CRM					61
136 PR-ECR0147	Open				Approved		CRM					61
137 PR-ECR0148	Open				Approved		CRM					61
138 PR-ECR0149	Open				Approved		CRM					61
139 PR-ECR0150	Open				Approved		CRM					61
140 PR-ECR0151	Open				Approved		CRM					61
141 PR-ECR0152	Open				Approved		CRM					61
142 PR-ECR0153	Open				Approved		CRM					61
143 PR-ECR0154	Open				Approved		CRM					61
144 PR-ECR0155	Open				Approved		CRM					61
145 PR-ECR0156	Open				Approved		CRM					61
146 PR-ECR0157	Open				Approved		CRM					61
147 PR-ECR0158	Open				Approved		CRM					61
148 PR-ECR0159	Open				Approved		CRM					61
149 PR-ECR0160	Open				Approved		CRM					61
150 PR-ECR0161	Open				Approved		CRM					61
151 PR-ECR0162	Open				Approved		CRM					61
152 PR-ECR0163	Open				Approved		CRM					61
153 PR-ECR0164	Open				Approved		CRM					61
154 PR-ECR0165	Open				Approved		CRM					61
155 PR-ECR0166	Open				Approved		CRM					61
156 PR-ECR0167	Open				Approved		CRM					61
157 PR-ECR0168												

# ECR sample – Product Defect





# Process ECO sample

**Process Outline**

```
graph LR; 1[1 Plan] --> 2[2 Execution]; 2 --> 3{3 QA Approval}; 3 --> 4[4 Regulatory Approvals]; 4 --> 5[5 Implementation]; 5 --> 6{6 QA Final Closure};
```

Step	Description	QR Code	Date
1	Plan		2023-01-02
2	Execution		2023-03-02
3	QA Approval		
4	Regulatory Approvals		
5	Implementation		
6	QA Final Closure		

**SOP regarding PR-ECO** SOP10033-6 Changes

**Step Properties**

**Plan**

Action	PR-ECO10241
Description Title*	Restructuring sequencing of Supply Chain procedures
CreateDate	2023-01-02
CreateBy	
Workspace	QMS
ECO document*	<a href="#">Document/ECO</a>
Execution Responsible*	
Deadline for execution*	2023-03-31

**Execution**

**QA Approval**

**Regulatory Approvals**

**Implementation**

**QA Final Closure**

**Process Outline**

Item	Item Type	Close	Description	Folder	Workspace	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9
1 + PR-ECO10247	PR-ECO	open	New process for production and shipping orders for MyConnect		QMS									
2 + PR-ECO10246	PR-ECO	open	Change of Brand Names - the word "Home" will be removed		QMS									
3 + PR-ECO10245	PR-ECO	open	TEST ECO		HTEST									
4 + PR-ECO10243	PR-ECO	open	New process for production and shipping orders for Semi Finished Goods		QMS									
5 + PR-ECO10242	PR-ECO	open	Simplifying Supply Chain Procedure for Goods Receipt		QMS									
6 + PR-ECO10241	PR-ECO	open	Restructuring sequencing of Supply Chain procedures		QMS									
7 + PR-ECO10240	PR-ECO	open	Restructuring sequencing of Supply Chain procedures		QMS									
8 + PR-ECO10239	PR-ECO	closed	Update label for storage media with new REF number		QMS									

**Confidential**

# Product ECO - Initiate – Start work



Item	Legacy ID	Status	Description	Note	Workspace	EventTime	LifeCycleStatus
	2-1693	Working	S/N LABEL DETECTOR		Parts	2023-03-15	In Development
	4-1972	Working	DETECTOR (MACHINING)		Parts	2023-03-15	In Development

# Product ECO - Board Accept



Item	Legacy ID	Status	Description	Note	Workspace	EventTime	LifeCycleStatus
	2-1693-14	Approved	S/N LABEL DETECTOR		Parts	2023-03-15	In Development
	4-1972-4	Approved	DETECTOR (MACHINING)		Parts	2023-03-15	In Development

# Product ECO - Transfer parts to production



Item	Legacy ID	Status	Description	Note	Workspace	EventTime	LifeCycleStatus
	2-1693-14	Approved	S/N LABEL DETECTOR		Parts	2023-03-15	In Production
	4-1972-4	Approved	DETECTOR (MACHINING)		Parts	2023-03-15	In Production

- Transition to Transfer stage sets LifeCycleStatus

# Action Module Manufacturing logistics and traceability examples (medtech)

Digital management starts with PLM



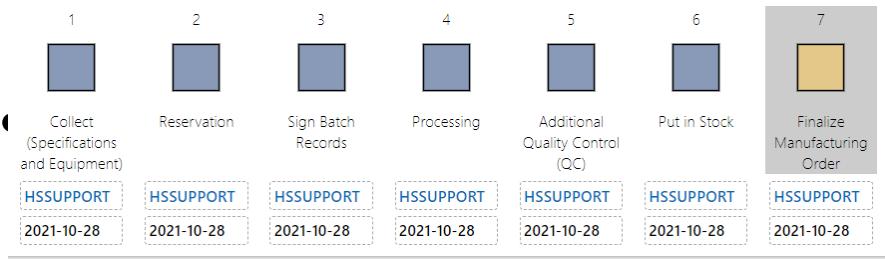
# Manuf. Logistics and traceability examples

- Manufacturing Work order has got «transitions» in stage promotions
- «Transitions» perform work like
  - Move goods from one storage location to another
  - Adds/removes from stock
  - Depleats remaining stocks
  - Scraps stock items base on non-c

The screenshot shows a software interface for manufacturing management. On the left, a sidebar menu titled 'OPERATIONS' lists various modules: Sales, Stock, Manufacturing (selected), External Work Orders, Incoming Quality Control, Manufacturing Orders (highlighted in orange), Work Orders, Package Orders, Purchase Orders, Project Reviews, Scrap, Withdraw, Production, and Traceability. The main area displays a table of manufacturing orders with columns for Item, ItemType, Close, Description, ProjectNo, Close, and Workspace. The table shows three entries: 1. Item 10181, ItemType MANORD, Close open, Description 1400 items for storage, ProjectNo HTEST. 2. Item 10177, ItemType MANORD, Close open, Description Spare Part Batch, ProjectNo HTEST. 3. Item 10164, ItemType MANORD, Close open, Description 16 000 for PO N12122, ProjectNo HTEST. Below the table, there are links for Quality Control (QC), Put in Stock (14), and Finalize Manufacturing Order (0).

	Item	ItemType	Close	Description	ProjectNo	Close	Workspace
1	10181	MANORD	open	1400 items for storage			HTEST
2	10177	MANORD	open	Spare Part Batch			HTEST
3	10164	MANORD	open	16 000 for PO N12122			HTEST

# Manufacturing work orders (medtech)



**Step Properties**

> Collect (Specifications and Equipment)

```
<step name="step2" title="Reservation" disabled="0">
<outline-xhtml name="default" src="ts/images/stage.svg"/>
<transition name="reserveFromStock" type="reserve"/>
<object name="Stocks" type="ts_stock" search-parameters="columns=Bts_ref.qty;"/>
</step>
```

> Reservation

```
<step name="step4" title="Processing" disabled="0">
<outline-xhtml name="default" src="ts/images/stage.svg"/>
<transition name="add2st2ock" type="manufacture"/>
</step>
```

> Sign Batch Records

> Processing

**ONGOING PRODUCTION: Step to Additional Quality Control (QC) once production is completed**

If this MANORD includes items with trays that needs location changed, add them here and specify the new location.

Scan trays

Device [Device \[2\]](#) Add Page

State of a device in case of non-consumable Dirty

> Additional Quality Control (QC)

```
<step name="step6" title="Put in Stock" disabled="0">
<outline-xhtml name="default" src="ts/images/stage.svg"/>
<object name="Build" type="part" search-parameters="columns=Item%3BPartDisplayQC%3Bts%5Fref%2Eqty%3Bts%5Fref%2Eqty%5Fto%5Fstock%3Bts%5Fref"/>
<transition name="add2431stock" type="stock"/>
<field name="ConfirmQCReports" title="Confirm Required Quality Control Performed" mandatory="1"/>
</step>
```

> Put in Stock

> Finalize Manufacturing Order

**Stock - Transaction History**

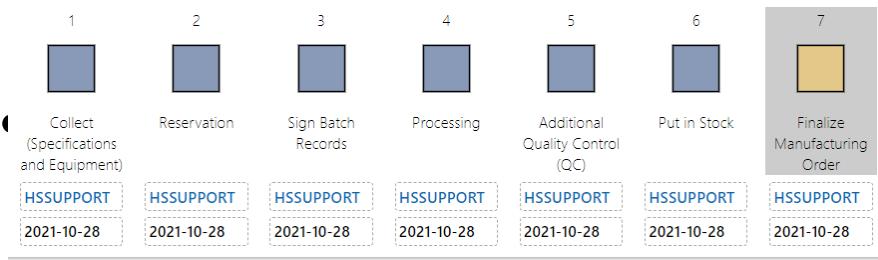
Stock - Transaction History

Search

action	Device	EventTime	Location	message	operation	Part	Quantity	State	Stock	UserId	
10244	MLOT70	2021-10-28 15:25:07	10014	Added in stock	Stock	COMPMT11681-1A	96	Stock	36934	HSSUPPORT	
10244	BAT00641	2021-10-28 15:24:21	10003	Added 0 in stock	Added	ASSY11678-1A	0	Reserved	36933	HSSUPPORT	
10244	BAT00641	2021-10-28 15:24:21	10003	Items have been Depleted	Depleted	ASSY11678-1A	0	Depleted	36933	HSSUPPORT	
10244	BAT00641	2021-10-28 15:22:21	10003	Added 0 in stock	Added	ASSY11678-1A	0	Stock	36932	HSSUPPORT	
10244	BAT00641	2021-10-28 15:22:21	10003	Items have been Depleted	Depleted	ASSY11678-1A	0	Depleted	36932	HSSUPPORT	
6	10244	BAT00641	2021-10-28 15:22:21	10003	Added in stock	Reserved	ASSY11678-1A	1	Reserved	36933	HSSUPPORT
7	10243	BAT00641	2021-10-28 15:08:40	10017	Added in stock	Stock	ASSY11678-1A	1	Stock	36932	HSSUPPORT
8	10242	BAT00640	2021-10-28 14:58:58	10020	Items have been depleted	depleted	ASSY11679-1A	1	depleted	36931	HSSUPPORT
9	10242	BAT00640	2021-10-28 14:58:58	10020	Removed 1 from stock	Removed	ASSY11679-1A	0	depleted	36931	HSSUPPORT
10	10242	BAT00640	2021-10-28 14:58:58	10020	Items have been Depleted	Depleted	ASSY11679-1A	0	Depleted	36931	HSSUPPORT
11	10241	BAT00640	2021-10-28 14:58:58	10020	Added 0 in stock	Added	ASSY11679-1A	0	depleted	36931	HSSUPPORT
12	10241	BAT00640	2021-10-28 14:35:16	10020	Added in stock	Stock	ASSY11679-1A	1	Stock	36931	HSSUPPORT

with PLM

# Manufacturing work orders (medtech)



**Step Properties**

- > Collect (Specifications and Equipment)
- > Reservation
- > Sign Batch Records
  - Confirm Line Clearance is performed\*
  - Select Work Instruction\* WIDK10698-1; WIDK10679-1
  - Confirm Production Parameters are checked\*
  - Confirm QC Specification\*
- > Processing
- > Additional Quality Control (QC)
- > Put in Stock
- > **Finalize Manufacturing Order**
- Close

**Properties and Options**

**Share With**

**CopyTo**

**Close**

**Advanced**

**Events and Rationale** 12

EventLog	EventTime	Severity	UserId	ObjType	Obj	ObjName	Field	Column	OldValue	NewValue	Message
1	2021-10-28 15:24:58	INFO:0	Highstage Support	action	10244	10244	confirmqreports	confirmqreports	0	1	nbvc
2	2021-10-28 15:24:21	INFO:0	Highstage Support	action	10244	10244					Add reference device MLOT70-1A
3	2021-10-28 15:23:23	INFO:0	Highstage Support	action	10244	10244					Add reference device TRAY1-1A
4	2021-10-28 15:22:21	INFO:0	Highstage Support	action	10244	10244					Add reference ts_stock 36933
5	2021-10-28 15:20:46	INFO:0	Highstage Support	action	10244	10244					Add reference ts_stock 36932
6	2021-10-28 15:20:46	INFO:0	Highstage Support	action	10244	10244	parttobuild	parttobuild			COMPMMAT11681-1A Updated the parttobuild column after

# Manufacturing work orders (medtech)

Item	ItemType	Close	Description	ProjectNo	Close	Workspace	Priority	Step 1	Step 2	Step 3	Step 4
10083	CUSTORD	<span>open</span>	SW Test CUSTORD			HTEST	-1	PER	PER	PER	PER
								2020-08-30	2020-09-04	2020-09-04	2020-09-04
<span>Paste Ref</span> <span>Scope:Top</span> <span>Tree-View</span>											
<span>Action 9</span> <span>Page</span>											
1	<span>+ 10106</span>	MANORD	<span>open</span>	SW Test CUSTORD		HTEST	-1	PER	PER	PER	2020-09-04
2	<span>+ 10108</span>	MANORD	<span>open</span>	SW Test MANORD from CUSTORD		HTEST	-1	PER	PER	PER	2020-09-04
3	<span>+ 10110</span>	MANORD	<span>open</span>	SW Test created from CUSTORD new		HTEST	-1	PER	PER	PER	2020-09-04
4	<span>- 10051</span>	WORKORD	<span>open</span>	Manual interface - mold tools		QUANTUMDX	-1	RASMUS			2020-07-22
<span>Paste Ref</span> <span>Scope:Top</span> <span>Tree-View</span>											
<span>&gt; Document 1</span> <span>Page</span>											
<span>&gt; Part 3</span> <span>Page</span>											

# Non-con to Scrap handling (medtech)

10102 Scrap for HSSUPPORT TEST

✓ Action 10102 default

**Process Outline**

```
graph LR; 1[Attach evidence] --> 2[Select stock for Scrap]; 2 --> 3[Finalize Scrap]
```

1. Attach evidence (HSSUPPORT, 2020-09-03)  
2. Select stock for Scrap (HSSUPPORT, 2020-09-03)  
3. Finalize Scrap (HSSUPPORT, 2020-09-03)

**Step Properties**

✓ Attach evidence

Specified cause: Failed in QC

Non Conformity Report: Document/NCR [1]

Item	File	Folder	Revs	Status	Description	Workspace	Author	Reviewer	Approver	EventTime	.Class	ItemType	.lock	.comment
1	NCR10589-1 .docx (.pdf)				Approved	Mock Audit, IVDeology	QUALITY	GERT; KIRSTINE	KIM; PIA; JOHN	2020-06-04	NCR			

✓ Select stock for Scrap

Stock: > Stock [1]

Confirm selection of stock and quantity for Scrap\*

✓ Finalize Scrap

Comments: > Comments

**Properties and Options**

Share With: [ ]

CopyTo: [ ]

Close: [ ]

> Advanced

**Events and Rationale** 4 Page [ ]

EventLog	EventTime	Severity	UserId	ObjType	Obj	ObjName	Field
1	2020-09-03 12:01:28	INFO:0	Highstage Support	action	10102	10102	con
2	2020-09-03 12:01:12	INFO:0	Highstage Support	action	10102	10102	
3	2020-09-03 12:01:03	INFO:0	Highstage Support	action	10102	10102	
4	2020-09-03 12:00:58	INFO:0	Highstage Support	action	10102	10102	

# Incoming quality control (medtech)

**Process Outline**

1 2 3 4 5

Step 1 - Receive Step 2 - Critical Material Step 3 - Additional Quality Control (QC) Step 4 - IQC OK Step 5 - Finalize IQC

HSSUPPORT HSSUPPORT HSSUPPORT HSSUPPORT HSSUPPORT

2021-08-17 2021-08-17 2021-08-17 2021-08-17 2021-08-17

**Step Properties**

- > Step 1 - Receive
- > Step 2 - Critical Material
- > Step 3 - Additional Quality Control (QC)
- < Step 4 - IQC OK

Please create or add each individual goods to be included in the IQC.

Assembly	> Part/ASSY [0]	Create	Add	Page
Component (processed GRAN)	> Part/COMPGRAN [0]	Create	Add	Page
Processed Material	> Part/COMPMAT [0]	Create	Add	Page
Granulate	> Part/GRAN [0]	Create	Add	Page
Material (non-granulate)	> Part/MAT [0]	Create	Add	Page
Metal tray	> Part/QMDT [0]	Create	Add	Page
Part/TRAYPART	> Part/TRAYPART [1]	Create	Add	Page

If this IQC includes items with trays that needs location changed, add them here and specify the new location.

Scan trays

Device	> Device [150]	Add	Page
New Location			

< Step 5 - Finalize IQC

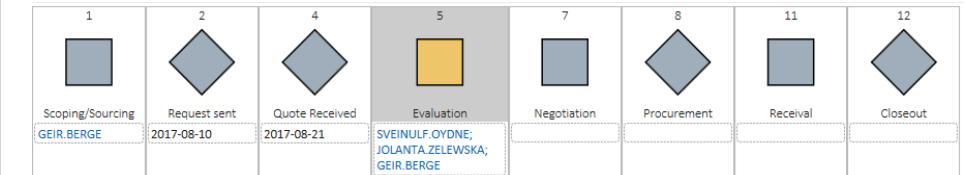
Digital management starts with PLM

# Action Module Project management examples

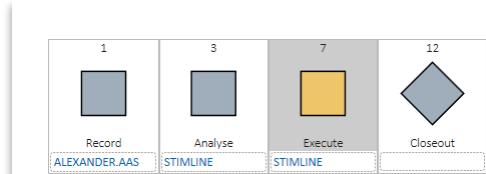
Digital management starts with PLM



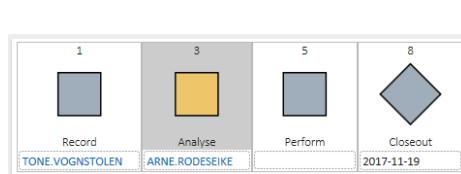
# Project man. example



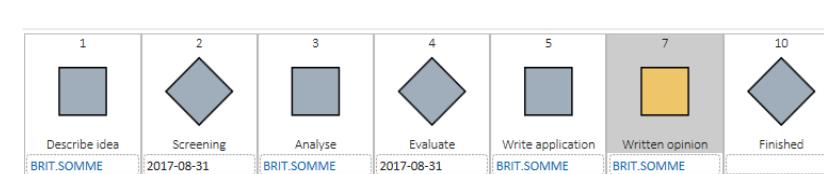
PURC



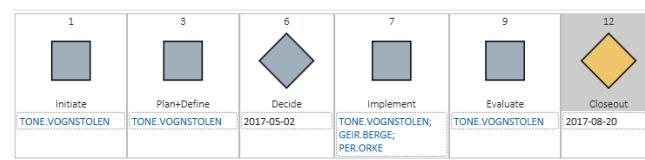
Punch



NonCon HSE impr.



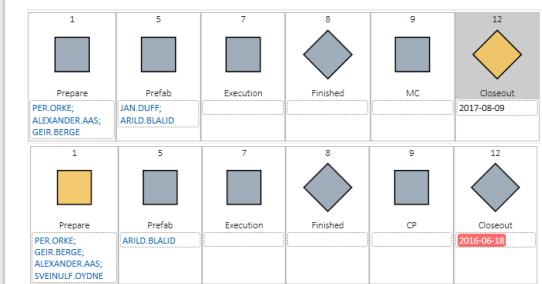
Patent



Change



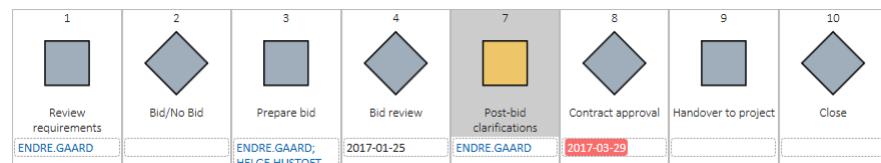
Lead



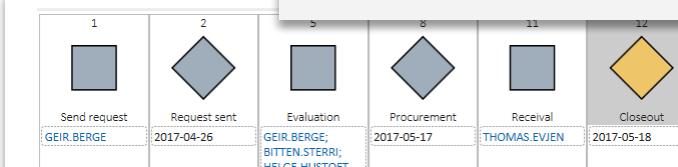
WP / CP



Todo

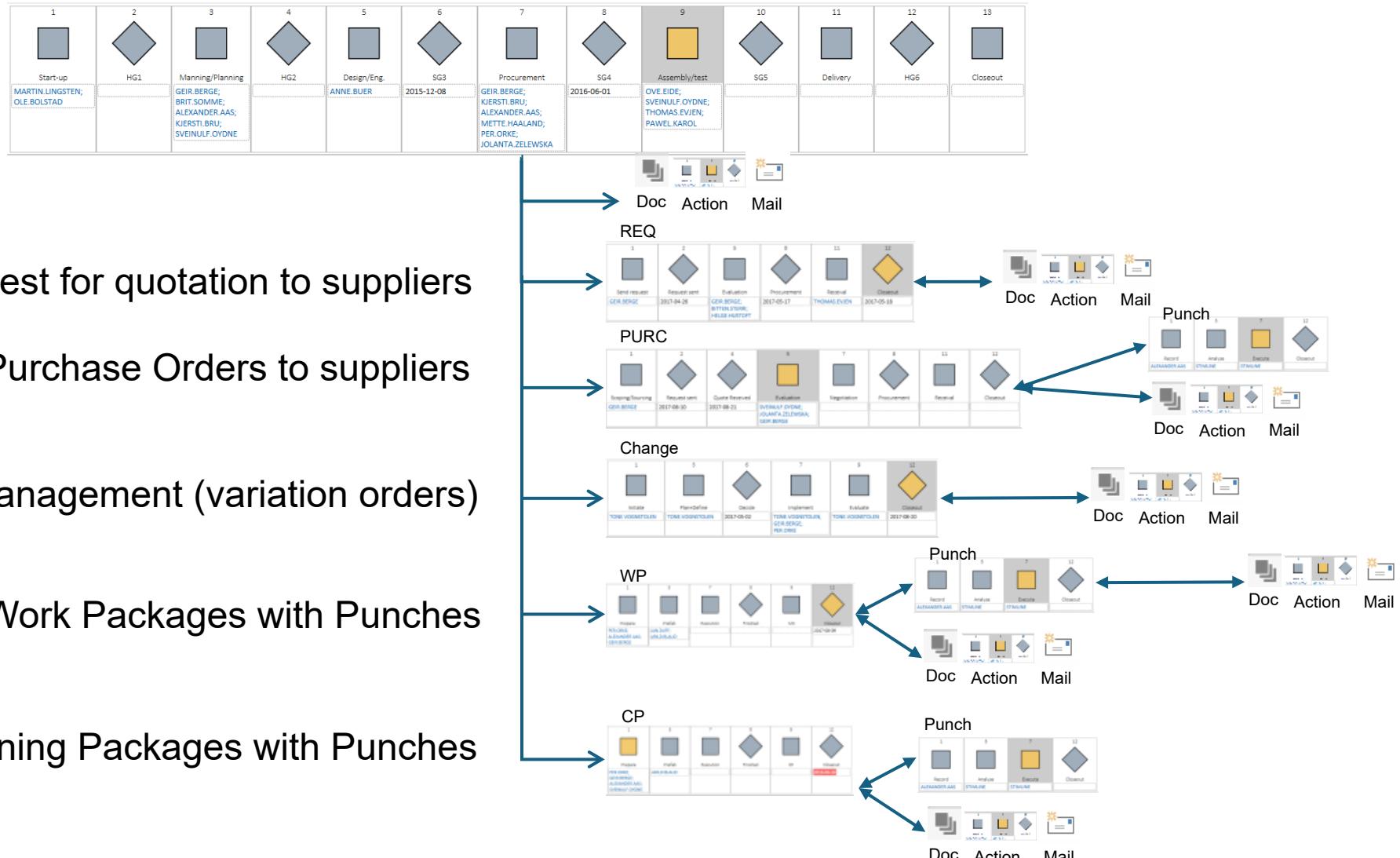


Bid



REQ

# Project man. customer example





# Project man. customer example

The screenshot shows a project management application interface. The top navigation bar includes icons for Home, Refresh, Mail, Trace, Reset, and Favorites, along with a search bar and user information (Per Reidar Ørke (PER.ORKE), User Level: AdminRead). The main content area displays a table of projects with columns: Item, Title, Close, Project WBS, Parent Action, Project Type, Project class, PO/VO Number, Org unit, and Step 1. The table lists five projects: PRO22429, PRO22428, PRO22427, PRO22426, and PRO22425. The 'Title' column for PRO22429 is heavily redacted with 'Confidential'. The 'Title' column for PRO22428 is heavily redacted with 'Confidential'. The 'Title' column for PRO22427 is heavily redacted with 'Confidential'. The 'Title' column for PRO22426 is heavily redacted with 'Confidential'. The 'Title' column for PRO22425 is heavily redacted with 'Confidential'. The sidebar on the left contains links for Project Search, Search Projects, Search Packages, Search Sub-Projects, New Project, Search PURCHASEs, Search REQuitions, Search PBOMs, PBOM Status, Search Purchasing docs, Project Reports, Service Menu, and Supplier. The 'Project Search' link is currently selected. The bottom left corner shows the page number 34.

Item	Title	Close	Project WBS	Parent Action	Project Type	Project class	PO/VO Number	Org unit	Step 1
1	PRO22429	open				0	4791629877		
2	PRO22428	open				4			
3	PRO22427	open				5			
4	PRO22426	open				4	4512204421		
5	PRO22425	open				4	4791502371		



# Project man. customer example

The screenshot displays a user interface for project management, specifically for a customer example. The interface is organized into three main sections, each titled 'Action' with a count of 1, 10, and 10 respectively.

**Action 1:** This section shows a table with columns for Item, Title, Close, Project WBS, Parent Action, Project Type, Project class, PO/VO Number, Org unit, and Step 1 through Step 8. The first row contains data for 'WP55073' (Title: 'January 2023'), which is linked to 'PCK54862' (Project WBS). The Step columns are mostly empty, with only Step 1 showing a value of 0.

Item	Title	Close	Project WBS	Parent Action	Project Type	Project class	PO/VO Number	Org unit	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	
1	WP55073	January 2023	open	PCK54862					0								

**Action 10:** This section shows a table with columns for Item, Title, Close, Project WBS, Parent Action, Project Type, Project class, PO/VO Number, Org unit, and Step 1 through Step 8. The first three rows contain data for 'PUNCH53618' (Title: '1'), 'PUNCH53619' (Title: '2'), and 'PUNCH53623' (Title: '3'), all of which are linked to 'WP55073' (Project WBS). The Step columns are mostly empty, with only Step 1 showing a value of 0 for each row.

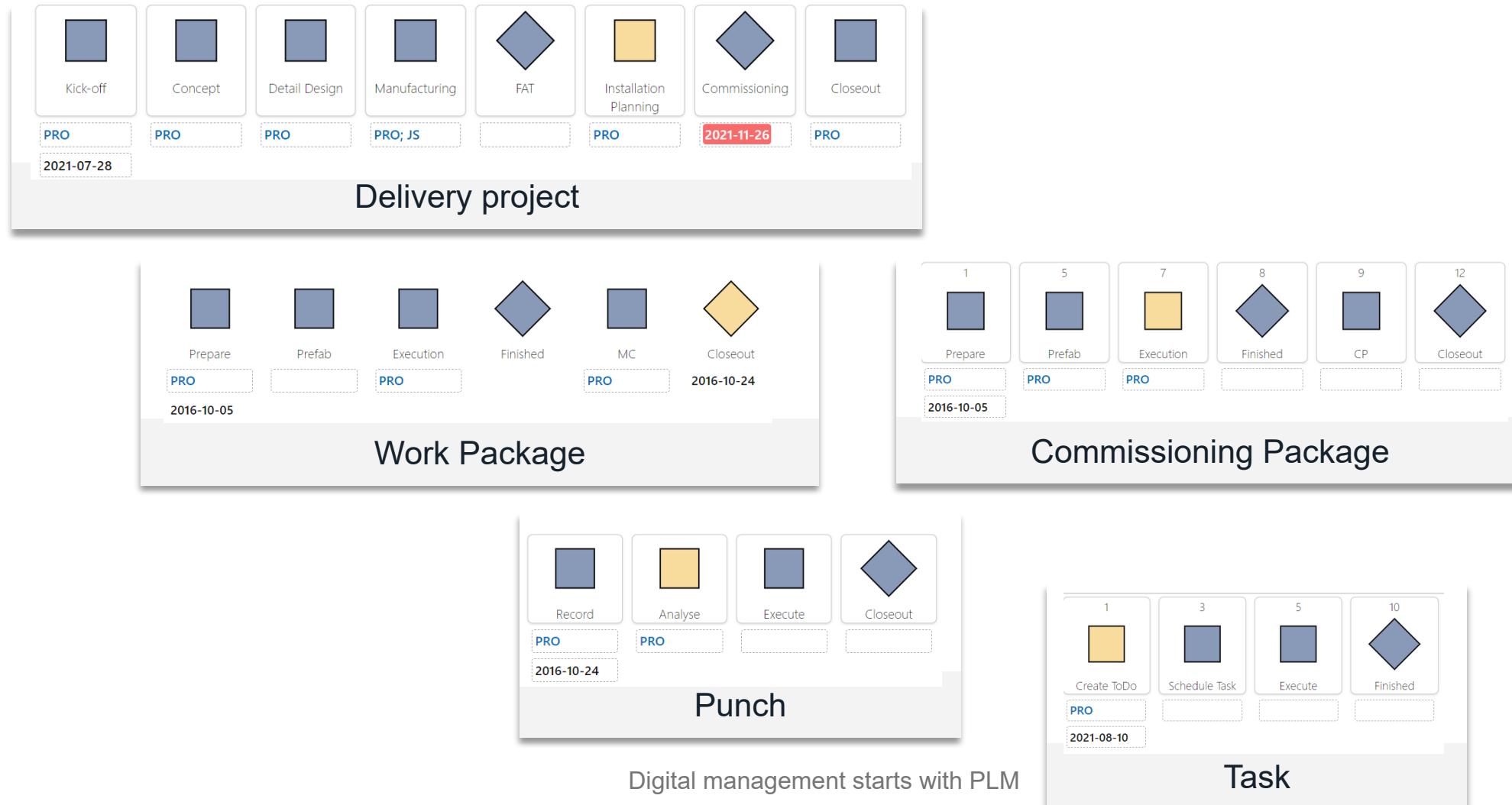
Item	Title	Close	Project WBS	Parent Action	Project Type	Project class	PO/VO Number	Org unit	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8
1	PUNCH53618	open	WP55073						0							
2	PUNCH53619	open	WP55073						0							
3	PUNCH53623	open	WP55073						0							

# Action Module Delivery Project Example (internal demo server)

Digital management starts with PLM



# Delivery project demo example



# Delivery project demo example

The screenshot displays a delivery project management interface with three main sections: Action 2, Action 3, and Part 1.

**Action 2:**

Item	Title	Workspace	Priority	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9	Step 10	Step 11	Step 12	Step 13
1 PRO-DWWP10080	closed   First Dwellop project - Legg inn Dwellop schema	Demo	-1	PRO	2016-10-05											
2 PRO-DWWP10081	open   First Dwellop project - Legg inn Dwellop Data Eksempler	Demo	-1	PRO	2016-10-05											

**Action 3:**

Item	Title	Workspace	Priority	Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	Step 8	Step 9	Step 10	Step 11	Step 12	Step 13
1 PRO-DWPUNCH10084	closed   Første billedpunch	Demo	-1	OK	2016-10-09											
2 PRO-DWPUNCH10088	open   Test manager	Demo	-1	PRO; RO	2016-10-24	OG										
3 PRO-DWPUNCH10089	open   with template files	Demo	-1	PRO	2016-10-24	PRO										

**Part 1:**

Item	File	Folder	PictureThumbnail	Revs	Status	Title	Deviceable	Workspace	Working	Freeze	Review	Approval	Approved	EventTime	ItemType	Cost
1 PRO-ASSY10020-1					Approved	WellCAM		VIO	PRO					2015-12-08	ASSY	0



E  
F  
P  
T  
O  
N

# Using the Action Module

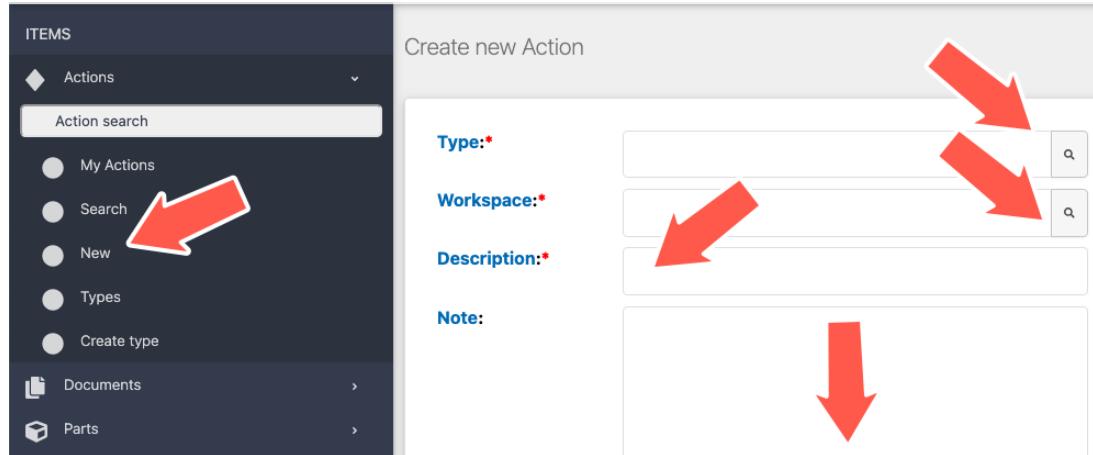
Digital management starts with PLM

 Highstage

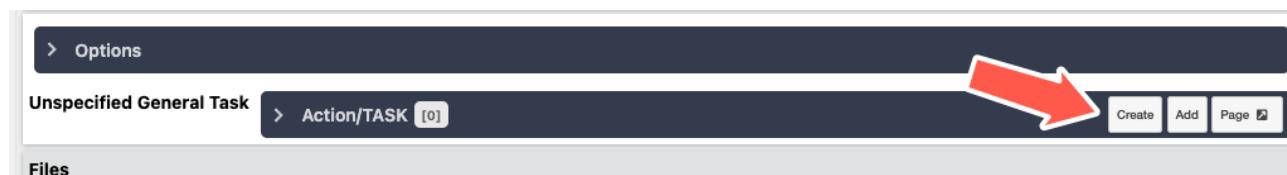
# Using Action

- Create an Action ()
- Action Types
- Completing an Action (Assigning resources, progressing, completing)
- Searching for Actions.
- Parameters and Settings
- Mandatory fields forward
- Access and Permissions

# Create an Action



- Create new Action in menu
- Fill inn Type, Workspace and Description
- Click the Create button
- Alternatively, add sub-Actions where available



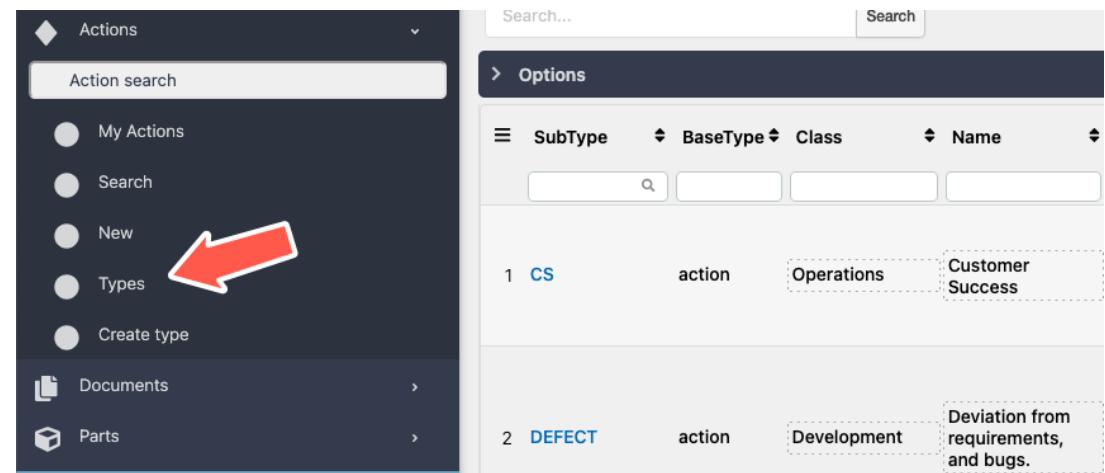
# Action Types

FEEDBACK Subtype

Subtype FEEDBACK

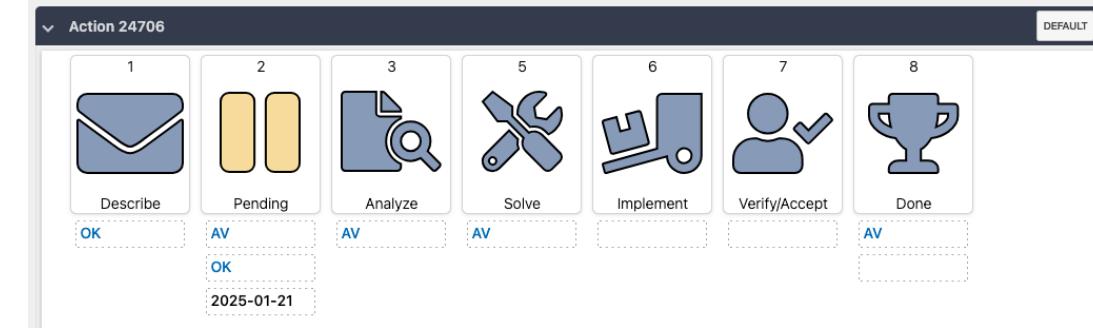
Type	FEEDBACK
Name	Feedback
Note	Information as a basis for corrections, changes, or improvements.
Active	<input checked="" type="checkbox"/>
TrustCreate	[employees]
Class	
TemplateDocument	QD13854
UseWorkingTemplate	<input checked="" type="checkbox"/>
TemplateLocation	\Turbostage\files\104\QD\QD13854\QD13854\FEEDBACK
TemplateFolder	
TemplateFile	
DefinitionFile	GENERIC_DEFINITION.xml

- List of types in the same way as for documents or parts
- Similar functionality as for other item types
- Content of Action coded in XML schema

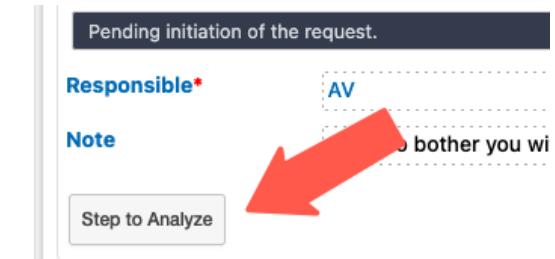


The screenshot shows the 'Actions' interface. On the left, a sidebar menu includes 'Action search', 'My Actions', 'Search', 'New', 'Types' (which is highlighted with a red arrow), and 'Create type'. On the right, a main panel displays a table of action types. The first row shows '1 CS' as the action type, 'Operations' as the category, and 'Customer Success' as the description. The second row shows '2 DEFECT' as the action type, 'Development' as the category, and 'Deviation from requirements, and bugs.' as the description. The interface includes a search bar at the top and various filtering options on the right.

# Completing an Action

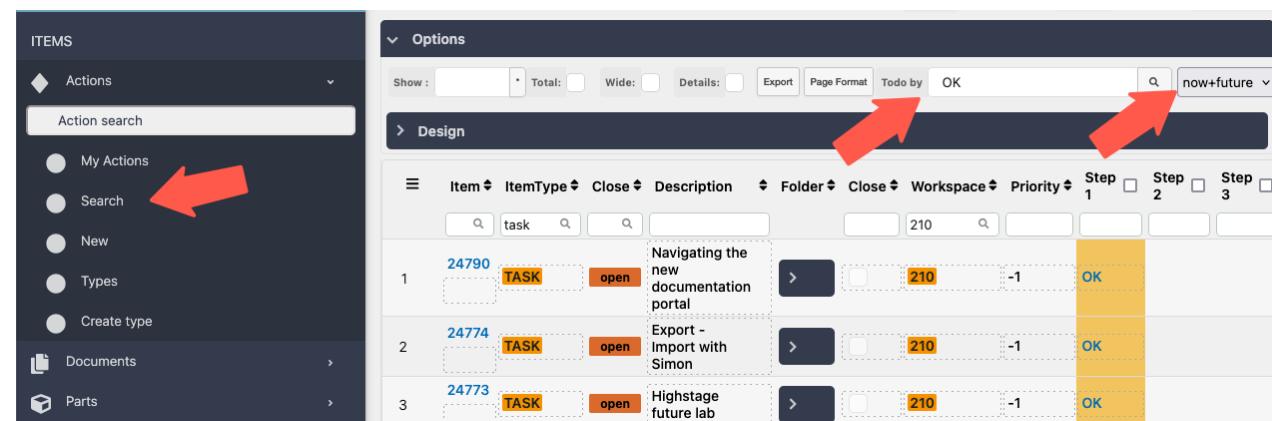


- Fill in info requested when the action opens
- Initial page may have header info in additional step info
- When Completing the step, progress by one of:
  - Click the Step to <Next step>
  - Click the step in the graphical representation
- When complete, do click Close



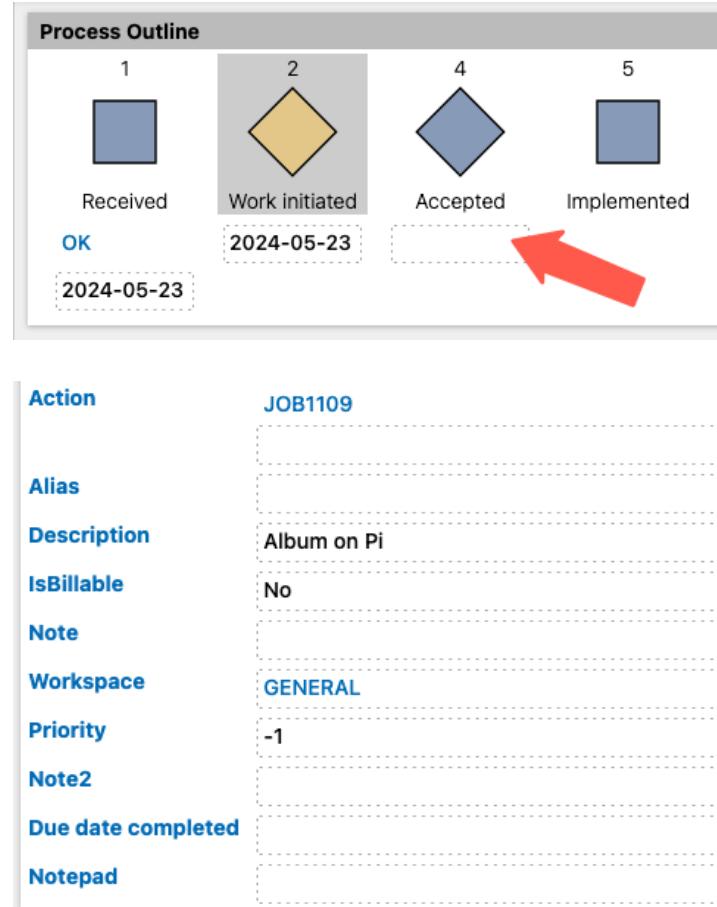
# Searching for Actions

- Search works in the same manner as for Documents with some extensions
- Under options the search may be limited to
  - Who is engaged in the action
  - Time window for the actions, here shown open now and forward
- phases are listed with generic names
- To present specific phase names, use the Item type definition =<subtype>, in this case =task



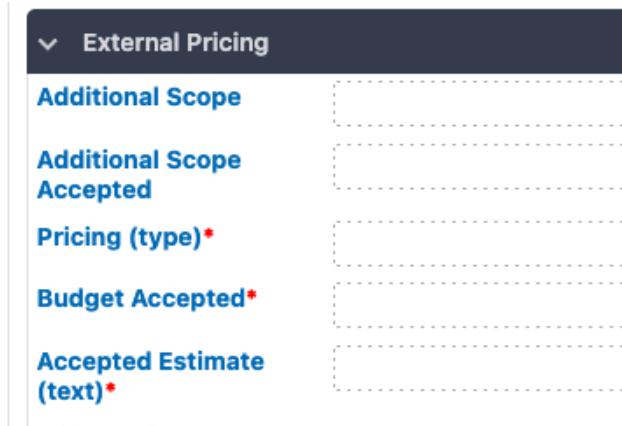
The screenshot shows a software interface with two main panels. The left panel is a sidebar titled 'ITEMS' with a 'Actions' section. It contains a 'Action search' dropdown with the following options: 'My Actions' (selected), 'Search', 'New', 'Types', and 'Create type'. Below this are 'Documents' and 'Parts' sections. A red arrow points to the 'Search' option in the dropdown. The right panel is titled 'Options' and contains a search bar with a placeholder 'now+future' and a red arrow pointing to it. Below the search bar is a table titled 'Design' with columns: Item, ItemType, Close, Description, Folder, Close, Workspace, Priority, Step 1, Step 2, and Step 3. The table has three rows, each representing a task. The first task is '24790 TASK open' with description 'Navigating the new documentation portal'. The second task is '24774 TASK open' with description 'Export - Import with Simon'. The third task is '24773 TASK open' with description 'Highstage future lab'. Each task row has a red arrow pointing to the 'open' status in the ItemType column.

# Parameters and Settings



- Many of the parameters and settings from Doc applies
- The squares represent activities. Its date indicates when it was entered.
- Diamonds are milestones and user may define a date. Otherwise, it will be recorded when first visited.
- Other standard items may be defined in the header.

# Mandatory fields forward



The screenshot shows a software interface with a dark header bar containing a dropdown arrow and the text 'External Pricing'. Below this, there is a list of items, each with a blue label and a corresponding input field. The items are: 'Additional Scope', 'Additional Scope Accepted', 'Pricing (type)\*', 'Budget Accepted\*', and 'Accepted Estimate (text)\*'. The input fields are represented by dashed rectangles. The asterisk (\*) is placed after the label 'Pricing (type)\*' and 'Accepted Estimate (text)\*'.

Label	Input Field
Additional Scope	Dashed rectangle
Additional Scope Accepted	Dashed rectangle
Pricing (type)*	Dashed rectangle
Budget Accepted*	Dashed rectangle
Accepted Estimate (text)*	Dashed rectangle

- Mandatory fields are marked with the red asterix \*
- You may not close the action if there are any blank mandatory fields in current or any previous steps
- Workaround: Move back to latest step before first mandatory field and then close.

# Access and Permissions

- Action access managed under Base types
- Subtype access managed in the same way as for Docs
- Data access managed through workspace

ACCOUNT Subtype

Subtype ACCOUNT

trust Filter RAW

Name	Title	Value	Description
trustcreate:	TrustCreate	[employees]	Defines users and usergroups that is allowed to create new objects of this subtype
trustcreateusercount:	TrustCreateUserCount		
trustees:	Trustees		
trustmodify:	TrustModify		
trustmodifyusercount:	TrustModifyUserCount		
trustread:	TrustRead		
trustreadusercount:	TrustReadUserCount		

action Basetype

Basetype action

Filter... Filter

Name	Title	Value
active:	Active	<input checked="" type="checkbox"/>
active_:	Active_	<input checked="" type="checkbox"/>
basetype:	BaseType	action
devicetype:	DeviceType	
id:	id	1
name:	Name	
nextid:	Nextid	24794
note:	Note	
objtype:	Objtype	action
schemaxml:	SchemaXml	xml
schemaxmlinspector:	XML Inspector	Inspect
trustcreate:	TrustCreate	Everyone; HSHOME PAGE
trustcreateusercount:	TrustCreateUserCount	82
trustees:	Trustees	Everyone
trustmodify:	TrustModify	Everyone
trustmodifyusercount:	TrustModifyUserCount	82
trustread:	TrustRead	Everyone
trustreadusercount:	TrustReadUserCount	82
type:	Type	action
typetype:	TypeType	ts_basetype

ONE  
SIZE  
NEVER  
FITS  
ALL

