

Part 2.3: Maintenance Functions – WorkOrder

Calem Enterprise Training

Summer 2022

Austin, Texas



What are the goals - WO

CalemEAM

Goals

I know how to set up WO roles

I know how to set up work order processes

I know how to create work orders

I know how to plan work orders

I know how to execute work orders

I know how to accept work orders

I know how to get work order reports

Asset and
Location

Maintenance
Schedules

Contract and SLA

Work Order

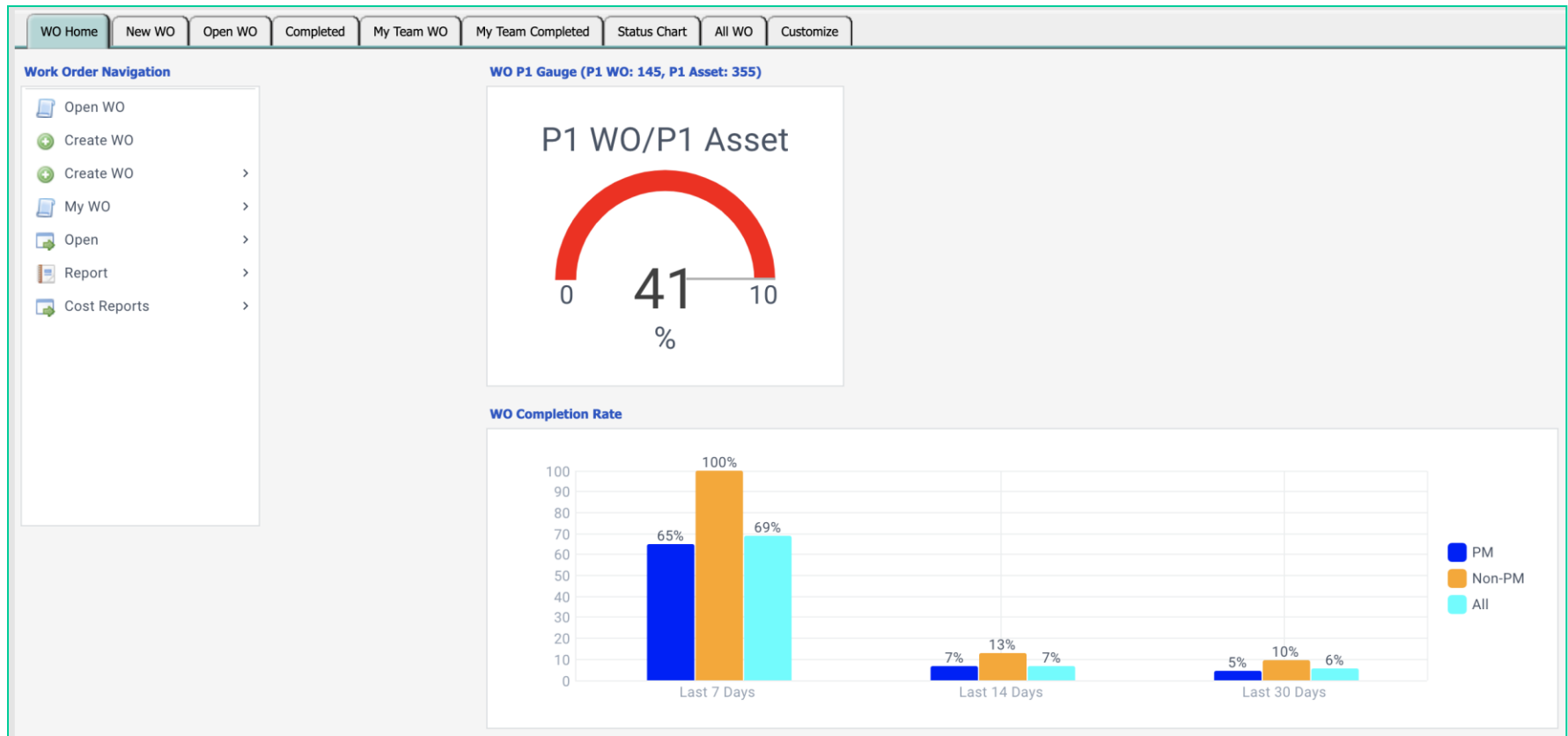
Service Request

Change Management

Product – Work Order Module

CalemEAM

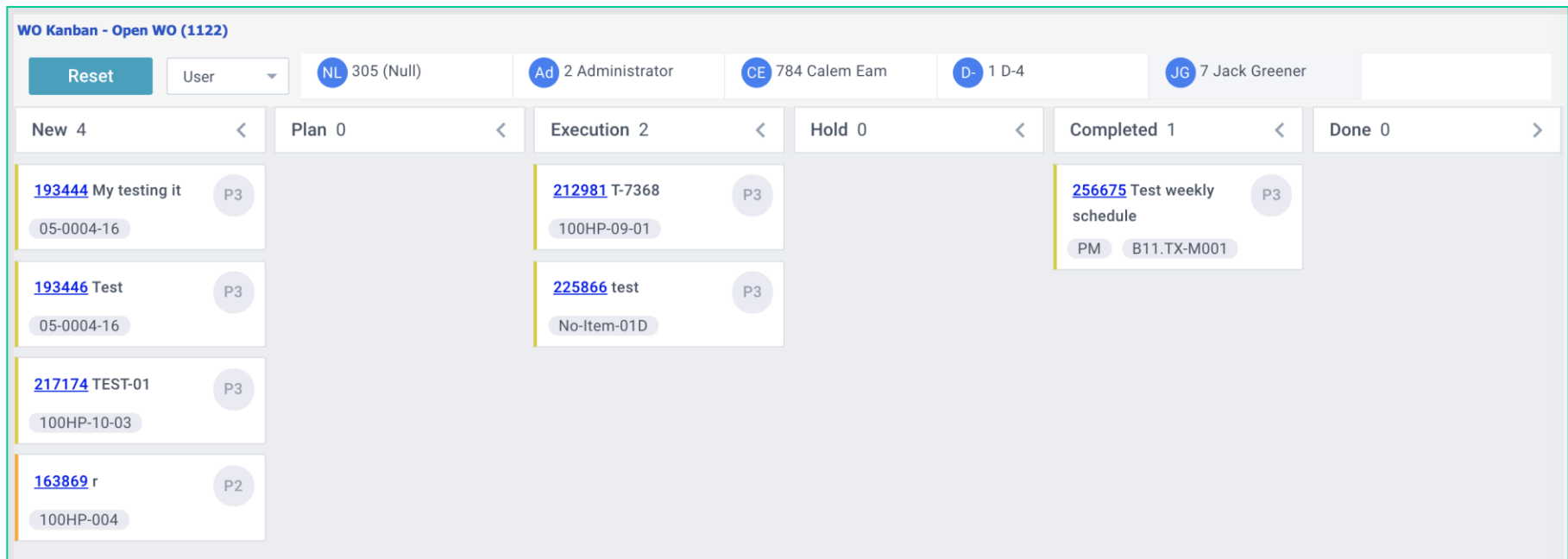
- Work steps, time and material
- Work Processes & Workflow Notifications



Product – Work Order Kanban Board

CalemEAM

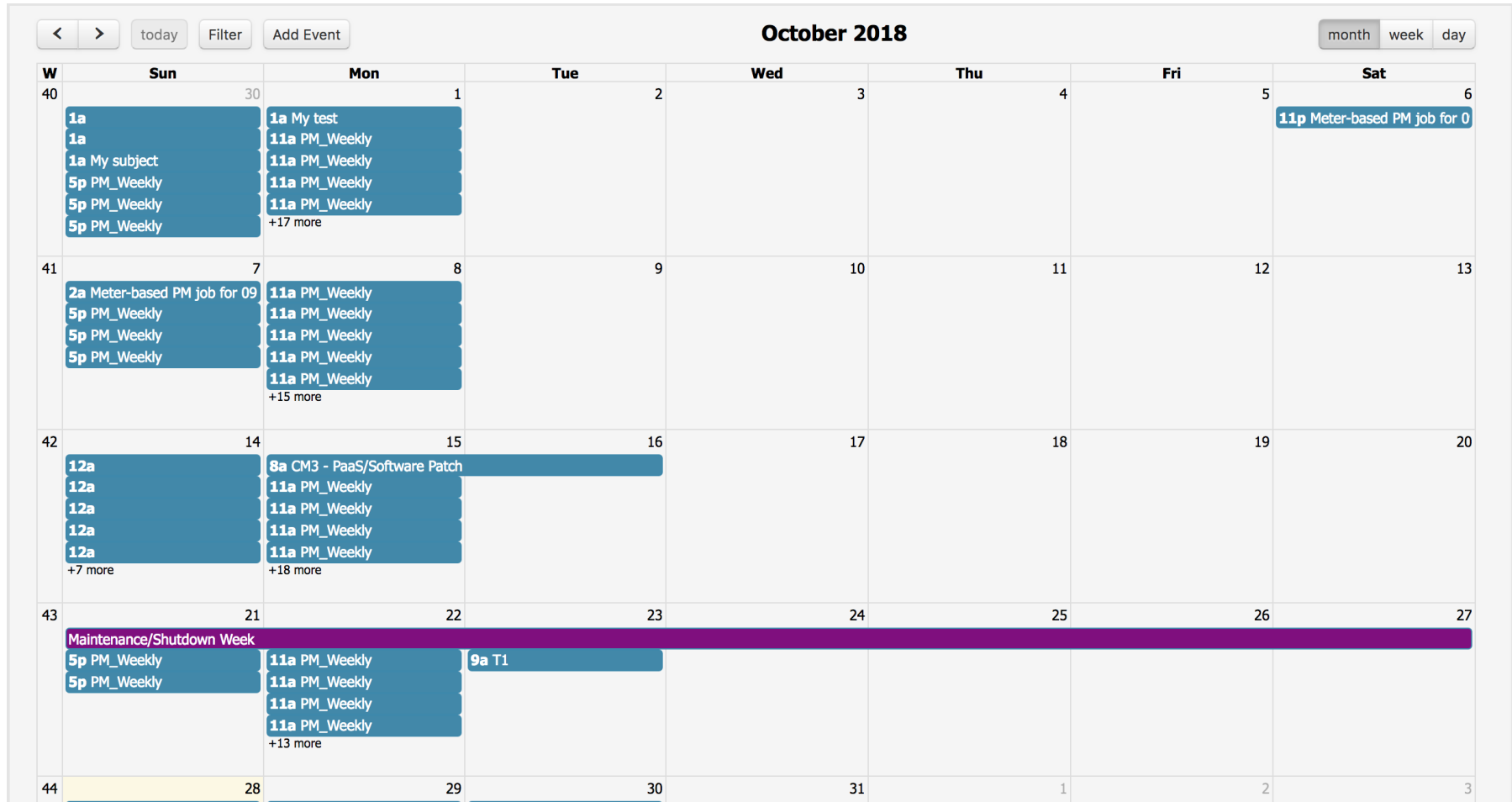
- Use Kanban board to analyze work loads



Product – Work Order Calendar

CalemEAM

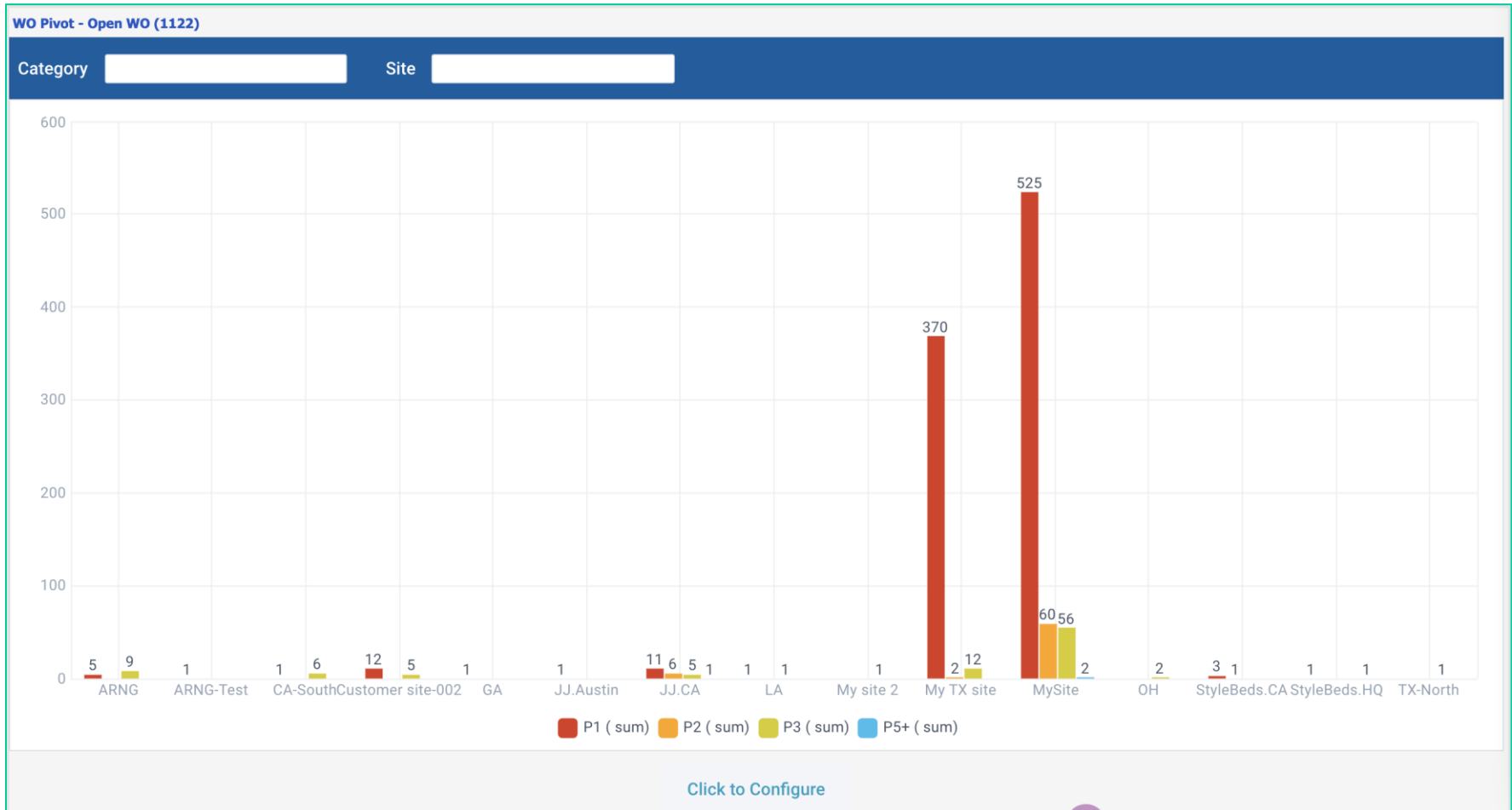
Open Work Orders in Calendar View



Product – Work Order Pivot

CalemEAM

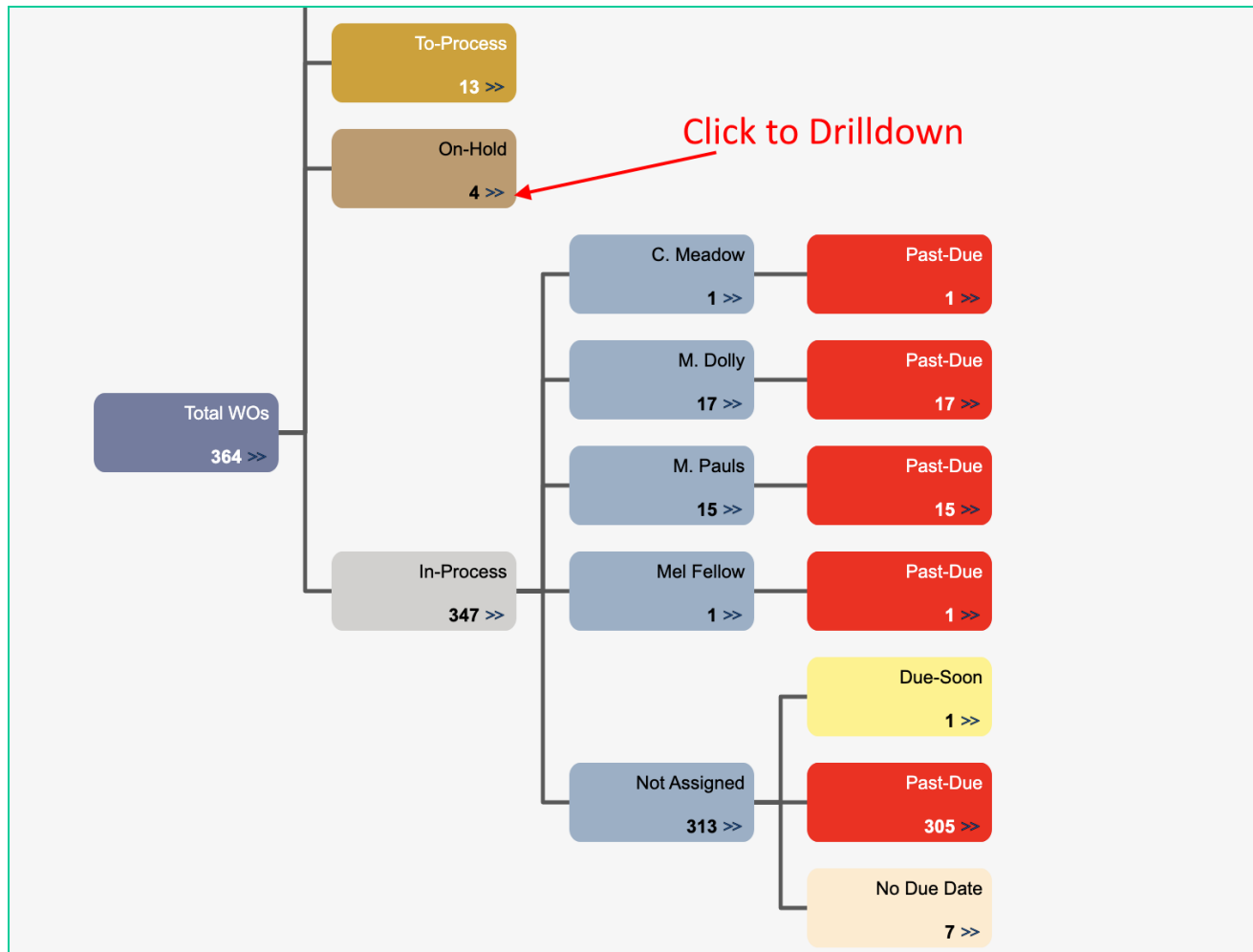
- Use Pivot to Visualize Work Orders



Product – Work Order Status Chart

CalemEAM

Open Work Order Status Chart



- Roles
- Notifications
- Life-Cycle and Processes
- Plan
- Execute
- Completion
- Review and Close
- Reports

Work Order Roles

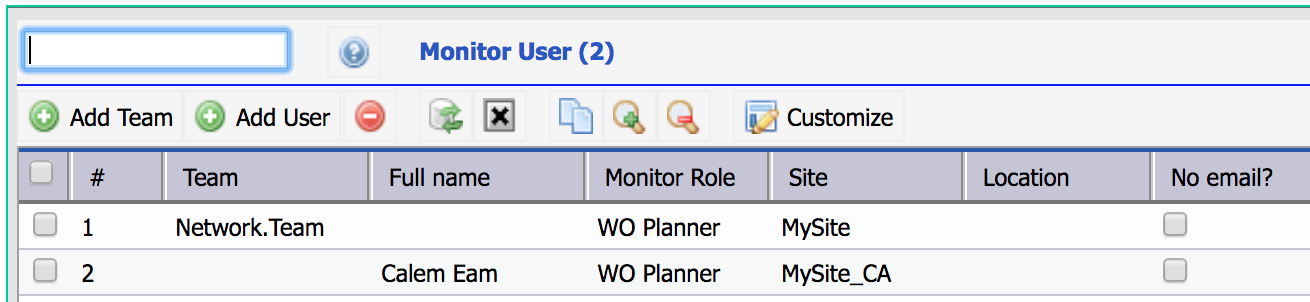
CalemEAM

Roles	Calem Object	Function
Maintenance Supervisor & Manager	WO Planner WO Monitor	Approve WO Release WO for execution Close WO
Operations Supervisor & Manager (Internal or External)	WO Acceptor	Accept/Reject WO Create WO
Technical Staff (Internal or External)	Maintenance Users	Execute WO Create WO
Operations Staff (Internal or External)	Users	Create WO Create Service Request
Inventory Staff	Users	Issue Parts Off-Site Repair

WO Planner & Monitor

CalemEAM

- Planner – schedule work orders
- Monitor – receive work order notifications
- Menu path: Organization | ACL Profiles | Monitor User
 - Add Team or Users as monitor by sites



The screenshot shows a web application interface titled "Monitor User (2)". It features a toolbar with icons for adding teams and users, deleting, and customizing. Below the toolbar is a table with the following data:

<input type="checkbox"/>	#	Team	Full name	Monitor Role	Site	Location	No email?
<input type="checkbox"/>	1	Network.Team		WO Planner	MySite		<input type="checkbox"/>
<input type="checkbox"/>	2		Calem Eam	WO Planner	MySite_CA		<input type="checkbox"/>

WO Accepters

CalemEAM

- WO Accepters are maintenance supervisors, or customers of work orders
- Menu path: Organization | ACL Profiles | WO Acceptor

my

?

Work Acceptor (4)

+

Add Team

+

Add User

-












Customize

<div><div></div></div>	#	Site	Team	Full name	Category Set
<div><div></div></div>	1	My-Site-001	MyTeam2		
<div><div></div></div>	2	My TX site	Network.Team		
<div><div></div></div>	3	My TX site	TigerTeam		
<div><div></div></div>	4	MySite	Network.Team		

Maintenance Staff

CalemEAM

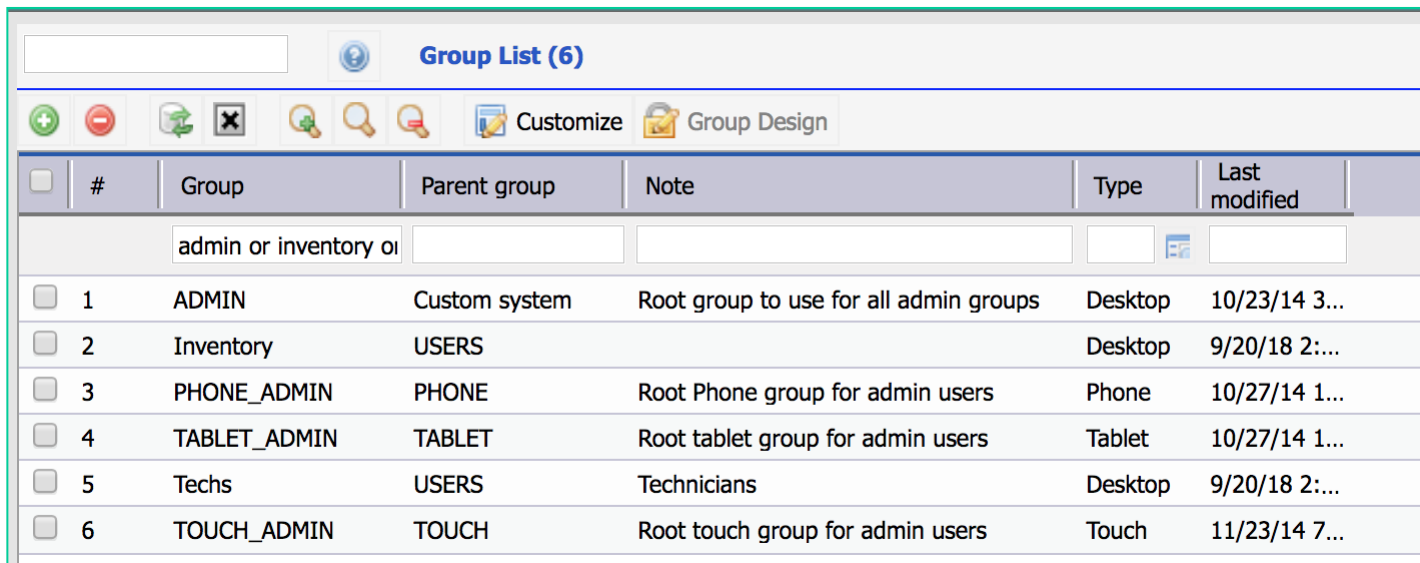
- Maintenance Staff
- Menu path: Organization | ACL Profiles | User List
 - Set user's Maintenance flag for users who can be assigned to work orders

<input type="text" value="ad"/>									
User list (7)									
<div>          </div>									
<input type="checkbox"/>	#	Full name	Note	Status	Maintenance	Login blocked	Team	Username	Site
<input type="checkbox"/>	1	Administrator	Admin user (reserved for syst...	Active	<input checked="" type="checkbox"/>	<input type="checkbox"/>	MyTeam1	admin	MySite
<input type="checkbox"/>	2	Calem Test-A		Active	<input type="checkbox"/>	<input type="checkbox"/>	My_Team2	calemtest	MySite

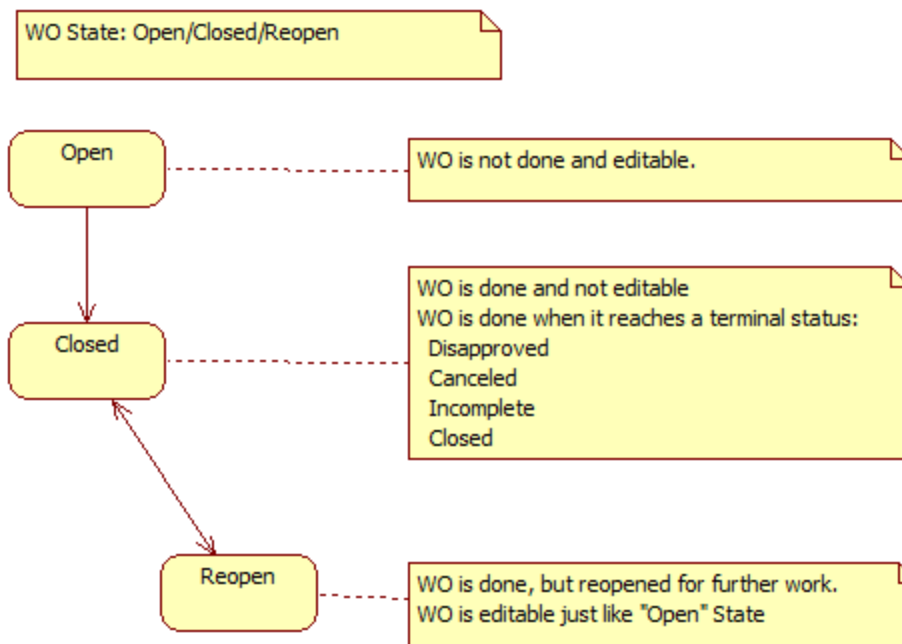
Operational and Inventory Staff

CalemEAM

- Operational Staff: Create work orders & service requests
- Inventory Staff: Issue Parts & Send Assets for Off-Site Repair
- User Groups are created to grant permissions for designated functions
- Menu path: Admin | Groups
- See blog: <http://www.calemeam.com/calemcustomers-2/how-to-set-up-multi-site-access-control-in-calem>

The screenshot shows the 'Group List (6)' interface in CalemEAM. At the top, there is a search bar and a title 'Group List (6)'. Below the title is a toolbar with icons for adding, deleting, and editing groups, as well as 'Customize' and 'Group Design' buttons. The main area is a table with columns: #, Group, Parent group, Note, Type, and Last modified. The table lists six groups: ADMIN, Inventory, PHONE_ADMIN, TABLET_ADMIN, Techs, and TOUCH_ADMIN, each with its parent group, a note, and a type (Desktop, Phone, Tablet, or Touch).

#	Group	Parent group	Note	Type	Last modified
1	ADMIN	Custom system	Root group to use for all admin groups	Desktop	10/23/14 3...
2	Inventory	USERS		Desktop	9/20/18 2:...
3	PHONE_ADMIN	PHONE	Root Phone group for admin users	Phone	10/27/14 1...
4	TABLET_ADMIN	TABLET	Root tablet group for admin users	Tablet	10/27/14 1...
5	Techs	USERS	Technicians	Desktop	9/20/18 2:...
6	TOUCH_ADMIN	TOUCH	Root touch group for admin users	Touch	11/23/14 7...

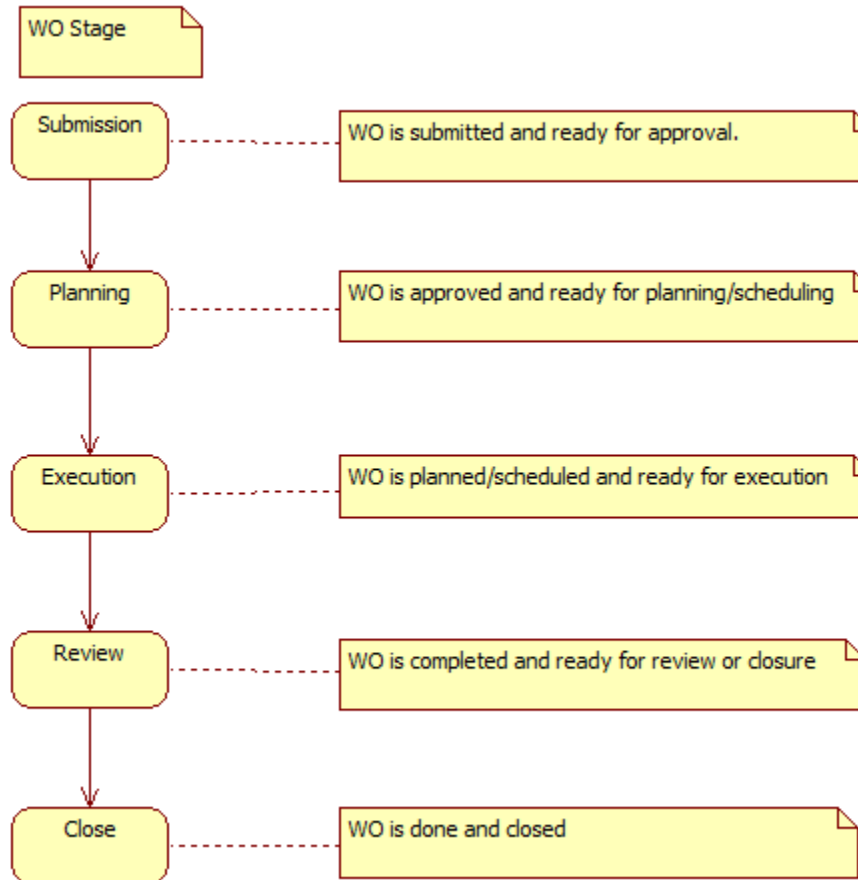


State, Stage and Status Blog

- <http://eam.calemeam.com/index.php/calemcustomers-2/a-note-of-work-order-life-cycles-in-calem>

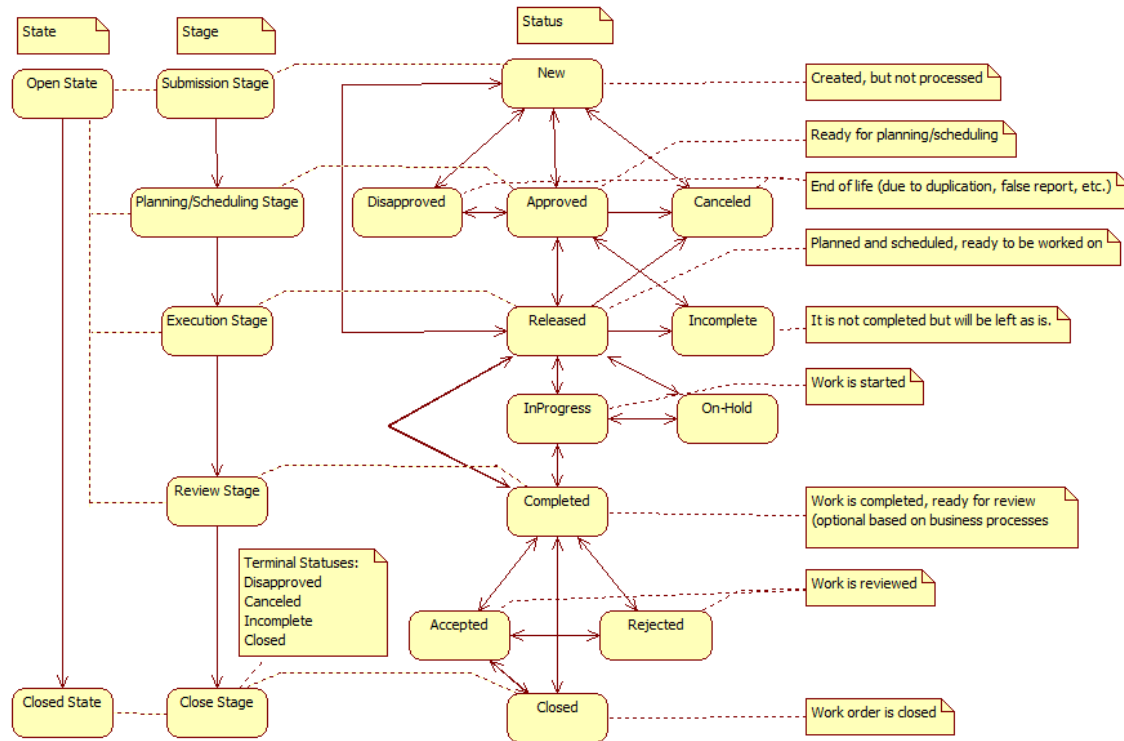
Work Order Stages

CalemEAM



Work Order Status Graph

CalemEAM



Work Order Status Permissions

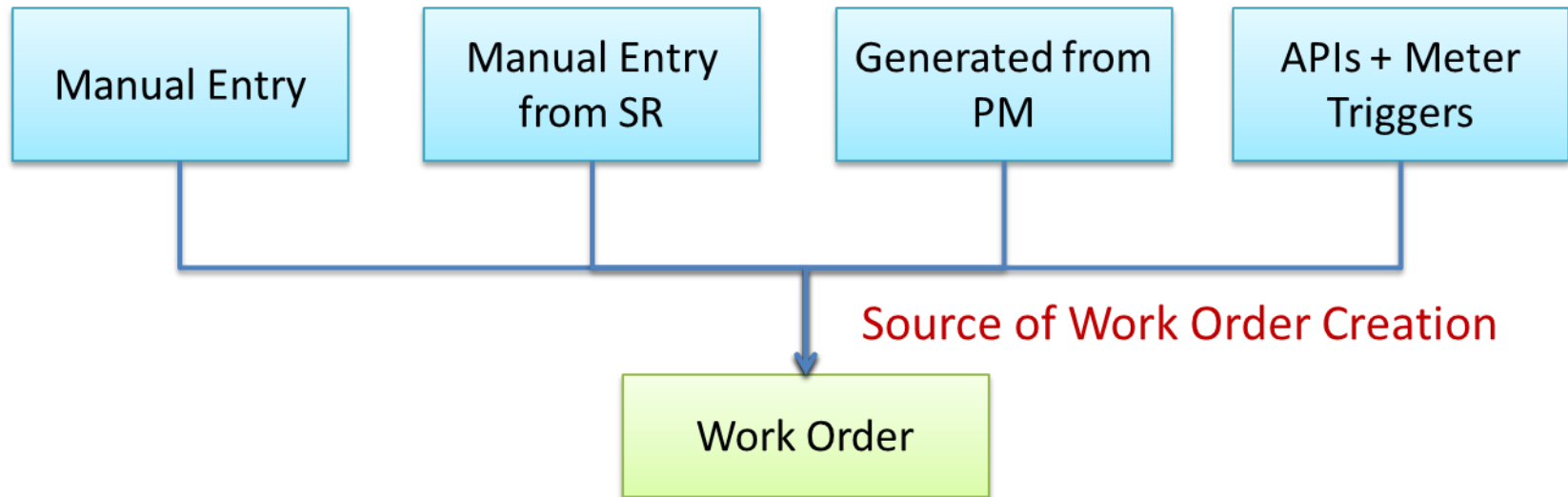
CalemEAM

- Who can transition to what statuses
- Who can edit what statuses
- Menu path: Admin | Groups | Group Form | WO Status Tab
- For example, “Techs” group cannot approve, disapprove, cancel, accept work orders.

The screenshot shows the 'WO Status' tab in the configuration interface. At the top, there are tabs for 'Main', 'WO Status', 'SR Status', 'Module', and 'Customize'. Below the tabs, the 'Group (26 of 35)' section is active, showing the 'Techs' group. The 'Parent group' is 'USERS' and the 'Type' is 'Desktop'. There is a 'Customize' button. Below this, the 'Exclude WO Status (6)' section is shown, which contains a table of status permissions. The table has columns for 'Status', 'No Edit', 'Note', and 'Group'. The 'Closed' status is highlighted in yellow, indicating it is selected. The 'No Edit' checkbox for 'Closed' is checked, while the others are unchecked. The 'Note' for 'Closed' is 'Manual entry'. The 'Group' for all entries is 'Techs'.

<input type="checkbox"/>	Status	No Edit	Note	Group
<input type="checkbox"/>	Accepted	<input type="checkbox"/>	Manual entry	Techs
<input type="checkbox"/>	Approved	<input type="checkbox"/>	Manual entry	Techs
<input type="checkbox"/>	Canceled	<input type="checkbox"/>	Manual entry	Techs
<input checked="" type="checkbox"/>	Closed	<input checked="" type="checkbox"/>	Manual entry	Techs
<input type="checkbox"/>	Disapproved	<input type="checkbox"/>	Manual entry	Techs
<input type="checkbox"/>	Rejected	<input type="checkbox"/>	Manual entry	Techs

- Email Notifications
 - Status changes
 - Assignment
 - Comments
 - Attachment
 - Notifications for PM and non-PM work orders
- Email Interaction
 - Use email to interact with Calem
 - Email contents will be added as WO comments
 - Email attachments will be added as WO attachments
- Setup blog:
 - <http://www.calemeam.com/calemcustomers-2/how-to-set-up-workflow-emails-for-work-order>



Manual Entry

- Create WO
- Create completed WO
- Create from PM
- Create from PM Plan

Work Order Creation

CalemEAM

- Set an Asset or Location
- Set a Subject and short description
- Customize per requirements

Create WO
 Save Cancel Customize
 Ready to save changes.

Asset or Location (not both)
Asset Tag:
Location:
Asset Down: ☐

Description
Priority: Category:
Specialty: Need by:
Failure:
Subject:
Description:

Origination
Origination:
Requester: Contact:
Request Time:

Codes
Cost center:

Assignment
Assigned To:
Team assigned:

Work Order Priority

CalemEAM

- Priority is set by Calem based on Asset or Location Priority
- Edit the priority field to set a new priority

1 Submission 2 Planning 3 Execution 4 Review 5 Close History DataView Customize

Work Order (1 of 1)

Icons: [Icons] More Customize


Wo #:	145372	PM #:	
Asset Tag:	A0000469	Asset note:	
Model:		Asset Categorization:	
Location:		Site:	JJ.CA
Priority:	P1	Service site:	SiteA
Need by:		Flag:	
Status:	New	PM?:	<input type="checkbox"/>
Category:	Detective	Is inspection?:	<input type="checkbox"/>
Specialty:	MECH	Categorization:	
Parent wo #:			
Subject:	AC broken		
Description:	It is running but temperature is not where it should be		

Edit

1 New 2 Planning 3 Execution 4 Review 5 Close History **DataView** Customize

Work Order (5 of 725)

Start Clock More Customize

Wo #:	5500	PM #:	InspectionPM
Asset #:	200-001	Asset note:	Production system Mercury s2 - wm003
Location:	HQ.BLD001	Site:	MySite
Priority:	P1	Service site:	MySite
Status:	In-process	Flag:	
Subject:			
Completion			
Actual start:	Fri, 2/12/16 4:51 PM	Actual finish:	
Repaired?:	<input type="checkbox"/>	Repaired in Workshop?:	<input type="checkbox"/>
Ready for use?:	<input type="checkbox"/>	Area cleanliness:	

- Task View shows work orders by its stages
- It simplifies work order process
- Techs use “Execution” tab to do work orders

Work Order TaskView vs. DataView

CalemEAM

- TaskView: show work orders by stages
 - Better for daily work order management
- DataView: show work orders by data tabs
 - Better to jump to detail data

The screenshot shows the DataView interface. At the top, a navigation bar contains buttons for stages: 1 Submission, 2 Planning, 3 Execution, 4 Review, 5 Close, History, DataView (highlighted with a red box), and Customize. Below this, the header reads "Work Order (1 of 1)". A toolbar includes icons for editing, status changes, printing, and a "Start Clock" button, followed by a "More" dropdown and a "Customize" button. The main area displays fields for Work Order # (16585), Asset # (233-455-901), Location (B02.HQ), Priority (P4), PM # (MOTOR-M7), Asset note, Site (MySite), and Service site (VENDOR-TEST-001-A).

1 Submission 2 Planning 3 Execution 4 Review 5 Close History **DataView** Customize

Work Order (1 of 1)

Start Clock More Customize

Wo #: 16585 PM #: MOTOR-M7

Asset #: 233-455-901 Asset note:

Location: B02.HQ Site: MySite

Priority: P4 Service site: VENDOR-TEST-001-A

The screenshot shows the TaskView interface. At the top, a navigation bar contains buttons for various tabs: Main, Instruction, Labor, Part, Tool, Downtime, Meter, Comments, Document, Child WO, Misc, Permit, Log, History, TaskView (highlighted with a red box), and Customize. Below this, the header reads "Work Order (3 of 722)". A toolbar includes icons for editing, status changes, printing, and a "Start Clock" button, followed by a "More" dropdown and a "Customize" button. The main area displays fields for Work Order # (8728), Asset # (200-001), Location (B02.HQ), Priority (P1), PM # (InspectionPM), Asset note (Production system Mercury s2 - wm003), Site (MySite), and Service site (MySite).

Main Instruction Labor Part Tool Downtime Meter Comments Document Child WO Misc Permit Log History **TaskView** Customize

Work Order (3 of 722)

Start Clock More Customize

Wo #: 8728 PM #: InspectionPM

Asset #: 200-001 Asset note: Production system Mercury s2 - wm003

Location: B02.HQ Site: MySite

Priority: P1 Service site: MySite

Work Order Status Transition

CalemEAM

- “More” menu: select a next status

The screenshot displays the 'Work Order (4 of 1757)' interface. At the top, a navigation bar includes tabs for '1 Submission', '2 Planning', '3 Execution' (active), '4 Review', '5 Close', 'History', 'DataView', and 'Customize'. Below this, the 'Work Order (4 of 1757)' section contains a toolbar with icons for document, up/down arrows, a refresh icon, a close icon, a printer icon, a PDF icon, and a 'Start Clock' button. The main form fields are organized into two columns. The left column includes 'Wo #:' (2666), 'Asset Tag:', 'Model:', 'Location:' (ERO-LC-I264-W-00219), 'Priority:' (P3), 'Status:' (Released), 'Subject:', 'Completion', 'Actual start:', and 'Failure'. The right column includes 'PM #:', 'Asset note:', 'Asset Categorization:', 'Site:' (EASTERN), 'Service site:' (EASTERN), 'Flag:', and 'Actual finish:'. A red box highlights the 'Status:' field, which is currently set to 'Released'. To the right of the 'Status:' field, a 'More' dropdown menu is open, showing a list of status options: 'In-process', 'On-Hold-COMM', 'On-Hold-CONST', 'On-Hold-MOT', 'On-Hold', 'On-Hold-POWER', 'On-Hold-VDOT', and 'On-Hold-WEATHER'. The 'More' menu is also highlighted with a red box.

- Edit Status Field to move back to previous status

This screenshot shows a close-up of the 'Status:' field in the 'Work Order' form. The 'Status:' field is currently set to 'Released'. A red box highlights the 'Edit' button, which is located to the right of the 'Status:' field. The 'Edit' button is a small, rounded rectangle with the word 'Edit' inside. Below the 'Status:' field, there is a 'Subject:' field and a 'Completion' section. The 'Actual start:' field is also visible at the bottom.

- “More” menu: Status to Child
- “Checked”: Parent WO status change is cascaded to child WOs.
- “Unchecked”: Child WOs have to be completed to complete parent WOs.

The screenshot displays the 'Work Order (1 of 1)' form in the CalemEAM system. At the top, there are tabs for '1 Submission', '2 Planning', '3 Execution', '4 Review', '5 Close', 'History', and 'DataView'. The '2 Planning' tab is active. Below the tabs, the form is divided into two main sections. The left section contains fields for 'Wo #:' (145372), 'Asset Tag:' (A0000469), 'Model:', 'Location:', 'Priority:' (P1), 'Status:' (New), 'Assignment', 'Assigned to:', 'Cost', and 'Hours planned:'. The right section contains fields for 'PM #:', 'Asset note:', 'Asset Categorization:', 'Site:' (JJ.CA), 'Service site:' (SiteA), 'Flag:', 'Team assigned:', and 'Hours sched:'. A 'More' dropdown menu is open, showing options: 'Approve', 'Release', 'Disapprove', 'Assign to me', 'Assign to others', 'Status to Child' (highlighted with a red box), 'Change Asset/Location', and 'Status log'. A 'Customize' button is also visible next to the 'More' dropdown.

Work Order Planning – Assignment

CalemEAM

- Use “Assign to me” or “Assign to others” (WO Form, or WO List Form)
- Edit “Assigned to” field (in WO Edit Form)
- Multi-Assignment: “Scheduled Labor” List Form (at Planning Tab)
- Use “Weekly Schedule” Form (in Scheduling Module)

The screenshot displays the 'Work Order (1 of 723)' form in the CalemEAM system. At the top, a navigation bar includes tabs for '1 Submission', '2 Planning' (which is active), '3 Execution', '4 Review', '5 Close', 'History', and 'DataView'. The form is divided into several sections. On the left, a list of fields includes 'Wo #:' (8723), 'Asset #:' (200-001), 'Location:' (B02.HQ), 'Priority:' (P1), 'Need by:' (Sun, 2/7/10 12:), 'Status:' (In-process), 'Assigned to:' (Calem Eam), 'Time assigned:', 'Cost', 'Hours planned:', 'Hours sched:', 'Planned start:' (Sun, 2/7/10 12:), 'Sched start:', 'Actual start:' (Tue, 4/14/15 1:49 PM Central), and 'Planned finish:' (Sun, 2/7/10 12:00 AM Central). A red box highlights the 'Assigned to:' field. In the center, a 'More' dropdown menu is open, showing options like 'On-Hold', 'Assign to me', 'Assign to others', 'Change Asset/Location', 'Send for repair', 'View asset tran', 'Status log', 'Email', 'Print Quote', 'Open Quote', and 'Customize'. A red box highlights the 'Assign to me' and 'Assign to others' options. On the right, fields include 'InspectionPM', 'Asset note:' (Production system Mercury s2 - wm003), 'MySite', 'Service site:' (MySite), 'Tag:', 'Assigned by:', 'Team assigned:', 'Actual hours:' (0.838), and 'Sched finish:'.

- **Permits:** Special Requirements such as work at height
- **Safety:** Safety measures
- **Steps:** Work steps to complete
- **Do I need to use all of them?**
 - **Option 1.** Use only “Step” for everything
 - Use “Step” for permit, safety measures and work steps.
 - All are listed as work steps to complete
 - One check list
 - **Option 2.** Use a combination of “Safety” and “Step”
 - Safety and Step
 - Permit and Step
 - Etc.
- Your maintenance practice may also determine which option to take

Work Order Planning – Permit/Safety/Step (2)

CalemEAM

- Copied from PM for PM WOs
- Use PM Plans to create WOs with stock permits, safety and steps
- Manually set them for ad-Hoc work orders

The screenshot displays the 'Work Order Planning' interface in CalemEAM. At the top, a navigation bar includes tabs for '1 Submission', '2 Planning' (active), '3 Execution', '4 Review', '5 Close', 'History', 'DataView', and 'Customize'. Below this, the 'Permit (0)' section is shown with a toolbar containing a green plus icon (highlighted with a red box), a red minus icon, a green checkmark, a printer icon, and a 'Customize' button. The table below has columns: #, Permit #, Permit, Done, Done by, Inspected by, Start time, End time, and Last modified. It displays 'No results found.'.

The 'Safety measure (2)' section follows, with a toolbar including a green plus icon (highlighted with a red box), a red minus icon, a green checkmark, a 'Done' button, and a 'Customize' button. The table has columns: Seq, Done, Description, and Last modified. It lists two items:

Seq	Done	Description	Last modified
1	<input type="checkbox"/>	My testing it.	8/13/10 7:37 PM ...
2	<input type="checkbox"/>	My testing note	8/13/10 7:37 PM ...

The 'Work steps (2)' section is at the bottom, with a toolbar including a green plus icon (highlighted with a red box), a red minus icon, a green checkmark, a 'Completed' button, a 'Customize' button, and a 'More' dropdown. The table has columns: Seq, Done, Description, Cond., PM needed?, CA taken?, Comments, and Last modified. It lists two items:







Seq	Done	Description	Cond.	PM needed?	CA taken?	Comments	Last modified
10	<input type="checkbox"/>	My note n2-q		<input type="checkbox"/>	<input type="checkbox"/>		6/26/15 9:3...
20	<input type="checkbox"/>	My noting it.		<input type="checkbox"/>	<input type="checkbox"/>		8/13/10 7:3...

Work Order Planning – Part/Tool

CalemEAM

- Copied from PM for PM work orders
- Use “Planned Part List” to manually do it
- Planned parts are reserved at inventory stores
- Requisitions are generated if Min/Max and auto-order are configured

Planned Part (2)

   WO Pick List  Use Item  Use All  Customize											
<input type="checkbox"/>	#	Part #	Qty	Filled	Uom	Stock type	Item type	Note	Locator	Delivery code	Requester
<input type="checkbox"/>	1	JJ.WATER-PUMP.2...	4		Case			JJ Water Pump 2001			
<input type="checkbox"/>	2	100HP-COMPRESS..	3		Qty.EA	Stock		Compressor bearing f...	MAIN-STORE		

- Use “Planned Tool List” to manually do it
- Tools are used and returned to inventory stores

Planned Tool (0)

Customize

<input type="checkbox"/>	#	Tool #	Qty	Uom	Stock type	Note	Locator	Delivery code	Requester	Last modified
No results found.										

Work Order Execution – Comments

CalemEAM

- Click “+” at Comments List to add a comment

✓ 1 Submission

▶ 2 Planning

● 3 Execution

● 4 Review

● 5 Close

• History

• DataView

• Customize

Comments (0)

+

↺

−

✎ Customize

<input type="checkbox"/>	Comment	Modified by	Last modified
No results found.			

Work Order Execution – Attachments

CalemEAM

- Attach photos, documents, and other files

The screenshot shows the 'Work Order Execution' interface. At the top, there is a navigation bar with tabs: 1 Submission, 2 Planning, 3 Execution (highlighted), 4 Review, 5 Close, History, DataView, and Customize. Below the navigation bar, the 'Attachment (0)' section is visible. It includes a toolbar with icons for adding, deleting, and uploading files, along with 'View file', 'Download All', and 'Customize' buttons. A table with columns 'File', 'Categorization', 'Note', and 'Last modified' is shown, but it contains no data, with the text 'No results found.' displayed below it.







The screenshot shows the 'Attachment Create' dialog box. It has a title bar that says 'Work Order (Task) > Attachment Create'. Below the title bar, there is a section labeled 'Attachment' with a close button and a 'Customize' button. The main area of the dialog is empty, with a large green button at the bottom that says '+ Add files, or Drag & Drop them'.

Work Order Execution – Safety and Step

CalemEAM

- Select one or more Safety Measures to check “Done”








Safety measure (2)

    Done   Customize

<input type="checkbox"/>	Seq	Done	Description	Last modified
<input checked="" type="checkbox"/>	1	<input type="checkbox"/>	My testing it.	8/13/10 7:37 PM Ce
<input type="checkbox"/>	2	<input type="checkbox"/>	My testing note	8/13/10 7:37 PM ...

- Select one or more Steps to complete
- Set a step to “Passed”, “Failed” or “None” when applicable

Work steps (2)

    Completed   Customize  More

<input type="checkbox"/>	Seq	Done	Description	Cond.	PM needed?	CA taken?	Comments	Last modified
<input checked="" type="checkbox"/>	10	<input type="checkbox"/>	My note n2-q		<input type="checkbox"/>	<input type="checkbox"/>		6/26/15 9:38 .
<input type="checkbox"/>	20	<input type="checkbox"/>	My noting it.		<input type="checkbox"/>	<input type="checkbox"/>		8/13/10 7:3...

Work Order Execution – Start/Stop Clock

CalemEAM

- An Maintenance User assigned to the WO
- Start Clock to start clocking
- Stop Clock to stop clocking
- Calem calculate hours spent in the work order

1 Submission

2 Planning

3 Execution

4 Review


5 Close

History

DataView

Customize

Work Order (1 of 723)

 Start Clock

More

Customize

Wo #: 8723

PM #: [InspectionPM](#)

Asset #: [200-001](#)

Asset note: Production system Mercury s2 - wm003


Location: [B02.HQ](#)

Site: [MySite](#)

Priority: P1

Service site: [MySite](#)

Status: In-process

Flag: 

Subject: twst

Completion

Actual start: Tue, 4/14/15 1:49 PM Central

Actual finish:

Repaired?: ☐

Repaired in Workshop?: ☐

Ready for use?: ☐

Area cleanliness:

Failure

Failure:

Action:

Root cause:





Result:

Work Order Execution – Hours at Labor List

CalemEAM

- Report Hours on work order at labor list
- Job role will be filled by Calem if left empty




Labor (1)


    Customize


<input type="checkbox"/>	Full name	Job role	Start time	Time type	Hours	O.T. hrs	Note
<input type="checkbox"/>	Calem Eam		2/17/16 4:33 PM Cent...	Work	4		


[Work Order \(Task\)](#) > Labor Create

Labor



 Save  Cancel  Customize


 Datetime is not valid.: Start time

Full name: 

Job role: 

Time type:

Start time:  

End time: 





Note:

Work Order Execution – Downtime

CalemEAM

- Report “Unplanned” (default) and “Planned” at Downtime List




Downtime (0)


    Customize


<input type="checkbox"/>	Asset #	Location	Total hrs	Total mins	Unplanned?	Note
No results found.						

[Work Order \(Task\)](#) > Downtime Create



Downtime


 Save  Cancel  Customize


 The data is required. It must have a value.


Total hrs: 

Unplanned?: ☒

Start time:  8/13/10  At: 7:37 PM Central




Shift: Day 

Reported by: Calem Eam 







Reported at: 8/16/10  At: 4:31 PM Central

Note:

- Checkout “Part” at “Part List”

Part (1)										
 Checkout  Transaction  Customize										
<input type="checkbox"/>	#	Part #	Serial #	Qty used	Uom	Stock type	Item type	Total (USD)	Tran. note	Store
<input type="checkbox"/>	1	ITM-001		2		Non-stock		67.8913		MainStore

- Checkout “Part” at “Planned Part List”
- Checkout a planned part or all parts
- Planned parts are reserved at inventory store
- Requisitions can be generated based on min/max and reorder settings








Planned Part (2)											
   WO Pick List  Use Item  Use All  Customize											
<input type="checkbox"/>	#	Part #	Qty	Filled	Uom	Stock type	Item type	Note	Locator	Delivery code	Requester
<input type="checkbox"/>	1	JJ.WATER-PUMP.2...	4		Case			JJ Water Pump 2001			
<input type="checkbox"/>	2	100HP-COMPRESS..	3		Qty.EA	Stock		Compressor bearing f...	MAIN-STORE		

Work Order Execution – Meter Readings

CalemEAM

- Copied from PM for PM work orders
- “Create” to add meters
- “Add reading” to record a reading
- “Add reading done” to add a reading when a work order is done.

Meter (1)

 Create  Add reading  View readings  Add reading done    Customize

<input type="checkbox"/>	Meter #	Taken?	Reading released	Reading due	Note
<input checked="" type="checkbox"/>	TestMeter1	<input type="checkbox"/>			

Work Order Execution – Inspection

CalemEAM

- Include multiple assets in WO for inspection
- “Record Inspection” to pass all or pass/fail individually
- “View Inspection” to review results
- Create “Repair” work orders from inspection list
- “Replace, Repair, Rebuild and Reuse” Process for Serialized Assets

1 Submission 2 Planning 3 Execution 4 Review 5 Close History DataView Customize

Work Order (1 of 723)

Start Clock More Customize

Wo #: 8723 **PM #:** [InspectionPM](#)

Asset #: [200-001](#) **Asset note:** Production system Mercury s2 - wm003

Location: [B02.HQ](#) **Site:** [MySite](#)

Priority: P1 **Service site:** [MySite](#)

Status: In-process **Flag:**

Subject: twst

Completion

Actual start: Tue, 4/14/15 1 **Actual finish:**

Repaired?: ☐ **Repaired in Workshop?:** ☐

Ready for use?: ☐ **Area cleanliness:**

More menu options: On-Hold, Record inspection, View inspection, Send for repair, View asset tran, Email, Status log, Customize

Work Order Execution – Completion

CalemEAM

- Use “More” menu dropdown to complete
- Set “Actual Start” and “Actual Finish” if not set
- Set “Failure”, “Action” and “Root cause” if applicable
- Add a comment

[Work Order \(Task\)](#) > Status log Create

Status log - 297301

Save Cancel Troubleshooting Customize

The field value for the lookup is not valid.: Action

Actual start:

Actual finish:

Failure:

Action:

Cause:

Comment:

Repaired?: ☐ **Repaired in Workshop?:** ☐

Ready for use?: ☒

Changed by:

To status:

From status:

To state:

From state:

Work Order Completion – Labor Requirement

CalemEAM

- Labor must be reported to complete a work order.
- A system-wide configuration can be enabled so that work orders cannot be completed until someone reported hours in a work order

The screenshot displays the CalemEAM Work Order Completion interface. At the top, a navigation bar shows steps: 1 Submission (checked), 2 Planning (checked), 3 Execution (active), 4 Review, 5 Close, History, DataView, and Customize. Below this, the 'Work Order (1 of 1)' section contains a toolbar with icons for editing, saving, deleting, printing, and a 'Start Clock' button. The main form area shows fields for 'Wo #:' (113506), 'Asset Tag:' (401402-17), 'Model:', 'Location:' (B02.HQ), 'Priority:' (P4), 'Status:' (In-Progress), 'Subject:' (PM_Weekly), 'Completion', 'Actual start:', 'SLA Start:', and 'Failure'. A 'PM #:' field is also visible. A 'Server error' dialog box is overlaid on the form, displaying the message: 'The Application Server raises an exception. See details below. The action is not performed. 'The status change is not allowed. There is no labor reported in the work order.' Exception: CmServerAppException'. The dialog has a 'Close' button.

1 Submission 2 Planning 3 Execution 4 Review 5 Close History DataView Customize

Work Order (1 of 1)

Wo #: 113506 PM #: WeeklyPM-1799

Asset Tag: 401402-17

Model:

Location: B02.HQ

Priority: P4

Status: In-Progress

Subject: PM_Weekly

Completion

Actual start: Tue, 9/18/18 8:34 PM Ea

SLA Start:

Failure

Auto-generated serial no.

ASSEMBLY

MySite

MySite

Close

Work Order Completion – Step Requirement

CalemEAM

- All work order steps must be done to complete a work order.
- A Company/Site configuration can be enabled so that work orders cannot be completed until all steps are completed if any.
- Menu: Organization | EAM Company: Enforce Step for PM or non-PM WOs

The screenshot displays the CalemEAM Work Order interface. At the top, a navigation bar contains buttons for '1 Submission', '2 Planning', '3 Execution', '4 Review', '5 Close', 'History', 'DataView', and 'Customiz'. Below this, the 'Work Order (1 of 1)' section is visible. A 'Server error' dialog box is overlaid on the interface, displaying the following text:

Server error

The Application Server raises an exception. See details below. The action is not performed.

'WO steps are incomplete. Complete all steps and try again.'

Exception: CmServerAppException

A 'Close' button is located at the bottom of the dialog box.

The background interface shows the following fields:

- Wo #:** 113506
- Asset Tag:** [401402-17](#)
- Model:**
- Location:** [B02.HQ](#)
- Priority:** P4
- Status:** In-Progress
- Assignment**
- Assigned To:** [Calem Eam](#)
- Cost**
- Hours planned:**
- Downtime planned:**
- Hours sched:** 1.5
- WeeklyPM-1799**
- Auto-generated serial no.**
- Organization:** [ASSEMBLY](#)
- MySite**
- MySite**

Work Order Completion – Required Fields

CalemEAM

- Required fields can be configured by status and category
- Menu: Admin | Data Design | WO Status Required
- For instance, actual start and finish time are required to complete any work order.

WO Status Required (12)					
<div><div><div></div><div></div><div></div><div></div></div><div>Customize</div></div>					
<input type="checkbox"/>	#	Status	Category	Field name	
<input type="checkbox"/>	1	Completed	Calibration	actual_finish_time	
<input type="checkbox"/>	2	Completed	Calibration	actual_start_time	
<input type="checkbox"/>	3	Completed	Corrective	actual_finish_time	
<input type="checkbox"/>	4	Completed	Corrective	actual_start_time	
<input type="checkbox"/>	5	Completed	Detective	actual_finish_time	
<input type="checkbox"/>	6	Completed	Detective	actual_start_time	
<input type="checkbox"/>	7	Completed	Emergency	actual_finish_time	
<input type="checkbox"/>	8	Completed	Emergency	actual_start_time	
<input type="checkbox"/>	9	Completed	Predictive	actual_finish_time	
<input type="checkbox"/>	10	Completed	Predictive	actual_start_time	
<input type="checkbox"/>	11	Completed	Preventive	actual_finish_time	
<input type="checkbox"/>	12	Completed	Preventive	actual_start_time	

Work Order Review – Review & Close

CalemEAM

- “Accept”/”Reject” a WO (set “Review Req’d?” to mandate it)
- OR, “Close WO”
- Auto-Close ”Accepted” WO by default two days after acceptance

✓ 1 Submission

✓ 2 Planning

✓ 3 Execution

▶ 4 Review

● 5 Close

● History

● DataView

● Customize

Work Order (3 of 9)

More Customize

Wo #: ● 4475

Asset #: [Sensor-001](#)

Location: [B02.HQ](#)

Priority: P1

Status: Completed

Subject: ● PM_Weekly

Solution:

Accept

Reject

Close WO

View inspection

View asset tran

Email

Status log

Customize

PM #: [LOC-PM-Test01](#)

Asset note:

Site: ● [MySite](#)

Service site: ● [MySite](#)

Flag:

Customize

<input type="checkbox"/>	Comment	Modified by	Last modified
<input type="checkbox"/>	test	Calem Eam	4/17/16 9:26 AM...

Work Order Past-Due and Pre-Due Alerts

CalemEAM

- Define alerts at contracts: Contract | Contract
- Set default contract per site/company:
 - Organization | EAM Company: SLA Contract
 - Organization | EAM Company | Site Tab | Site: SLA Contract

Main	Instruction	Labor	Part	Tool	Downtime	Meter	Comments	Document	Child WO	Misc	Permit	Log	History	TaskView	Customize
------	-------------	-------	------	------	----------	-------	----------	----------	----------	------	--------	-----	---------	----------	-----------

Work Order - My-Cat2 (1 of 1)

Start Clock More Customize

Wo #: 147008 PM #: [WeeklyPM-1799](#)
Asset Tag: [401402-17](#) Asset note: Auto-generated serial no.

Contract & SLA

Need by:	Mon, 8/13/18 8:00 PM Eastern	Contract:	CONTRACT-001
Last completed:		Last closed:	
Past-due alert:	<input type="checkbox"/>	SLA Term:	
Past-due (days/hrs):	0	SLA unit:	Days
Pre-Due alert:	<input type="checkbox"/>	Last pre-due?:	
Pre-Due (days/hrs):		Unit:	

Business Line: —








Assignment

Assigned To:	Calem Eam	Credit Ignored?:	<input type="checkbox"/>
Team assigned:	—	Skill Match?:	<input type="checkbox"/>
		Assigned by:	Administrator
		Time assigned:	Wed, 8/15/18 4:47 PM Eastern


- Advanced SLA between two statuses. For example, 8 hours from approved to completed.
- Status Timespan – how long a work order can be in a status
- See blog: <http://www.calemeam.com/calemcustomers-2/how-to-streamline-work-order-processes-in-calem>

Main SLA Lines Asset WO Contact Document Business Lines Project Log Customize








Contract (2 of 18)

      Cost Status  Customize

Contract: CONTRACT-001

Note: Testing service site as vendor site e 

WO SLA (2)

       Customize

<input type="checkbox"/>	Line	Priority	Category Set	From status	To status	SLA Due	SLA Warning	SLA unit	Note
<input type="checkbox"/>	10	P1		Approved	Completed	9	8.5	Hours	P1 Completion SLA
<input type="checkbox"/>	20	P1		Approved	In-Progress	4	3.5	Hours	P1 On-Site SLA

Work Order Module – Credit Hold

CalemEAM

- Credit Hold Prompt when WO Form is opened
- Contract “Credit Hold”.
- Contract “Credit Hold” prevents work orders being edited

The screenshot displays the 'Work Order (1 of 1)' form in the CalemEAM system. At the top, a navigation bar includes tabs for '1 Submission', '2 Planning', '3 Execution' (active), '4 Review', '5 Close', 'History', 'DataView', and 'Customize'. Below the navigation bar, the form fields are organized into two columns. The left column contains fields for 'Wo #:', 'Asset #:', 'Location:', 'Priority:', 'Status:', 'Subject:', 'Completion', 'Actual start:', 'Repaired?:', 'Ready for use?:', 'Failure:', and 'Root cause:'. The right column contains fields for 'PM #:', 'Asset note:', 'Site:', 'Service site:', 'Flag:', 'Actual start:', 'Repaired?:', 'Area:', 'Action:', and 'Result:'. A modal dialog box titled 'Work Order' is overlaid on the form, displaying the message 'There is a credit hold for the work order.' and a 'Close' button. The form fields are populated with the following data: 'Wo #:' is 27429, 'Asset #:' is 100HP-007, 'Location:' is B07.MyCA Site1, 'Priority:' is P1, 'Status:' is Released, 'Subject:' is My testing it, 'Asset note:' is JJ 100 HP Compressor of 2000, 'Site:' is MySite, 'Service site:' is MySite CA, and 'Flag:' is a green flag icon.

Work Order (1 of 1)

1 Submission 2 Planning 3 Execution 4 Review 5 Close History DataViewCustomize

Start Clock More Customize

Wo #: 27429 PM #: Asset note: JJ 100 HP Compressor of 2000

Asset #: 100HP-007 Site: MySite

Location: B07.MyCA Site1 Service site: MySite CA

Priority: P1 Flag:

Status: Released

Subject: My testing it

Completion

Actual start: Actual start:

Repaired?: Repaired?:

Ready for use?: Ready for use?:

Failure

Failure: Action:

Root cause: Result:

Work Order

There is a credit hold for the work order.

Close






Work Order Module – Permits

CalemEAM

- Permits must be completed to start a WO with permits
- Maintenance Manager to set “Permits”
- Optionally use “Safety”/”Step” for permits

MainCustomize

Permit (1 of 2)

Customize

Permit #: Permit: ☒ Work at Height Permit

Done by: Done: ☐

Inspected by:Time inspected:

Start time: End time:



Approved By

Area foreman:Foreman time:

Organizer:Organizer time:

Safety dept rep:Dept rep time:

Permit measure (1)

Customize

Seq	Description	Done	Done by	Inspected by	Last modified
10	Ladder is secured	<input type="checkbox"/>			2/2/16 9:40 AM C...

- Vendor Work Order can be achieved through Teams
- Blog: <https://calemeam.com/calemcustomers-2/when-to-use-teams-in-calem>
- Blog: <https://calemeam.com/calemcustomers-2/how-to-use-team-to-manage-contractors-in-calem>

- **Work Orders to Print:** to manage work order printing
- **WO attachments included in print:**
 - Pictures and drawings
 - PDF docs
- **Highlighted Area:** user input
- **Print Customization**

- **Menu: Work Order | Cost Reports:**
 - **PM On-Time**
 - **Downtime**
 - **Labor Hours Planned vs. Actual**
 - **WO Cost and Labor Cost**
- **Menu: Analysis Module**
 - **WO Cost Summary**
 - **WO Labor Cost Summary**
 - **Asset Downtime Summary**

- Create a WO – Submission Screen Customization
- Create a WO
- Boilerplate safety measures and steps for corrective work orders
- Schedule users in work orders
- Assign team to work orders
- Print a WO
- Transition work orders to Approved, Released, In-Process, Completed, Accepted and Closed.
- Report hours and parts used in a work order
- Check off steps and safety notes
- Add comments to work orders
- Add attachments to WO
- Add meter readings to WO
- Email a work order




Work Order Module – Calibration


CalemEAM


- Set WO “Category” to “Calibration” in PM
- Record readings for Calibration
- Use “Calibration WO” to view work orders for calibration
- Print “Calibration Certificate” from WO

[Work Order \(Task\)](#) > Add reading Create


Add reading


 Save  Cancel  Customize


 Value is required: Reading

Reading:  Last reading: 23 at 2 hrs ago by Calem Eam

Note:

Read by: 

Time taken:  At:

Calib. phase: 

(None)
As-found
As-left

Work Order Module – Assignment by Skill Match

CalemEAM

Define Skill:

Business Line	Vendor	Certificate	Cert. level
Network	Cisco	CCNA	
Network	Level3	Level3 Sample	1000

Define Skill by Site:


Customer	Customer Site	Business Line	Vendor	Certificate	Cert. level
Customer1	Site1	Network	Cisco	CCNA	
Customer1	Site2	Network	Level3	Level3 Sample	1000









Define User Skill:

User	Business Line	Vendor	Certificate	Cert. level	License No.	Expiration
John Freeman	Network	Cisco	CCNA		331002	2014-05-31
Eric Canter	Network	Level3	Level3 Sample	1000		

Select users based on their skills by WO site:

[Work Order \(Task\)](#) > [Scheduled labor Create](#) > User Skill Lookup

 **User Skill (1)**

 Select  Cancel  No Skill Match  Site Disallowed     Customize

Full name	Business Line	Vendor	Certificate	Cert Level	License	Expiration	Last modified
John Freeman	Camera	3M	Cert	1,000		2/13/13 8:13 PM ...	






Work Order Module – WO Quote

CalemEAM


- Use WO Quote for customers
- Menu: WO Form: Open Quote, or Print Quote
- Labor and Material discount can be configured per customers


MainDetailCustomize


WO Quote (1 of 1)



Approve Quote

 Print Quote

 More

 Customize

Wo #: 16585PM #: [MOTOR-M7](#)

Asset #: [233-455-901](#)Asset note:

Location: [B02.HQ](#)

Site: [MySite](#)

Priority: P4

Service site: [VENDOR-TEST-001-A](#)

Status: Released

SR #:

PM Plan: [WeeklyPM](#)

Parent wo #:

Payment term:

Quote?: ☐

Quote approved?: ☐

Last Quote appr.:

Quote approver:

Quote sent?:

Subject: PM_Weekly

Description:

Next Module – Service Request

CalemEAM

Asset and
Location

Maintenance
Schedules

Contract and SLA

Work Order

Service Request

Change Management

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the CalemEAM Training!**
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