



Training Guide

QAD Enterprise Asset Management

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EAM 2015
August 2015

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Change Summary

The following table summarizes significant differences between this document and the previous version.

Date/Version	Description	Reference
August 2015/EAM2015	Introduced functionality new in EAM 2015	--
April 2015/EAM v12.8	Extensive updates throughout the guide to illustrate new functionality	--
February 2011/EAM v12	1 st Release	--

About This Course

Course Description

This class is designed to teach the basic features and functions of QAD Enterprise Asset Management. The topics cover maintenance, inventory, purchasing, and project controls.

Topics will be presented and then practiced with hands-on exercises. On the last day, students will have the opportunity to test their understanding and knowledge by working on an extended exercise covering most of the topics discussed during the class.

Course Objectives

By the end of this class, students will:

- Have a thorough understanding of the concepts underlying QAD Enterprise Asset Management
- Understand how to navigate and configure the system for optimal use
- Be able to demonstrate how EAM can benefit an organization's business goals

Audience

This class is intended for any EAM user, including maintenance managers, system administrators, project engineers, and purchasing supervisors, as well as QAD R&D and Services and Support personnel. The EAM course is the first step on the Enterprise Asset Management learning path.

Virtual Environment Information

The hands-on exercises in this book should be used with the latest Enterprise Edition learning environment.

Additional Resources

If you encounter questions on QAD software that are not addressed in this book, several resources are available. The QAD corporate Web site provides product and company overviews. From the main site, you can access the QAD Learning or Support site and the QAD Document Library. Access to some portions of these sites depends on having a registered account.

<http://www.qad.com/>

QAD Learning Center

To view available training courses, locations, and materials, use the QAD Learning Center. Choose Education under the Services tab to access this resource. In the Learning Center, you can reserve a learning environment if you want to perform self-study and follow a training guide on your own.

QAD Document Library

To access release notes, user guides, training guides, and installation and conversion guides by product and release, visit the QAD Document Library. Choose Document Library under the Support tab. In the QAD Document Library, you can view HTML pages online, print specific pages, or download a PDF of an entire book. To find a resource, you can use the navigation tree on the left or use a powerful cross-document search,

which finds all documents with your search terms and lets you refine the search by book type, product suite or module, and date published.

QAD Support

Support also offers an array of tools depending on your company's maintenance agreement with QAD. These include the Knowledgebase and QAD Forums, where you can post questions and search for topics of interest. To access these, choose Visit Online Support Center under the Support tab.

CHAPTER 1

General Navigation and Configuration

General Navigation and Configuration

EAM Training Guide

General Navigation and Configuration

EAM 2015



With the March 2015 release of EAM, the naming convention for the software has changed from the previous v12.x nomenclature to align with the EE naming convention. In general, EAM is now called “EAM 2015.”

Overview

EAM Overview

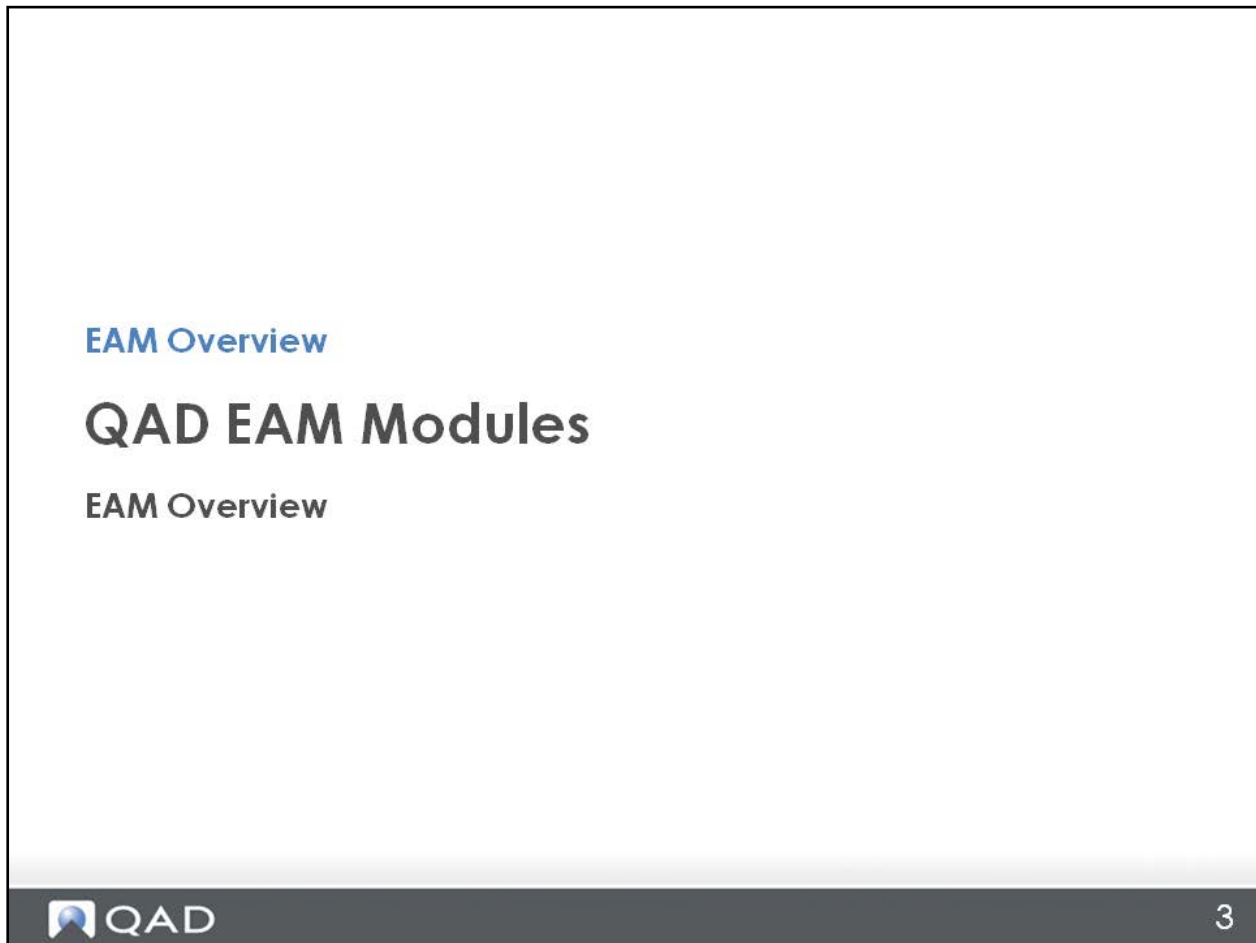
Overview

- EAM modules
- Access the system (QAD Demo Center)
- General navigation training
 - Login
 - .NET UI look and feel
 - Browsers
 - Filters
 - Exporting
 - External Links
- EAM configuration



With this class, you start to move into digestible bites of the software.

QAD EAM Modules



This section explores the key functionality in EAM, specifically around the four major modules of the software.

QAD EAM Overview – Four Main Modules

EAM Overview

QAD EAM Overview – Four Main Modules

- Maintenance
 - Equipment efficiency
 - Plant reliability
- Inventory
 - Right size MRO/indirect inventory
 - The right parts when you need them
- Purchasing
 - Control MRO/indirect spend
 - Comply with corporate financial manual approvals
- Project Controls
 - Manage project spend
 - Track true acquisition cost of assets

Each of the four main modules is explored in-depth throughout this guide, but the following information is important to kick things off.

Accessing the System

EAM Overview

Accessing the System

Log In

EAM Overview

Log In

Log in to QAD to access EAM






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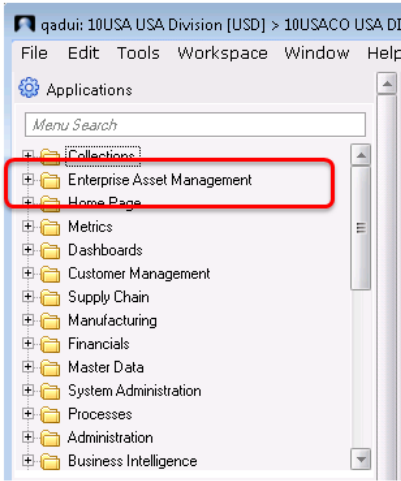
EAM 2015 runs in the QAD AppShell when run against QAD 2015 EE. There is one icon and one login when EAM runs against 2015 EE. When you log in to QAD, you also log in to EAM. In this environment, EAM appears as an EE Main Menu option. Be sure to select the proper “Log on to” environment. Note that, when EAM is run against an earlier version of EE, or any version of SE, EAM still has a separate login.

Main Menu

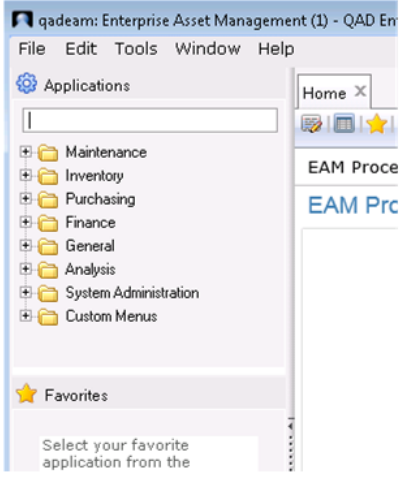
EAM Overview


Main Menu

**When logged in under
EE 2015:**



**Stand-alone EAM Menu when
used against SE or earlier EE
versions:**




7

When you log in to EAM 2015 when it is under the EE 2015 AppShell, and the user ID has permissions for EAM, the EAM menu structure appears in the EE menu structure as “Enterprise Asset Management,” as seen on the left. When using EAM 2015 against earlier versions of EE or against any SE version, EAM remains stand-alone, and the menu structure appears as it does on the right side of the slide.

From this point forward, the navigation and menu structure for EAM remain the same, regardless of whether EAM is in the EE AppShell.

General Navigation

EAM Overview

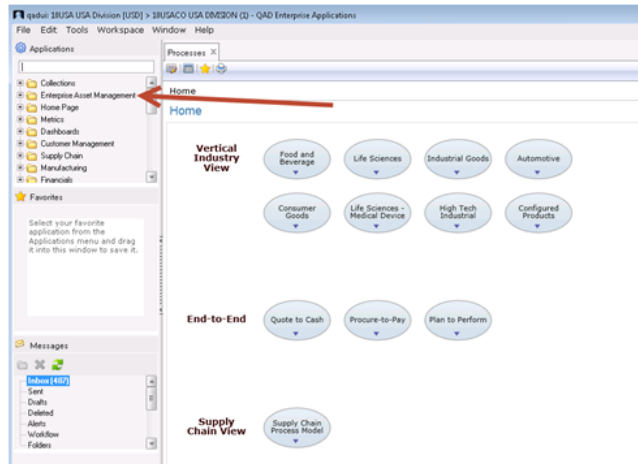
General Navigation

Standard .NET UI Features

EAM Overview

Standard .NET UI Features

- Enterprise Asset Management Folder in QAD AppShell
- Expandable menus
- Inbox
- Menu search
- Favorites
- Browsers
- Filters
- Tab pages
- Lookups
- Printing and exporting



Each of the topics in the slide is covered in more detail in the following pages.

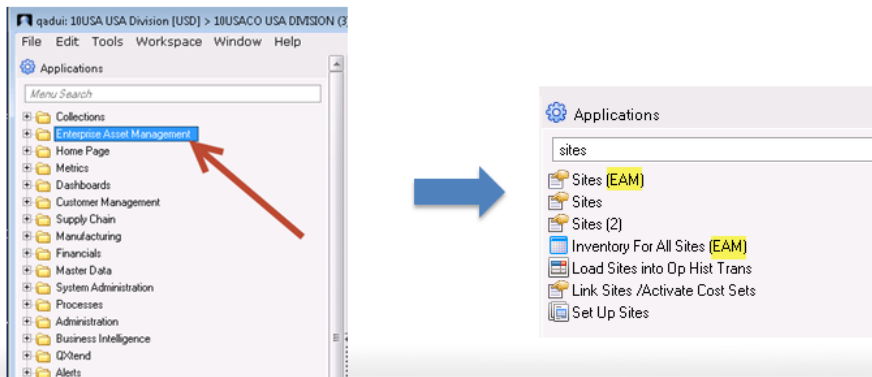
EAM 2015 is now under QAD's AppShell.

EAM is Under the QAD EE AppShell

EAM Overview

EAM is Under the QAD EE AppShell

- One icon
- One login
- EAM remains a separate module in the menu structure
 - EAM screens are identified by "(EAM)" at the end of the screen name.



EAM 2015 is now available to run in the same instance of the AppShell and in the same workspaces as EE. It is visible in the EE menu when properly licensed.

Login and Password Changes. EAM 2015's login process has been altered to comply with Enterprise Edition 2015 rules. When running in the same AppShell with Enterprise Edition 2015, EAM uses the EE password policies. Additionally, if LDAP integration is enabled in EE, EAM relies on EE to validate the login ID and password. EAM retains the rest of its security mechanisms, including EAM Role and User/Role functionality.

ERP login ID and password maintenance have been moved from the system registry to a new action on the System Control browse. Users with permission to access this action can enter the ID that EAM uses to access EE APIs. The password for this ID also can be entered and changed. It is protected from view so that it remains secure and, when changed, must be entered twice to ensure that the user entered the value accurately.

When a password is changed in a merged 2015 AppShell, EAM does not check to see if the new password matches the old or previous passwords. When a password is reset in EE by an administrator and the next login forces a password change, EAM does not check to see if the new password matches the old or previous passwords. EAM's Change Password User browse action is disabled in a merged 2105 environment.

Prior Version E-mail Hyperlinks Inactive. As a result of EAM's move into the core AppShell, some of EAM's menu IDs changed. This change caused the hyperlinks in EAM e-mails to break. When upgrading to EAM 2015, the links in all e-mails prior to the upgrade no longer work.

User Maintenance. When EAM is integrated with EE in an environment that has QAD 2015 EE or higher, the addition or deletion of system users within EAM is no longer allowed. These actions must be completed in EE and downloaded into EAM.

EAM Interface

EAM Overview

EAM Interface

The screenshot displays the QAD EAM interface with the following components:

- Title Bar:** Shows the application path: qadur:18USA USA Division [USD] > 18USACO USA DIVISION (Q) - QAD Enterprise Applications
- Menu:** File, Edit, Tools, Workspace, Window, Help
- Tool Bar:** Excel Export, Print, Add To Favorites, New, Edit
- Application Area:** A table listing equipment records.
- Left Panel:** Contains 'Modules' (Maintenance, Equipment, DUDM Conversion IE, All Downtime [EAM], Data Loads, PM / PDM, Work Orders, Production Driven Maint, Service Requests [EAM], Labor History [EAM], Cycle...) and 'Inbox' (Messages, Inboxes (4/27), Sent, Drafts, Deleted, Alerts, Workflow, Folders).
- Table Data:**

Equip No	Description	Serial No	Cost Center	Dept	Location	Parent?	Parent No	Locked?	Status
AC0001	Air Conditioner 01		Adm		BLD2	<input checked="" type="checkbox"/>	Bldg 1	<input type="checkbox"/>	A
AC0002	Air Conditioner 02		Adm		BLD2	<input checked="" type="checkbox"/>	Bldg 2	<input type="checkbox"/>	A
AC0003	Air Conditioner 03		Adm		BLD2	<input checked="" type="checkbox"/>	Bldg 2	<input type="checkbox"/>	A
AC0004	Air Conditioner 04		Adm		BLD2	<input checked="" type="checkbox"/>	Bldg 2	<input type="checkbox"/>	A
AC0005	Air Conditioner 05		Adm		BLD2	<input checked="" type="checkbox"/>	Bldg 2	<input type="checkbox"/>	A
AC0006	Air Conditioner 06		Adm		BLD2	<input checked="" type="checkbox"/>	Bldg 2	<input type="checkbox"/>	A
AC0007	Air Conditioner 07		Adm		BLD2	<input checked="" type="checkbox"/>	Bldg 2	<input type="checkbox"/>	A
AC0008	Air Conditioner 08		Adm		BLD2	<input checked="" type="checkbox"/>	Bldg 2	<input type="checkbox"/>	A
AC0009	Air Conditioner 09		Adm		BLD1	<input checked="" type="checkbox"/>	Bldg 1	<input type="checkbox"/>	A
AC0010	Air Conditioner 10		Adm		BLD1	<input checked="" type="checkbox"/>	Bldg 1	<input type="checkbox"/>	A
BLD-G1	Building 1, mfg, NY		Adm		NY	<input checked="" type="checkbox"/>	Plant 1	<input type="checkbox"/>	A
Bldg 2	Building 2, receiving, NY		Adm		NY	<input checked="" type="checkbox"/>	Plant 1	<input type="checkbox"/>	A
Bldg 3	Building 3, Warehouse, NY		Adm		NY	<input checked="" type="checkbox"/>	Plant 1	<input type="checkbox"/>	A
C00001	Compressor, air, 100hp, joy	14338425937	Adm		BLD1	<input checked="" type="checkbox"/>	Bldg 1	<input type="checkbox"/>	A
C00002	Compressor, air, 75hp, SULA/Rair	33256018881	Adm		BLD1	<input checked="" type="checkbox"/>	Bldg 1	<input type="checkbox"/>	A
C00003	Compressor, air, 100hp, SULA/Rair	11379100904	Adm		BLD1	<input checked="" type="checkbox"/>	Bldg 1	<input type="checkbox"/>	A
C00011	Cranes, gantry, 5ton, 18ft tpa	4225367	Adm		BLD2	<input checked="" type="checkbox"/>	Bldg 2	<input type="checkbox"/>	A
CV0033	Counter Jaser	6L42384192	Mfg		WC4	<input checked="" type="checkbox"/>	P00002	<input type="checkbox"/>	A
CV0001	Conveyor, feed, 3ft, 3in belt		WC01		PL1	<input checked="" type="checkbox"/>	P00001	<input type="checkbox"/>	A
CV0002	Conveyor, delivery, 4ft, 3in belt		WC01		PL1	<input checked="" type="checkbox"/>	P00001	<input type="checkbox"/>	A
CV0003	Conveyor, delivery, 4ft, 3in belt		Mfg		WC4	<input checked="" type="checkbox"/>	P00002	<input type="checkbox"/>	A
CV0004	Conveyor, feed, 3ft, 3in belt		Mfg		WC4	<input checked="" type="checkbox"/>	P00002	<input type="checkbox"/>	A
CV0005	Conveyor, feed, 3ft, 3in belt		WC01		BLD1	<input checked="" type="checkbox"/>	Bldg 1	<input type="checkbox"/>	A
GREASEPUMP005	Grease Pump-45		Mfg		BLD1	<input checked="" type="checkbox"/>	WC0001	<input type="checkbox"/>	A
GREASER0001	Grease Tumbler V229		WC01		WC1	<input checked="" type="checkbox"/>	WC0001	<input type="checkbox"/>	A
GREASER0002	Greaser-02	2040	WC01		WC1	<input checked="" type="checkbox"/>	WC0001	<input type="checkbox"/>	A
GREASER0003	Greaser-03 PM06		WC01		WC1	<input checked="" type="checkbox"/>	WC0001	<input type="checkbox"/>	A
GREASER0004	Greaser-04		WC02		WC2	<input checked="" type="checkbox"/>	WC0002	<input type="checkbox"/>	A
- User logged in:** A red arrow points to the bottom right corner of the application area.

Favorites

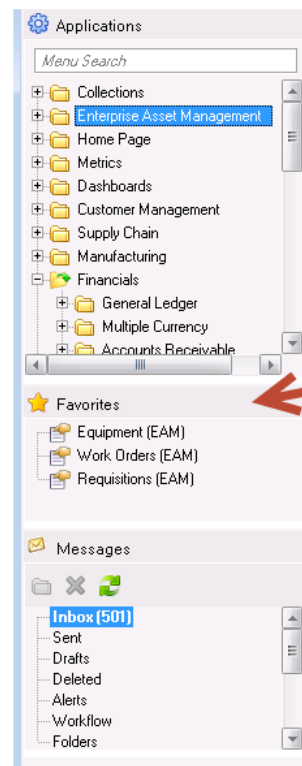
EAM Overview

Favorites

Add to Favorites by either:

1. Drag & drop, OR
2. Right-click

Use right-click to remove from Favorites



The Favorites pane is a user-specific menu that you can create using menu options or drag-and-drop techniques. You can add, remove, and organize your Favorites list with its right-click menu.

You can even create your own folder within Favorites to organize your common or related tasks. Favorites can be set to Auto-Start, which is a great feature for limited users who use only one module such as Service Requests.

Browse

EAM Overview

Browse

Excel Export | **Find** | **Filter** | **Group** | **Refresh** | **Copy** | **Delete** | **Notes**

Actions | Excel Export | Print | Add To Favourites | New | Edit

Action | Find | Site: 10-100 | Filter: All | Default

Equip No	Description	Serial No	Cost Center	Dept	Location	Parent?
AC0001	Air Conditioner 01		Adm		BLD1	<input checked="" type="checkbox"/>
AC0002	Air Conditioner 02		Adm		BLD2	<input checked="" type="checkbox"/>
AC0003	Air Conditioner 03		Adm		BLD2	<input checked="" type="checkbox"/>
AC0004	Air Conditioner 04		Adm		BLD2	<input checked="" type="checkbox"/>
AC0005	Air Conditioner 05		Adm		BLD2	<input checked="" type="checkbox"/>
AC0006	Air Conditioner 06		Adm		BLD2	<input checked="" type="checkbox"/>
AC0007	Air Conditioner 07		Adm		BLD2	<input checked="" type="checkbox"/>
AC0008	Air Conditioner 08		Adm		BLD2	<input checked="" type="checkbox"/>
AC0009	Air Conditioner 09		Adm		BLD1	<input checked="" type="checkbox"/>
AC0010	Air Conditioner 10		Adm		BLD1	<input checked="" type="checkbox"/>
BLDG 1	Building 1, mfg, NY		Adm		NY	<input checked="" type="checkbox"/>
Bldg 2	Building 2, receiving, NY		Adm		NY	<input checked="" type="checkbox"/>
Bldg 3	Building 3, Warehouse, NY		Adm		NY	<input checked="" type="checkbox"/>
C00001	Compressor, air, 100hp, joy	J43369425897	Adm		BLD1	<input checked="" type="checkbox"/>

Double Click to Open

Column Headers:

1. Drag & Drop to rearrange
2. Left click to Determine Sort Order
3. Right click to Add/Remove Columns

Existing records for current module

13

Comments? Go to goo.gl/MfwKHm

Group a Browse

EAM Overview

Group a Browse

1. Select Group

2. Drag & Drop Column Headers to Group Bar

14

When reviewing data inside a browse, it can be helpful to group the records based on information in the record. Simply turn on the Group By option and then drag and drop the column header for the field that you want to group by.

You can group by single or multiple columns. Simply move the column headers around to implement the order you want.

Custom Filters

The screenshot shows the 'EAM Overview Custom Filters' dialog box. The background displays a table of equipment with columns for 'Equip No' and 'Description'. The dialog box has a 'Fields' list on the left, a central area for selecting a field and operator, and a right-hand area for defining filter criteria. Annotations highlight various features:

- Filter by Specific Fields:** Points to the 'Fields' list.
- Filter Preview:** Points to the 'Query Preview' section at the bottom.
- And/Or Statement:** Points to the 'AND' and 'OR' radio buttons.
- Parenthesis:** Points to the parentheses buttons.
- Advanced vs. Basic:** Points to the 'Basic' button.

EAM 2015 filter capabilities are powerful. In some cases, the use of these filters can allow a browse screen to become a report.

Use a filter to specify the information displayed on a specific browse. Each module has a number of fields that can establish the criteria for filtering a browse list. Advanced filtering allows you to use And and Or functions in order to have complex filters, as well as using parentheses ('and').

Filters are automatically saved within the browse and are available for selection in other areas such as reports.

The Fields list displays all possible fields in the database entry associated with the current module. Click one to move it to the Filter Criteria list; for example, to filter records by this month, enter:

this month OR

past 30 days

The system can process plain language commands such as past year (versus 365 days) or your name (as opposed to user ID). When adding multiple filter criteria, select AND to indicate that the filter records must meet all criteria; select OR to indicate that the filter records meet any one of the filter criteria.

Another filtering mechanism is parentheses. Enclose parts of the filter criteria in parentheses to indicate that this value is the first, and most important, filter criteria. The system follows mathematical progression when filtering records (criteria in parentheses first, then AND, then OR from left to right).

Use the Up and Down buttons to change the filter priority. Click Delete to move the criteria from the filter list. Fields removed from Filter Criteria remain in the database.

For example, a planner filters by all equipment associated with a specific user ID, with a status 1 or 2, and by cost center.

QAD EAM Tab View

EAM Overview

QAD EAM Tab View

Tabbed View *User Defined Fields* *Sub Details or "Submenus"*

Processes: Equipment (EAM) Site: 10-100, Equip No: AC0001

Site: 10-100 Equip No: AC0001

Action [Icons]

Codes: Asset Detail User Defined

General

Description: Air Conditioner 01

Category: PD Plant Owned Type: HVAC Heating Ventilation and AC

Parent? Parent No: Bldg 2

Upd Children? Status: A Active

Location: BLD2 Building 2 BOM Type:

Failure Type: EM Electrical/Mechanical Notify: FACM Facility Maintenance

Planner: 10-EMP32 BRAD NIX Responsible:

Owner: W/O Owner:

Priority: Catalog: HVAC Heating Ventilation and AC

Manual:

Equipment

- Detail
- Notes
- Service Requests
- Work Orders
- PM Templates
- Failure Analysis
- Cost Analysis
- BOM
- Readings
- Equipment Alternate
- Procedure Lists
- Production Hours
- Equipment Products
- Equipment Descriptors

**Configurable Mandatory Fields*

QAD 16

Most of the EAM recordkeeping occurs in the tab view. Your system administrator may remove fields, so what you see in training or at the start of an implementation is not necessarily what you see on your production desktop. Also, required fields (mandatory fields) are configurable by site, so the training environment may have more, less, or different fields to those in your production environment.

QAD recommends that you do not remove fields until all users have reviewed and confirmed that the fields are not in use. QAD wants to ensure that users are aware of all available fields to avoid a situation where users are not happy with the software because they think that EAM does not have the fields they need.

Records

EAM Overview

Records

Primary Information *Additional Important Information* *Notes Submenu*

Processes x Equipment (EAM) x Site: 10-100, Equip No: AC0001 x

Site: 10-100 Equip No: AC0001

Action - [Icons]

Codes: Asset Detail User Defined

General

Description: Air Conditioner 01

Category: PD Plant Owned Type: HVAC Heating Ventilation and AC

Parent? Parent No: Bldg 2

Upd Children? Status: A Active

Location: BLD2 Building 2 BOM Type: []

Failure Type: EM Electrical/Mechanical Notify: FACM Facility Maintenance Group

Planner: 10-EMP32 BRAD NIX Responsible: []

Owner: [] WO Owner: []

Priority: [] Catalog: HVAC Heating Ventilation and AC

Manual: []

*Configurable Mandatory Fields

Equipment Submenu:

- Equipment
- Detail
- Notes
- Service Requests
- Work Orders
- PM Templates
- Failure Analysis
- Cost Analysis
- BDM
- Readings
- Equipment Alternate
- Procedure Lists
- Production Hours
- Equipment Products
- Equipment Descriptors

QAD 17

In EAM, you can find initial information on the first displayed tab page when you open a record. However, additional information is contained in the other tab pages, as well as within the various submenus associated with the record.

The labels on the tab pages and the submenus vary, depending on the type of record you are viewing. Many of the foundational records in EAM have tabbed pages and submenus. The submenus provide access to related information such as work order or service request information associated with the selected equipment record.

A helpful way of remembering where to find information in a tab page versus a submenu is to focus on the relationship to the base record. If there is a many-to-one relationship, then the submenu is the place to look. For example, compare equipment records to work orders – a single piece of equipment is likely to have multiple work orders over the course of its life.

Records – User-Defined Fields

User-defined fields are “spare” fields found on all foundational records in EAM.

User-defined fields include the following types:

- Character with lookup tables
- Character free-form entry
- Decimal fields
- Integer fields
- Date field
- Logical field (yes/no)

User-defined fields can be relabeled. Some record types, such as the “Character with Lookup”, can link to validation tables.

These fields can also be made mandatory and hidden/visible, as with other standard fields on a record. If no user-defined fields are used in a module, all fields can be removed, but note that the removal of a tab restricts the ability to re-add the tab later.

Records – User-Defined Fields

EAM Overview

Records – User-Defined Fields

Change the label on a UDF (User Defined Field) by navigating to "User Defined Fields (EAM)"

Module	Character 1	Character 1 Descr	Character 2	Character 2 Descr	Character 3	Character 4	Date	Integer 1	Integer 2	Decimal 1
	PO Char 1		PO Char 2		PO Char 3	PO Char 4	PO Date	PO Int 1	PO Int 2	PO Dec 1
	WO Char 1		WO Char 2		WO Char 3	WO Char 4	WO Date	WO Int 1	WO Int 2	WO Dec 1
	Req Char 1		Req Char 2		Req Char 3	Req Char 4	Req Date	Req Int 1	Req Int 2	Req Dec 1
Employee	Emp Char 1		Emp Char 2		Emp Char 3	Emp Char 4	Emp Date	Emp Int 1	Emp Int 2	Emp Dec 1
Equipment	Equip Char 1		Equip Char 2		Equip Char 3	Equip Char 4	Equip Date	Equip Int 1	Equip Int 2	Equip Dec 1
Inventory	Inv Char 1		Inv Char 2		Inv Char 3	Inv Char 4	Inv Date	Inv Int 1	Inv Int 2	Inv Dec 1
Job	Job Char 1	Job Char 1 Descr	Job Char 2	Job Char 2 Descr	Job Char 3	Job Char 4	Job Date	Job Int 1	Job Int 2	Job Dec 1
Project	Proj Char 1		Proj Char 2		Proj Char 3	Proj Char 4	Proj Date	Proj Int 1	Proj Int 2	Proj Dec 1
Purchase Order	PO Char 1		PO Char 2		PO Char 3	PO Char 4	PO Date	PO Int 1	PO Int 2	PO Dec 1
Requisition Line	Req Char 1		Req Char 2		Req Char 3	Req Char 4	Req Date	Req Int 1	Req Int 2	Req Dec 1
Vendor	Vendor Char 1		Vendor Char 2		Vendor Char 3	Vendor Char 4	Vendor Date	Vendor Int 1	Vendor Int 2	Vendor Dec 1
Work Order	WO Char 1		WO Char 2		WO Char 3	WO Char 4	WO Date	WO Int 1	WO Int 2	WO Dec 1

Lookups

EAM Overview

Lookups

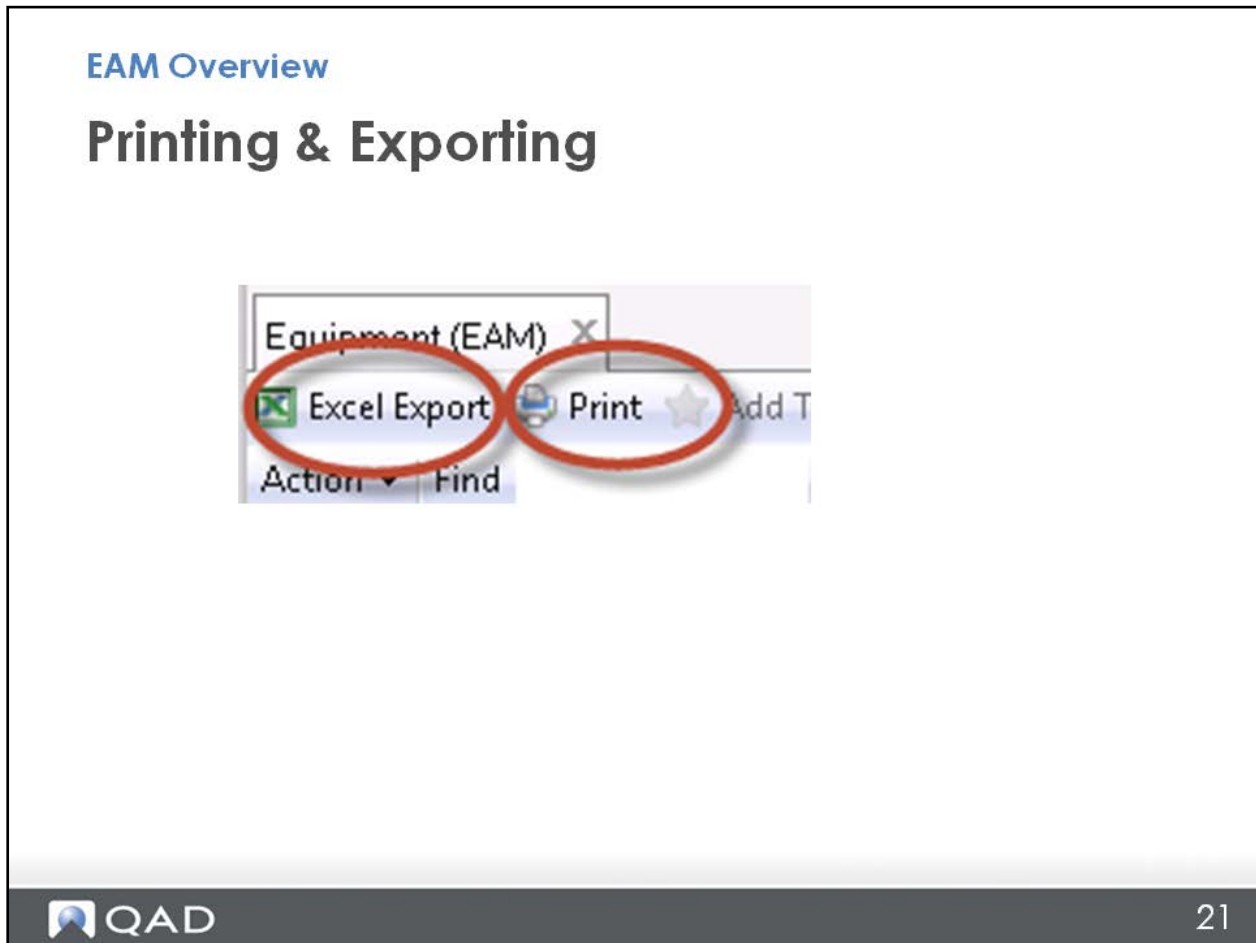
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Many fields display a small magnifying glass icon. This indicates that a validated table is associated with the field. Click the icon or use the Alt+L keyboard shortcut to display the lookup. The lookup lists available valid values; select one from the list by double-clicking.

Date fields have an associated calendar. Click the drop-down icon next to the field or use the Alt+L keyboard shortcut to display a calendar where you can select the required date.

When a lookup is activated, the view is the default view from the browse. You can add columns as needed to find the required record to select.

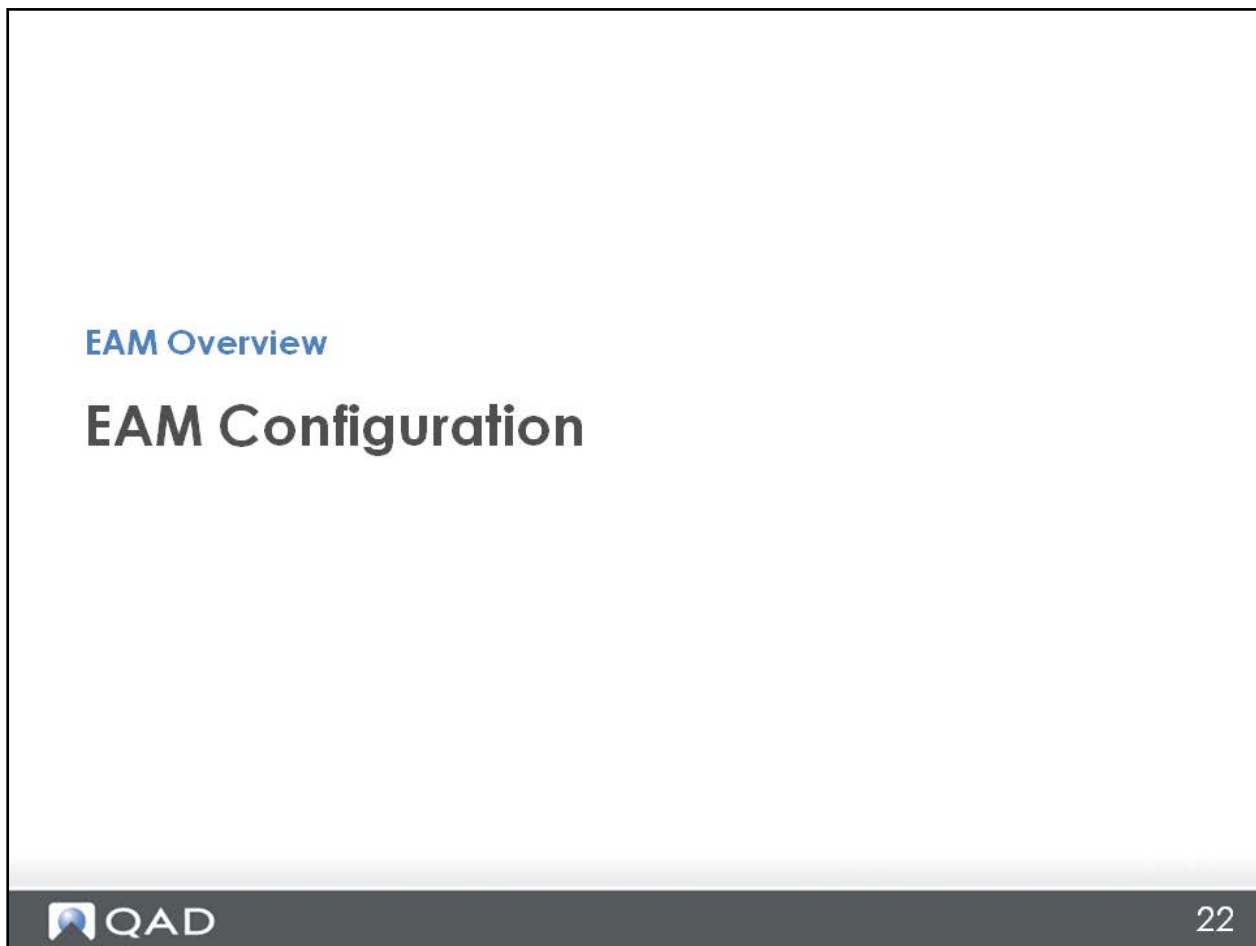
Printing and Exporting



You can print and export the records in a filtered browse, including any added columns. If you want to print a single record, create a filter for it and print from that view.

Note: This is NOT the same as printing a document such as a work order or a purchase order. This functionality can be used to replace many of the list-type reports that businesses often require.

EAM Configuration



Now that you have seen an overview of the EAM business space and the general system features, let's explore the key functionality in EAM, specifically around the four major modules of the software.

Configuration Overview

EAM Overview

Configuration Overview

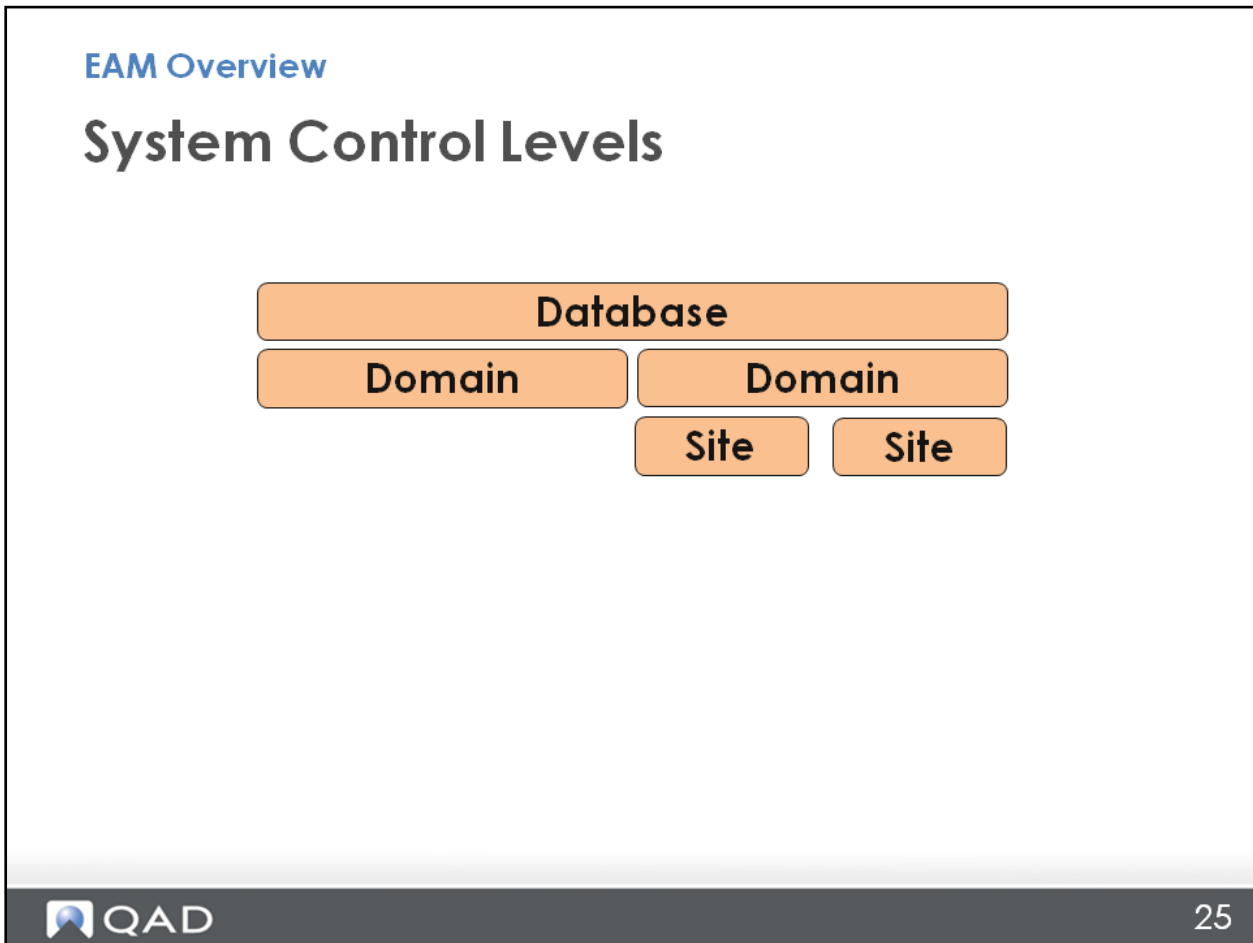
- Domains, entities, and sites
- Basic security
- Employee and user setup
- Basic system and site-control settings
- Sequences
- Other controls
- ERP and EAM shared data
- Mandatory fields
- Master codes
- EAM mail
- ERP and EAM integration points
- Mail groups
- Owner groups

Configuration: System Controls (Database)

EAM Overview

Configuration: System Controls (Database)

System Control Levels



When configuring EAM, it is important to understand that different settings are available at different levels throughout EAM.

Database-level settings control high-level configurations that affect every domain, entity, and site in that database.

Domain-level settings control functionality for all the sites within that domain.

And finally, site-level settings affect functions only within a specific site.

Throughout this portion of the guide, at the top of each slide, this diagram is used to help you to understand at which level each configuration is set.

Database-Level Settings

EAM Overview

Database-Level Settings

- EAM-wide settings (System Control)
- Examples:
 - Job controller options
 - SMTP setting for external e-mail connection

The screenshot shows the 'System Control (EAM)' configuration window for version 12.9.0.0. The interface includes a breadcrumb trail at the top right: 'Database' (highlighted in yellow), 'Domain', and 'Site'. The main content area is titled 'Detail | MFG/PRO Options' and contains several sections:

- General:** Company Name (Prod), Mandatory Color, Version No (12.9.0.0), and Last Memcheck.
- Mail Options:** SMTP Server, System Mail ID, Wait Hrs (0), and Wait Minutes.
- Revision Control:** Mstr List Rev? (checkbox).
- Password Options:** Restrict Pwd? (checkbox), Min Length (0), Exp Days, and Purge Days.

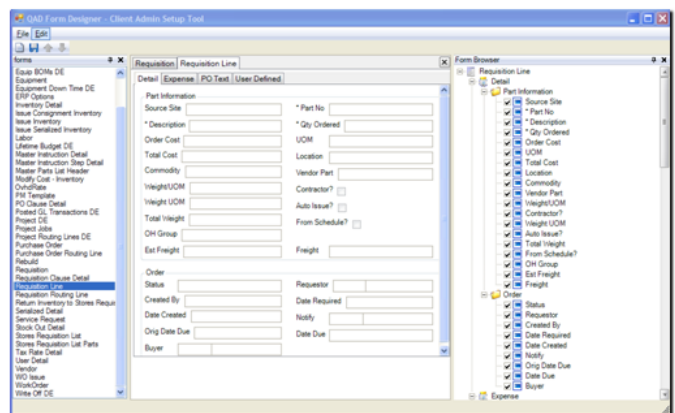
Certain aspects of EAM are applicable to the entire database, regardless of domain or entity/site. These include such things as registry settings, job controller options, password restrictions, and SMTP settings for corporate e-mail connection.

Screen Editor

EAM Overview

Screen Editor

- EAM screens are configurable
- Allows system administrator to hide fields
- Accessible under System Administrator in .NET UI
 - Select desired screen to modify
 - Screen changes are database wide



The Screen Editor is a powerful tool. For this training, it is sufficient to know that you can modify field visibility using the Screen Editor; however it is **NOT** recommended that you modify screens until you have sufficiently vetted your business processes and are confident that you know which fields you need. Often, users are unaware of other available fields that have been hidden and they begin to consider the software incomplete and inadequate.

Keep in mind that modified screens also present a challenge to Support, and for that reason, access to this screen is usually tightly secured to only the system administrator and designee at a company.

Configuration: Domain

EAM Overview

Configuration: Domain


Domains, Entities, and Sites

Database
Domain
Site

EAM Overview

Domains, Entities, and Sites

- Hierarchy: Domain > Entities > Sites
- Domain:
 - Must match ERP
 - Must be unique
 - A domain may have many sites, but the following must be the same for all:
 - Base currency
 - Daybook code
 - Domain-level settings for Maintenance, Inventory, and Purchasing
 - Setup: General | Business Units | Domain


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EAM configuration must match the QAD ERP setup to allow vital information and transactions to flow properly. The most basic consideration in this setup is the overall hierarchy of information. Below the actual database level, the primary hierarchy consists of:

Domain

Entity

Site appears as a more contained silo in EAM than in ERP. The ERP focuses more on the entity level, and EAM allows further division below that.

Not only must the Domain → Entity → Site setup and combinations match, but also certain settings associated with the levels must match the ERP configuration. This is one of the reasons why it is critical for the EAM group to be involved with final ERP decisions regarding chart of accounts and basic ERP configuration in a new enterprise-bundled product implementation, and to be kept apprised of any changes on the ERP side for the duration of use. These include base currency, mail server data, password restrictions, and daybook codes.

Domain Settings

EAM includes domain-level maintenance settings such as work order and PM scheduling, authorization settings, and reopen capabilities. There are also domain-level inventory settings such as inventory costing method, ABC settings, and other optional settings. Additionally, EAM includes domain-level settings for the purchasing area such as buyer and receipt limits. The domain's base currency is recorded here. These are covered in detail in the following pages.


Domain Settings – Detail Tab

Database
Domain
Site

EAM Overview

Domain Settings – Detail Tab

- Note that the following are set at the domain level:
 - Language
 - Bill-To, Ship-To, and Clause Type codes
 - Daybook code


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Under General|Business Units|Domains, you can see the domains and their settings. The domain description is found on the Detail tab. When integrating with the core QAD product, this information should match the ERP system's domain information. Also on the Detail tab is the language setting, Bill-To, Ship-To, and Clause Type codes required for integration. This information tells EAM where to look for the data that will be downloaded into EAM. Typically, the fields are 'company' for Bill To and Ship To and '*' for the Clause Type fields. For QAD Enterprise Edition integrations, a daybook code is required. Record a daybook code that has been defined in the core QAD application.

Domain Settings – Maint Tab

EAM Overview

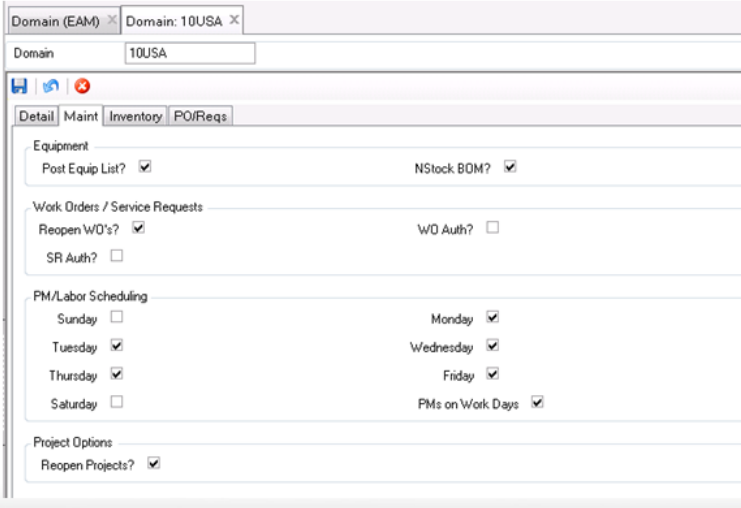
Domain Settings – Maint Tab

- Domain-level settings for Maintenance control
 - Behavior of automated BOM build
 - Work order/ service request authorization
 - Labor scheduling
 - Ability to reopen closed records

Database


Domain

Site



The screenshot shows the 'Domain Settings - Maint Tab' configuration page for domain '10USA'. The page is divided into several sections with checkboxes for configuration:

- Equipment:** Post Equip List? ; NStock BOM?
- Work Orders / Service Requests:** Reopen WO's? ; SR Auth? ; W/O Auth?
- PM/Labor Scheduling:** Sunday ; Tuesday ; Thursday ; Saturday ; Monday ; Wednesday ; Friday ; PMs on Work Days
- Project Options:** Reopen Projects?


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Domain-level settings for the maintenance functions are found on the Maint tab. The Equipment section handles the building of the equipment Bill of Materials (BOM) and the data source. The CIM Load settings of Reading or Usage are read when you use a batch load routine to upload Equipment Driving Unit of Measure (DUOM) readings. Use the setting that defines how the source data is captured.

In the Maintenance module, the setting that controls whether work order and/or service request authorizations are required is configured at the domain level. You can also determine the days of the week on which the system can automatically schedule maintenance when work orders are created.

Domain Settings – Inventory

EAM Overview


Domain Settings – Inventory

- Inventory costing method
- Stock replenishment controls
- Accounting behaviors
- Part description protection

Database

Domain

Site


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Inventory settings, such as the costing method, are configured on the Inventory tab. Companies can decide whether they want to integrate their maintenance planning with their inventory controls and purchasing controls by using inventory reserves. These settings allow a company to put inventory on reserve and to determine whether any reserved inventory should be considered when reordering stock. The ABC fields are available for use in inventory cycle counting.

Domain Settings – Purchasing

EAM Overview

Domain Settings – Purchasing

- Base currency
- Buyer/receiving limits
- Ability to reopen closed PO/Req
- When to send PO to ERP

The screenshot displays the 'Domain (EAM)' configuration window for 'Domain: 10USA'. The 'PO/Reqs' tab is active, showing the following settings:

- Options:**
 - Any Buyer?
 - Base Currency: USD
 - Upd Receiver?
 - Receipt Limit Amount: [Empty]
 - Receipt Limit %: [Empty]
 - Receiver? MFGPRO
 - Use Only Vendor Currencies
 - Reopen PO/Req?
 - Nstock UOM: EA
 - Receipt Limit
 - EAM Recv Prefix: [Empty]
 - Budget Code: [Empty]
- Buyer Limits:**
 - Enforce Buyer Limits?
 - Use Enforce Buyer Limits for BO?
 - Increase Amount: [Empty]
 - Increase %: [Empty]
 - Decrease Amount: [Empty]
 - Decrease %: [Empty]

Purchasing settings are defined on the PO/Reqs tab. Purchasing limits (for buyers and receivers) are generally defined at the corporate level within the company's "Spending Limits of Authority" or other financial controls. For this reason, purchasing settings are configured at the domain level in EAM and are enforced consistently across all entities/sites. The base currency of the domain is set here, and you must select the Create PO When? field for any new domain, regardless of whether the company is using Purchasing.

Configuration: Sites

EAM Overview

Configuration: Sites


Site-Level Settings

Database
Domain
Site

EAM Overview

Site-Level Settings

- Maintenance, Inventory, and Purchasing functions/requirements can be defined at a site level
 - Purchasing approval methods
 - Bill To & Ship To defaults
 - Work order requirements
 - Inventory controls
- Each site can have a set of default cost centers, accounts, and sub-accounts for financial reporting
 - Use a subset, not the full chart


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Below the domain-level settings, EAM also provides many configurable site-level settings to help each site to manage its reliability program according to its own localized requirements. The *QAD Enterprise Asset Management User Guide* provides more detail on each of these settings, but some of the more important settings controlled at the site level are:

Purchasing Approval Methods: Because most corporations define high-level financial controls for purchasing, but leave the more detailed control to each facility, you can define Purchasing Approval Methods at the site level.

Each site within a domain typically has a different shipping address, and may even receive invoices directly for approval, rather than having them sent to a centralized location.

EAM provides various inventory controls that primarily drive site-level reporting. For example, at one facility, the management may not want to include physical inventory adjustments as part of inventory usage, but at another facility, inventory loss may be of such concern that management want to include these adjustments in reports of inventory usage.

As with purchasing, most corporations define high-level controls for the approval of capital and expense projects, but at the site level, those controls may be further broken down at the discretion of site-level management.

EAM allows each site to maintain a sub-set of the overall chart of accounts, as needed, to further control and report financials. You can define default accounting information for each transaction type and exception handled.


Basic EAM Security

Database
Domain
Site

EAM Overview

Basic EAM Security

- EAM's security is Roles based
 - Allows simplified security definition
 - Security in previous versions was cumbersome
- User may have:
 - Multiple roles in one site
 - Different roles in different sites
- What can be secured:
 - EAM menus
 - Toolbar icons
 - Submenus
 - Actions
 - Edit/View/Print/Export


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To access EAM, a user must first have access to QAD and then the user can be assigned specific EAM access.

In EAM, the security is role based, meaning that a single user can be assigned multiple roles, as needed, to fulfill his or her job, without the need for multiple logins.

Security is also site specific, so you may have access to certain EAM functions in one site and not have that same access in other sites.

Basic EAM Security – Roles

EAM Overview

Basic EAM Security – Roles

Database

Domain

Site

Home Roles Name: TECHNICIAN, Site: SA...

Name: TECHNICIAN
Site: Role/Site

Menu

- Maintenance
- Equipment
- PM / PdM
- Work Orders
 - Assigned
 - SubMenu Labor History
 - Instruction Lists
 - WO Instruction List Hdr
 - WO Instruction
 - Authorize
 - Change Status
 - Cost Analysis
 - Post Labor
 - Reopen
 - Global Change Status
 - Global Edit
 - Global Authorize
 - Issue
 - Reverse Labor
 - Copy Master Instruction List
 - Action Print Document
 - Global Print Document
- Service Requests
- Labor History
- Codes
- Inventory
- Purchasing
- Finance
- General
- Analysis
- System Administration

Access

- Full
- None
- Partial

Options

- Print/Export

QAD

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The definition of security roles in EAM is a visual process. Controls are available at the overall access level (Full, None, or Partial) to quickly define access at the high level. Menus, submenus, actions, and toolbar functions can be secured by role with an easy to use visual layout for evaluating the definition.

Setting Up Users in EAM 2015

EAM Overview

Setting Up Users in EAM 2015

1. Create user in QAD EE
2. Set password
3. Associate EE user to domain & entity
4. Associate EE user to EE role by domain & entity
5. Download user to EAM via job controller
6. Create EAM employee
7. Associate EAM employee with downloaded user
8. Assign EAM user sites
9. Assign EAM user roles

Note: Users, Roles and Employees can be dataloaded using CIM loads and the EAM dataload utility.

Setting Up Users in EAM 2015

EAM Overview

Setting Up Users in EAM 2015

	Step	Screen
EE	Set up a new user	User Maintenance (36.3.1)
EE	Initial password setup	User Maintenance (36.3.1)
EE	Add domain/entity access	User Domain/Entity Access Maintain (36.3.4)
EE	Add role to user	Role Membership Maintain (36.3.6.6)
EAM	Run Job Program	Job Controller
EAM	Set up employee	Employees
EAM	Link employee to new user	Users
EAM	Complete user setup	Users
EAM	Associate user to role	User/Roles

Completing User Setup in EAM

EAM Overview

Completing User Setup in EAM

- User record
 - Requires a unique e-mail address
 - Provides controls
 - Spending limits
 - Account and/or cost center groups are used in requisitioning
 - Approval groups
 - User-based routing

The screenshot displays the 'User ID: SP1tsos' configuration page. The top navigation bar includes 'Home', 'Roles', 'Users', and 'User ID: SP1tsos'. The main content area is divided into 'Detail' and 'Mail Opt' sections. The 'Detail' section includes 'Preferences' with fields for 'Emp No' (SP1tsos), 'Language' (US), and 'Orig Notify' (AGay). It also features 'Spending Limits' with checkboxes for 'PO Limit?', 'Req Limit?', and 'Req Over Limit?', and input fields for their respective values. The 'Horizontal Approver' section has a 'Horizontal Approver?' checkbox. The 'Internet Mail' section includes a 'Receive Email?' checkbox and an 'Email' field with the value 'zsp@qad.com'. The 'Printing' section has a 'Print Title Page?' checkbox. The right sidebar shows a 'User' section with 'User Site' highlighted.

The user ID provides controls that are important to an individual's use of EAM.

At the user level, the following additional controls apply:

- PO approval limit
- Requisition approval limits (capital, expense, and project)
- Over-spend limits (for when budgets are used)
- Project approval limits
- Accounts/cost centers that the user is authorized to use in purchasing
- User-based approval routing, if applicable
- Internet mail settings
- Print controls for including a title page on reports
- EAM mail notification options

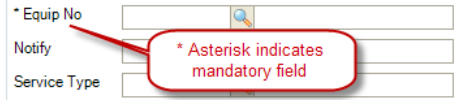
Mandatory Fields


Database
Domain
Site

EAM Overview

Mandatory Fields

- EAM allows fields to be marked as mandatory on certain screens
- You cannot save a record without filling in that field
- Some conditional mandatory field examples:
 - Work Order > Close
 - Job (Project)
- Visibly differentiated on the screen when conditional on Save




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It is important to ensure that the mandatory fields support the business process. For example, if a sub-account is needed on every GL transaction, then Sub Account should be a mandatory field. On the other hand, if a field is not required or not used, making it mandatory will confuse the user and add an unnecessary additional step.

Conditional mandatory fields, like Job, allow a field to be mandatory only when the project is entered.

Sequences

Database
Domain
Site

EAM Overview

Sequences

- The sequence fields are broken into two major groups: system and site
 - System-wide sequences that need to be set include Transit Numbers, PM Templates, and Master Lists.
 - Sequence settings set by site include WO and stores req numbers, PO numbers, and requisition numbers.

Home System Sequence

Excel Export Print Add To Favourites New Undo

Find Filter ALL Default

Version No	Transit No	Stock Out No	Receiver No	PM Template No	PM Run No	Master Tool No	Master Parts No	Master Instr No	Job ID	Claim No
12.8.0.0	1	0	0	1055	0	0	12	40	0	0

Home Site Sequences

Excel Export Print Add To Favourites New Undo

Find Site 10-100 Filter ALL Default

Site	WD No	Stores Req No	Stock Run No	Service No	RFQ No	Req No	PO No	Multi-Line No	Inv Trans No	Inv No
10-100	200	54	1	9	2	28	1003	12	105	2
10-200	99	0	0	0	0	0	999	0	4	0

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The Sequences defined in this screen drive the numbering of certain sequential records in EAM. When a sequential record is created, EAM automatically increments the number on this screen and displays the next sequential number.

Some records must be unique across all sites and, therefore, are defined at the database level. In general, database-level records are records that may be shared across sites or that must always be unique upon being passed to ERP (such as the receiver number).

Other sequences are used on site-specific records. These records are combined in the EAM database with a site number to make them unique. Also of note is that the PO number, which is passed to ERP as a record identifier, can be combined with a site-specific prefix in order to ensure that, within the ERP system, the EAM PO number does not “step” on the same number from another source.

In implementation, the sequences defined on this page require thorough consideration.

IMPORTANT NOTE: After first loading master data like instruction lists and PM templates, be sure to update the sequence numbers. Also, if you select New for any of these types of records, but do not save the record, the sequence number is not reused.

Comments? Go to goo.gl/MfwKHm

ERP and EAM Shared Data

Database
Domain
Site


EAM Overview

ERP and EAM Shared Data

- ERP is the system of record
 - Bill-to, currency, accounts, cost centers, sub-accounts, GL calendars, projects, ship-to, standard clauses, terms, and vendors.
- Allows for a subset of data
- Manually downloaded
- Routines can pick up changes (via various job control programs)

⚙️
Applications

- 📄 Bill To Download
- 📄 Currency Download
- 📄 EE Account Download
- 📄 EE Cost Center Download
- 📄 EE Sub Account Download
- 📄 GL Calendar Download
- 📄 Project Download
- 📄 Ship To Download
- 📄 Standard Clauses Download
- 📄 Terms Download
- 📄 Vendor Download


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In addition to the GL calendar, ERP and EAM share the following data for which the ERP system is the system of record:

- Cost centers/accounts/sub-accounts
- Bill-to/ship-to records
- Budgets
- Currency (with currency conversion factors)
- Languages
- Project numbers
- Standard clauses
- Terms
- Vendors (suppliers)

Note that new records must first be downloaded manually to EAM, but thereafter, EAM's background processes manage updates to the existing records with the Job Control programs.


Financial Controls

Database
Domain
Site

EAM Overview

Financial Controls

- Cost center and account groups (site specific)
 - Defines those against which a user is allowed to requisition
 - Not to be confused with routing/authorization approval
- Accounting calendar (domain specific)
 - Synchronized with the ERP accounting calendar
 - Used for financial reporting periods
 - System control settings can prevent EAM users from posting transactions in a previous period
 - Closed periods do not allow any additional transactions and do not allow a reopen option


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EAM provides a level of financial control beyond that in ERP by allowing you to restrict which cost centers and accounts users are allowed to perform transactions against such as in purchasing. Cost center restrictions are the most common. Account restrictions can become cumbersome to maintain.

Cost center and account groups are **NOT** the same as cost center and account approval groups. The cost center and account groups only control which cost centers and/or accounts a user may use for requisitions.

The GL calendar in ERP is critical for defining and controlling financial periods, and for this reason, EAM's GL calendar should be synchronized with the ERP GL calendar. Note that closing a period in ERP does not automatically close a period in EAM. EAM closure is a separate and manual activity.

Note: You **cannot** re-open GL periods in EAM.


Basic Master Data

Database
Domain
Site

EAM Overview

Basic Master Data

- Master codes are maintained in associated modules
- Different levels: database, domain, site
- Chart of accounts from ERP
 - Account
 - Sub-account
 - Cost center
- UOM conversions
- Currency conversions
 - Pulled from ERP
 - Allows ERP to drive updates to conversion factors

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Master data is primarily the means by which a company intends to organize and report upon data. Aside from the synchronized codes previously discussed, EAM provides many master code tables to assist with slicing and dicing your data.

Configuration – Review

EAM Overview

Configuration – Review

- Basic
 - Database settings
 - Domain-level settings
 - Site-level settings
 - Security
 - Master data
- General system configuration
 - Employees and users
 - Sequences
 - Screen editor
 - Master data
 - EAM mail

CHAPTER 2

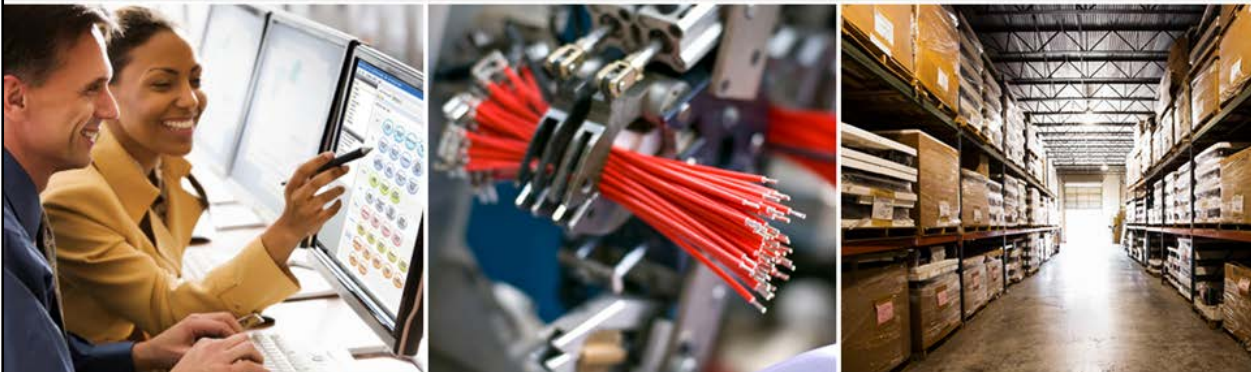
Maintenance

Maintenance

EAM Training Guide

Maintenance

EAM 2015



Our Passion. Your Advantage.

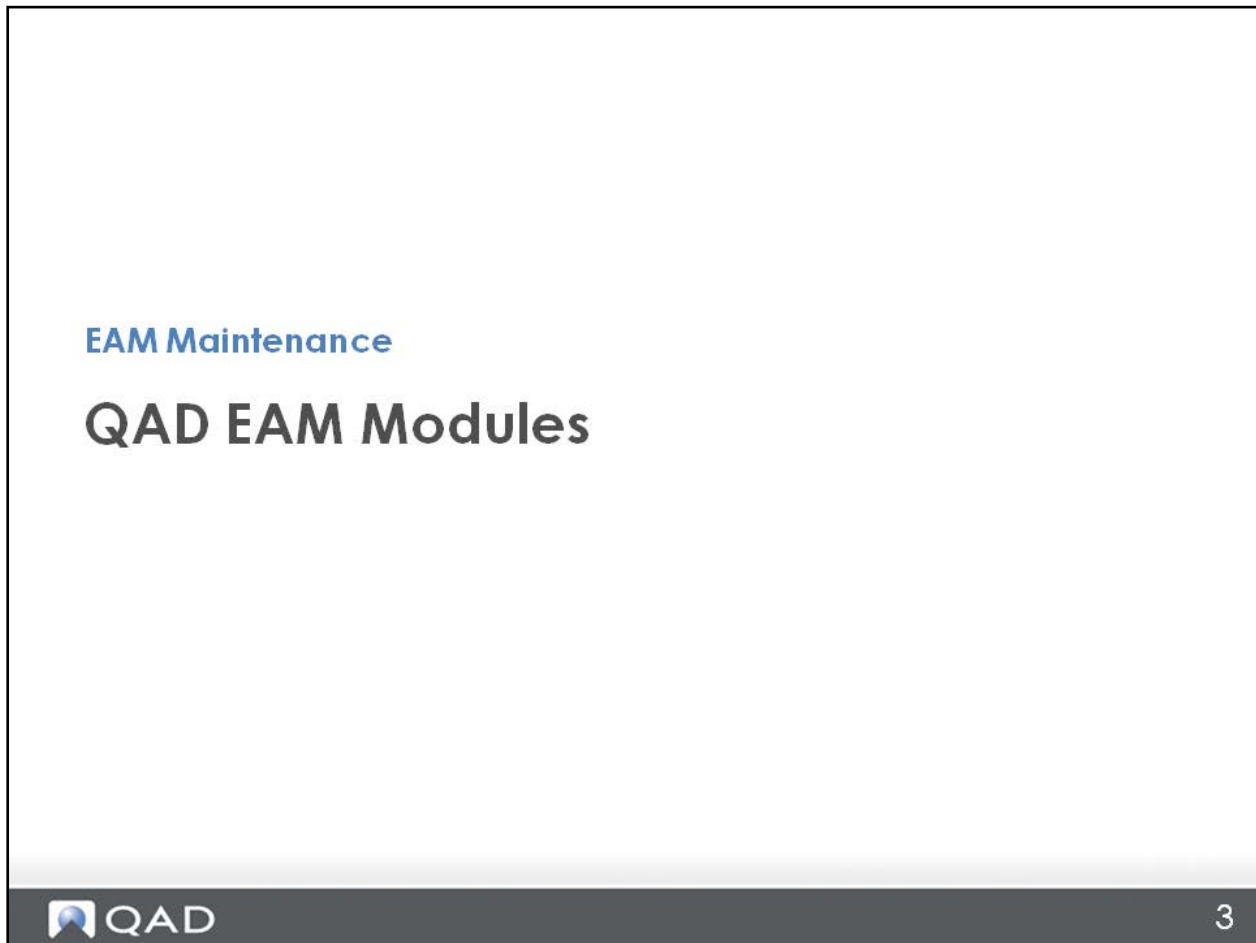
Maintenance – Overview

EAM Maintenance

Maintenance – Overview

- EAM module
- Maintenance overview
- Key concepts
- Setup – high level
 - Domain settings
 - Site settings
 - Equipment records
 - Preventative maintenance (PM) records
- Maintenance process step through
- Setup – more details
 - Equipment
 - Master instruction lists
 - PM routes
 - PM templates
 - Service requests
 - Downtime records
 - Production driven maintenance
 - MS Project integration

QAD EAM Modules



Now that you have seen an overview of the EAM business space and the general system features, let's explore the key functionality in EAM specifically around the four major modules of the software.

QAD EAM Overview – Modules

EAM Maintenance

QAD EAM Overview – Modules

- **Maintenance**
 - **Equipment efficiency**
 - **Plant reliability**
- Inventory
 - Right size MRO/Indirect inventory
 - The right parts when you need them
- Purchasing
 - Control MRO/indirect spend
 - Comply with corporate financial approvals
- Project controls
 - Manage project spend
 - Track true acquisition cost of assets

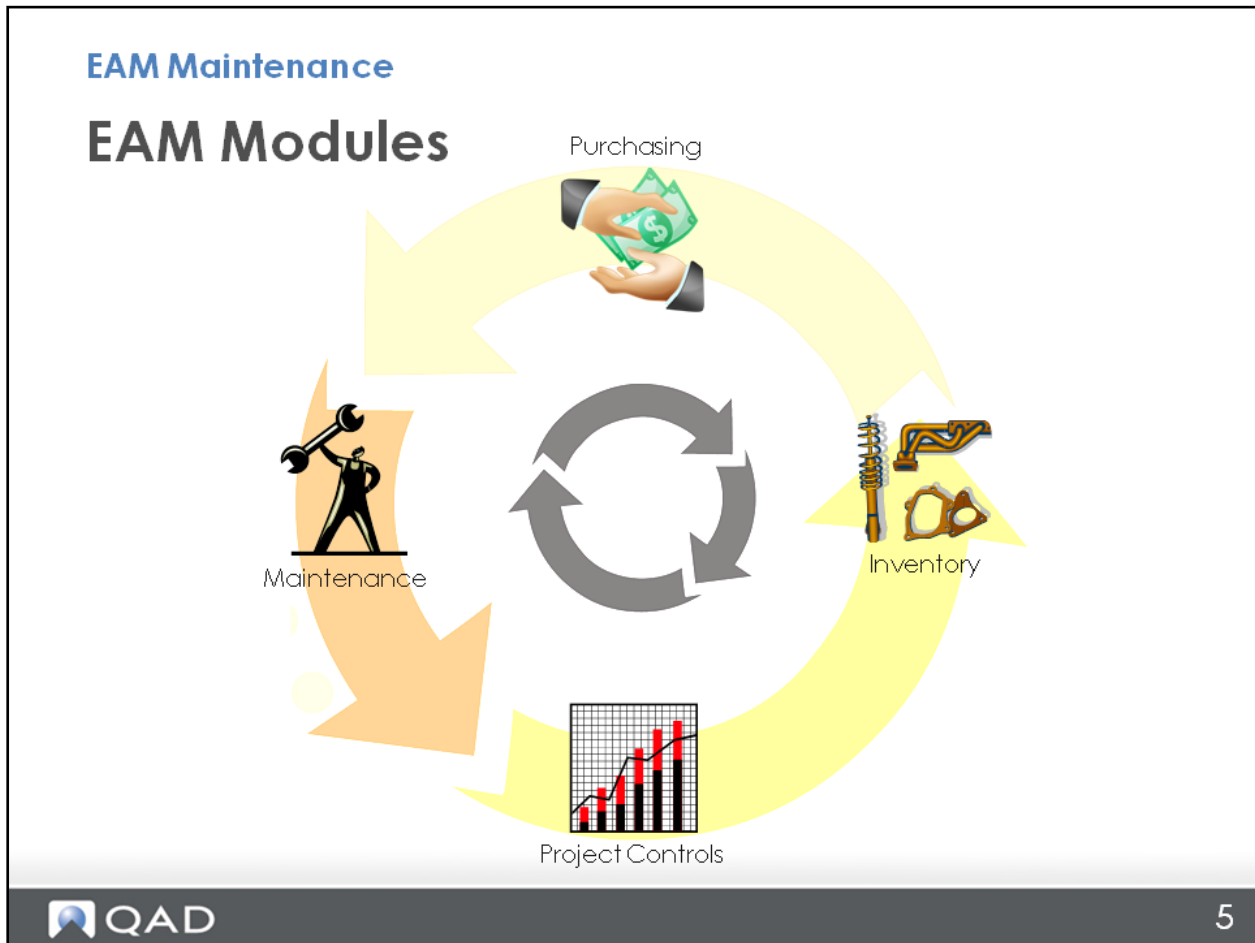


As we continue through this class, it is important to keep in mind that EAM has four major modules, or areas of operation, as well as to keep in mind how each area contributes to a facility's overall reliability, lean initiatives, and cost controls. Understanding the value proposition for each area and how the areas work together will assist you in designing the proper solution for any business need around EAM.

Notice how each of these modules addresses business drivers. As you begin to link business drivers with EAM functionality, you will better understand the overall domain space of EAM.

This section of training pertains directly to maintenance.

EAM Modules



- Purchasing
- Inventory
- Maintenance
- Project Controls

These modules are the portals with which users interact to accomplish their daily tasks. Notice how each of these modules forms a piece of a complete circle. While certain elements of EAM can be implemented without implementing others, EAM is at its best when all four modules work together to form a true Enterprise Asset Management solution.

In the various sections of this EAM training class, you will explore each of these modules and learn the business space of each.

Course Objectives

EAM Maintenance

Course Objectives

- Understand the Maintenance module domain space
 - Know how reliability efforts can benefit from EAM
- Obtain high-level understanding of the Maintenance module functionality
 - Use the activities handbook to perform basic maintenance functions
 - Prepare for the next steps toward certification

Maintenance Overview

EAM Maintenance

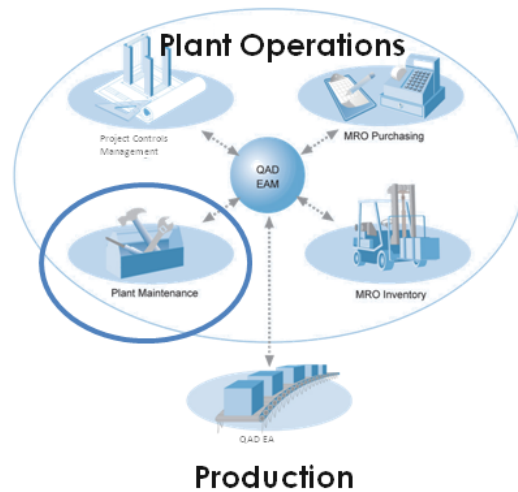
Maintenance Overview

Plant Maintenance Overview

EAM Maintenance

Plant Maintenance Overview

- Maximize manufacturing equipment utilization and minimize repair costs
 - Schedule and track preventive and predictive maintenance to optimize equipment utilization
 - Schedule maintenance based on production data from QAD ERP system
 - Prioritize repair work
 - Manage repair costs
 - Track repair history



Within an organization, the maintenance department is responsible for making sure that the equipment is running at optimal levels. The goal is to ensure that the equipment is available when needed to support operations, but at the same time, the maintenance department must schedule its work around when production is using the machines. Companies that invest in computerized systems are looking for ways to make their equipment and the maintenance department more efficient.

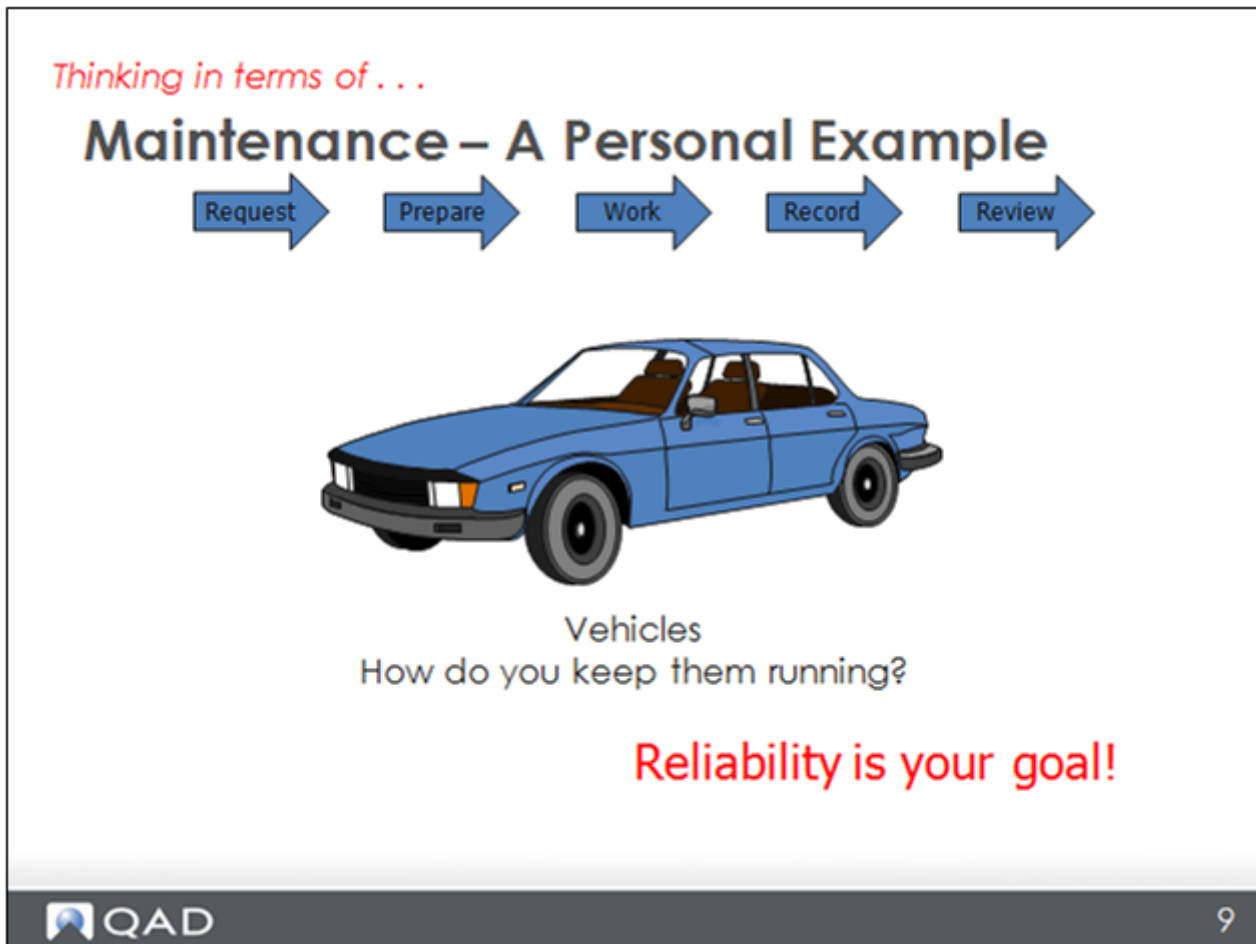
Within a computerized system, use the Maintenance section to drive the work order process for maintenance and repair operations. This application includes all preventive/predictive maintenance (PM/PdM), plus planned and unplanned work to keep equipment operating at capacity.

Every business has supporting facilities and equipment (assets), whether the organization makes cars, builds planes, creates software, or provides education. If these assets are not well maintained and managed, the efficiency of the business suffers. Use EAM to establish equipment records and hierarchies, to create work orders from service requests, and to perform preventive maintenance. Use EAM to track the total cost of labor, materials (internal and external), and subcontractor services.

The basic building block of the maintenance operation is the equipment record.

Reference materials, such as *World Class Maintenance Management* by Terry Wireman, provide a solid foundation for understanding the maintenance business space.

Maintenance – A Personal Example



When you think of maintenance in a personal example, you can use the same philosophy that companies use for maintenance of their production equipment.

How do you ensure that “Old Faithful” is ready when you need it?

You perform preventive maintenance by:

- Changing the oil every three months or 3000 miles – Calendar/DUOM PM
- Washing the car following heavy snow, salt – event based
- Filling the air in the tires based on pressure gauge reading compared with min/max requirements from the OEM

You perform corrective maintenance as needed:

- When you have a flat tire
- When the battery goes dead
- When the car does not start

How do you schedule the maintenance?

- When will the car be available for an oil change? (Scheduled outage)
- What if the car breaks down? (Unscheduled outage)

Do you have the inventory to take care of your car?

- Some items are in stock, like your spare tire
- Some items are not held in stock but you want to have the part number handy in case you do need it – like wiper blades, oil, and air filters
- Some items you might make to keep in your car like a CD burned with music designed to put the kids to sleep. This is what a plant would call an internally fabricated part
- You must keep track of your insurance card, which is a virtual part for your car.

When buying the items or things you need, it is important to know the details of what might come up.

- Stock parts
- Non-stock parts
- Fuzzy dice to hang from the rear-view mirror (definitely a spot buy!)
- Services – car wash

When you need repairs or work, do you call your mechanic for an appointment and describe the problem? (service request)

Is it not also important to know your cost of ownership? Do you include just your monthly payments and insurance, or do you also add in the cost to fill the tank, keep it clean, and get the oil changed? How do you decide when to replace “Old Faithful” with a newer model?

Who uses EAM Maintenance?

EAM Maintenance

Who uses EAM Maintenance?

- Maintenance manager
- Reliability manager
- Planner (planner = yes)
- Scheduler
- Technicians (assigned = yes)
- Anyone requesting service from maintenance

EVERYONE!!!



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The Maintenance module's most robust users include employees in the maintenance organization, and often the Engineering and Quality departments. As you would expect, these power users leverage EAM for planning, scheduling, detecting trends, and predicting failures. However, it is important to note that an organization that is properly using EAM allows anyone in the organization to enter a service request, though these users are not considered power users.

Think of it like this: the service request is the organization's best practice method of alerting the Maintenance department of something requiring attention. The nature of service requests can range from a production line supervisor notifying maintenance of a potential issue with production equipment, to the front office notifying maintenance of a blown light bulb. By entering a service request, the requestor receives notifications of its status, allowing the maintenance organization to plan and schedule work based upon priority rather than being called from task to task in a reactive manner.

So, anyone and everyone can use EAM to help Maintenance to reach their goals. Therefore, you can say EAM Maintenance is used by everyone in a facility.

Maintenance Role in EAM

EAM Maintenance

Maintenance Role in EAM

- Addresses ALL requests for repairs
- Enables the maintenance manager to review ALL costs in a single system
- Equipment and work orders are the backbone
 - All work captured to specific equipment
 - History tracked through:
 - Equipment
 - Work order
 - Create work orders for scheduled preventive maintenance
- Key to collection of cost of ownership
- All other modules can tie into Maintenance

Key Concepts

EAM Maintenance

Key Concepts

Maintenance Key Concepts

EAM Maintenance

Maintenance Key Concepts

- Equipment records are the key foundational record
- Types of work orders
 - Corrective maintenance (CM)
 - Preventive maintenance (PM)
- Special work orders
 - Fabricated parts (internally build inventory)
 - Changeovers/product change
 - Serial rebuilds

Maintenance Key Concepts (cont.)

EAM Maintenance

Maintenance Key Concepts (cont.)

- EAM work orders \neq ERP work orders
- Highest calling of plant maintenance
 - Maintain the most valuable assets (production equipment) to ensure the plant keeps producing and selling
- EAM tracks cost of ownership

Maintenance Best Practices Goals

EAM Maintenance

Maintenance Best Practices Goals

- World class PM:CM ratio is 85:15
- Increase plant reliability by
 - Reducing unscheduled downtime
 - Improving quality
 - Increasing equipment availability (or uptime)
- Utilize cost of ownership to make repair/replace decisions

Until the last few years, the target ratio of preventive maintenance (PM) to corrective maintenance (CM) was 80:20. However, since then, the bar has been raised to world class being 85% preventive and only 15% corrective.

Maintenance Best Practices Goals

EAM Maintenance

Maintenance Best Practices Goals

- Prioritize work to support reliability
- Schedule work to minimize impact to production
- Effectively utilize resources
- Reduce schedule breaks
- Increase "wrench time" and decrease "travel time"
- Increase proactive planning and scheduling

Maintenance Setup – High Level



This section explains the high-level configuration and record settings that drive the Maintenance functionality. Later in this course, we will cover certain aspects of setup in much greater detail.

Maintenance Setup – Key Settings

EAM Maintenance

Maintenance Setup – Key Settings

- Domain settings
 - Post Equip List?
 - Reopen WO?
 - WO Auth?
 - SR Auth?
 - Labor Scheduling
- Site settings
 - Equipment lookup
 - Labor default accounting

Processes x Domain (EAM) x Domain: 10USA x

Domain: 10USA

Detail | Maint | Inventory | PO/Reqs

Equipment

Post Equip List? NStock BOM?

Work Orders / Service Requests

Reopen WO's? WO Auth?

SR Auth?

PM/Labor Scheduling

Sunday Monday

Tuesday Wednesday

Thursday Friday

Saturday PMs on Work Days

Project Options

Reopen Projects?

At the domain level, the key settings for EAM include defining if and how a Bill of Materials (BOM) is built when inventory or parts are used. Companies may wish to have service request or work order authorization turned on so that work cannot begin without official approval. You can define the days of the week for PM tasks with Labor Scheduling, and PM scheduling can be set up on a different schedule than CM scheduling.

At the System Control Settings level, no settings are specifically related to Maintenance other than the options to turn on Revision History tracking for master lists.

On the site-settings level, as with the other modules, the ability to define certain key accounting defaults in advance ensures that labor credit is accounted for properly. Also, on the site level, you determine whether the Equipment lookup screen displays equipment records in list form or if the drill-down “parent/child” relationship should display.

Maintenance Setup – Key Settings

EAM Maintenance

Maintenance Setup – Key Settings

- Employee ID
 - Planner?
 - Assigned?
 - Responsible?
 - Craft
 - Pay rate
 - Labor default accounting
- WO approval groups
- Record-level control – OWNER groups

The screenshot displays the 'Employees (EAM)' interface for Site 10-100 and Employee 10EMP17. It is divided into two main sections: 'Personal' and 'Codes'. The 'Personal' section includes fields for name, address, contact information, and labor accounting details. The 'Codes' section includes fields for craft, crew, shift, and hire date, along with checkboxes for 'Planner?' and 'Assigned?'. A red oval highlights these two checkboxes.

The Employee record contains many settings to support maintenance. Employees who are planners, or the responsible person of record, must be marked with that designation to make them available on lookup lists. All technicians who will be assigned to a work order or have labor posted for them must have the Assigned? field selected and have a pay rate entered on their record. Note that the pay rate is typically NOT the actual pay rate for an individual, but a blended rate applied to all resources in the department.

You can also assign default labor accounting on an employee record to have accounting used on the credit side of the transaction when labor costs are debited to the equipment. Labor transactions may be internal to EAM for cost tracking in EAM or may generate GL transactions to send to ERP.

Owner groups are a great way of implementing record-level security if you have different groups with the same security access such as to modify equipment. Be cautious and assign security access for records to owner groups rather than individuals to keep a record from being permanently restricted if an individual with record-level security leaves the company.

Equipment Record Overview

EAM Maintenance

Equipment Record Overview

- Represents ANYTHING for which work can be scheduled and costs collected
 - Even virtual work – like production lines or work centers
- Created at the lowest level that management wants to track costs
- MUST be unique across database

Use Equipment to store and track the following information: cost analysis, failure analysis, bill of materials (BOM), driving units of measurement (DUOM), serialized components, tracking, and service requests. Track regularly scheduled work and breakdowns while collecting repair and maintenance cost information for each piece of equipment.

Equipment Record Overview

EAM Maintenance

Equipment Record Overview

- Created from a completed capital project
- Schedule routine preventive maintenance
- Schedule work orders to track repair history and cost
- Track cost of ownership on Cost Analysis submenu
 - Internal material
 - External material
 - Subcontractor costs
 - Internal labor

Equipment Record Overview

EAM Maintenance

Equipment Record Overview

- Accounting defaults
- Parent/child relationship
 - Roll-up costs
 - Many children to one parent
 - Many levels of children



The accounting defaults on the Equipment record are critical to ensuring that costs are posted to the proper cost center/account/sub-account. While accounting on the Inventory records is not usually encouraged, accounting on the Equipment record is highly recommended.

There is a system limit of 500 top-level equipment records. If using parent/child relationships, QAD recommends that you use no more than four-to-five top-level parents to organize the list.

PM Record Overview

EAM Maintenance

PM Record Overview

- EAM's plant maintenance keeps plants up and running through effective preventive maintenance (PM) programs.
 - Establishes an automated schedule
 - Production driven maintenance
 - Schedule maintenance based on actual production data from ERP
 - Predictive Maintenance
 - Customize a maintenance plan based on past failures
 - Failure codes



As maintenance departments mature in organizations, the people in charge quickly realize that a little preventive maintenance can go a long way. If you fail to change the oil in your car, you will cause more problems and cost yourself more money than if you spend a little money periodically on preventive maintenance. Using a computerized system allows the company to automate the scheduling of maintenance events.

A manufacturer may provide recommendations regarding the frequency of maintenance, which may be based strictly on a calendar timing – like changing the batteries in your smoke alarms every six months. Maintenance recommendations may be based on equipment usage – like changing the oil every 3,000 miles. Over time, the system, using history, starts to predict when a failure may occur. More mature maintenance organizations also use advanced technologies like vibration analysis or temperature and trigger work when things fall outside of a predetermined tolerance level.

PM Maintenance Setup and Options

EAM Maintenance

PM Maintenance Setup and Options

- PM goal
 - Perform specific maintenance activities at specific intervals
 - Avoid unplanned breakdowns
 - Excessive breakdowns = improper PM!!
 - Alternatively, too few breakdowns means excessive PM
- Scheduling options
 - PM frequency
 - Calendar
 - Driving unit of measure (DUOM)
 - Both (calendar or DUOM)
 - Events

There are four different ways to schedule PMs:

Calendar (every six months)

DUOM or Driving Unit of Measure (change the car's oil every 3,000 miles)

Both Calendar and DUOM (change the car's oil every 3,000 miles or every three months, whichever comes first)

Event (a holiday or shutdown such as the end of a production run)

PM Maintenance Setup and Options

EAM Maintenance

PM Maintenance Setup and Options

- Planning options
 - Lead days
 - Used to give advanced notice for planning manpower and parts
 - Sliding schedule
 - Allows schedule to slide based on when work was last completed
 - Caution: Do not use for audited PM programs. This can cause a monthly PM to be completed less frequently
 - Duration
 - Generates an anticipated target date for x number of working days after the Start Date of the work order

PM Maintenance Setup and Options

EAM Maintenance

PM Maintenance Setup and Options

- Master lists
 - Used with multiple PM templates
 - Instructions list
 - List of procedures to be performed
 - Narrative description of work to perform or a document
 - Classified as Instruction, Safety, or Route
 - Used to standardize PMs for like equipment across entire organization
 - Parts list
 - List of parts required
 - Convert to a pick list (stores requisition) to allow staging/kitting and issuing of parts
 - Reserve inventory to assist in replenishment due to planned usage

Master Lists are designed to be used by multiple pieces of equipment. Companies often have several pieces of the same equipment in their plants. Master Lists allow companies to apply the same criteria and procedures to each piece of equipment, regardless of who is going to be doing the work. Master Parts Lists allow the company to plan for the parts that will be needed, notifying the tool crib or purchasing department that these items need to be purchased and ready.

PM Templates Issue Methods

The screenshot displays the 'PM Templates Issue Methods' form in the QAD EAM Maintenance system. The form is titled 'EAM Maintenance PM Templates Issue Methods' and shows various scheduling options. The 'Issue Method' is set to 'Both'. The 'Calendar' section is highlighted with a red box and labeled 'Calendar based', showing 'Issue Cycle' as 'Day', 'No of Cycles' as '0', and 'Next Issue' as '5/22/2015'. The 'Driving UOM' section is highlighted with a red box and labeled 'DUOM based', showing 'DUOM' as 'HR', 'DUOM Cycle' as '20.0000', and 'Next DUOM Issue' as '20.0000'. The 'Event' section is highlighted with a red box and labeled 'Event based', showing 'Event' as 'Event' and 'Event Next Issue'. The 'Scheduling' section at the bottom shows 'PM Due' as '5/22/2015' and 'Shift Work Day?' checked. The QAD logo and page number '27' are visible at the bottom.

The four options for scheduling PMs have different fields that must be completed. This slide shows the fields that must be filled in.

Link an Instruction List for this PM

The screenshot displays the QAD EAM Maintenance interface. At the top, the title 'EAM Maintenance' is followed by the main heading 'Link an Instruction List for this PM'. Below this, a breadcrumb trail shows 'Processes > PM Templates (EAM) > PM Template No: 1047'. A search bar contains 'PM Template No: 1047'. The main content area is divided into tabs: 'Equipment', 'Issue Method', 'Codes', 'Detail', and 'User Defined'. The 'Equipment' tab is active, showing fields for 'Description' (AC MONTHLY PM), 'Equip No' (AC0008), 'Air Conditioner 08', 'Catalog', 'Location', 'Problem' (SAFETY FIRST Follow all Company safety procedures.), and 'Precautions'. On the right, a sidebar titled 'PM Templates' contains a tree view with options: 'Detail', 'Notes', 'Readings', 'Skips', 'Superiors', 'Subordinates', 'Failures', 'Work Order', 'Revisions', 'PM Master Parts List', 'PM Master Instruction List' (highlighted with a red circle), and 'PM Safety Procedures'. An arrow points from the red circle to a callout box containing the text 'Provides estimated labor time and cost'. The QAD logo is in the bottom left corner, and the number '28' is in the bottom right corner.

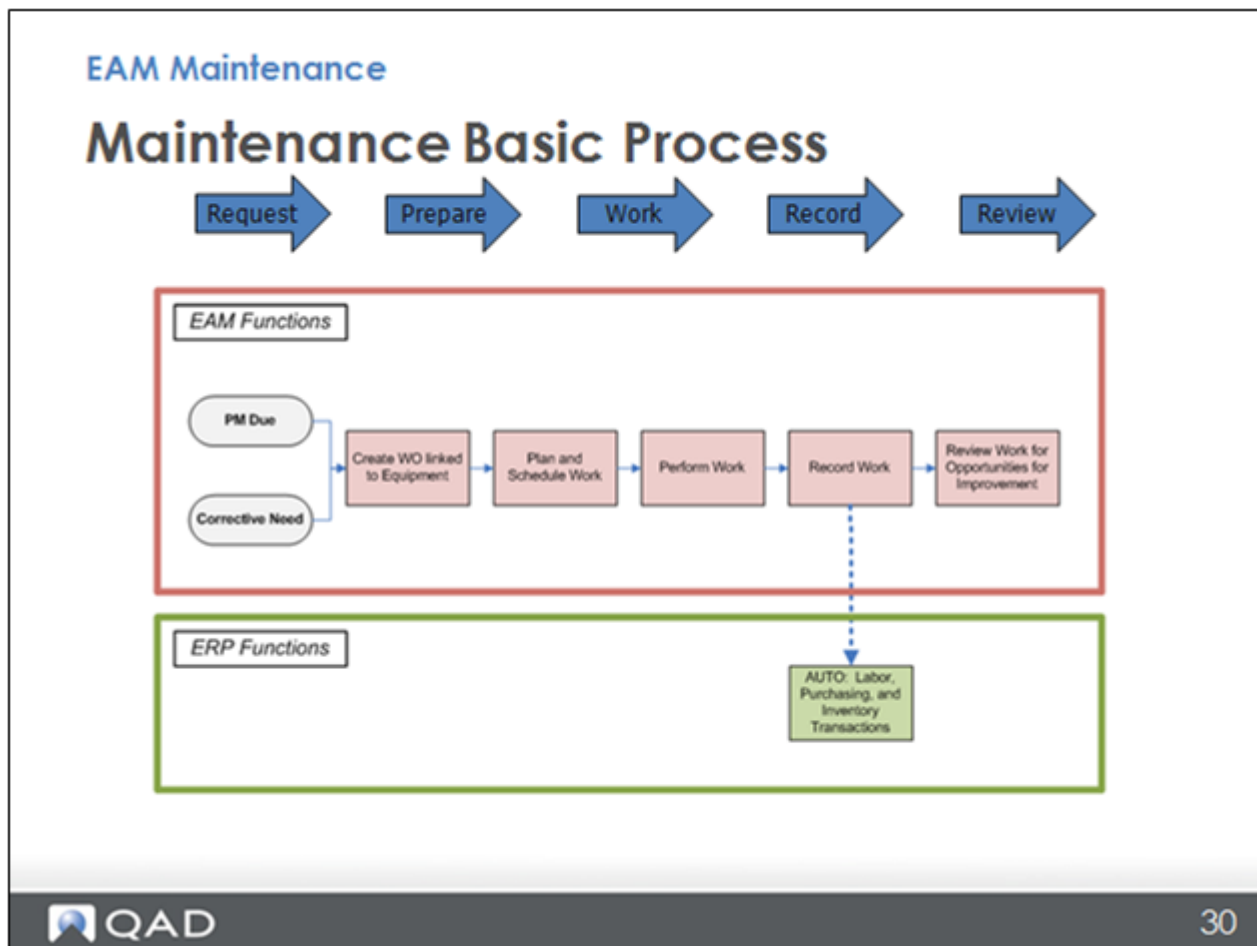
Any linked PM instructions are included in the work order to be used by the PM technicians. These instructions tell the technicians what needs to be done. The instruction lists capture estimated time and costs based on the craft and details entered in the steps. You link Master Parts Lists to PM templates similar to the way Master Instruction Lists are linked.

Maintenance Process

EAM Maintenance

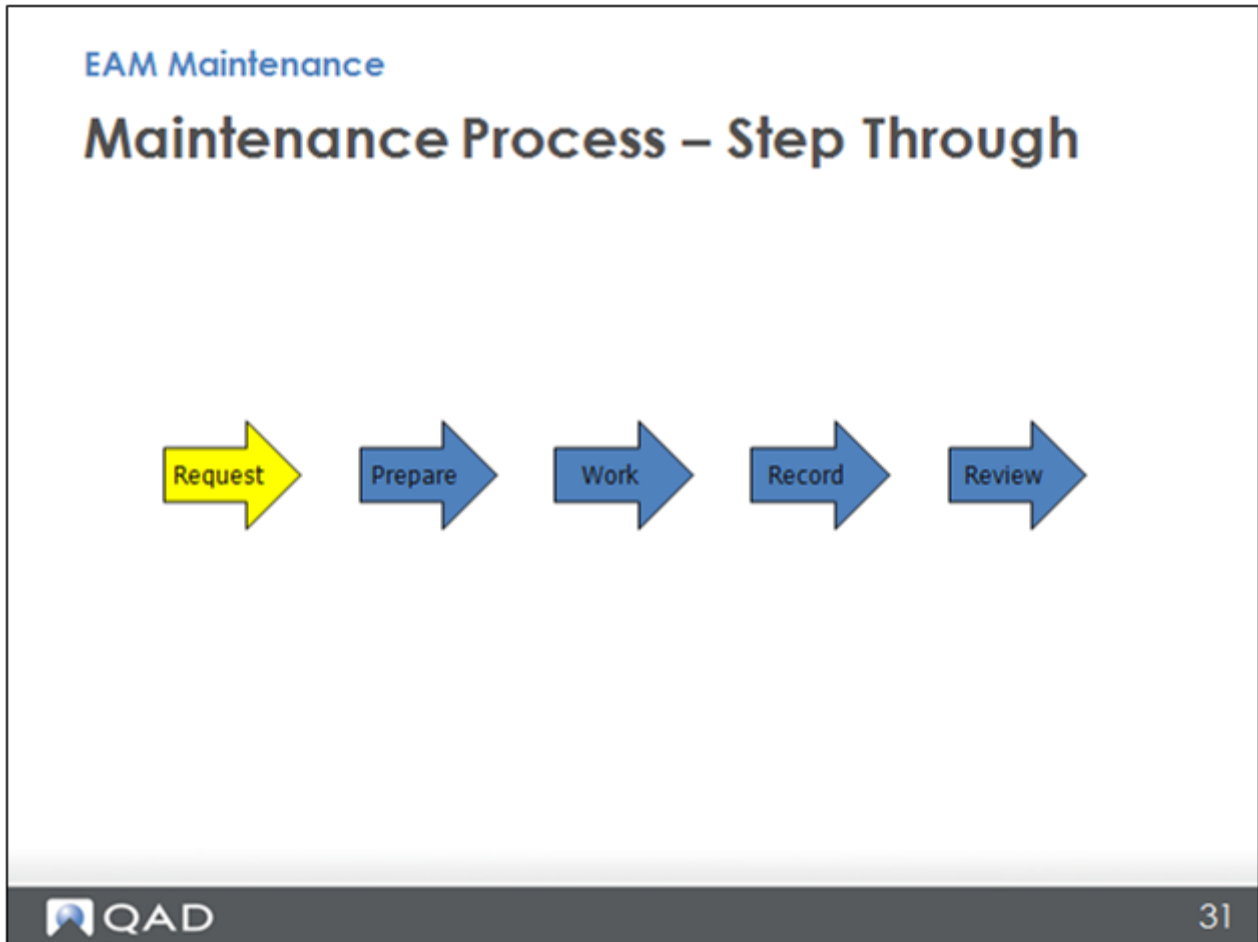
Maintenance Process

Maintenance Basic Process



These are the steps that maintenance follows. The following slides show the tracker of blue arrows and highlight the part of the process through which we are working. Review this slide to see what each of the steps entails. As we move forward, try to relate the steps in the maintenance process to the personal example of keeping Old Faithful running.

Maintenance Process – Step Through



How is Work Requested


EAM Maintenance



How is Work Requested

- Four ways to create a work order
 - Reach PM due date (event, DUOM, calendar date)
 - Enter service request
 - Create direct work order
 - Out-of-tolerance monitor-based DUOM
- NOT best practice unless emergency
 - Call technician on radio
 - Phone call
 - Stop technician in hallway
 - E-mail
- Unique feature
 - Different mandatory fields on SAVE and CLOSE


Request Work: PM Due



EAM Maintenance

Request Work: PM Due

- Search for due PMs on a regular basis
- Two options to create PM work orders
 - Option 1: Manually create PM work orders
 - Search for PMs that are due
 - Issue PMs
 - Option 2: Automatically schedule PMs to issue
 - Set up PM Auto Issue job program in Job Control
 - PMs work orders created when job runs
- Upon creation
 - Schedule and assign
 - Purchase parts, services, equipment rental, etc.
 - Parts reserved in inventory

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There are two ways to issue PMs to work orders. Companies decide how to issue based on their own processes and requirements.

Request Work: Service Requests

EAM Maintenance



Request Work: Service Requests

- Allows personnel to formally request work
 - Like a "Helpdesk" ticket
- Provides traceability
- Provides notification of status changes
- Allows ability to
 - Simplify data entry
 - One screen unless user-defined fields are used
 - Approve/deny prior to converting to work order
 - Group like requests onto one work order

Service requests are typically used to report a problem with a piece of equipment that may not need a work order immediately. It is often viewed as a simplified way of getting basic data into the work order from non-maintenance staff in order to expedite the planning required in the maintenance department. For example, an operator on the production floor reports that equipment appears to be leaking oil, or an office staff member reports a burned-out light bulb. A Maintenance Planner or Supervisor reviews the service requests and creates a work order, or closes the service request without action.

Work Order – Important Concepts






EAM Maintenance



Work Order – Important Concepts

- Preventive maintenance vs. corrective maintenance
 - System-generated flag, cannot change
 - PM generated from PM templates only
 - All other work orders are CM
- Important measure PM:CM ratio (8:1)


Work Order – Important Concepts

EAM Maintenance


Work Order – Important Concepts

- Planned vs. unplanned
 - Planned? field provided on work order
 - Defaulted for PM work orders from the PM template
 - Manually changed
 - Important measure to track work that requires purchasing, labor planning, internal inventory, etc.

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Planned work orders refer to work that requires preparation in advance of completing the work. An example of planned work would be a work order where an outside contractor had to be selected and equipment rented. An inspection PM is an example of unplanned work. The technician or operator simply needs to view the equipment and note the state that it is in.


Work Order – Important Concepts



EAM Maintenance

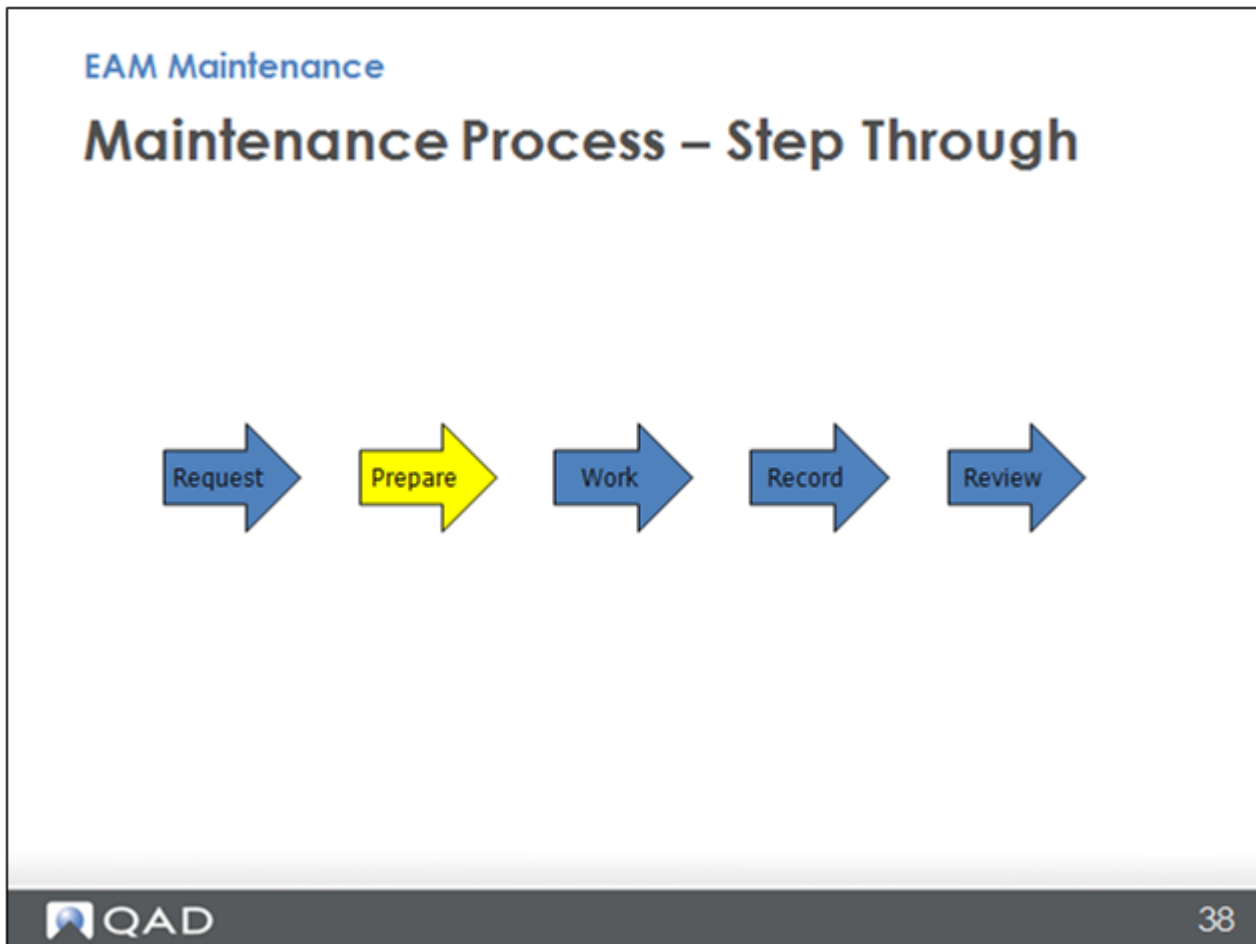
Work Order – Important Concepts

- Scheduled vs. unscheduled
 - No system-specific field; use user-defined logical field or a code
 - Important measure to indicate “breaks” in maintenance schedule

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Scheduled work orders refer to work that is placed on a schedule – for example, we are going to do work order 123 on Monday the 20th. If an emergency comes up and the work cannot be completed ‘on schedule,’ this situation causes a schedule break. Schedule breaks do occur, but you want to decrease their impact on equipment reliability and availability.

Maintenance Process – Step Through





Work Orders Overview

EAM Maintenance

Work Orders Overview

- Focal point of information
 - Coordinate and manage
 - Reactive
 - Planned corrective
 - Preventive maintenance work
 - Routes/readings
 - Projects
 - Shutdowns
 - Outlines work to be done
 - CM work orders for all repair activities
 - Issue PM work orders from PM templates when due
 - Charge all costs
 - Labor
 - Materials
 - Outside contract service
 - Record data
 - Primary reason for failure
 - Root cause
 - Work performed




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The goal of maintenance planning is to improve labor productivity. You want to match the work to be done with the resources required to do the work. During the planning process, consider:

- Maintenance backlog – the number, size, and priorities of current work orders (including corrective and preventive work orders)
- Resource requirements – time estimates, crafts, skills, shifts
- Materials
- Contractors
- Downtime – coordinate with production schedule

Prepare: Plan and Schedule


The screenshot shows the 'EAM Maintenance' software interface. At the top, a navigation bar contains five buttons: 'Request' (blue), 'Prepare' (yellow), 'Work' (blue), 'Record' (blue), and 'Review' (blue). The main title is 'Prepare: Plan and Schedule'. The interface displays a 'Work Order' for 'Air Conditioner 08' (Equip No: AC0008) at 'Site 10-100'. The 'General' tab is active, showing fields for 'Requester' (System Administrator), 'Planner' (BRAD NCI), and 'Status' (Preventative Maintenance). A red box highlights the 'Equip No' field. A 'Work Order' sidebar on the right lists various tasks like 'Notes', 'Equipment', and 'Assigned'. Annotations include: a blue arrow pointing from a box 'PM Service Request Direct Create monitor-based DUOM' to the 'Equip No' field; green arrows pointing from boxes 'Plan: Purchase external materials' and 'Plan: Purchase subcontractor services' to the 'Requester' and 'Planner' fields respectively; a green arrow pointing from a box 'Plan: Internal parts (stores request)' to the 'Work Order' sidebar; and a green arrow pointing from a box 'Plan: Internal labor' to the 'Status' field. A large green arrow labeled 'SCHEDULE' points downwards from the 'Status' field. Two questions are posed at the bottom: 'Question: Would you ever not Plan? When?' and 'Question: Would you ever not Schedule? When?'. The QAD logo and the number '40' are in the bottom left and right corners respectively.


Scheduling

EAM Maintenance

Scheduling

- Work order backlog
 - Good to have a backlog!
 - Prioritization
 - Labor requirements
- Interface to MS Projects
 - Export of work orders
 - Schedule
 - Import new schedule




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In some organizations, the planner and scheduler may be the same person. However, in more advanced organizations with larger maintenance teams, the two roles may be split.

Keep in mind that adding the Planning and Scheduling step in the Maintenance process is a best practice that companies in the process of uplifting their maintenance programs to world class standards must incorporate. Terry Wireman suggests that the Planning stage is “one of the largest potentials for cost savings in the maintenance arena” (*World Class Maintenance Management*).

Assign and Schedule the Work Order

EAM Maintenance

Request → Prepare → Work → Record → Review

Assign and Schedule the Work Order

Processes: Work Orders (EAM) | Site: 10-100, WO No: 242

Site: 10100 | WO No: 242

Planner field

Equip. | Des. | Text | Detail | User Defined

General

Equip No: AC0003 | Air Conditioner 03 | Req. Date: sysadm | System Administrator

Assigned: JEMP18 | Planner: JEMP32 | BRAD NDC

Notify: ACM | Facility Maintenance Group

Problem: SAFETY FIRST! Follow all Company safety procedures.

Can assign one or more people

Receives e-mails on certain status changes

Dates

Received: 3/31/2015 | Time Rcv (HH:MM): 00:29

* Start: 3/31/2015 | Time Start (HH:MM): 00:29

Closed: | Target Date: 3/31/2015

Status

Priority: 3 | High | Status: 5

Delay: | Class: PM | Preventative Maintenance

Route Instruction List Used:

Work Order

- Detail
- Notes
- Equipment
- Assigned
- Labor History
- Instruction Lists
- Stores Req Lists
- Cost Analysis
- Requisitions
- Requisition Lines
- Down Time
- Revisions
- Readings


QAD 42

When scheduling the work order, you can assign the technicians to use and set a start date. Note that the work order reflects the primary assigned individual, but multiple resources can be assigned using the Assigned submenu function.

Remember that if a person is missing from a lookup, such as Assigned, Planner, or Responsible, it is because a flag on their Employee ID is not properly set.


Prepare: Work Order Setup

EAM Maintenance



Prepare: Work Order Setup

- Important Data
 - Assigned
 - Employees where Assigned = yes
 - Assign a single technician
 - Assign multiple technicians using the Assigned submenu
 - Class
 - Categorizes work orders
 - Environmental
 - Safety
 - Calibration
 - Shutdown
 - Lean
 - Planned and Unplanned
 - CM work orders default to unplanned
 - PM templates default to planned
 - PM work orders default from PM template setting
 - Can be changed


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The class code is actually a configurable code in EAM. It is usually used to categorize work orders for reporting purposes.

As organizations strive to improve their maintenance programs, the ability to properly manage planned vs. unplanned work becomes critical. Industry estimates suggest that working in a planned mode as opposed to an unplanned mode could have a cost ratio as high as 1:5, meaning that, “performing a \$100 planned job could save as much as \$400 over performing the same job in an unplanned mode,” (Terry Wireman, *World Class Maintenance Management*).


Prepare: Work Order Setup

EAM Maintenance

Request
Prepare
Work
Record
Review

Prepare: Work Order Setup

- Important data (cont'd)
 - Work order status change
 - Automatically notify users
 - Estimates (labor, material, and contractor cost)
 - Feeds reporting for planned vs. actual analysis
 - Estimates (hours labor and hours down)
 - Compare estimated hours with actual hours


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On a work order, there are two ways to include estimates:

- Directly on the work order (less accurate).
- Use with Master Instruction Lists and Master Parts Lists/Stores Requests to estimate planned labor and costs (most accurate).

Estimates entered directly on the work order are used in variance reports. Both are shown in the cost analysis screen for comparisons.

Prepare: Work Order Printing

EAM Maintenance

Request
Prepare
Work
Record
Review

Prepare: Work Order Printing

- Prints a paper copy of the WO doc
- Safety Instructions print before any other instructions

Ultrasound Mfg Site

Work Order

WO No 255 Status S
 Received 05/15/2015 Start 05/15/2015 Target Completion Date 05/15/2015

Work Order Instruction List

Inst List No	Description	Annual Lockout Tagout Inspection
2	Annual Lockout Tagout Inspection	
Kind S	Equip No RoboticWeld	Mstr Inst No 11
Procedure	Description Robotic Welding 100	Revision
Type SFTY		

Step	Craft No	Skill	Qty	Time
1	TECH		1.00	1
[] Visually inspect fail safe pins on fixtures (Pins that will not allow the loading of wrong casting) for damage or wear. Attempt to load the wrong part on the fixture. Ensure the part cannot be loaded on the fixture. Notify the supervisor if the pins				
Hrs per Instruction List				1

Work Order Instruction List

Inst List No	Description	Press Monthly Servicing
1	Press Monthly Servicing	
Kind I	Equip No RoboticWeld	Mstr Inst No 1
Procedure	Description Robotic Welding 100	Revision
Type C&I		

Step	Craft No	Skill	Qty	Time
1	TECH		1.00	1
[] Replace air filter elements for cell air supply. The filter is located on the back slide of station 3 and station 4.				
Hrs per Instruction List				1

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Work Order Print prints safety instructions before any other instructions lists.

When selecting Global Print Document for work orders, you can print the documents or links attached to all selected work orders. An alternate work order document format is available to print and to manually mark up as you address the tasks for the work order. The document displays a selection of available codes that can be manually selected: Class, Repair, As Left, and As Found. Shift and Failure Code can be entered on the printout. You also can indicate yes or no for Leave WO Open and Waiting on Parts. For instruction lists printed with the WO, you can indicate whether each step has been completed by entering Yes or No.

Prepare: Work Order Printing

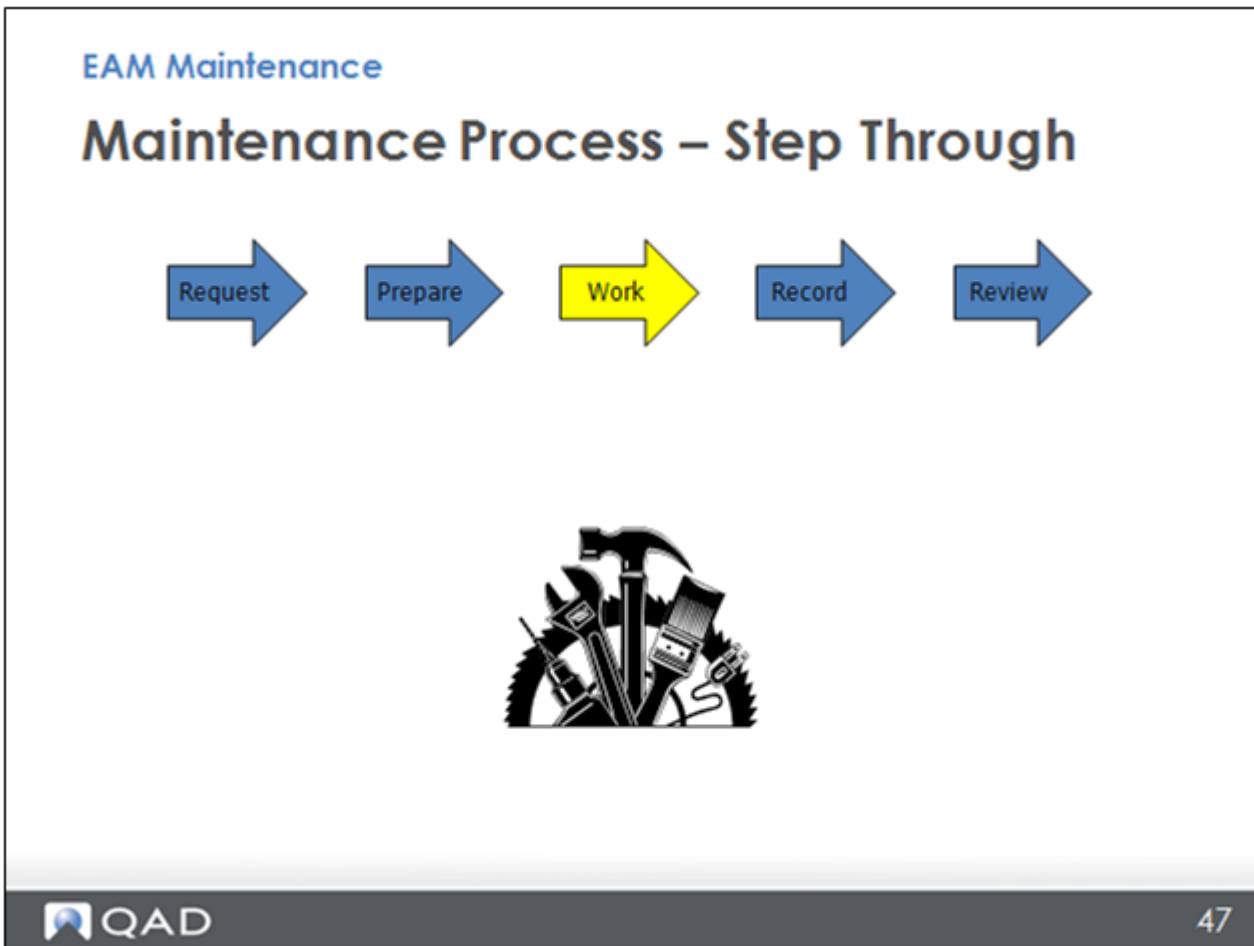
EAM Maintenance



Prepare: Work Order Printing

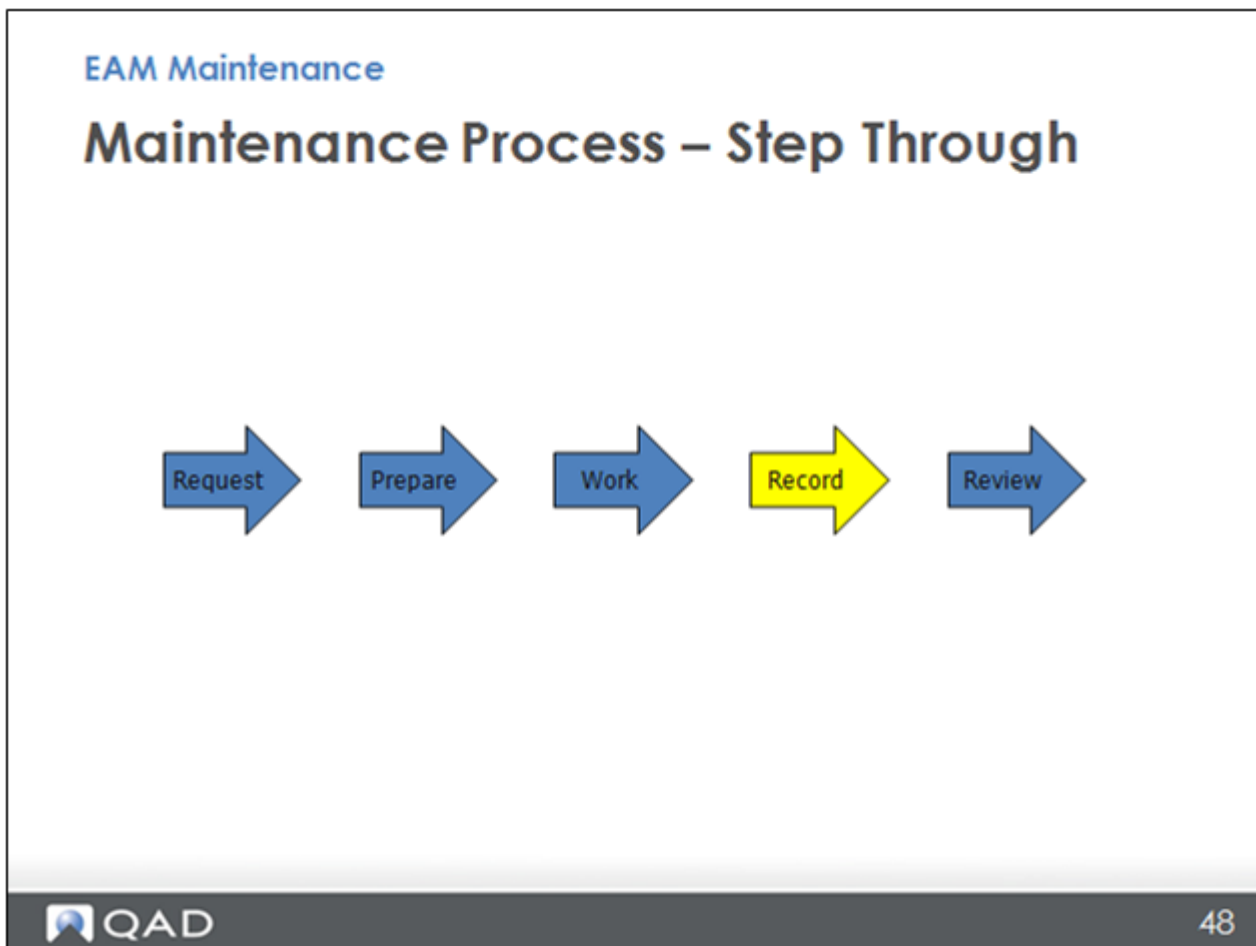
- External links may be printed
- Alternative WO formats
- Instruction lists have a yes/no completion option

Maintenance Process – Step Through



This step is the “wrench time” discussed frequently in the maintenance arena. Industry polls indicate that as little as 25 percent of a technician’s day is actually spent on wrench time. Planning and proper scheduling can be instrumental in reducing travel time and increasing wrench time, which results in more effective use of skilled resources.

Maintenance Process – Step Through



Once the actual work has been performed, the job is not over yet! Now you must perform perhaps the most important step of the maintenance process: recording key data to assist with future analysis and trending.

Record Work

EAM Maintenance



Record Work

- Critical step!
- Accumulates cost of ownership
 - Internal labor costs
 - Internal parts
 - Purchased materials
 - Subcontractor costs
 - Downtime
- Key trending data
 - Failure
 - Repair

Record Work

EAM Maintenance

Record Work

- Provides vital analysis data
 - What is our Mean-Time Between Failure (MTBF)?
 - Should PM be adjusted?
 - Could we have quality issues with a repair part?
 - Should we re-train operators?
 - Is it time to replace this equipment?
 - Are our work instruction steps correct and complete?
 - Could we better plan parts needed?
 - Is our BOM correct?

These are all questions that a company should be asking and that EAM can answer when used to its full potential.

Record Work: Important Data

EAM Maintenance



Record Work: Important Data

- As left
 - Notify planner when another problem is discovered
- Work performed
 - Notes specific steps – free form
- Downtime
 - Maintenance vs. production downtime
- Failure and repair codes
 - Drives MTBF reporting
- Work order status change
 - Notify users when status changes
 - Signals that work is finished and ready for review
 - Costs can still be recorded in this status

Record Work: Important Data

The screenshot displays the QAD EAM Maintenance interface for a work order. At the top, a process flow is shown: Request → Prepare → Work → Record → Review. The 'Record' step is highlighted in yellow. Below this, a box states 'Work orders generated for ALL work performed'. The main interface shows a work order form with several callouts:

- Record: Purchased external materials:** Points to the 'Equip No' field, which is highlighted with a red box.
- Record: Purchased subcontractor services:** Points to the 'Status' field, which is set to 'High'.
- Record: Internal parts used:** Points to the 'Work Order' sidebar menu.
- Record: Internal labor:** Points to the 'Personnel' field in the sidebar.

The QAD logo is visible in the bottom left corner, and the number 52 is in the bottom right corner.

All of the information captured in the record portion of the process is used to answer the record questions for customers. If customers do not record the information, they do not have a true picture of what is happening. Most importantly, the next time an incident happens, no one knows what steps were taken last time to fix the issue or to identify what solutions did not work.

Remember: ANY work done for a machine needs to be captured on a work order. A partial picture of the history is not the full history.

Post Labor Against Work Order

The screenshot displays the 'EAM Maintenance' interface with a workflow at the top: Request → Prepare → Work → Record → Review. The 'Record' step is highlighted in yellow. The main window title is 'Post Labor Against Work Order'. The interface shows a work order for Site 10-100, WO No. 249. An 'Action' menu is open, with 'Post Labor' selected. The menu options include: Authorize, Change Status, Post Labor, Reopen, Global Change Status, Global Authorize, Issue, Reverse Labor, Copy Master Instruction List, Print Document, Global Print Document, External Links, Export Work Orders, Import Work Orders, and Global Edit. The work order details include: Requestor (sysadm - System Administrator), Planner (10-EMP32 - BRAD NIX), and Alert. The status is 'S' and the class is 'FM' (Preventative Maintenance). The priority is '3' (High). The target date is 3/31/2015. A sidebar on the right lists various work order related actions like Detail, Notes, Equipment, Assigned, Labor History, etc.

Labor can be charged to a work order through the Post Labor action.

Note: Companies that use job cards for their employees may find it more efficient to enter labor through the employee browse list.

If employees post only their own labor, then their User records can be set up so that their employee number defaults in to the screen.

Note: Site settings determine if GL transactions are generated from the labor transactions.

Issue Parts from Stores

Request → Prepare → Work → Record → Review

EAM Maintenance

Issue Parts from Stores

The screenshot displays the 'Work Orders (EAM)' interface. The 'Action' menu is circled in red, and the 'Issue' option is highlighted in the context menu. The table below shows the data for the work orders.

W/O No	Equip No	Status	W/O Parts	Priority	Type	Class	Received	Time (Start)	Start
254	FL0001	O	N		CM	PM	03/01/2015	08:50	03/01/20
253	Bldg 2	O	N		CM		09/28/2010	08:46	03/01/20
252	WCH002	O	N	3	CM		03/01/2015	08:30	03/01/20
251	PAINT	S	N	3	PM	PM	03/01/2015	08:29	03/01/20
250		S	N	3	PM	PM	03/01/2015	08:29	03/01/20
249	PAINT	S	N	3	PM	PM	03/01/2015	08:29	03/01/20
248	PAINT	S	N				115	08:29	03/01/20
247	AC0008	S	N				115	08:29	03/01/20
246	AC0007	S	N				115	08:29	03/01/20
245	AC0006	S	N				115	08:29	03/01/20
244	AC0005	S	N				115	08:29	03/01/20
243	AC0004	S	N				115	08:29	03/01/20
242	AC0003	S	N				115	08:29	03/01/20
241	CV0001	S	N				115	08:29	03/01/20
240	CV0002	S	N				115	08:29	03/01/20
239	CV0003	S	N				115	08:29	03/01/20
238	CV0004	S	N				115	08:29	03/01/20
237	CV0005	S	N				115	08:29	03/01/20
236	P00001	S	N				115	08:29	03/01/20
235	P00002	S	N				115	08:29	03/01/20
234	GREASER0001	S	N				115	08:29	03/01/20
233	GREASER0002	S	N				115	08:29	03/01/20
232	GREASER0003	S	N				115	08:29	03/01/20
231	GREASER0004	S	N				115	08:29	03/01/20
230	GREASER0005	S	N				115	08:29	03/01/20
229	H00001	S	N				115	08:29	03/01/20

Parts that are used on a work order should be issued to that work order to capture the cost and the repair history.

Organizations often take one of two approaches to issuing parts:

- The Tool Crib Attendant records transactions as parts are removed from the crib (best practice).
- Technicians report consumption of parts AFTER completion of work as part of the record process (not best practice, because it takes away the real-time accuracy of inventory and could result in missed transactions).

Finishing Process

After the work has been completed, the appropriate details should be captured in the work order. This information is critical to the overall goal of increasing machine uptime, improving maintenance efficiency, and ensuring product quality. You can use free-form text fields to capture narrative information. Historical information is used to improve future planning.

Some companies choose to skip the finish process, but QAD does not recommend this approach. Once closed, you cannot add details to a work order, unless it is reopened by a supervisor with the relevant security access, and if system control settings allow closed work orders to be reopened.

Change WO Status to Finished (F)

Request → Prepare → Work → Record → Review

EAM Maintenance

Change WO Status to Finished (F)

W/D No	Equip No	Status	WO Parts	Priority	Type	Class	Received
254	PL0001	0	N		CM	PM	03/31/2015
253	Bldg 2	0	N		CM	PM	08/29/2010
252	WCH002				CM	PM	03/31/2015
251	PAINT				PM	PM	03/31/2015
250					PM	PM	
249	PAINT				PM	PM	
248	PAINT				PM	PM	
247	AC0008				PM	PM	
246	AC0007				PM	PM	
245	AC0006				PM	PM	
244	AC0005				PM	PM	
243	AC0004				PM	PM	
242	AC0003				PM	PM	
241	CV0001				PM	PM	
240	CV0002				PM	PM	
239	CV0003				PM	PM	
238	CV0004				PM	PM	
237	CV0005				PM	PM	
236	P00001				PM	PM	
235	P00002				PM	PM	
234	GREASER0001				PM	PM	
233	GREASER0002				PM	PM	03/31/2015
232	GREASER0003	S	N	3	PM	PM	03/31/2015


Note: Finished status is not required, but is often built into the process to allow for an audit step before closing.

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To change the status of a work order, simply return to the browse and select the Change Status option from the Action or right-click menu.

Though the Finished status is not one of the pre-packaged statuses in EAM, it is quickly becoming the norm for organizations working to improve their maintenance programs. The Finished step allows you to audit the data entry and to use that time to improve upon data collection. You also can identify opportunities to improve other important aspects of the maintenance program such as PM improvements and Work Instruction improvements.

Record Work: Important Data




EAM Maintenance

Record Work: Important Data

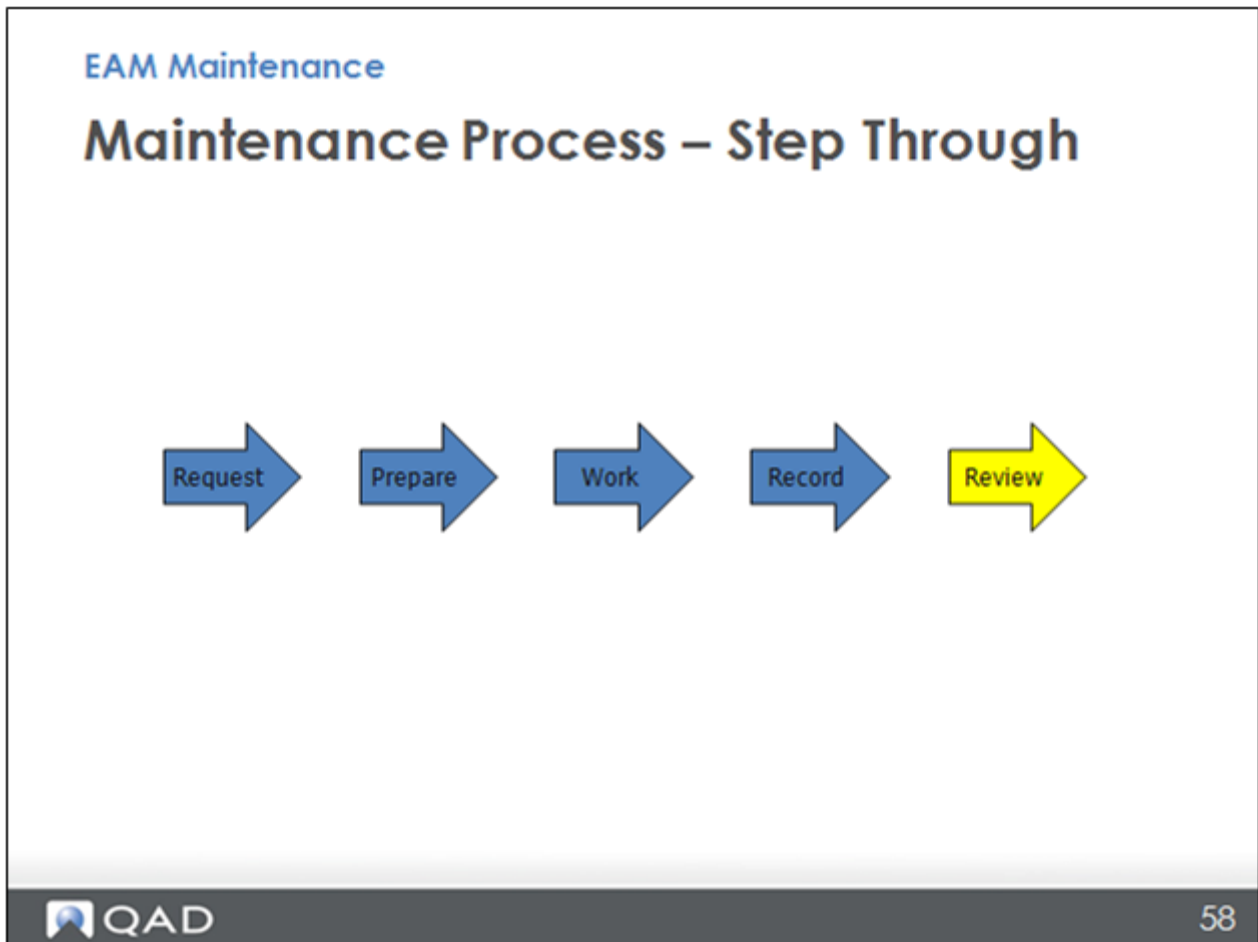
- Financial transactions can feed to QAD ERP system*
 - Purchase receipts (material and contract labor)
 - Material issues from QAD EAM inventory
 - Labor transactions
 - Other (Manual GLs, such as interest expense)

* You decide which transactions to feed.


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Remember that you can configure which transactions are sent to EE Financials. Most common settings allow all transactions to flow to QAD, except for labor. This restriction occurs because many companies do not want EAM labor transactions to compete with labor transactions coming from a time and attendance system or from a payroll system.

Maintenance Process – Step Through




Review Work Performed/Results



EAM Maintenance

Review Work Performed/Results

- Work orders status of F (finished)
- Root cause analysis
- PM improvement opportunities
- Downtime reduction opportunities
- Cost
- MTBF
 - Note: PM failures help exclude PM work from this
- Work performed details
- Instruction list improvements
- Parts list improvements
- Change to status C (closed)

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A properly managed and continuously improving maintenance organization must measure and review in order to increase productivity and reliability. A maintenance program is not complete without using the data collected to help make important business decisions.

Cost Analysis

Request → Prepare → Work → Record → Review

EAM Maintenance

Cost Analysis

Site: WO No:

Totals	Labor	Material	Contract	Manual	Total
Estimated	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>		<input type="text" value="0.00"/>
Planned	<input type="text" value="18.75"/>	<input type="text" value="14,578.30"/>	<input type="text" value="0.00"/>		<input type="text" value="14,597.05"/>
Actual	<input type="text" value="369.00"/>	<input type="text" value="25.50"/>	<input type="text" value="0.00"/>	<input type="text" value="0"/>	<input type="text" value="394.50"/>
Variance	<input type="text" value="1868.00%"/>	<input type="text" value="-100%"/>	<input type="text" value="N/A"/>		<input type="text" value="-97.00%"/>

Labor | Material | Contract | Manual


Excel Export | Print | Add To Favourites | New

Find: Default

Site	Part No	Date	Qty	UDM Cost	Total Cost
10000	05-01-0444	06/13/2009	2	12.75	25.5

Cost Analysis available on both **Equipment** and **Work Order Level**.

How is this helpful in the review process?

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The Cost Analysis screens on both the Equipment level and the individual work order level provide a comparison of estimates versus actual, as well as a detailed view of the transactions that make up the actual cost. This information can be used to refine estimating practices, to identify opportunities to refine inventory stock levels, and to identify ways in which to increase wrench time.

Close

EAM Maintenance

Close

Request → Prepare → Work → Record → Review

Processes: Work Orders (EAM)

Excel Export Print Add To Favorites New Edit

Action Find Site: 10-100 Filter: ALL Default

W/O No	Equip No	Status	W/O Parts	Priority	Type	Class	Received
254	PL001	0	N		CM	PM	00/10/15
253	Ng1	0	N		CM	PM	00/09/16
252	WCH02				CM		00/10/15
251	PAINT				PM	PM	00/10/15
250	PAINT				PM	PM	00/10/15
249	PAINT				PM	PM	00/10/15
248	PAINT				PM	PM	00/10/15
247	AC008				PM	PM	00/10/15
246	AC007				PM	PM	00/10/15
245	AC006				PM	PM	00/10/15
244	AC005				PM	PM	00/10/15
243	AC004				PM	PM	00/10/15
242	AC003				PM	PM	00/10/15
241	CV001				PM	PM	00/10/15
240	CV002				PM	PM	00/10/15
239	CV003				PM	PM	00/10/15
238	CV004				PM	PM	00/10/15
237	CV005				PM	PM	00/10/15
236	PM001				PM	PM	00/10/15
235	PM002				PM	PM	00/10/15
234	GREASER001				PM	PM	00/10/15
233	GREASER002				PM	PM	00/10/15
232	GREASER003				PM	PM	00/10/15

Lookup

Status	Description	CM Default?
C	Close	<input checked="" type="checkbox"/>
D	Delayed	<input type="checkbox"/>
F	Finished	<input type="checkbox"/>
N	New Request	<input type="checkbox"/>
O	Open	<input checked="" type="checkbox"/>
P	Planning	<input type="checkbox"/>
R	Rescheduled	<input type="checkbox"/>
S	Scheduled	<input type="checkbox"/>
X	Cancelled	<input type="checkbox"/>

Note that Reopen is separately securable and not available for most users. For this reason, Close is a very structured process.

QAD 61

CM/PM Basic Process Flow


EAM Maintenance

Request →
 Prepare →
 Work →
 Record →
 Review

CM/PM Basic Process Flow


- Planning and scheduling process
 - Raise requisitions for outside materials and contract service
 - Schedule start date
 - Define target completion date
 - Assign resources
- Execution
 - Material/subcontractor services rendered
 - Parts are consumed
 - Labor is consumed

Reminder: Financial transactions flow to QAD ERP based on site settings.


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The basic process flow of maintenance is similar to that of production. Start with the planning and staging process, assign resources such as technicians and parts, perform the repairs, use the materials and final product – working machinery is available for producing.

CM/PM Basic Process Flow



EAM Maintenance

CM/PM Basic Process Flow

- Closing process
 - Capture
 - Work performed
 - Failure and repair
 - Downtime
 - Costs
 - Work order is finished
 - Work order is reviewed and closed
 - Cost analysis is available

Review

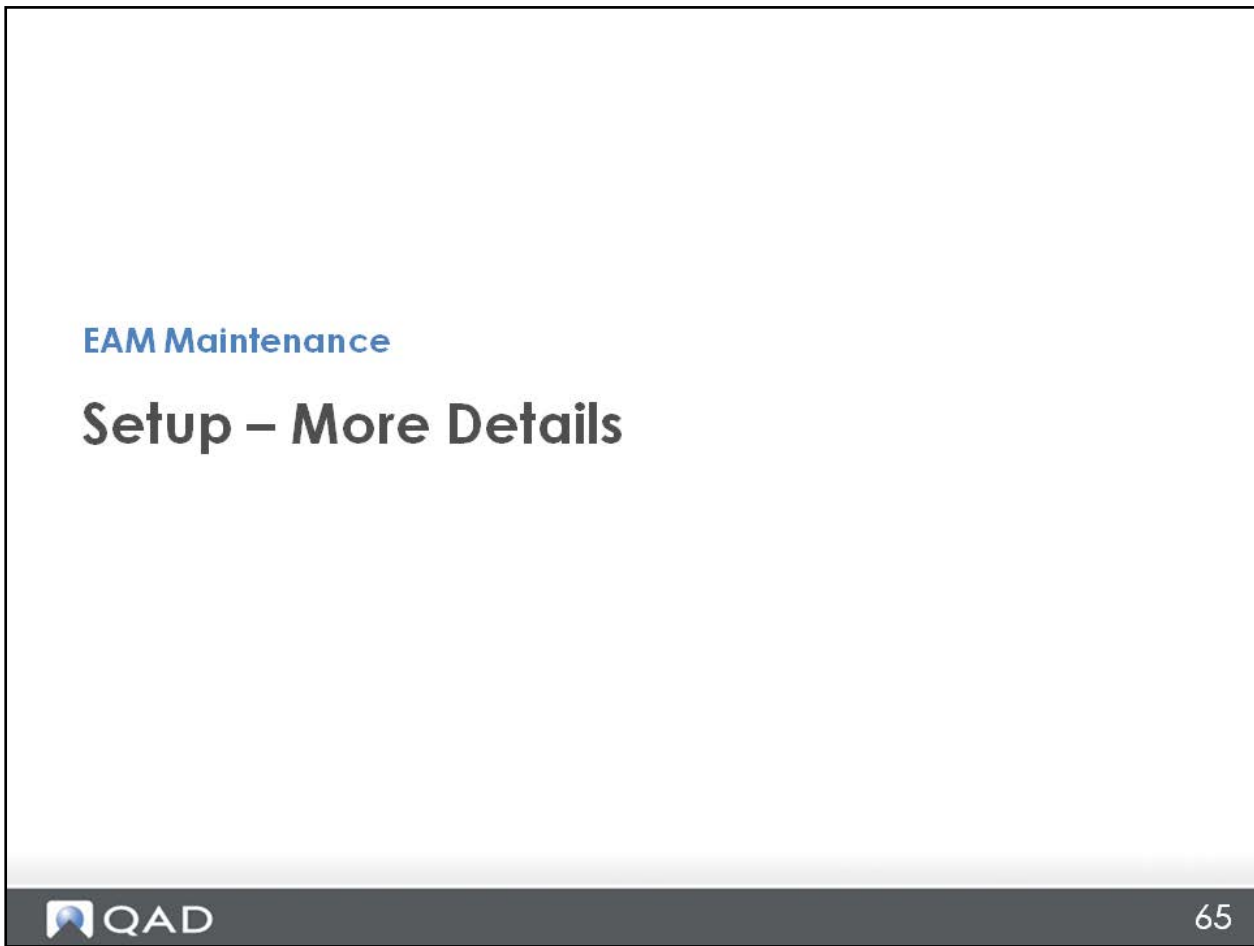
EAM Maintenance



Review

- Equipment Records
 - Key foundational record
 - Parent/child relationships
 - Analytical information available
- Master instruction lists (MILs)
 - Work instructions, equipment routes, or safety guidelines
 - Estimated labor time, costs, or equipment to measure/calibrate
- PM templates
 - Calendar, DUOM, both or event based
- Work orders
 - From service request, PM or directly created
- Perform actions on work orders
 - Planning, scheduling, work performed, costs
- Identify opportunities for improvement
- Status change notifications

Setup – More Details

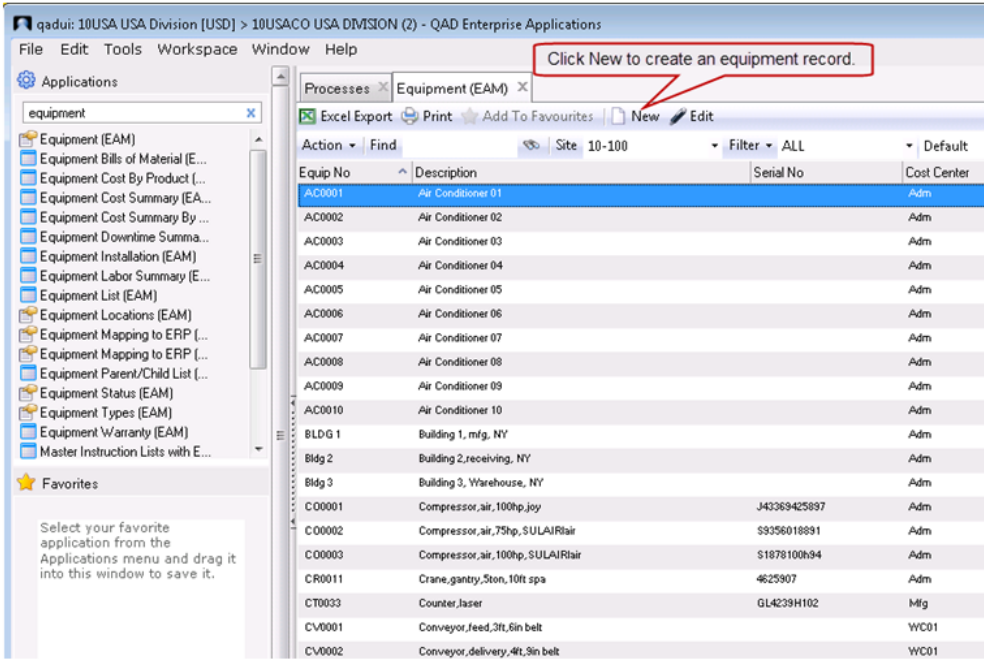


In this section of the training guide, you will explore in greater detail how to set up and/or create records and interfaces to support maintenance functionality.

Adding New Equipment

EAM Maintenance

Adding New Equipment



Equip No	Description	Serial No	Cost Center
AC0001	Air Conditioner 01		Adm
AC0002	Air Conditioner 02		Adm
AC0003	Air Conditioner 03		Adm
AC0004	Air Conditioner 04		Adm
AC0005	Air Conditioner 05		Adm
AC0006	Air Conditioner 06		Adm
AC0007	Air Conditioner 07		Adm
AC0008	Air Conditioner 08		Adm
AC0009	Air Conditioner 09		Adm
AC0010	Air Conditioner 10		Adm
BLDG 1	Building 1, mfg, NY		Adm
Bldg 2	Building 2, receiving, NY		Adm
Bldg 3	Building 3, Warehouse, NY		Adm
C00001	Compressor,air,100hp,joy	J43369425897	Adm
C00002	Compressor,air,75hp,SULAIRair	59356018891	Adm
C00003	Compressor,air,100hp,SULAIRair	51878100894	Adm
CR0011	Crane,gantry,5ton,10ft spa	4625907	Adm
CT0033	Counter,Jaser	GL4239H102	Mfg
CV0001	Conveyor,feed,3ft,6in belt		WC01
CV0002	Conveyor,delivery,4ft,9in belt		WC01

Navigate to Maintenance|Equipment|Equipment.

Click New or right-click and select the New option.

Adding New Equipment: Codes

Description: A brief description of equipment.

Category: The most general equipment code. Use it to designate ownership or virtual equipment.

Type: This field groups equipment by functional application or classification.

Status: The status of the equipment or machine. A code shows the current standing of equipment; for example, A - Active, I - Inactive, O - Obsolete, or M - Moved.

Parent?: This field prompts you to make this piece of equipment a child of another piece by attaching it to a parent piece of equipment.

Parent No. The associated parent equipment of the component (only appears if Parent? is checked).

Upd Children?: Select this check box to update the equipment DUOM when the parent's current reading changes. Any child conversions set up in DUOM Conversion are calculated.

Manual: The name of the equipment manual for a specific piece of equipment. The Manual field is for reference purposes only.

BOM Type: The BOM type is a grouping of system and assembly codes unique to a specific type of equipment, building, or facility.

Failure type: Use this field to group selected failure and repair codes for the equipment. When the failure or repair lookup runs from the Work Order Maintenance screen, the system filters to those codes linked to the failure type of the equipment.

Location: The physical location of a piece of equipment.

Catalog: Use this field to designate the class or group structure of the equipment.

Planner: Indicate the employee responsible for planning the maintenance on a piece of equipment. EAM validates your selection against the list of designated planners. The planner copies to associated PM templates and work orders.

Notify: Enter the user or group of users to notify with e-mail when a piece of equipment reaches its spending limits.

Responsible: Indicate the employee who is responsible for the equipment.

Owner: The user or group of users authorized to edit the equipment record. If an owner is associated with the equipment record, only the owner or owner group members can edit the equipment record. Unlike most fields that appear on the Equipment Maintenance screen, copying an equipment record does not copy the owner.

WO Owner: If a WO owner is added to the equipment record, only the owner or owner group members can edit any work orders for that equipment.

Priority: This editable code indicates the priority level for the piece of equipment. It automatically copies to service requests and work orders added for the equipment.

Adding New Equipment: Asset

Project Number: Use a project number when you purchase and install a new piece of equipment. When you enter a project number, EAM defaults the acquisition cost from the total spent in the project record.

Job No: Use the lookup to select a valid job number, associated with the project.

PO Number: The original purchase order number used to purchase the equipment.

Job Cost Center: The default job cost center from Finance|Projects displays.

Acquisition Cost: The original purchase cost of the equipment.

Job Sub Account No: The default job sub-account number from Finance|Projects displays.

Vendor No: The vendor from whom the equipment was purchased. EAM validates this number against the Vendor table.

Job Capitalize Date: The job's capitalize date from Finance|Projects. This field cannot be modified.

Manufacturer: The manufacturer for a piece of equipment. There is a lookup available for this field.

Model No: A reference field for storing the equipment or machine's model number.

Yr Made: The year the equipment was built.

Weight: The weight of the asset or equipment

Weight UOM: The weight unit of measure. There is a lookup table available for this field.

Serial Number: The serial number of the equipment or machine. The serial number is for reference purposes only and has no other functionality within EAM.

Purchased Date: The purchase date of a piece of equipment.

Tax Auth Loc: This represents the physical location where the asset resides to identify proper depreciation/tax codes in Asset Management. The lookup for this field is a validated list for Tax Authority Loc defined in Finance|Codes. Use the lookup to select a tax authorization location.

Profile ID: Use the lookup to select a profile ID.

Installed Date: Enter the date a piece of equipment was installed.

Replacement Value: Enter the cost of replacing this piece of equipment.

Retired Date: Enter the date a piece of equipment was removed from service.

Book Value: Enter the amount that represents the calculated worth of the equipment. Accounting can update the field and use it for insurance purposes.

Fixed Asset No: Enter the asset number that cross-references the equipment with the equipment fixed asset or tag number from your finance department.

Life Expectancy: Enter the life expectancy of a piece of equipment in years. This field is for reference purposes only.

County: Enter the county where the equipment resides.

Note: The data in the following asset fields is entered or updated based on the use of the asset.

Accounting Interface setting (Acquisition Options) in the General|Business Units|Site|Maintenance tab – This is currently not functional.

Adding New Equipment: Detail

Use the Detail tab to enter information about an equipment record. Of particular importance on the Detail tab page is the default accounting. Define the site and cost center to which this equipment belongs budget-wise, and then define the account/sub-account that is appropriate for Labor, Material, and Contractor Services. This accounting will pull through on all future transactions against this equipment to drive proper GL transactions.

Adding New Equipment: User Defined

EAM Maintenance

Adding New Equipment: User Defined

Processes: Equipment (EAM) Site: 10-100, Equip No:

Site: 10-100 Equip No: New Record

Action -

Codes Asset Detail **User Defined**

Detail

Equip Char 1	<input type="text"/>	Equip Char 2	<input type="text"/>
Equip Char 3	<input type="text"/>	Equip Char 4	<input type="text"/>
Character 5	<input type="text"/>	Character 6	<input type="text"/>
Character 7	<input type="text"/>	Character 8	<input type="text"/>
Character 9	<input type="text"/>	Character 10	<input type="text"/>
Character 11	<input type="text"/>	Character 12	<input type="text"/>
Character 13	<input type="text"/>	Character 14	<input type="text"/>
Character 15	<input type="text"/>	Character 16	<input type="text"/>
Character 17	<input type="text"/>	Character 18	<input type="text"/>
Character 19	<input type="text"/>	Character 20	<input type="text"/>
Character 21	<input type="text"/>	Character 22	<input type="text"/>
Equip Dec 1	<input type="text" value="0.0000"/>	Equip Dec 2	<input type="text" value="0.0000"/>
Decimal 3	<input type="text" value="0.0000"/>	Decimal 4	<input type="text" value="0.0000"/>
Decimal 5	<input type="text" value="0.0000"/>	Decimal 6	<input type="text" value="0.0000"/>
Decimal 7	<input type="text" value="0.0000"/>	Decimal 8	<input type="text" value="0.0000"/>
Equip Int 1	<input type="text" value="0"/>	Equip Int 2	<input type="text" value="0"/>
Equip Date	<input type="text" value="(none)"/>	Equip Logic?	<input type="checkbox"/>

Equipment

- Detail
- Notes
- Service Requests
- Work Orders
- PM Templates
- Failure Analysis
- Cost Analysis
- BOM
- Readings
- Equipment Alter...
- Procedure Lists
- Production Hours
- Equipment Prod...
- Equipment Desc...
- Down Time
- ERP Production...
- ERP Work Center

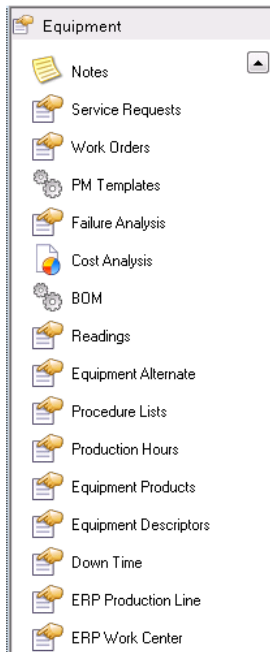
QAD 70

Use the Equipment User Defined tab to track information against specific equipment in EAM. There are several field types available: two code-driven lookup fields, several free-form alphanumeric fields, several decimal fields, two integer fields, one date field, and one Yes/No (logical) field.

Adding New Equipment: Submenus

EAM Maintenance

Adding New Equipment: Submenus












- Notes: insert free-form internal notes
- Service Requests: view associated service requests
- Work Orders: view associated work orders
- PM Templates: view associated PM templates
- Failure Analysis: view failure analysis for equipment when failure codes are used on related PMs and WOs
- Cost Analysis: view summary and detailed cost analysis
- BOM: view or update the Bill of Materials
- Readings: view or record the equipment's DUOM readings
- Equipment Alternate: enter and view alternate equipment names
- Procedure Lists: view or add a safety instructions list – used in all work orders

Adding New Equipment: Submenus (cont.)

EAM Maintenance

Adding New Equipment: Submenus (cont.)

-  Production Hours
-  Equipment Products
-  Equipment Descriptors
-  Down Time
-  ERP Production Line
-  ERP Work Center
-  Revisions
-  Equipment Rotable Parts
-  Rotable History

- Production Hours: view and add production hour readings from the equipment when using production driven maintenance from ERP's op_hist table
- Equipment Products: view or associate a list of products produced on the equipment – can be referenced in a work order for analysis
- Equipment Descriptors: view or set up further information
- Down Time: view the downtime history
- ERP Production Line: view the ERP Production Line
- ERP Work Center: view the ERP Work Center
- Revision: view the revision history
- Equipment Rotable Parts: view the rotatable parts that have been issued
- Rotable History: view the history of rotatable parts used on this equipment record

Equipment Setup

EAM Maintenance

Equipment Setup

- Important Equipment fields
 - Notify
 - Generates automatic e-mail and sends it to the notify (group or user ID) on a record
 - Owner
 - Restricts who can modify a record
 - User-defined fields
 - Modifies labels and includes user-defined fields in filters for browse lists and reports
 - Mandatory fields
 - Specifies fields that users must populate before they can save a record
 - Denoted with * on screen as a visual reminder for users

Equipment Setup

EAM Maintenance

Equipment Setup

- Important Equipment fields
 - Parent/child relationships
 - Links equipment for lookups and cost reports
 - A parent can have many children
 - A child can only have one parent
 - Unlimited levels (see lookup)
 - Asset Number - NOT linked to fixed asset system
 - Used as a reference only for the finance team
 - Often many pieces of equipment may have the same asset number because they were acquired from the same project

Equipment Setup

EAM Maintenance

Equipment Setup

- Important Equipment functions
 - Cost analysis
 - Summarizes cost spent against equipment
 - Broken down by work order type
 - BOM
 - Lists bill of material of parts used on equipment
 - EAM can automatically add BOM when issuing parts to equipment
 - Failure type
 - Groups failure codes, limiting the lookup on work orders of failure codes to just those relating to the type of equipment
 - Priority
 - Work orders default to the equipment's priority code
 - Failure analysis
 - Shows different equipment failures, the Mean Time Between Failure (MTBF), and its impact on the equipment
 - Soon to be converted to B13 Report

Attachments and revision control are available in EAM 2015.

Equipment Setup

EAM Maintenance

Equipment Setup

- Important Equipment functions
 - Auto filter
 - Runs the primary filter in a module automatically when the user opens the module
 - Accounting information
 - Defaults cost center and account numbers when creating work orders and issuing parts, labor, or purchases
 - Spending limits
 - Sends e-mails to the equipment's notify user or group when equipment reaches spending limits
 - Driving Unit of Measure (DUOM)
 - Sets up and tracks equipment usage data, which you can enter manually, by automatic file upload, or direct connection to the QAD ERP system's production data



Fields on the Equipment Record Detail tab.

DUOM: The Driving Unit of Measure for production-driven maintenance.

Update the DUOM for subordinate (child) equipment based on the parent equipment DUOM update. DUOM conversions drive how those production records translate into usage measures to automatically drive preventative maintenance.

Set Up Master Instruction Lists (MILs)

EAM Maintenance

Setup Master Instruction Lists (MILs)

Creating a Master Instruction List

EAM Maintenance

Creating a Master Instruction List

The screenshot shows the QAD Enterprise Applications interface. The main window is titled 'Instruction Lists (EAM)'. The left sidebar shows a navigation tree with 'Maintenance' > 'PM / PdM' > 'Master Lists' > 'Instruction Lists' selected. The main area displays a table of instruction lists. The 'New' button in the top toolbar is circled in red. A context menu is open over the selected row (row 8), with the 'New' option also circled in red.

Mstr Inst No	Kind	Description	Type	Description	Procedure	Owner
1	Instruction	C&I	Press Monthly Servicing			
2	Instruction	LUBE	Press Quarterly Servicing			
3	Instruction	REBLD	Press Annual Servicing			
4	Instruction	LUBE	Motoman Greasing			
5	Instruction	LUBE	Motoman Battery Change			
6	Instruction	C&I	Motoman Weekly Inspection			
7	Instruction	LUBE	Motoman yearly inspection			
8	Instruction	C&I	Greaser Inspection PM			
9	Instruction	C&I	Hydraulic Unit Check			
10	Safety	SFTY	Lockout Procedures			
11	Safety	SFTY	Annual Lockout Tagout Inspection			
12	Instruction	C&I	Fork truck Inspection			

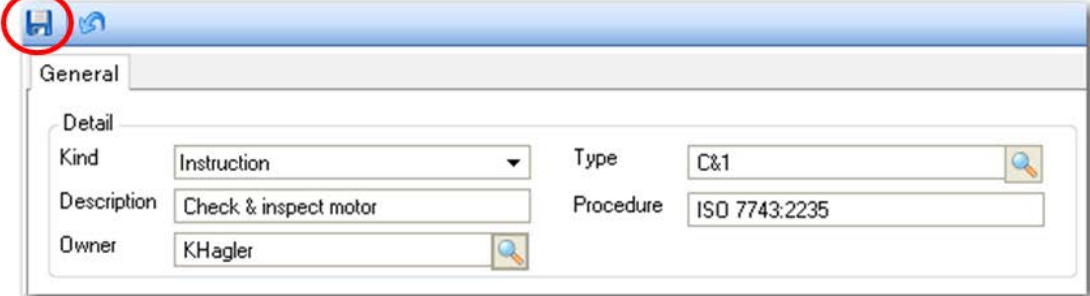
Step	Qty	Craft	Skill	Std Hrs	Cost	Description	Equip No
1	1	TECH		1.00	20.00	[] HSK Collet (2 Top spindles): Open the collet and ma	
2	1	TECH		1.00	20.00	[] Vaporize the lubricant (Item 3) inside the collet in ord	
3	1	TECH		1.00	20.00	[] Move the tension rod (Item 4) forward and reverse b	

Navigate to Maintenance|PM/PdM|Master Lists|Instruction Lists

Creating a Master Instruction List

EAM Maintenance

Creating a Master Instruction List



General

Detail


Kind: Instruction

Description: Check & inspect motor

Owner: KHagler

Type: C&1

Procedure: ISO 7743:2235


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1. Set the Kind field to Instruction to locate it in the correct lookup when associating to PM templates (instruction, route, or safety procedures).
2. Click the magnifying glass to open the Type lookup.
3. Select a type from the list.
4. Briefly describe the purpose of these instructions under Description.
5. Cross-reference any official procedures such as ISO.
6. Select the owner group, as needed, using the lookup.
7. Save the record.

*see later slides on route lists.

Safety instructions are similar to Instruction Kind, but designed to print first and are added to a PM template under a different submenu. Creating a Master Instruction List with a kind of Safety designates those instructions to print first when printing work order documents.

Creating a Master Instruction List Step

EAM Maintenance

Creating a Master Instruction List Step

Mstr Inst No	Kind	Description	Type	Description	Procedure	Owner
1	Instruction	C&I		Press Monthly Servicing		
2	Instruction	LUBE		Press Quarterly Servicing		
3	Instruction	REBLD		Press Annual Servicing		
4	Instruction	LUBE		Motoman Greasing		
5	Instruction	LUBE		Motoman Battery Change		
6	Instruction	C&I		Motoman Weekly Inspection		
7	Instruction	LUBE		Motoman yearly inspection		
8	Instruction	C&I		Greaser Inspection PM		
9	Instruction	C&I		Hydraulic Unit Check		
10	Safety	SFTY		Lockout Procedures		
11	Safety	SFTY		Annual Lockout Tagout Inspection		
12	Instruction	C&I		Fork truck Inspection		

Step	Qty	Craft	Skill	Std Hrs	Cost	Description
1	1	TECH		1.00	20.00	[] HSK Collet (2 Top spindles): Open the collet and
2	1	TECH		1.00	20.00	[] Tighten the tension rod (Item 4) inside the collet in ord
3	1	TECH		1.00	20.00	[] Move the tension rod (Item 4) forward and reverse b
4	1	TECH		1.00	20.00	[] Extract the joint (Item 6) and replace it with a new sp
5	1	TECH		1.00	20.00	[] Rescrev the ring nut (Item 5) onto the collet pusher (
6	1	TECH		1.00	20.00	[] Tighten the lock nut (Item 1). Verify the collet clampi
7	1	TECH		1.00	20.00	[] After 1 hr of machine operation, check the 10.5mm d
8	1	TECH		1.00	20.00	[] Accumulator pressure: Check the accumulator nitrog
9	1	TECH		1.00	20.00	[] Accumulator Y axis counter balance: Check the acc

Note:
Entering the step details on the Master Instruction List is what allows reporting of planned labor (time and cost)

After you create the header information, return to the Instruction Lists browse screen to begin adding step details.

Click New or select New from the right-click menu options in the lower portion of the browse screen. The system assigns a step number to the new record, but you can reorder the steps as needed using the Move Up and Move Down actions in the lower browse.

Creating a Master Instruction Step

EAM Maintenance

Creating a Master Instruction Step

Step

Detail

Craft	<input type="text" value="TECH"/>	Reg Pay Rate	<input type="text" value="20.00"/>
Qty	<input type="text" value="1"/>	Skill	<input type="text"/>
Hours	<input type="text" value="1"/>	Minutes	<input type="text" value="_0"/>
Std Hrs	<input type="text" value="1.00"/>	Cost	<input type="text" value="20.00"/>

Route Options

Equip No	Description
DUQM	Type
Reading	Reading Date
<input type="text" value="0.00"/>	

Description

Description	[] HSK Collet (2 Top spindles): Open the collet and maintain it opened. Unclamp the locknut (Item 1) and unscrew the collet pusher (Item 2) completely.
-------------	--


The Step detail screen opens to allow you to enter detailed information. Craft and time (hours and minutes) are required to develop the estimated costs.

Craft: Select the user-defined craft code required to carry out this step in the PM.

Qty: Enter the number of people required to carry out this step in the PM.

Skill: Select a user-defined skill code required for this step.

Hours/Minutes: Enter the duration of time required to carry out this step of the PM.



Questions? Visit community.qad.com

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Create PM Routes

EAM Maintenance

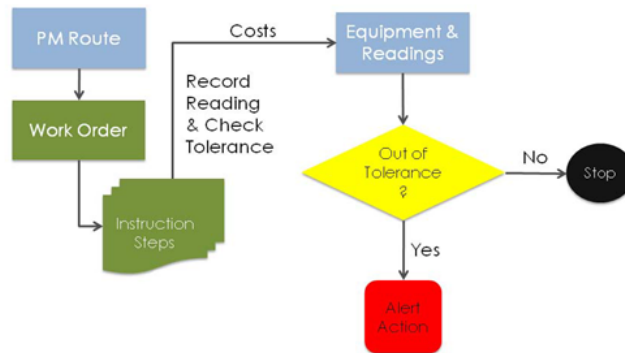
Create PM Routes

PM Routes

EAM Maintenance

PM Routes

- The route-based PM template relates a given MIL associated to one or more equipment records.
- The PM template defines planning rules that drive how the PM is released and scheduled.
- The MIL with kind = route drives how the PM/WO is conducted.
- Typically used to inspect and record readings for (or to indicate need to calibrate) several pieces of equipment on a single work order.

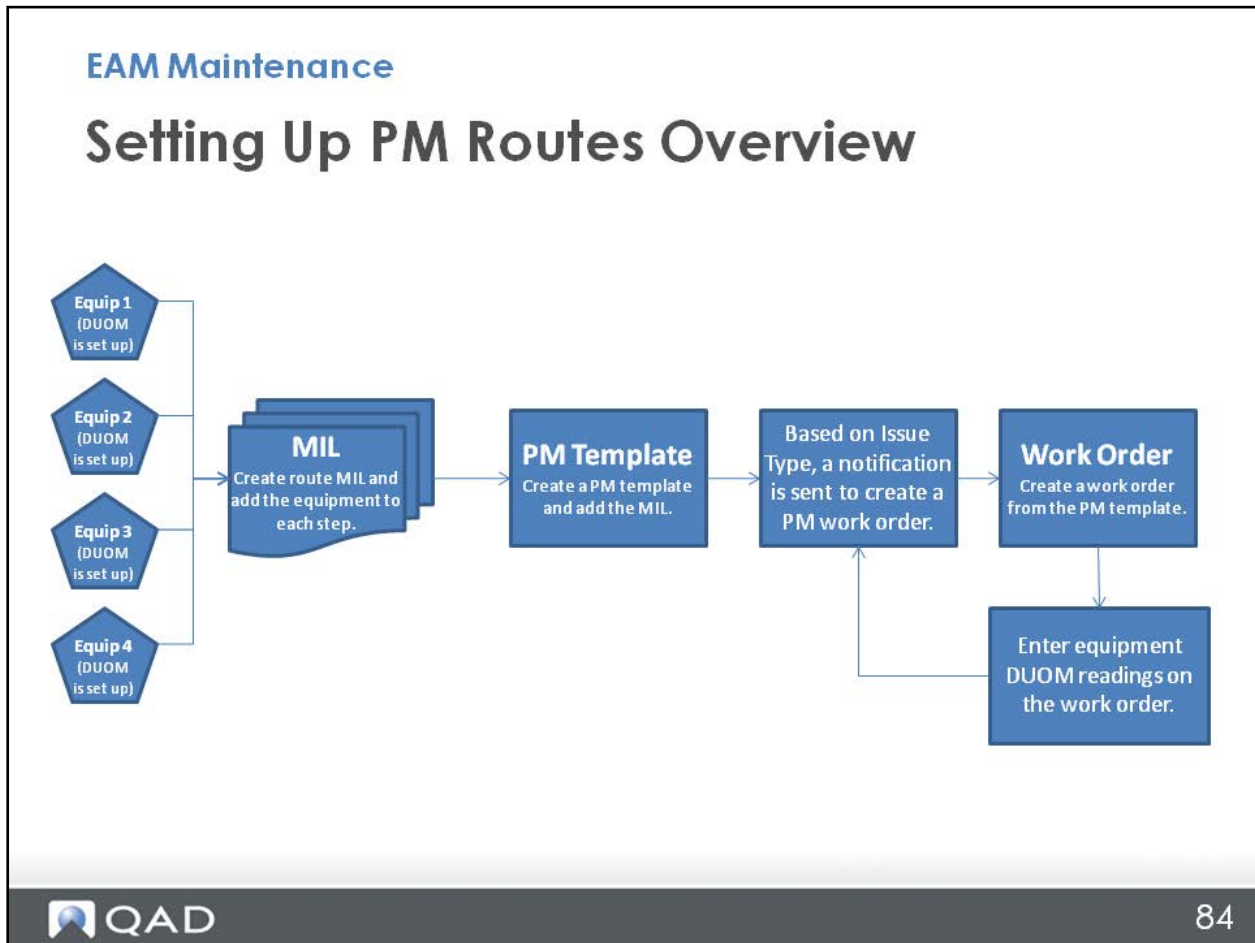


The PM route workflow lets you define PM routes for use in recording equipment calibration readings.

With EAM, you now can add multiple pieces of equipment to a single PM work. On the route instruction list, you can add a different piece of equipment with its DUOM to each step. This approach makes it possible for you to inspect and record readings for the equipment's DUOMs with a single work order. The use of PM routes enables maintenance planners to more efficiently schedule a PM work order or a planned CM work order where the same task, such as inspection and taking readings, can be performed on multiple pieces of equipment.

Note: In previous versions of EAM, you had to create a PM work order for each piece of equipment.

Setting Up PM Routes Overview



The following slides demonstrate how to set up a basic route MIL that is linked to a PM template.

Create Route MIL

EAM Maintenance

Create Route MIL

Processes > Instruction Lists (EAM) > Mstr Inst No: 39

Mstr Inst No: 39

General

Detail

Kind: Route

Type: CALIB

Description: Temperature readings

Owner: AHOWARD

Procedure:

QAD 85

From the Master Instructions List page [Maintenance|Equipment|PM/PdM|Master Lists|Instruction Lists], click New in the top browse.

Kind: Select Route from the drop-down list.

Type: Select a user-defined MIL type code for this list.

Description: Enter a brief description of the MIL.

Procedure: Input any additional information about this MIL, if needed.

Owner: Insert an owner group to limit access for amending this MIL.

Click Save and close out of the header tab.

The next step is to add equipment to the MIL. In this example, we use four different fire extinguishers located throughout Building 1.

Create Steps by Equip Number

EAM Maintenance

Create Steps by Equip Number

Processes x Instruction Lists (EAM) x PM Inst No: 39, Step: 1 x

PM Inst No: Step:

Step

Detail


Craft	<input type="text" value="TECH"/>	Reg Pay Rate	<input type="text" value="20.00"/>
Qty	<input type="text" value="1"/>	Skill	<input type="text" value="M1"/>
Hours	<input type="text" value="0"/>	Minutes	<input type="text" value="30"/>
Std Hrs	<input type="text" value="0.50"/>	Cost	<input type="text" value="10.00"/>

Route Options

Equip No	<input type="text" value="WCH001"/>	Description	<input type="text" value="Water Chiller, Unit 1"/>
DUOM	<input type="text" value="Temp"/>	Type	<input type="text" value="Monitor"/>
Reading	<input type="text" value="20.00"/>	Reading Date	<input type="text" value="3/31/2015"/>

Description

Description:

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Note: Prior to adding equipment to the MIL, the equipment must have a DUOM code set up and established on the Readings submenu of the Equipment record.

In the lower browse on the Master Instructions List, click New and enter in the following information:

Craft: Select the user-defined craft code required to carry out this step in the PM.

Qty: Enter the number of people required to carry out this step in the PM.

Skill: Select a user-defined skill code required for this step.

Hours/Minutes: Enter the duration of time required to carry out this step of the PM.

Equipment No: Select the first piece of equipment to be inspected in the route of the PM.

DUOM: Select the DUOM to be measured that is established on the Equipment's Readings submenu.

Description: Enter any additional text required to carry out the step.

Click Save and close the tab. Continue with these steps to add additional equipment and/or steps to include in the inspection route for the PM.

Repeat for All Equipment and Steps

EAM Maintenance

Repeat for All Equipment and Steps

The screenshot displays two tables from the EAM Maintenance software interface.

Table 1: Instruction Lists (EAM)

Mstr Inst No	Kind Description	Type	Description	Procedure	Owner
28	Instruction	LUBE	Conveyor Monthly		
29	Instruction	REPLC	Conveyor Semi-Annual		
30	Instruction	REBLD	Conveyor Yearly		
31	Instruction	C&I	Fire extinguisher Monthly		
32	Instruction	C&I	Machining Centers Bi-Monthly		
33	Instruction	CLEAN	Tool Maintenance		
34	Instruction	REBLD	Tool Semi Annual		
35	Instruction	C&I	Overhead Doors Monthly		
36	Instruction	LUBE	Overhead Door Semi-Annual		
37	Instruction	REBLD	Accumulator rebuild		
38	Instruction	C&I	Compressor Inspection		
39	Route	CALIB	Temperature readings		

Table 2: Step Details

Step	Qty	Craft	Skill	Std Hrs	Cost	Description	Equip No	Equip No Desc	DUOM	Reading Date
1	1	TECH	M1	0.50	10.00	Take temperature reading	WCH001	Water Chiller, Unit 1	Temp	03/31/2015
2	1	TECH	M1	0.50	10.00	Take temperature reading	WCH002	Water Chiller, Unit 2	Temp	03/31/2015

QAD 87

Now that all steps have been filled out with different pieces of equipment, this MIL can be attached to a PM template. The MIL steps reference the different pieces of equipment for measurement or calibration, depending on the equipment or DUOM.

Create PM

EAM Maintenance

Create PM

PM Template No

Equipment | Issue Method | Codes | Detail | User Defined

Description <input type="text" value="Temperature readings for Water Chiller units"/>	Catalog <input type="text"/>
Equip No <input type="text"/>	Location <input type="text"/>
Problem <input type="text" value="Check temperature readings for Water Chillers Unit 001 and Unit 002"/>	Precautions <input type="text"/>

Equipment | Issue Method | Codes | Detail | User Defined

Issue Method

Issue Method

Calendar

Issue Cycle <input type="text" value="Week"/>	No of Cycles <input type="text" value="1"/>	Status <input type="text" value="Active"/>
Next Issue <input type="text" value="4/7/2015"/>	Sliding Sch? <input type="checkbox"/>	
Lead Days <input type="text" value="0"/>	Last Day of Month <input type="checkbox"/>	

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Leave the Equipment No field blank because the MIL mentions several equipment records.

Enter the issue method details.

Add MIL to PM

EAM Maintenance

Add MIL to PM

Processes PM Templates (EAM) PM Template No: 1051

PM Template No: 1051

Excel Export Print Add To Favourites New Undo

Find Default

Mstr Inst List	Type	Description	Procedure	Revision
39	CALIB	Temperature readings		

Excel Export Print Add To Favourites New

Action Find Default

Step	Qty	Craft	Skill	Std Hrs	Cost	Description	DUDN
1	1	TECH	M1	0.50	10.00	Take temperature reading	Temp
2	1	TECH	M1	0.50	10.00	Take temperature reading	Temp

PM Templates

- Detail
- Notes
- Readings
- Skips
- Superiors
- Subordinates
- Failures
- Work Order
- Revisions
- PM Master Parts List
- PM Master Instruction List**
- PM Safety Procedures

QAD 89

On the PM template submenu PM Master Instruction List, add the Route MIL to the PM.

Click Save.

When the PM becomes due, a WO is created and a Route Instruction List is used.

Route Instruction List Work Order

EAM Maintenance

Route Instruction List Work Order

Work Order

WO No 200 Status S
 Received 02/04/2015 Start 02/04/2015 Target Completion Date 02/04/2015

Work Order Instruction List

Inst List No 1 Description Building 1 Fire Extinguisher Inspection

Kind R Mstr Inst No 40
 Procedure Revision
 Type INSPEC

Step	Equip No	DUOM	Last Reading	Date Read	Reading	Date
1	FREXT-1	PSI	12.00	02/04/2015		
2	FREXT-2	PSI	12.00	02/04/2015		
3	FREXT-3	PSI	12.00	02/04/2015		
4	FREXT-4	PSI	12.00	02/04/2015		

WO Document Options

Work Orders

Instruction Lists

Stores Req Lists

Attachments

OK Cancel

Site 10-100 WO No 200

Excel Export Print Add To Favourites New Undo

Action Find Default [Icons]

Inst List No	Description	Mstr Inst No	Kind	Revision
1	Building 1 Fire Extinguisher Inspection	40	Route	

Excel Export Print Add To Favourites New Undo

Action Find Default [Icons]

Step	Qty	Craft	Time	Equip No Desc	DUOM	Current Reading	Reading
1	1	TECH	0002	Fire Extinguisher 1	PSI	12.00	12.00
2	1	TECH	0002	Fire Extinguisher 2	PSI	10.00	10.00
3	1	TECH	0002	Fire Extinguisher 3	PSI	11.00	11.00
4	1	TECH	0002	Fire Extinguisher 4	PSI	11.00	11.00

Work Order

- Detail
- Notes
- Assigned
- Labor History
- Instruction Lists**
- Stores Req Lists
- Cost Analysis
- Requisitions
- Requisition Lines
- Revisions

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When the WO document is printed with the Instruction Lists, there is a space for the maintenance person to enter the readings on the WO document. The recorded readings can then be updated in EAM within the WO record on the Master Instructions List submenu.

Create PM Templates and Issue to WO

EAM Maintenance

Create PM Templates and Issue to WO

PM Maintenance Setup and Options

EAM Maintenance

PM Maintenance Setup and Options

- Available fields
 - Work order owner
 - User group who can modify the work order
 - Active
 - Clear this check box to stop work orders from a PM
 - Locking equipment deactivates PMs
 - Lock list
 - Prevents technicians from modifying the work order instruction or parts list for regulatory or safety-based PMs
 - Estimated labor hours
 - Displays estimated labor on standard work order
 - Failures
 - Identify failures that the PM was designed to prevent

Creating a Calendar-Based PM Template

EAM Maintenance

Creating a Calendar-Based PM Template

qadui: 10USA USA Division [USD] > 10USACO USA DIVISION (2) - QAD Enterprise Applications

File Edit Tools Workspace Window Help

Applications

Menu Search

Maintenance

- Equipment
 - Equipment (EAM)
 - DUQM Conversion (EAM)
 - All Downtime (EAM)
 - Data Loads
- PM / PdM
 - PM Templates (EAM)**
 - Master Lists
 - Instruction Lists (EA)
 - Parts Lists (EAM)
 - Work Orders
 - Work Orders (EAM)
 - WD Close Browse (EAM)
 - Production Driven Maintenanc

Favorites

Select your favorite application from the Applications menu and drag it here. Also, you can...

Processes x PM Templates (EAM) x

Excel Export Print Add To Favourites **New** Edit

Action Find Site 10-100 Filter ALL

PM Template N	Description	Equip No	Next Failure	Pt
1053	Robotic Welding Alignment	RoboticWeld		
1052	Reactor 55 Cleaning	Reactor55		
1051	Temperature readings for Water Chiller units			04
1050	M1 C & I Fire Extinguisher Sys			05
1049	FIRE SYSTEM TEST			05
1048	CLEAN EYEWASH STATIONS			05
1047	AC MONTHLY PM			05
1046	AC MONTHLY PM			05
1045	AC MONTHLY PM			05
1044	AC MONTHLY PM			05
1043	AC MONTHLY PM			05
1042	AC MONTHLY PM			05
1041	AC MONTHLY PM			05
1040	AC MONTHLY PM			05
1039	ANNUAL OVERHEAD HOIST PM			03
1038	ANNUAL OVERHEAD HOIST PM	H00004		03

Select All
Add Record To Browse
New
Edit
Columns
Copy to Equipment
Issue
Global Issue
External Links
Global Edit

QAD 93

Navigate to Maintenance|PM/PdM|PM Templates

Creating a Calendar-Based PM Template

EAM Maintenance

Creating a Calendar-Based PM Template

The screenshot shows the 'PM Templates (EAM)' window with 'PM Template No. 2' entered. The 'Equipment' tab is active, showing 'Monthly Inspection' in the Description field. A 'Lookup' dialog box is open, displaying a tree view of equipment categories and a list of equipment items with their descriptions.

Equip No	Description
Plant 1	Plant 1,manufacturing,NY
BLDG 1	Building 1, mfg. NY
AC0009	Air Conditioner 09
AC0010	Air Conditioner 10
CO0001	Compressor,air,100hp,joy
CO0002	Compressor,air,75hp,SULAIRlair
CO0003	Compressor,air,100hp,SULAIRlair
CV0005	Conveyor,feed,7ft,9in belt
HO0002	High Speed Overhead Hoist
HO0003	Overhead Hoist 03
HO0004	Overhead Hoist 04

QAD

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Calendar-based PMs are the simplest PMs and are usually the least accurate.

The system assigns the PM template number.

Use the lookup to select equipment.

Creating a Calendar-Based PM Template

EAM Maintenance

Creating a Calendar-Based PM Template

The screenshot shows the 'Equipment' tab with the following configuration:

- Issue Method:** Calendar
- Issue Cycle:** Month
- No of Cycles:** 1
- Next Issue:** 5/22/2015
- Lead Days:** (empty)
- Status:** Active
- Sliding Sch?:**
- Driving UOM:** (empty)
- DUOM:** (empty)
- Meter:**
 - DUOM Cycle: 0.00
 - Current Reading: 0.00
 - Next DUOM Issue: 0.00
 - Est Due Date: (empty)
- Event:** (empty)
- Event Next Issue:** (empty)

A calendar pop-up for May 2015 is shown, with the date 22 highlighted. The calendar shows the following days: 25, 27, 28, 29, 30, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31. The days of the week are S, M, T, W, T, F, S.

QAD 95

1. Select:

Issue Method = Calendar

Issue Cycle = Month

No of Cycles = 1

Next Issue date

Lead Days = 5

2. Enter any other relevant information and Save.

When creating other frequencies, use the following as a guide for conversions:

Issue cycle = Month and No of Cycles = 3 defines a quarterly frequency.

Some companies base a month on 28 days or four weeks in order for PMs to become due on the same day of the week each time.

Link an Instruction List for this PM

EAM Maintenance

Link an Instruction List for this PM

Processes x PM Templates (EAM) x PM Template No: 2 x

PM Template No: 2 PM Template No: 2 *New Record*

Equipment | Issue Method | Codes | Detail | User Defined

Equipment

Description	Monthly Inspection	Catalog	HVAC	Heating Ventilation and AC
Equip No	AC0009 Air Conditioner 09	Location	BLD1	Building 1
Problem		Precautions		

PM Templates

- Detail
- Notes
- Readings
- Skips
- Superiors
- Subordinates
- Failures
- Work Order
- Revisions
- PM Master Parts List
- PM Master Instruction List**
- PM Safety Procedures

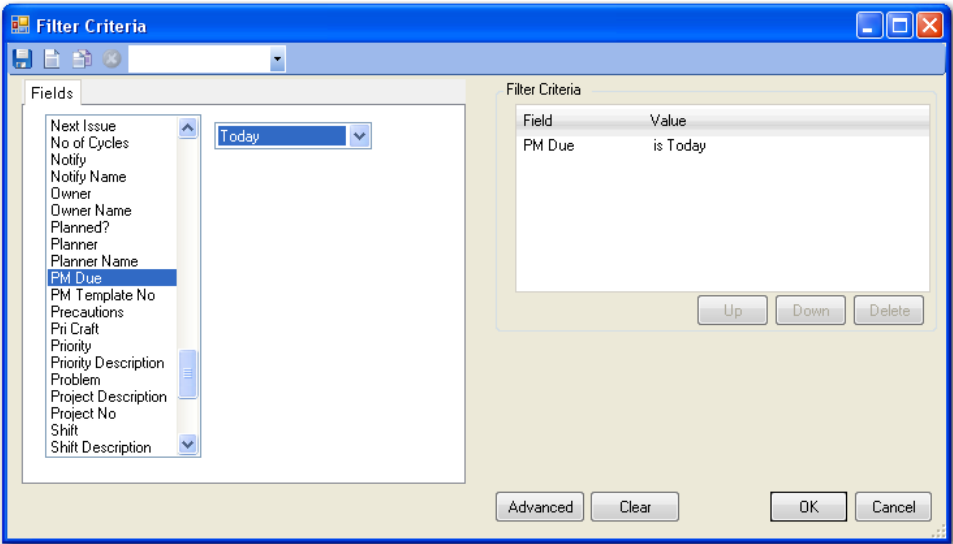
QAD 96

People who access this work order use the instructions and any safety or other included notes to perform the work order. If the instruction list is of type Route, the list includes all machines that must be included on a route-based PM.

Filtering by PM Due

EAM Maintenance

Filtering by PM Due



The screenshot shows a software window titled "Filter Criteria". On the left, a list of fields is displayed, with "PM Due" selected. A dropdown menu next to it shows "Today". On the right, a table titled "Filter Criteria" contains one entry: "PM Due" with the value "is Today". Below the table are "Up", "Down", and "Delete" buttons. At the bottom of the window are "Advanced", "Clear", "OK", and "Cancel" buttons.

Field	Value
PM Due	is Today

QAD 97

This task is usually performed by the planner or by the maintenance supervisor.

Filtered Browse of PMs that are Due

EAM Maintenance

Filtered Browse of PMs that are Due

The screenshot shows the 'PM Templates (EAM)' window in the QAD EAM software. The 'Filter' dropdown menu is set to 'PM Due', which is highlighted with a red circle. The main window displays a table of PM templates with the following data:

PM Template N	Description	Equip No	Next Failure	PM Due	Next Issue	Lead D
1051	Temperature readings for Water Chiller units		04/07/2015	04/07/2015	0	
1050	M1 C & I Fire Extinguisher Sys	PAINT	05/01/2015	05/01/2015	0	
1049	FIRE SYSTEM TEST	PAINT	05/01/2015	05/01/2015	0	
1048	CLEAN EYEWASH STATIONS	PAINT	05/01/2015	05/01/2015	0	
1047	AC MONTHLY PM	AC0008	05/01/2015	05/01/2015	0	
1046	AC MONTHLY PM	AC0007	05/01/2015	05/01/2015	0	
1045	AC MONTHLY PM	AC0006	05/01/2015	05/01/2015	0	
1044	AC MONTHLY PM	AC0005	05/01/2015	05/01/2015	0	
1043	AC MONTHLY PM	AC0004	05/01/2015	05/01/2015	0	
1042	AC MONTHLY PM	AC0003	05/01/2015	05/01/2015	0	
1041	AC MONTHLY PM	AC0002	05/01/2015	05/01/2015	0	

Issue Globally

EAM Maintenance

Issue Globally

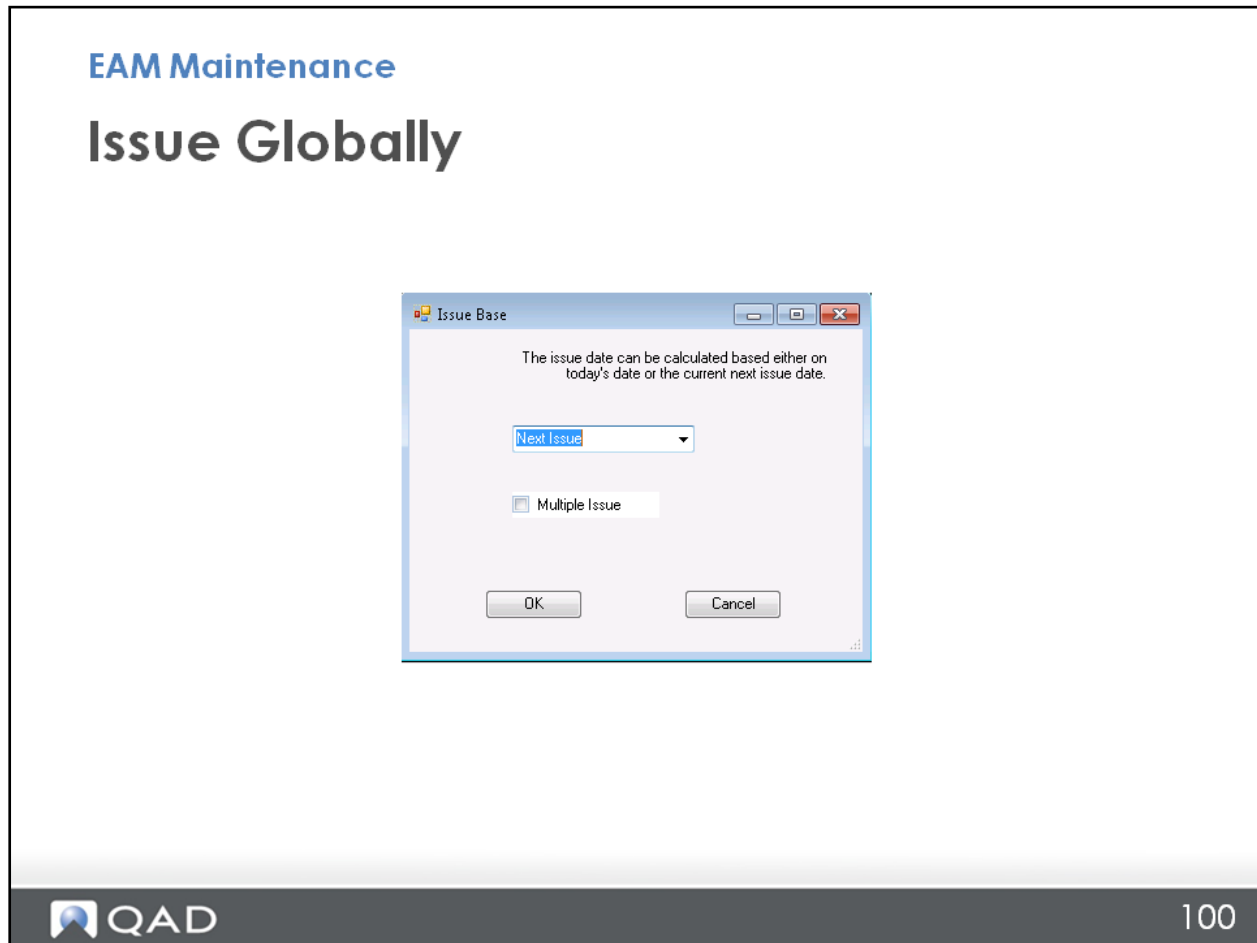
		Equip No	Next Failure	PM Due	Next Issue	Lead C
	ment	RoboticWeld				0
		Reactor55				0
	s for YWater Chiller units			04/07/2015	04/07/2015	0
	isher Sys	PAINT		05/01/2015	05/01/2015	0
1049	FIRE SYSTEM TEST	PAINT		05/01/2015	05/01/2015	0
1048	CLEAN EYEWASH STATIONS	PAINT		05/01/2015	05/01/2015	0
1047	AC MONTHLY PM	AC0008		05/01/2015	05/01/2015	0
1046	AC MONTHLY PM	AC0007		05/01/2015	05/01/2015	0
1045	AC MONTHLY PM	AC0006		05/01/2015	05/01/2015	0
1044	AC MONTHLY PM	AC0005		05/01/2015	05/01/2015	0
1043	AC MONTHLY PM	AC0004		05/01/2015	05/01/2015	0

QAD 99

Select multiple PM templates to issue.

Select Global Issue from the Action or right-click menu.

Issue Globally



Select either Today or Next Issue to determine how to recalculate the next PM's due date.

If multiple calendar issues have been missed, select Multiple Issue to allow each of the missed scheduled work orders to be created. Leaving this field clear creates only one PM work order. Use this feature to produce PMs if the planner is out on vacation and you want the PMs issued in advance.

The Next Issue option is often selected – this option recalculates the new next issue based on the current next issue date. If many PMs have been skipped, then select Today to ensure that the new next issue date disregards the passage of time.

New PM Work Orders

EAM Maintenance

New PM Work Orders

- After processing the Issue Action, the work order browse opens with only the new PM work orders in view
- Remember!!!
 - Best Practice PM to CM ratio is 8:1
- Note: PM work order is linked to the PM template number for analysis

The screenshot shows a web application interface for 'Work Orders (EAM)'. At the top, there are tabs for 'Processes', 'PM Templates (EAM)', and 'Work Orders (EAM)'. Below the tabs is a toolbar with 'Excel Export', 'Print', 'Add To Favourites', 'New', and 'Edit' buttons. A search bar contains 'Site: 10-100' and a filter dropdown is set to 'ALL'. Below the search bar is a table with the following columns: W/O No, Equip No, Status, W/O Parts, Priority, Type, Class, Received, Time (Start), Start, Location, and Catalog. One row is visible with the following data: W/O No: 247, Equip No: AC0008, Status: S, W/O Parts: N, Priority: 3, Type: PM, Class: PM, Received: 03/31/2015, Time (Start): 08:29, Start: 03/31/2015, Location: BLD2, Catalog: HVAC.

W/O No	Equip No	Status	W/O Parts	Priority	Type	Class	Received	Time (Start)	Start	Location	Catalog
247	AC0008	S	N	3	PM	PM	03/31/2015	08:29	03/31/2015	BLD2	HVAC

Create Service Requests

EAM Maintenance

Create Service Requests

Service Request Setup

EAM Maintenance

Service Request Setup

- Common service request fields and functions
 - Originator
 - EAM e-mails when service request is assigned to a work order
 - Originator (Orig) notify
 - Setup in originator User Maintenance
 - Notifies a person associated with the originator that a service request is created
 - Notify
 - EAM e-mails when service request is assigned to a work order
 - Type
 - Lookup code for the category of requested service
 - Authorization (if enabled)
 - Create a work order from the service request after the service request is approved

Use service requests to report a problem with a piece of equipment that may not need a work order immediately. For instance, an operator on the production floor reports that equipment appears to be leaking oil or an office staff member reports a burned-out light bulb.

A maintenance planner or supervisor reviews the service requests and creates a work order, or closes the service request without action.

Service Request Sample

EAM Maintenance

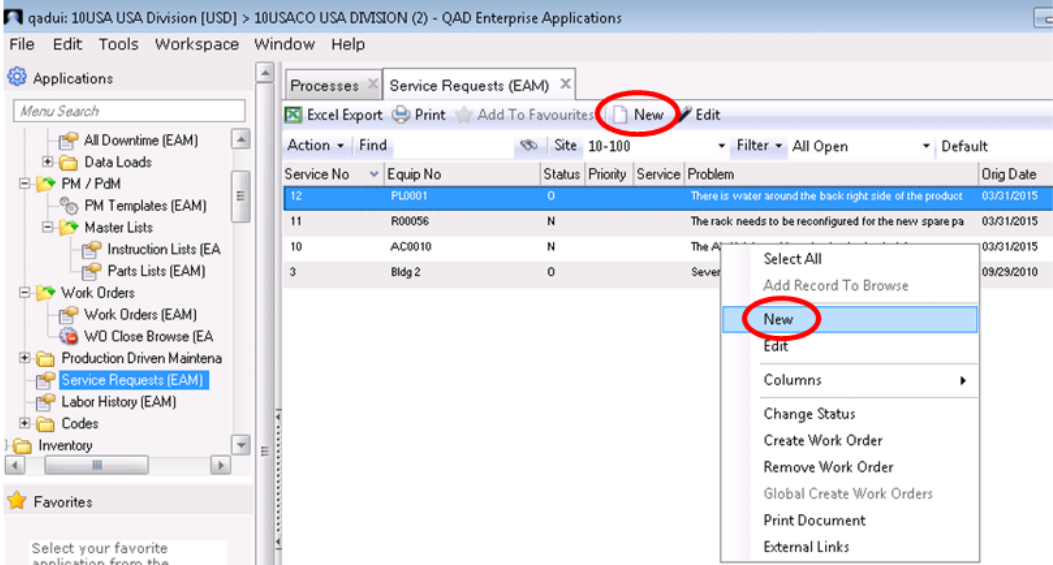
Service Request Sample

- Initiate service request
 - Production supervisor creates service request
 - Maintenance planner receives e-mail notification
 - Maintenance planner turns service request into work order and schedules technician
 - In emergency situations, follow protocols to alert maintenance and then proceed with entering the service request

Create a Service Request

EAM Maintenance

Create a Service Request



The screenshot shows the QAD Enterprise Applications interface. The main window is titled "Service Requests (EAM)". The top toolbar includes buttons for "Excel Export", "Print", "Add To Favourites", "New", and "Edit". The "New" button is circled in red. Below the toolbar is a table of service requests with columns: Service No, Equip No, Status, Priority, Service, Problem, and Orig Date. The table contains three rows of data. A right-click context menu is open over the table, and the "New" option is circled in red.

Service No	Equip No	Status	Priority	Service	Problem	Orig Date
12	PL0001	0			There is water around the back right side of the product	03/31/2015
11	R00056	N			The rack needs to be reconfigured for the new spare pa	03/31/2015
10	AC0010	N			The A	03/31/2015
3	Bldg 2	0			Sever	09/29/2010

Two ways to create service request:

1. From Service Request Menu
2. Directly from Equipment

QAD 105

Click New using the button or the right-click menu.

Create a Service Request

The screenshot displays the 'Create a Service Request' form in the QAD EAM Maintenance system. The form is divided into several sections:

- Origin:** Includes fields for Originator (sysadm), System Administrator, Orig Date (3/31/2015), and Orig Notify (Alert).
- Detail:** Contains fields for Equip No (PL0001), Production line 1, mfg., Location (PL1), Plant 1, Notify (MFGM), MFG Maintenance Group, Priority, and * Class (PM). A text area for the Problem is also present.
- Status:** Includes fields for Status (0), W/O No (254), Assigned, and Start (3/31/2015).
- Authorization:** Includes an 'Auth?' checkbox and an 'Auth By' field.

The 'Action' button is circled in red. The 'Equip No', 'Priority', 'Status', and 'Authorization' sections are also circled in red. The QAD logo is visible in the bottom left corner, and the page number '106' is in the bottom right corner.

Special Notes:

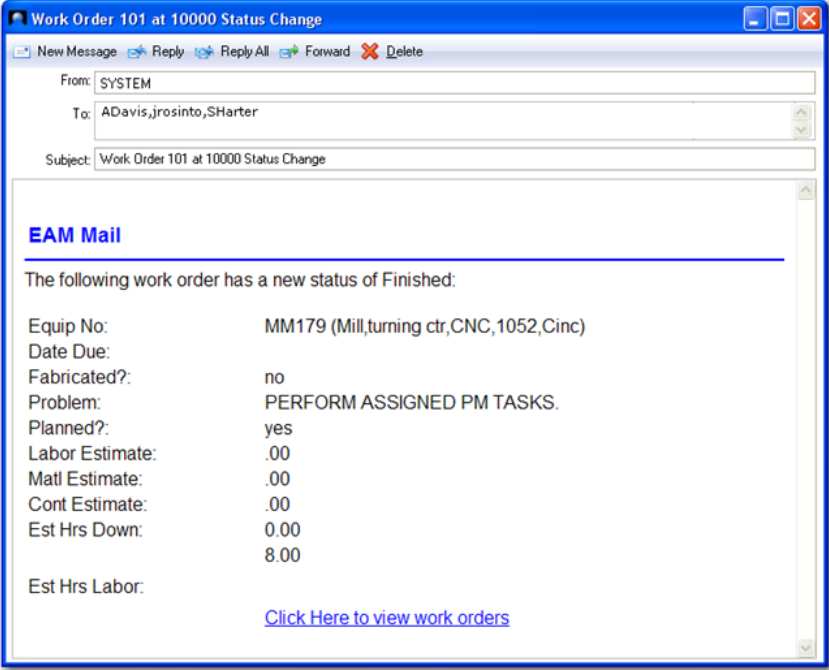
- The Equipment field is often made mandatory.
- The requestor specifies the priority, but it can be changed on the work order.
- The status always aligns with the WO status.
- The Authorization function may or may not be enabled. If enabled, these fields are system generated.

Enter pertinent data and the save record.

Automatic E-Mail Notification

EAM Maintenance

Automatic E-Mail Notification



Work Order 101 at 10000 Status Change


From: SYSTEM
To: ADavis,jrosinto,SHarter
Subject: Work Order 101 at 10000 Status Change

EAM Mail

The following work order has a new status of Finished:

Equip No:	MM179 (Mill,turning ctr,CNC,1052,Cinc)
Date Due:	
Fabricated?:	no
Problem:	PERFORM ASSIGNED PM TASKS.
Planned?:	yes
Labor Estimate:	.00
Matl Estimate:	.00
Cont Estimate:	.00
Est Hrs Down:	0.00
Est Hrs Labor:	8.00

[Click Here to view work orders](#)

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Copies of this e-mail notification can be sent to the Notify user's regular e-mail inbox.

Equipment Downtime

EAM Maintenance

Equipment Downtime

All Downtime Browse

EAM Maintenance

All Downtime Browse

Equip No	Site	Start Date	Line	Start Time	End Date	End Time	Hours Down	Reason Desc	Sch Down?	WO No
AC0006	10-100	10/14/2010	1	11:00	10/14/2010	14:00	3.00		<input checked="" type="checkbox"/>	143
C00002	10-100	09/29/2010	1	10:00	09/29/2010	14:30	4.50	Unplanned Correctiv	<input type="checkbox"/>	101

QAD 109

The All Downtime browse, located in Maintenance|Equipment, displays a list of all downtime records for all equipment.

Downtime within Equipment Record

EAM Maintenance

Downtime within Equipment Record

The screenshot displays the QAD EAM Maintenance interface. At the top, there are tabs for 'Processes' and 'Equipment (EAM)', and a breadcrumb trail 'Site: 10-100, Equip No: AC0006'. Below this, there are input fields for 'Site' (10-100) and 'Equip No' (AC0006). A toolbar contains options for 'Excel Export', 'Print', 'Add To Favourites', 'New', and 'Edit'. A search bar is labeled 'Find' with a 'Default' dropdown. The main area is a table with the following data:

Start Date	Line No	Start Time	End Time	Down Time	Reason	Sch Down?	Hours Down
10/14/2010	1	11:00	14:00	3:00		<input type="checkbox"/>	3.00

On the right side, there is a navigation sidebar titled 'Equipment' with the following menu items: Detail, Notes, Service Requests, Work Orders, PM Templates, Failure Analysis, Cost Analysis, BDM, Readings, Equipment Alternate, Procedure Lists, Production Hours, Equipment Products, Equipment Descriptors, **Down Time** (highlighted), and ERP Production Line.

QAD 110

EAM provides a method of tracking downtime directly to a specific equipment record. Downtime may or may not be associated with a maintenance work order. Each downtime record is also associated with an equipment record and, potentially, system, assembly, reason down, and failure codes.

To view the equipment downtime records, open the equipment record and select the Down Time submenu. Drill into the downtime record by double-clicking the record.

Production Driven Maintenance

EAM Maintenance

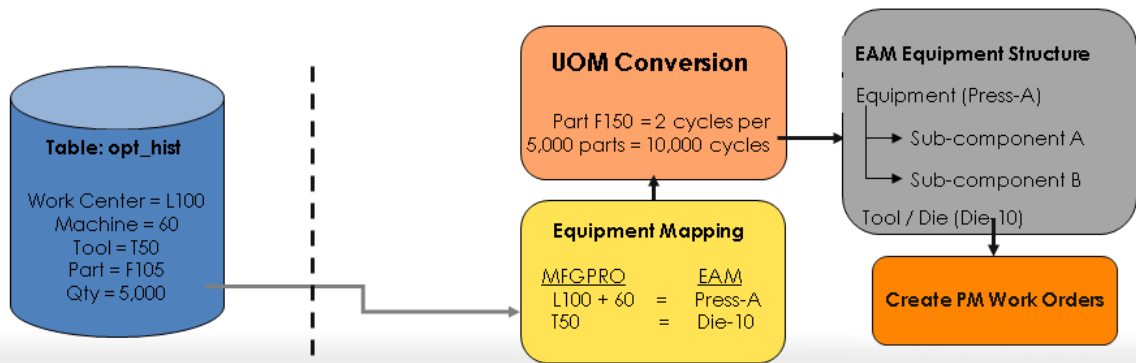
Production Driven Maintenance

Production Driven Maintenance Overview

EAM Maintenance

Production Driven Maintenance Overview

- Schedule maintenance based on actual production data from ERP
 - Establishes relationships between ERP and EAM records
 - Automatically updates PM templates and triggers PM due dates



Let's start with an overview. What is production driven maintenance?

Production driven maintenance allows you to schedule routine maintenance based on actual production data from the ERP. Relationships are configured between the ERP and EAM records. Actual production equipment usage triggers the issue of a PM template based on a specified unit of measure reading such as run-time hours or number of hits. The slide shows the relationships between the ERP's operations history table and how it maps back to EAM equipment.

PDM: Dependencies

EAM Maintenance

PDM: Dependencies

- Setup
 - Create a relationship between EAM Equipment and ERP Work Center and Machine
 - Create a DUOM item conversion
 - Create a DUOM type PM template
 - Run Job program
 - Menu
 - Maintenance | Production Driven Maintenance
 - Equipment mapping to ERP
 - Equip DUOM/ERP item conversion



There are a few dependencies to cover. First is setup. You need to set up a relationship between an EAM equipment record and an ERP work center and machine. To translate the ERP's DUOM (Driving Units of Measure) to an EAM DUOM, you need to create a DUOM item conversion. This setting indicates to EAM when it should trigger a PM based on the number of products being produced.

In addition, to trigger a PM, you must set up a Driving Unit of Measure type PM template for the equipment. To generate the readings back into EAM from the ERP operations history table, a job needs to run. This process is illustrated in the next few slides. No other dependent applications are required for production driven maintenance to function. The production driven maintenance process is entirely maintained within the EAM application. Production driven maintenance is available with the 12.8 release.

To access the setup, there are new menu options under Maintenance called Production Driven Maintenance. Under this menu, there are two setup modules. First is the Equipment Mapping to ERP and the second is Equipment DUOM/ERP Item Conversion. In the next few slides, you will see how these new setup screens are configured.

PDM: Setup

The screenshot shows the QAD EAM Maintenance interface with the 'PDM: Setup' window open. The navigation pane on the left includes 'Equipment Mapping to ERP (EAM)'. The main window displays a table with the following data:

Work Center	Machine	Tool Code	Equip No	Equip Description
1000	1001	RobotcYield	Robotc	Robotc Yielding 100

Below the screenshot is a diagram illustrating the data flow. On the left, a blue cylinder represents the 'Table: opt_hist' with the following data: Work Center = L100, Machine = 60, Tool = T50, Part = F105, Qty = 5,000. An arrow points from this table to a yellow box labeled 'Equipment Mapping' which contains the following mapping: MFGPRO L100 + 60 = EAM Press-A, T50 = Die-10. An arrow then points from the 'Equipment Mapping' box to a large blue rounded rectangle, which in turn points to another smaller blue rounded rectangle below it.

The first step is to establish the relationship between the ERP work center, machine, and tool, and the EAM equipment number. The menu item for this mapping is located under Maintenance|Production Driven Maintenance|Equipment Mapping to ERP.

In the graphic at the bottom of the slide, you can see the relationship between the ERP work center/machine/tool and the EAM equipment ID. The left blue block is the data captured from the ERP Operational History table and eventually fed back in to EAM. Further details on this will be introduced shortly.

PDM: Setup

EAM Maintenance
PDM: Setup

Processes: Equipment Mapping to ERP (E...)

Excel Export Print Add To Favourites New Undo

Find: Site: 10-100 Filter: ALL Default

Work Center	Machine	Tool Code	Equip No	Equip Description

Lookup

Domain	Work Center	Machine	Department	D
10USA	1000		0400	
10USA	1000	1001	0400	C
10USA	1001		0400	L
10usa	1010		0400	E
10usa	1020		0410	F
10usa	1030		0500	L
10usa	1040		0160	E
10usa	1050		0160	F
10USA	1050	1001	0160	F
10usa	1060		0550	F
10USA	1060	1001	0550	F
10usa	2000		1000	r

Table: opt_hist

Work Center = L100
Machine = 60
Tool = T50
Part = F105
Qty = 5,000

Equipment Mapping

MFG-PRO	EAM
L100 + 60	= Press-A
T50	= Die-10

QAD 115

When you select New for the work center and machine, EAM lookups display data directly from ERP. This information is not maintained in EAM.

PDM: Setup

The screenshot shows the 'EAM Maintenance PDM: Setup' interface. A 'Lookups' window is open, displaying a tree view of equipment under 'Plant 1'. The equipment list includes:

Equip No	Description
Plant 1	Plant 1,manufacturing,NY
BLDG 1	Building 1, mfg, NY
AC0009	Air Conditioner 09
AC0010	Air Conditioner 10
C00001	Compressor,air,100hp,joy
C00002	Compressor,air,75hp,SULAIRlair
C00003	Compressor,air,100hp,SULAIRlair
CV0005	Conveyor,feed,7ft,9in belt
H00002	High Speed Overhead Hoist
H00003	Overhead Hoist 03
H00004	Overhead Hoist 04
H00008	Overhead Hoist 08 (Tool Room)
H00093	Hoist,cable,10 U/R
PAINT	Paint Shop

Below the screenshot is a data flow diagram. On the left, a cylinder represents a database table: 'Table: opt_hist' with data: 'Work Center = L100', 'Machine = 60', 'Tool = T50', 'Part = F105', 'Qty = 5,000'. An arrow points from this table to a yellow box labeled 'Equipment Mapping' which contains: 'MFG-PRO L100 + 60 = EAM Press-A' and 'T50 = Die-10'. From the 'Equipment Mapping' box, an arrow points to a large blue rounded rectangle, which then has an arrow pointing down to a smaller blue rounded rectangle. A vertical dashed line separates the database table from the mapping and lookup components.

When you select the equipment number, the lookups display data from the EAM Equipment module.

PDM: Setup

EAM Maintenance

PDM: Setup

qadui: 10USA USA Division [USD] > 10USACO USA DIVISION (2) - QAD Enterprise Applications

File Edit Tools Workspace Window Help

Applications

Menu Search

Enterprise Asset Management

- Maintenance
 - Equipment
 - PM / PdM
 - Work Orders
 - Production Driven Maintenance
 - Equipment Mapping to ERP (EAM)
 - Equip DUOM/ERP Item Conversion (EA)
 - Service Requests (EAM)
 - Labor History (EAM)

Processes x Equipment Mapping to ERP (E... x

Excel Export Print Add To Favourites New Undo

Find [] Site 10-100 Filter ALL Default

Work Center	Machine	Tool Code	Equip No	Equip Description
1050			Reactor55	Reactor
1060	1001	RoboticWeld		Robotic Welding 100

Table: opt_hist

Work Center = L100
Machine = 60
Tool = T50
Part = F105
Qty = 5,000

Equipment Mapping

MFG-PRO EAM
L100 + 60 = Press-A
T50 = Die-10

QAD 117

The result is that a relationship is built between an ERP work center, machine, and tool and an EAM equipment record, as illustrated by the yellow square. For example, in the ERP, Work Center L100 and Machine 60 map to EAM equipment called Press-A. In this example, the tool was not indicated. You only need to set up the information used in the ERP for mapping purposes.

The mapping depends on the configuration in ERP. The mapping may only need to indicate a work center mapped to an EAM equipment ID, or it may need to indicate a work center, machine, and tool code mapped to an EAM equipment ID. The most commonly used mappings include work center and machine. If a tool code is required, this information must be manually entered. There is no lookup on the Tool Code field because it is provided with the work center and machine.

How to Set Up

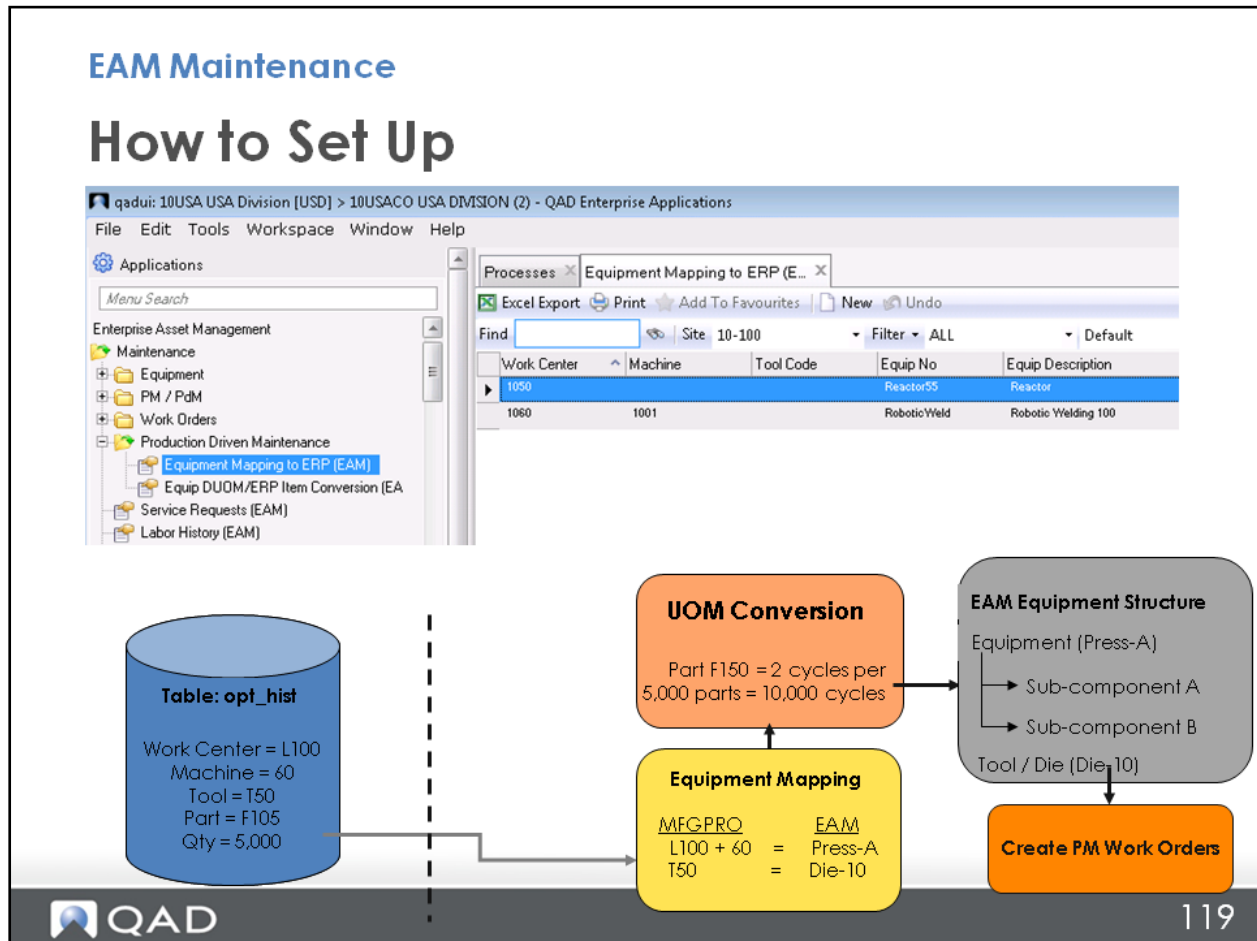
The screenshot shows the QAD EAM Maintenance interface. The title is "EAM Maintenance How to Set Up". The breadcrumb trail is "Maintenance | Production Driven Maintenance | Equip DUOM/ERP Item Conv (EAM)". The application window title is "qadul: 1BUSACO USA DIVISION (2) - QAD Enterprise Applications". The menu bar includes File, Edit, Tools, Workspace, Window, and Help. The left sidebar shows a tree view with "Equipment Mapping to ERP (EAM)" and "Equip DUOM/ERP Item Conversion (EAM)" selected. The main window displays a table with the following data:

Equip No	DUOM	Item Number	Multiplier	Value to Use
Reactor25	HR		1.00	Qty Completed
RoboticWeld	HR		1.00	Qty Completed

Below the screenshot is a flow diagram illustrating the data flow. On the left, a cylinder represents a table named "Table: opt_hist" with the following data: Work Center = L100, Machine = 60, Tool = T50, Part = F105, Qty = 5,000. An arrow points from this table to a yellow box labeled "Equipment Mapping" which contains the mapping: MFGPRO L100 + 60 = EAM Press-A, and T50 = Die-10. An arrow then points from the "Equipment Mapping" box to an orange box labeled "UOM Conversion" which contains the calculation: Part F150 = 2 cycles per 5,000 parts = 10,000 cycles. Finally, an arrow points from the "UOM Conversion" box to a large blue rounded rectangle, which then points to a smaller blue rounded rectangle below it.

Now that the equipment relationships are built, the next step is to define the driving unit of measure values that will trigger a preventative maintenance work order. For example, from looking at the orange square, you can see that a particular work center and machine produce a part in the ERP. In this case, it is Part F150, and it takes two cycles to produce that part. In EAM, we want to maintain the equipment based on the number of cycles. We need the multiplier of two to show that one completed quantity equals two cycles.

How to Set Up



In EAM, equipment Press-A is associated with a preventative maintenance template that becomes due every 10,000 cycles. When the ERP readings that are brought into EAM reach 10,000 cycles, the PM due date is populated, indicating that it is necessary to issue and perform a preventative maintenance routine on the equipment.

Implementation

EAM Maintenance

Implementation

- Configure job program

System Administration |
Job Control |
Job Program (EAM) |
Find DUOM Load

JobProgramID	Auto Run	Name	Description	Last Start	Program Name
1	<input type="checkbox"/>	TestProg	Testing Program	08/10/2011	systemadminstrat
10	<input type="checkbox"/>	Project Network	Project Network	07/27/2011	systemadminstrat
11	<input type="checkbox"/>	Project Query Network	Project Query Network	07/26/2011	systemadminstrat
12	<input type="checkbox"/>	JobProgramID	36		

Job Program Details:

Name: DUOM Load | Description: DUOM Load

Notify Complete: system | Auto Run:

Interval Amount: | Timeout Amount: | Program Name: systemadminstrat

Run Parameters: %password% password & %site% 10/100

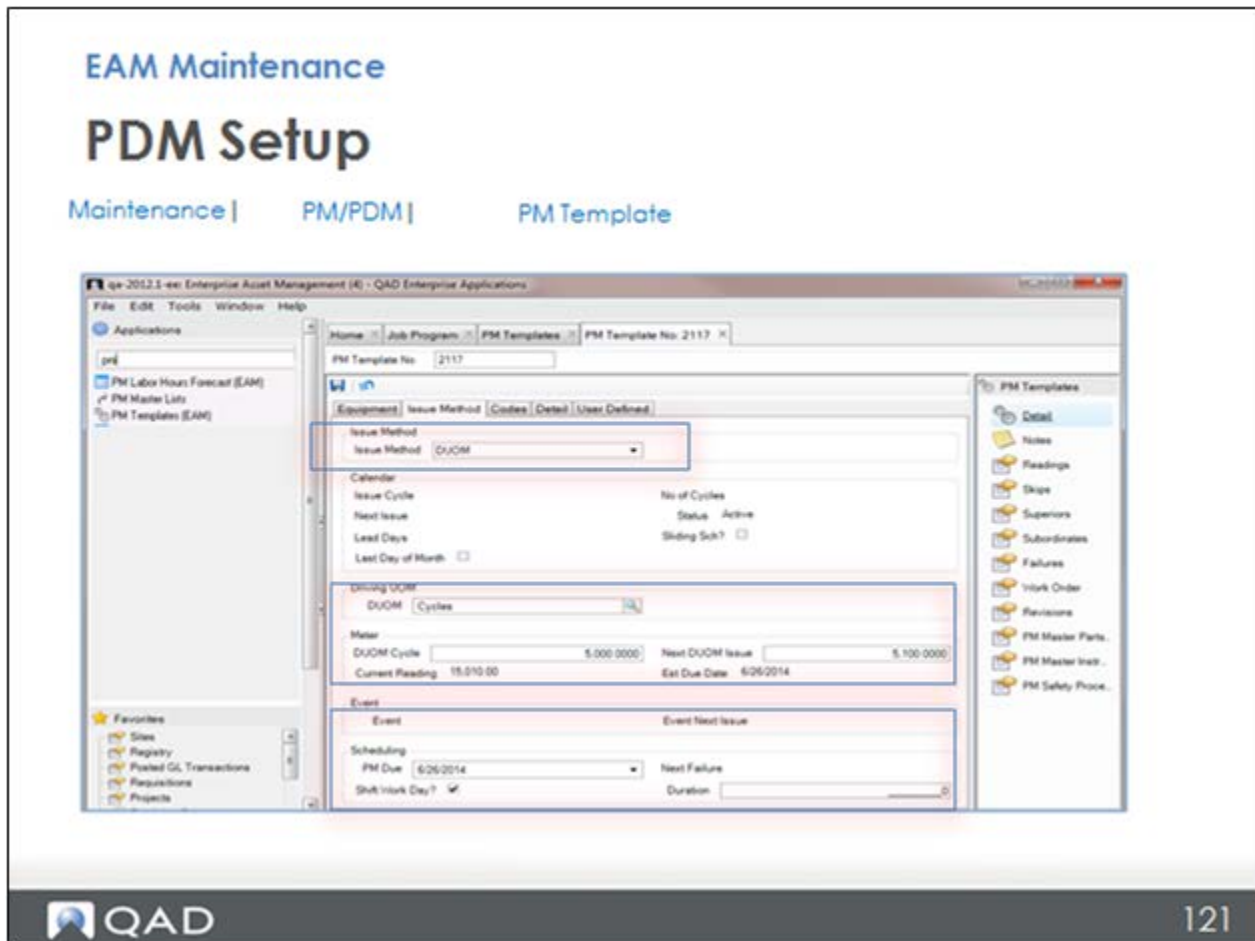
Site = EAM Site number
ID = Sysadm
Password = ID's logon password

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Next, configure a job called DUOM Load. Go to System Administration|Job Control|Job Program and then locate DUOM Load. This job reads data from the ERP Op_hist records and brings them into EAM's equipment and PM readings. When you locate the job, select Edit and view the setup. Under Run Parameters, enter the site code, which is the EAM site code for which this program is going to run. You must enter a user ID and password. Identify a user or a mail group to notify when the job completes.

Remember to select Auto Run to run the job at the specified frequency.

PDM Setup



To access PM Maintenance, go to Maintenance|PM/PdM|PM Template. Here, you see a PM template set for a piece of equipment where the issue method is DUOM, the actual DUOM is Cycles, and the DUOM cycle is set to 5,000.00. This setting means that, every 5,000 cycles, this PM template is issued.

As readings are updated by the job, the current reading and the estimated due date are updated. The PM due date is triggered when the current reading reaches the value designated under Next DUOM Issue. The new Next DUOM Issue value is calculated by adding the DUOM Cycle value to the current Next DUOM Issue, when the PM is issued to a work order.

MS Project Interface

EAM Maintenance

MS Project Interface

MS Project Interface

EAM Maintenance

MS Project Interface

- Maintenance planning and scheduling
- EAM modules
- Planning process
- Work orders
- Job planning
- Master instruction lists
- Feedback

Overview of MS Project Interface

EAM Maintenance

Overview of MS Project Interface

- MS Project interface
 - EAM work order export/import
- Key capabilities and benefits
 - Graphical tool helps to schedule maintenance work orders
 - Maintenance planner can assign resources, change start dates, priorities, etc. directly from MS Project
 - Easily identify where resources (maintenance technicians) are overbooked
 - Two-way interface allows changes in MS Project to be easily updated in EAM work orders

It is crucial for planners to have a planning tool to make the best use of labor availability. The MS Project Integration is designed to provide a visual display of work orders on a calendar, where the schedule can be shifted and changed as needed.

Planners have an easy way to view employee hours and availability, to assign resources, and to change start dates and priorities. This enhancement makes it possible to identify and use labor resources to their capacities. Once all resources are allocated, the work orders are imported back into EAM's work order module.

Additional Information: MS Project Interface

EAM Maintenance

Additional Information: MS Project Interface

- The MS Project interface provides maintenance planners a graphical scheduling tool to assess resource constraints and to quickly create a maintenance schedule for the day, week, or month.

Set Up Registry

EAM Maintenance

Set Up Registry

- Open Registry
 - Edit Work Order Schedule/Import and Export Default Dir

Project/Refresh Spending/PO Order	Project Refresh Spending/PO Order	No
QXend/		
QXend/Enabled	QXend Enabled?	yes
QXend/QXD Host Name	QXD Host Name	qaddemo.qad.com
QXend/QXD Name Server Port	QXD Name Server Port	5162
QXend/QXD SI App Service	QXD SI App Service	qrosi_aSlive
QXend/Source Application	Source Application	QADEAM
SAF/		
SAF/Omit Unsupported SAF Concepts	No, false or 0 will include unsupported SAF code entries.	no
SAF/Use SAF	yes / no	no
SCP/		
SCP/Bid File Archive	Bid File Archive	
SCP/Bid File Directory	Bid File Directory	
SCP/Bid File Naming	Bid File Naming	rfq_bidding
SerialNumber	Serial number for product.	123456789
UNIX Mail Command		sendmail -t -fname >> mail.err
UserCount	Number of users product is licensed for.	
VerifyCurrencyExchExists	Verify if Currency has Exchange Rate?	yes
Work Order Schedule/Import and Export/DefaultDir	MSProject Default Directory	\\solent1C\Users\jaee\Data
Work Order Schedule/Import and Export/RunProject	Automatically run MSProject	

Work Order Export

EAM Maintenance

Work Order Export

- On Work Order browse, select Action and then select Export Work Orders

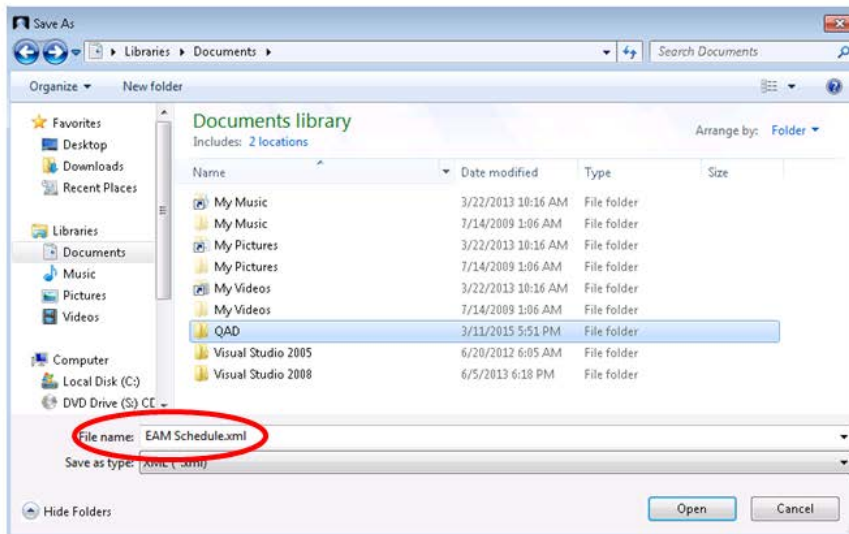
Status	WD Parts	Priority	Type	Class	Received	Time (Start)	Start	Location
N		3	PM	PM	05/19/2015	12:21	07/01/2015	WC1
N		3	PM	PM	05/19/2015	12:21	07/01/2015	WC2
N		3	PM	PM	05/19/2015	12:21	07/01/2015	WC1
N		3	PM	PM	05/19/2015	12:21	07/01/2015	WC2
N		3	PM	PM	05/19/2015	12:20	05/01/2015	BLD2
N		3	PM	PM	05/19/2015	12:20	05/01/2015	BLD2
N		3	PM	PM	05/19/2015	12:19	05/01/2015	BLD2
N			CM	PM	03/31/2015	08:50	03/31/2015	PL1
N			CM		09/29/2010	08:46	03/31/2015	NY
N		3	CM		03/31/2015	08:30	03/31/2015	BLD2
N		3	PM	PM	03/31/2015	08:29	03/31/2015	BLD1
N		3	PM	PM	03/31/2015	08:29	03/31/2015	BLD1
N		3	PM	PM	03/31/2015	08:29	03/31/2015	BLD1

Name Export File

EAM Maintenance

Name Export File

- Name the export .xml file for this export session and save it

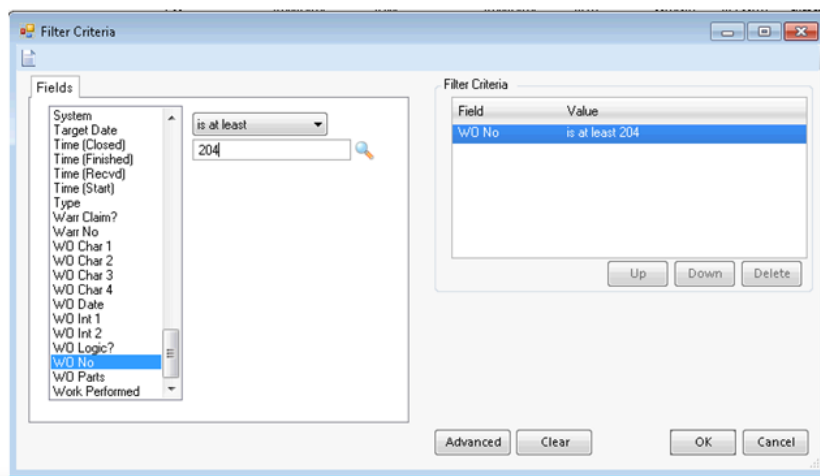


Filter the Work Orders

EAM Maintenance

Filter the Work Orders

- Filter the work orders that must be exported (Note: Closed and canceled work orders are automatically excluded)

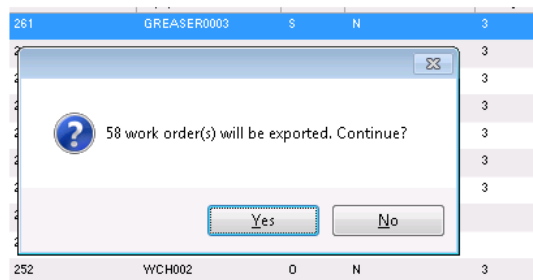


Confirmation

EAM Maintenance

Confirmation

- The system generates a confirmation message
 - If OK, select Yes to continue



- Export of work order is now complete

Schedule with Microsoft Project

EAM Maintenance

Schedule with Microsoft Project

- Launch Microsoft Project and use the EAM template.

Work Order	Equip No	Priority	Requestor	Est Hrs Labor	Actual Hrs Labor	% Complete	Start	End
								7 '03
								16 Mar '03
								23 Mar '03
								30 M

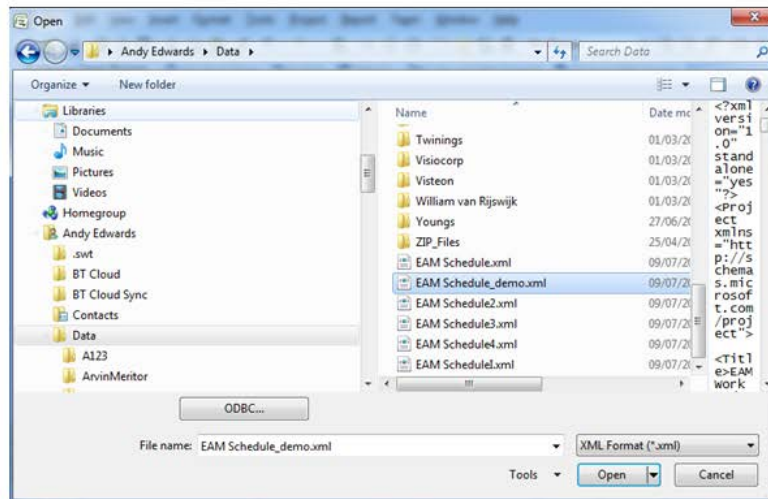
In order for the exported data to be formatted properly, the IT department needs to place the EAM template on your server and to make it available to users. The template can be acquired by contacting QAD Support, and should also be available for download from the QAD Store soon.

Open EAM Exported File

EAM Maintenance

Open EAM Exported File

- Locate the file in the directory specified in the Registry

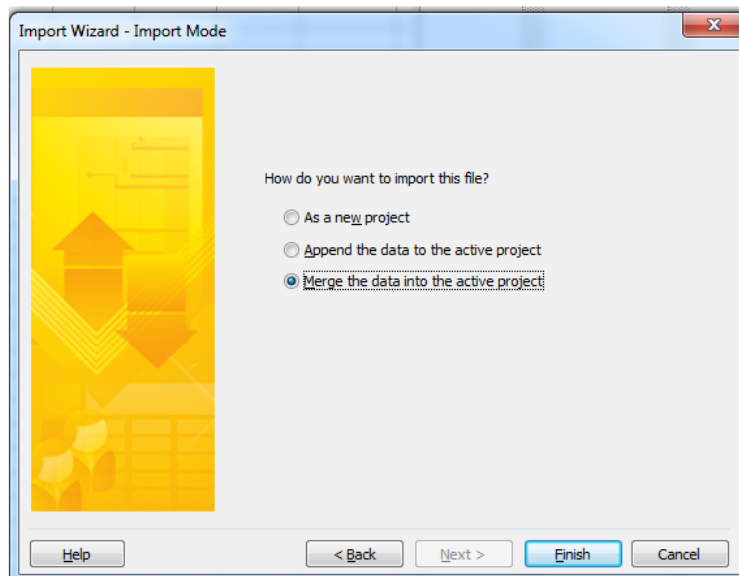


Load/Merge Exported File

EAM Maintenance

Load/Merge Exported File

- Use merge option to load the export file



Work Orders Loaded into MS Project

EAM Maintenance

Work Orders Loaded into MS Project

- The work orders are now in MS Project
 - Resources can be assigned
 - Start dates changed
 - Durations and priorities updated

	Work Order	Equip No	Priority	Requestor	Est Hrs Labor	Actual Hrs Labor	% Complete	Start	06 Jul '14				13 Jul '14				20 Jul '14				27 Jul '14															
									S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	204 - Stock Replenishment Reque		4	sysadm	8		0%	Wed 09/07/14																												
2			4	sysadm	5		0%	Wed 09/07/14																												
3	206 - export wo test	HO0002	3	sysadm	5		0%	Wed 09/07/14																												
4	207 - wo export test2LINE-RETUR	R00056	4	sysadm	8		0%	Wed 09/07/14																												
5	208 - repair this equipment	AC0004	3	sysadm	8		0%	Wed 09/07/14																												
6	209 - more repairs	AC0003	4	sysadm	8		0%	Wed 09/07/14																												

Updates

EAM Maintenance

Updates

- Duration
- Priority

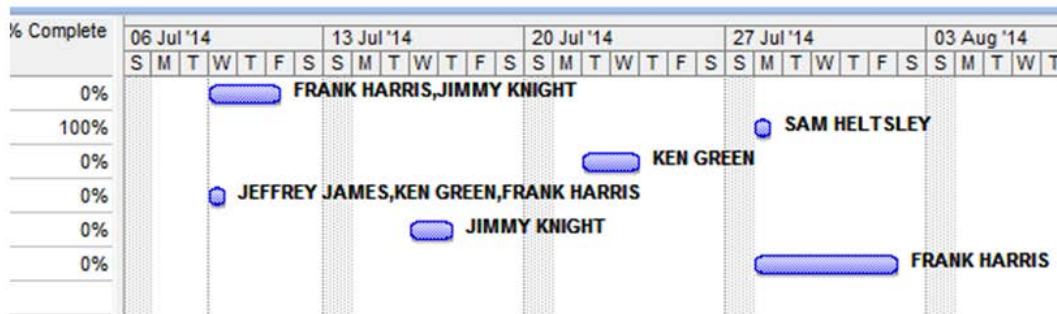
Order	Equip No	Priority	Duration	Requestor	Est Hrs Labor	Actual Hrs Labor	% Complete	06 Jul '14	13 Jul '14	20 Jul '14	27 Jul '14															
								S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T		
Stock Replenishment Reque		4	20 hrs	sysadm	20		0%																			
		4	5 hrs?	sysadm	16		0%																			
export wo test	HO0002	3	16 hrs	sysadm	5		0%																			
wo export test2LINE-RETUR	R00056	4	5 hrs	sysadm	8		0%																			
repair this equipment	AC0004	3	8 hrs?	sysadm	8		0%																			
more repairs	AC0003	4	40 hrs	sysadm	8		0%																			

Schedule

EAM Maintenance

Schedule

- It is possible to use drag and drop to schedule the WOs.



Different Views

EAM Maintenance

Different Views

- It is possible to use MS Project's views to look at the work load.
 - Frank is overloaded!

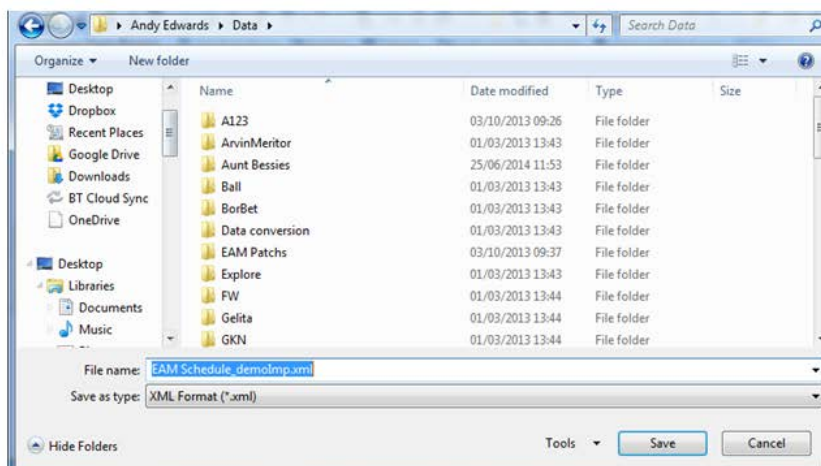
			16 Mar '03						
			W	T	F	S	S	M	T
1	FRANK HARRIS	65 hrs	Work						
	204 - Stock Rep	20 hrs	Work						
	207 - wo export	5 hrs	Work						
	209 - more repa	40 hrs	Work						
2	JEFFREY JAMES	5 hrs	Work						
	207 - wo export	5 hrs	Work						
3	JIMMY KNIGHT	32 hrs	Work						
	204 - Stock Rep	20 hrs	Work						
	208 - repair this	12 hrs	Work						
4	KEN GREEN	21 hrs	Work						
	206 - export wo	16 hrs	Work						
	207 - wo export	5 hrs	Work						
5	SAM HELTSLEY	5 hrs	Work						
		5 hrs	Work						
6	WILLIAM KEY	0 hrs	Work						
			Work						

Import New Schedule

EAM Maintenance

Import New Schedule

- When the scheduling is complete, import it back to EAM
- Save the .xml file



WO Browse Import

EAM Maintenance

WO Browse Import

- To import the new scheduled work orders, use Action > Import Work Orders

The screenshot shows the QAD Work Orders (EAM) interface. The 'Action' menu is open, and the 'Import Work Orders' option is highlighted with a red circle. The background shows a table of work orders with columns for Status, WD Parts, Priority, Type, Class, Received, and Time (Start).

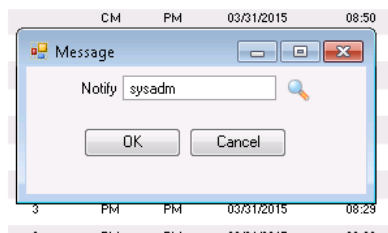
Status	WD Parts	Priority	Type	Class	Received	Time (Start)
N		3	PM	PM	05/19/2015	12:21
N		3	PM	PM	05/19/2015	12:21
N		3	PM	PM	05/19/2015	12:21
N		3	PM	PM	05/19/2015	12:21
N		3	PM	PM	05/19/2015	12:20
N		3	PM	PM	05/19/2015	12:20
N		3	PM	PM	05/19/2015	12:19
N			CM	PM	03/31/2015	08:50
N			CM		09/29/2010	08:46
N		3	CM		03/31/2015	08:30
N		3	PM	PM	03/31/2015	08:29
N		3	PM	PM	03/31/2015	08:29
N		3	PM	PM	03/31/2015	08:29

Notify

EAM Maintenance

Notify

- If required, enter a person or group that should be notified about the import of scheduled work orders.

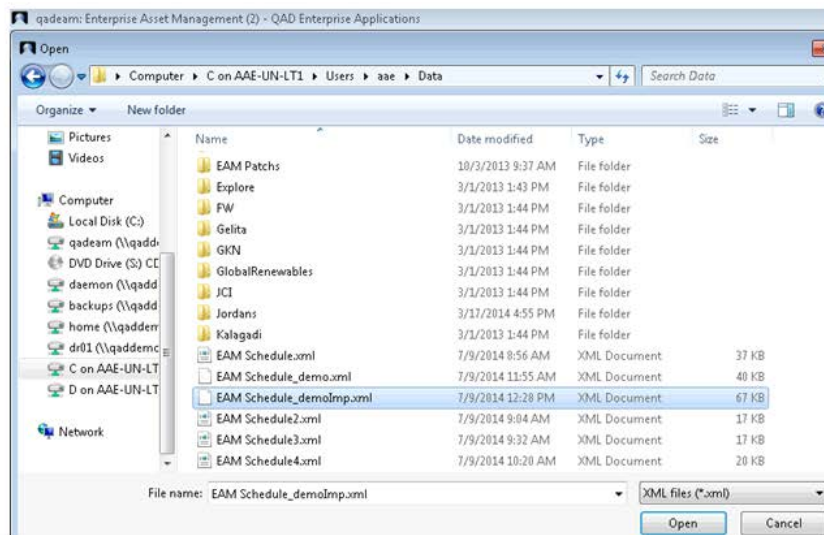


Select Import .XML File

EAM Maintenance

Select Import .XML File

- Select scheduled work orders .xml file to import

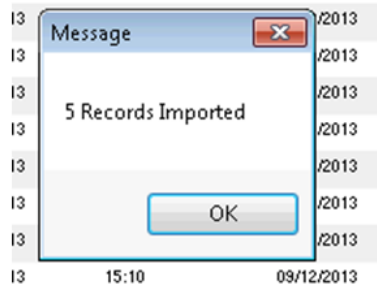


Confirmation of Import

EAM Maintenance

Confirmation of Import

- Number of records imported – confirmation message

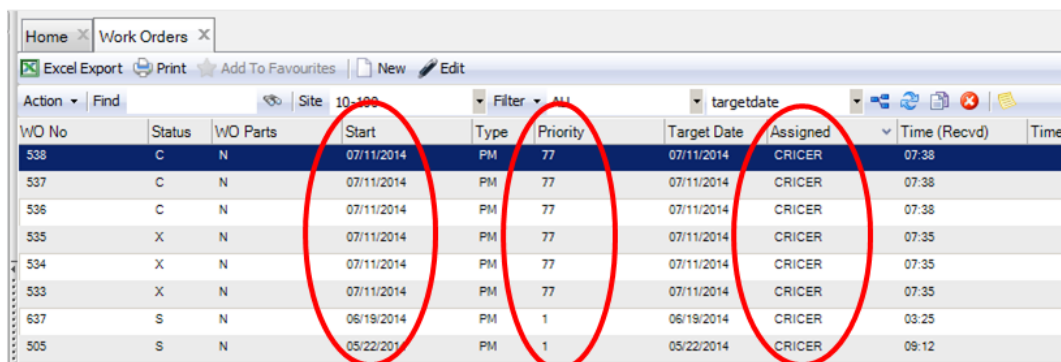


Changes Updated in EAM

EAM Maintenance

Changes Updated in EAM

- The changes to the work orders are now incorporated in EAM



WO No	Status	WO Parts	Start	Type	Priority	Target Date	Assigned	Time (Recvd)	Time
538	C	N	07/11/2014	PM	77	07/11/2014	CRICER	07:38	
537	C	N	07/11/2014	PM	77	07/11/2014	CRICER	07:38	
536	C	N	07/11/2014	PM	77	07/11/2014	CRICER	07:38	
535	X	N	07/11/2014	PM	77	07/11/2014	CRICER	07:35	
534	X	N	07/11/2014	PM	77	07/11/2014	CRICER	07:35	
533	X	N	07/11/2014	PM	77	07/11/2014	CRICER	07:35	
637	S	N	06/19/2014	PM	1	06/19/2014	CRICER	03:25	
505	S	N	05/22/2014	PM	1	05/22/2014	CRICER	09:12	

CHAPTER 3

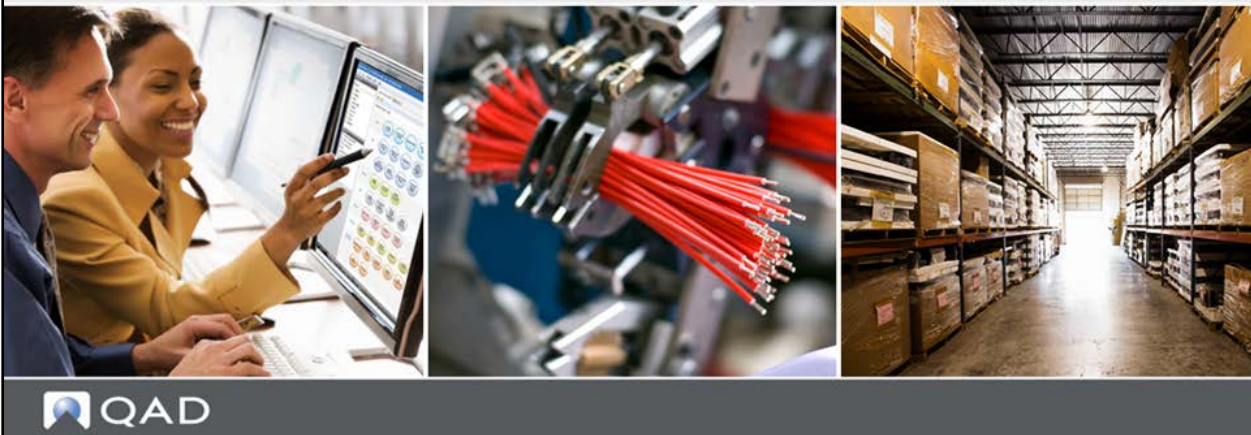
Inventory

Inventory

EAM Training Guide

Inventory

EAM 2015



Inventory – Overview

EAM Inventory

Inventory – Overview

- EAM modules
- Inventory overview
- Key concepts
- Inventory processes
 - Define inventory
 - Set up inventory
 - Modify a part price
 - Perform an inventory transaction
 - Adjust
 - Issue
 - Return
 - Relocate
 - Physical inventory
- Additional inventory features
- Consignment inventory
- Rotable inventory

The following slides provide useful information and instructions on how to leverage the key features included in the Inventory module within EAM.

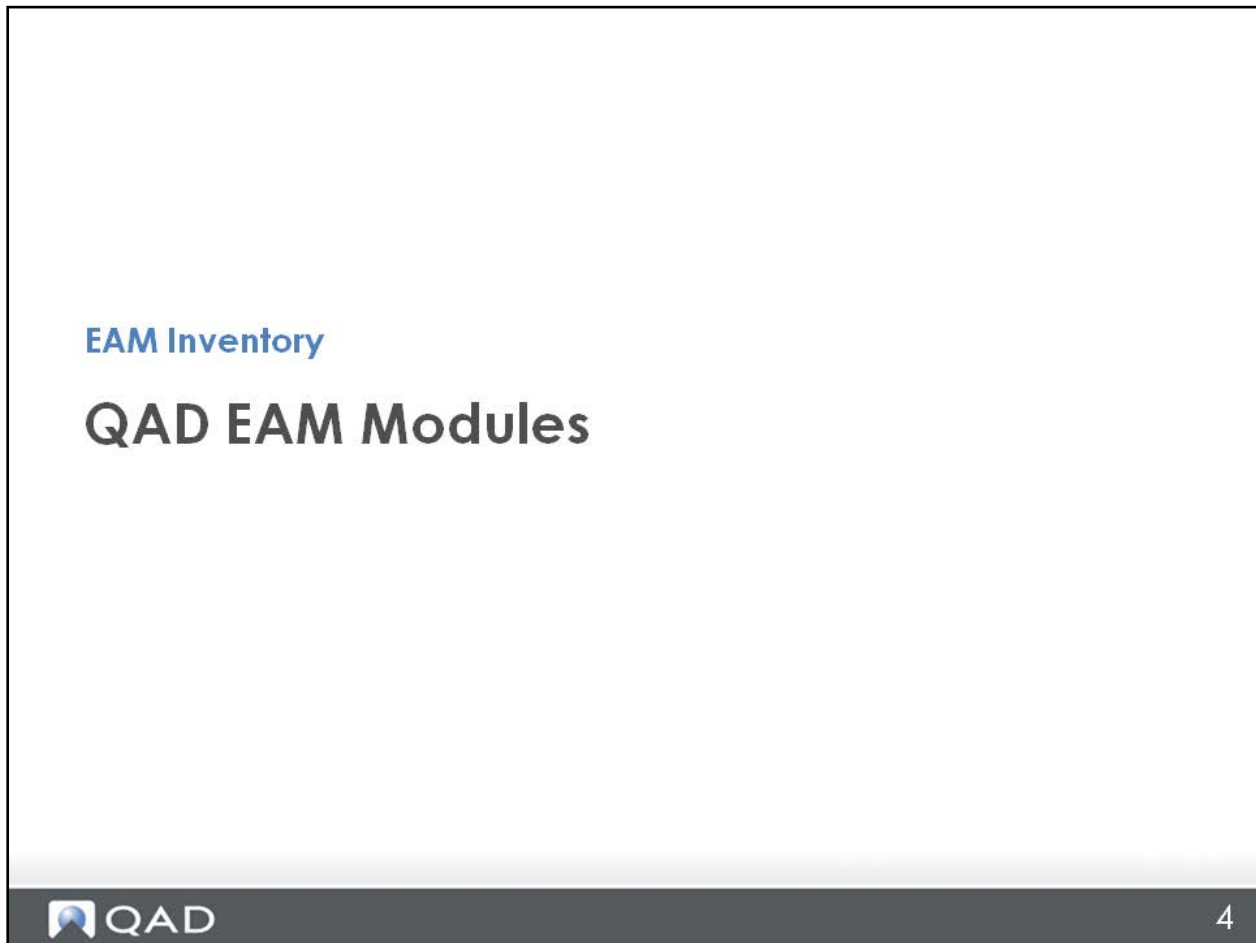
Course Objectives

EAM Inventory

Course Objectives

- Understand the Inventory module domain space
 - Demonstrate how EAM can benefit an organization's business goals
- Obtain high-level understanding of the Inventory module functionality
 - Use the Activities Handbook to perform basic inventory functions
 - Prepare for next steps toward certification

QAD EAM Modules



Now that we have covered general navigation and maintenance, you will learn about inventory.

QAD EAM Overview – Modules

EAM Inventory

QAD EAM Overview – Modules

- Maintenance
 - Equipment efficiency
 - Plant reliability
- **Inventory**
 - **Right size MRO/indirect inventory**
 - **The right parts when you need them**
- Purchasing
 - Control MRO/indirect spend
 - Comply with corporate financial manual approvals
- Project Controls
 - Manage project spend
 - Track true acquisition cost of assets

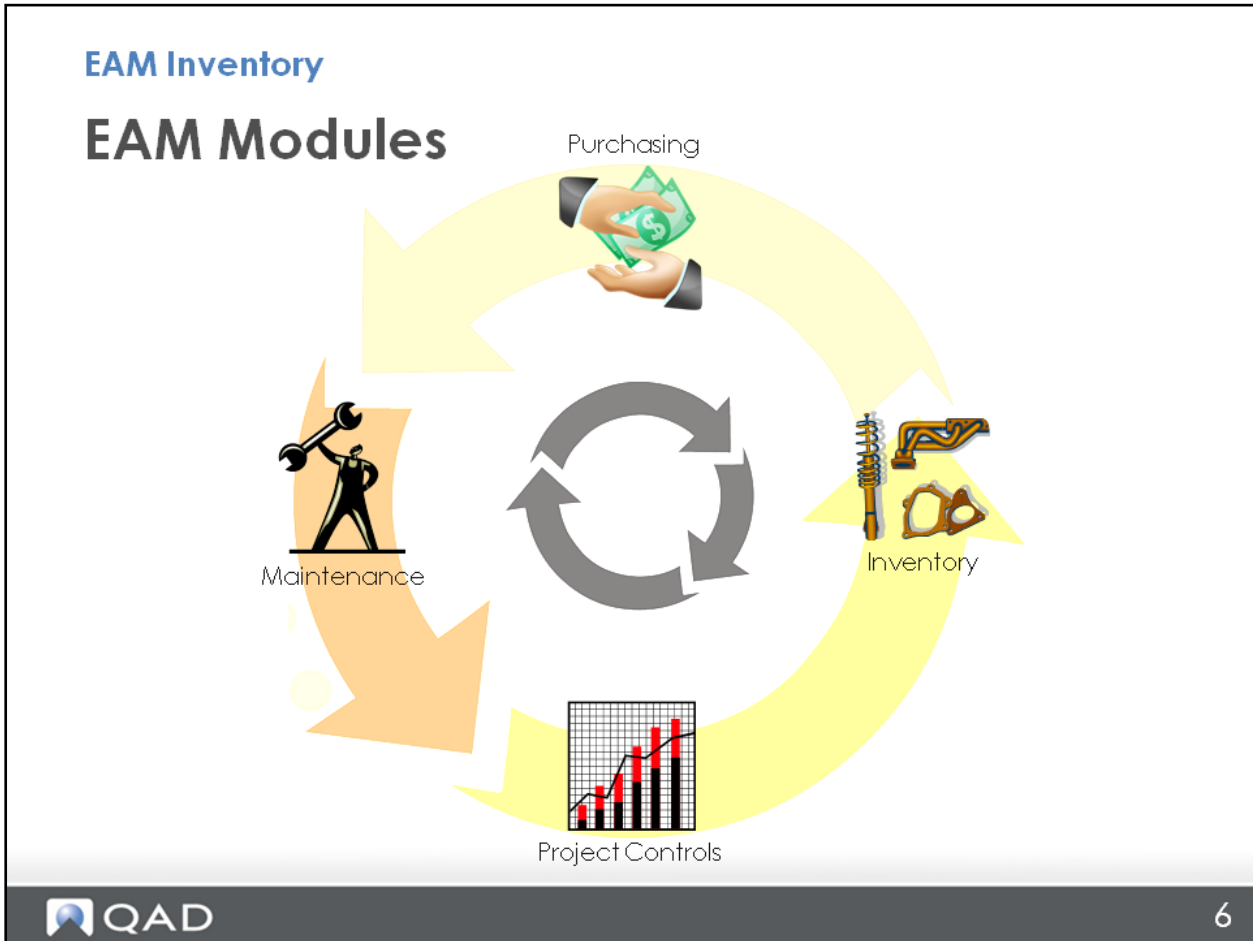


As we continue through this guide, it is important to remember that EAM has four major modules, or areas of operation, and to recall how each area contributes to a facility's overall reliability, lean initiatives, and cost controls. Understanding the value proposition for each area and how the areas work together will assist you in designing the proper solution for any business need around EAM.

Notice how each of these modules is associated with addressing business drivers. As you begin to link business drivers with EAM functionality, you will find that you better understand the overall domain space of EAM.

This section of training pertains directly to inventory.

EAM Modules



- Purchasing
- Inventory
- Maintenance
- Project Controls

These modules are the portals with which users interact to accomplish their daily tasks. Notice how, in this slide, each of these modules forms a piece of a complete circle. While you can implement certain elements of EAM without implementing others, EAM is at its best when all four modules work together to form a true Enterprise Asset Management solution.

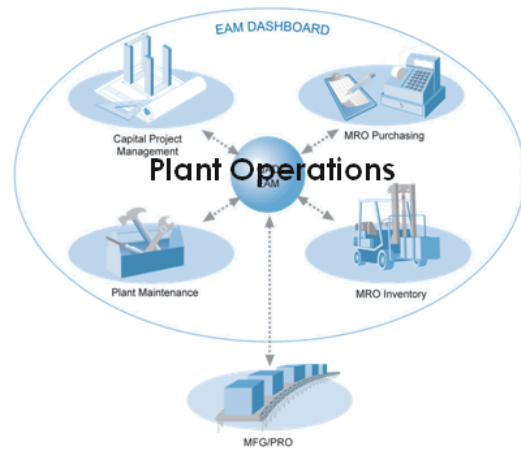
In the various sections of this EAM training guide, we will explore each of these modules and explain the business space of each.

Inventory

EAM Inventory

Inventory

- Goal: Minimize equipment downtime and reduce inventory levels by maintaining the best balance of critical spare parts on hand
 - Automatic stock replenishment
 - Track and transfer parts across plants
 - Lower inventory investment by leveraging consignment inventory capabilities
 - Verify equipment true cost of ownership
- Inventory roles
 - Maintenance manager
 - Tool crib/stores attendant
 - Buyers/purchasers
 - Technicians
 - Employees
 - Vendors



Inventory Role in EAM

EAM Inventory

Inventory Role in EAM

- Addresses indirect inventory management needs
- Ensures they have what they need, when they need it, at the correct price and quality
 - Part record is the backbone of Inventory
 - Track cost of ownership
 - Touches all other modules: Maintenance, Purchasing, and Projects
- Inventory advantages
 - Inventory "Right-Sizing"
 - Automated stock replenishment
 - Inventory costing
 - Usage analysis
 - Assists with indirect purchasing management

Inventory Key Concepts



Next we will look at the key concepts related to the Inventory module.

Inventory Key Concepts

EAM Inventory

Inventory Key Concepts

What you should already know

- Inventory records (parts) are the basic building block of EAM Inventory
- EAM Inventory part numbers \neq QAD part numbers
- Terminology
 - MRO inventory – Maintenance, Repair, and Operations
 - Indirect inventory
 - Non-production inventory

Inventory Key Concepts

EAM Inventory

Inventory Key Concepts

What you should already know

- EAM's part number
 - NOT in ERP system
 - Company's internal catalog ID
 - Used for stock parts, non-stock parts, and service
 - May be free-issue, vendor managed, consignment, rotatable
 - Location controls for stock parts
 - Multiple methods for identifying and locating parts

Inventory Key Concepts

EAM Inventory

Inventory Key Concepts

- Specialized types of inventory parts
 - Critical parts
 - Fabricated parts
 - Sole source
 - Tools and equipment
 - Vendor managed inventory (VMI)
 - Rotable parts
 - Consignment inventory

Inventory Key Concepts

EAM Inventory

Inventory Key Concepts

- Centralized vs. decentralized stores
- A-B-C classifications
- Staffed stores vs. open stores
- Inventory costing methods

Inventory Best Practices Goals

EAM Inventory

Inventory Best Practices Goals

- Increase plant reliability
 - Ensuring stocking of critical parts
 - Known as Stores Service Level
 - Visibility into seasonal trends
 - Building parts lists, BOMs, and stores reqs for planning
 - Providing "Where Used" information and substitutes
- Provide accurate inventory costing to contribute to accurate cost of ownership
- Control inventory access



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Along with increasing plant reliability, tracking cost of ownership, and controlling inventory access, EAM's Inventory module helps to address the following needs:

- Ensuring that critical spares are on hand, while keeping inventory low.
- Ensuring that spares are visible across facilities to prevent the needless duplication of expensive or rarely used materials.
- Minimizing excess and obsolete inventory.

Inventory Best Practices Goals

EAM Inventory

Inventory Best Practices Goals

- Right-size inventory
- Maintenance owns and drives inventory decisions
- Reduce travel time by proactive "kitting"
- Reserve inventory to provide visibility to demand in replenishment
- Empower resources to research parts
- Automatic receipt notification to requestor

Customers are able to reach many industry standards for best practices with EAM. Most notably, EAM:

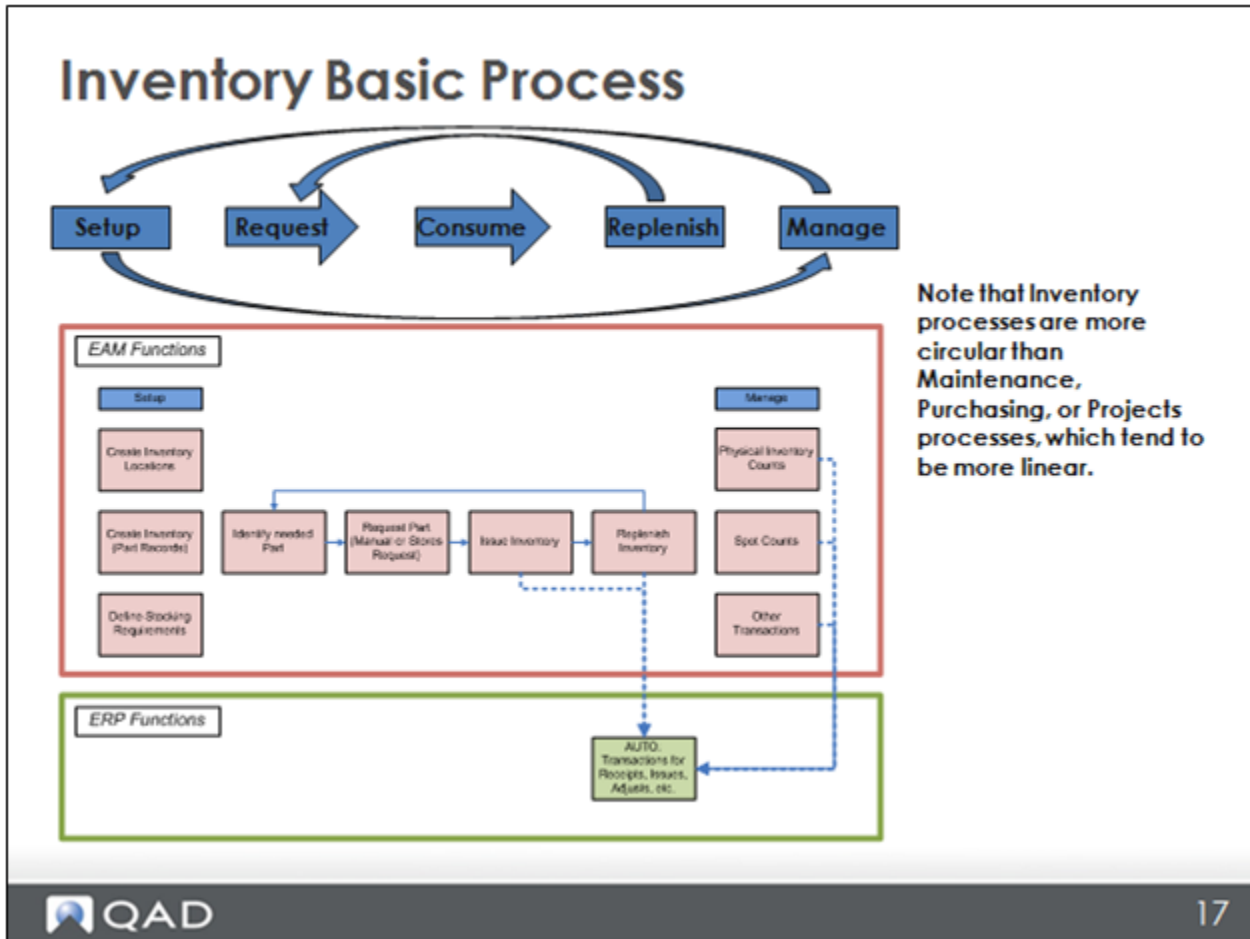
- Provides visibility of MRO values across all facilities
- Enables items to be transferred between plants
- Automates the stock replenishment process based on min/max levels
- Supports consignment and vendor-managed inventory (VMI)
- Helps managers to determine the correct mix of inventory based on stock-out history
- Supports the sourcing of critical spare parts quickly and at the lowest possible cost
- Provides requisitions and enforces company spending policies
- Provides an MRO catalog that enables you to identify and to requisition items quickly

Inventory Process



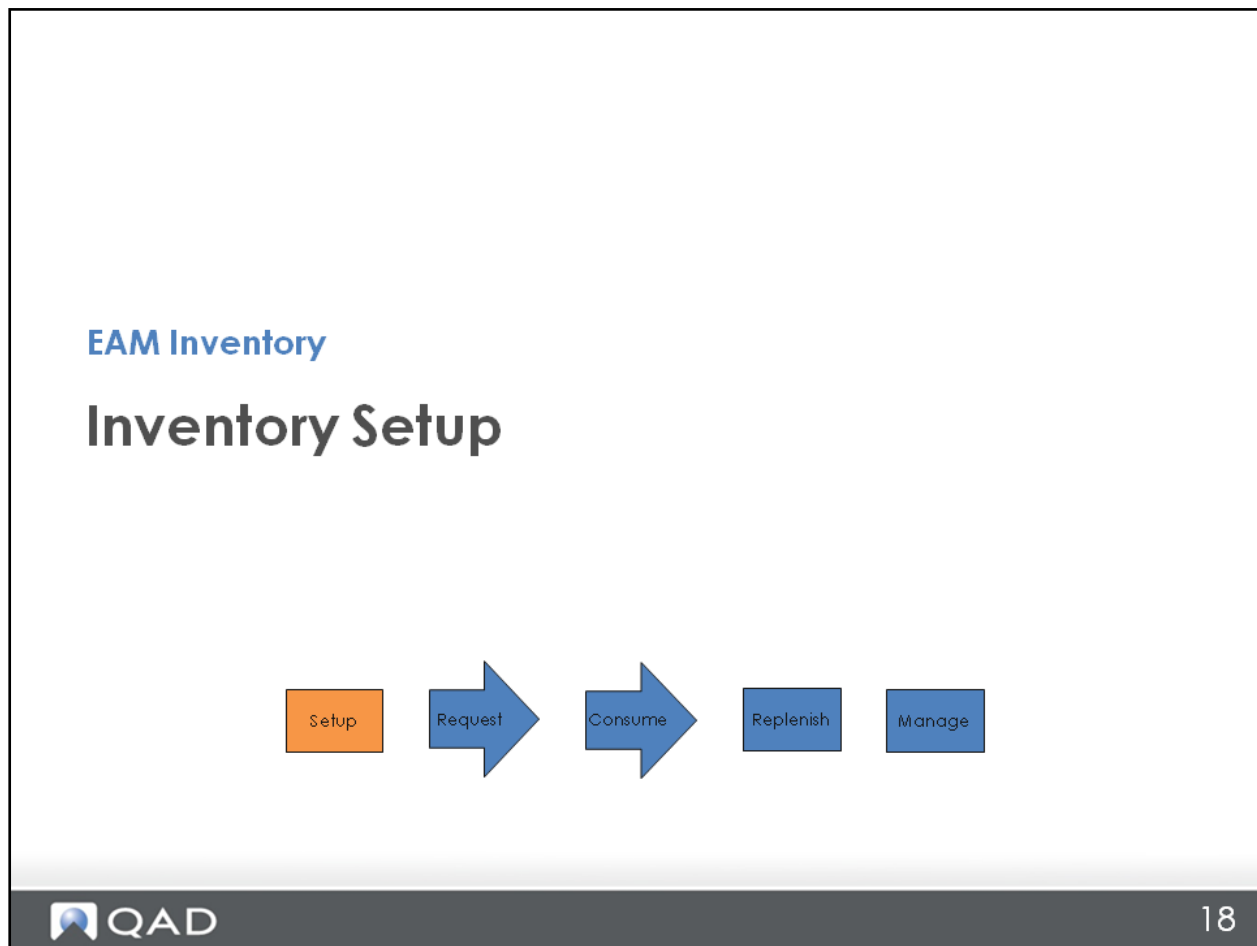
We are now going to review the inventory process. This will take us from the initial part setup, all the way through replenishing and managing inventory.

Inventory Basic Process



The slide features a diagram that depicts a common inventory item lifecycle.

Inventory Setup



The first step in the inventory process is to set up inventory parts.

Inventory Setup – Key Settings

EAM Inventory

Inventory Setup – Key Settings

- Domain settings
 - Inventory costing method
 - Reserves and replenishment
 - ABC settings
 - In Transit?
 - Diff Acct Period?
 - Reopen Stores?
 - Part Description Protected?

Domain: 10USA

Detail | Maint | Inventory | POIReqs

Ordering

Inv Cost Mthd: FIFO Cons Reserves?

Cons Res/Short? Cons Res Orders?

ABC

A Percent: 20 A Days: 90

B Percent: 30 B Days: 180

C Percent: 50 C Days: 365

Options

Reserve Inv Transit

Diff Acct Period? Reopen Stores?

Part Description Protected

Three inventory cost methods are available: FIFO (first in, first out), LIFO (last in, first out), and Weighted Average. Each of these methods uses different approaches to calculating and assigning costs when inventory is issued or valued. Your customer's finance department will decide which method to select. The three Cons Res settings help you to define how inventory is analyzed during the replenishment process. These settings let you determine if the system must consider reserved inventory, inventory that indicates that you are short of items you need, and items that are already on order when calculating stock replenishment levels. Be careful before automating this process through the batch job scheduler/job controller – make sure that inventory levels are reliable.

The ABC settings allow a company to define how often the inventory is counted. In addition, the ABC settings enable the system to calculate the breakdown of parts between categories.

The Transit setting allows you to treat inventory being transferred between sites like it is already on a truck being moved. The inventory in the source site is reduced immediately, but the inventory in the target site is not increased until that site physically receives the item.

Companies often want to standardize their part descriptions, but EAM does not allow field-level security in a record. Use Part Description Protected to restrict the ability to change a description when a part is copied across sites.

Inventory Setup – Key Settings (cont.)

EAM Purchasing

Inventory Setup – Key Settings (cont.)

- Site settings
 - Accounting defaults
 - Inventory issue
 - Consignment
 - Adjustments
 - Transit
 - Variances
 - Rounding
 - Intercompany

The screenshot shows the 'Inventory Setup' screen for Site 10-100. The 'Inventory' tab is selected, and the 'Inventory Issue Defaults - Debit' section is expanded. The 'Acct No' field is set to 5020, and the 'Cost Center' is set to MFG. The 'Inventory Issue Defaults - Credit' section shows 'Stock Dept' and 'NStock Dept' fields. The 'Consignment Inventory Defaults' section includes fields for 'Asset Dept', 'Adj Dept', 'Asset Cost Center', 'Adj Cost Center', 'Asset Acct No', 'Adj Acct No', 'Asset Sub Acct', and 'Adj Sub Acct'.

At the site-setting level, there are many different accounting default options. For different transactions, a company may want to capture the financial piece in a different account. These defaults can be overridden at the part level.

Inventory Setup – Key Settings (cont.)

EAM Inventory

Inventory Setup – Key Settings (cont.)

- Site settings
 - Inventory usage settings
 - Auto Close Stores?
 - Stores Auth?
 - Prompt for Pick Ticket
 - Sole source options

The screenshot shows the 'More Inventory' tab in the EAM system. The form is organized into four main sections:

- Inventory Adjustment Defaults:** Contains fields for Dept, Cost Center (set to 'Adm'), Acct No (5910), and Sub Acct No.
- Include As Inv Usage:** Contains checkboxes for Issue, Return, and Adjust Down (all checked), and options for Relocation (unchecked) and Adjust Up (checked).
- Transit Accounts:** Contains fields for Dept, Cost Center (set to 'Adm'), Acct No (5020), and Sub Acct No.
- Options:** Contains checkboxes for Auto Close Stores? (checked) and Prompt for Pick Ticket? (checked), and a dropdown menu for Stores Auth? (set to 'None').

EAM has a standard report for Inventory Usage Analysis. At the site level, a company can define what transactions are counted as usage. Some companies may understand how inventory adjustments occur in their organization and may then consider those adjustments when they analyze inventory. Other companies may consider their inventory to be well controlled and do not want to count an adjustment as usage. These usage settings can be changed over time as companies proceed along the path to world class organizations.

EAM includes several options for stores requisitions:

- Do you want the requisitions to close automatically when items are issued?
- Do you want the system to request authorization prior to issuing a stores requisition?

You can activate these options for all stores requisitions or only for project-related stores requisitions.

The Sole Source options allow you to configure settings related to sole source purchases. It is common for a company to configure sole source purchases to create POs. This configuration allows the purchasing department to review information prior to authorizing and placing items on order.


Inventory Setup

EAM Inventory

Setup
Request
Consume
Replenish
Manage

Inventory Setup

- Important functions in Inventory:
 - Notify
 - Automatically e-mails when part falls below either reorder point or safety stock level
 - Add to BOM
 - Automatically updates equipment BOM on issue
 - Not usually associated with consumables
 - Auto-Issue
 - Used when a part will not be issued and on-hand balances are not tracked – replenishment is visual or upon request
 - Cost
 - Based on costing method: weighted average, FIFO, and LIFO costing methods
 - Apply cost on issue
 - PO Text
 - Description printed as line-item detail on the PO


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Notify: When selecting the lookup in this field, you are presented with an option to select a single user or a mail group (recommended) to notify

Add to BOM: When an item is added to a BOM automatically, the default quantity is blank.

Auto Issue: Use this setting to denote that an item should be issued upon receipt (this is the default setting for contract items, or for inventory that is purchased for a work order and/or project/job).

Cost: It is important to note and update price schedules that are associated with inventory items and their primary vendors.

PO Text: Any text included in this frame is printed on the purchase order document.

Inventory Setup

EAM Inventory

Setup Request Consume Replenish Manage

Inventory Setup

- Important functions in Inventory
 - Stock details
 - Min
 - Max
 - Reorder point
 - Codes
 - Cost
 - PO text
 - Submenus

QAD 23

The following slides explain the setup functions for an Inventory record in further detail.

Buyer/Commodity Purchasing

EAM Overview

Buyer/Commodity Purchasing

- Domain-level setting

Domain: 10USA

Detail | Maint | Inventory | PO/Reqs

Ordering

Inv Cost Mthd: FIFO

Cons Res/Short?

Cons Reserves?

Cons Res Orders?

ABC

A Percent: 20

A Days: 90

B Percent: 30

B Days: 180

C Percent: 50

C Days: 365

Options

Reserve Inv?

Dll Acct Period?

Part Description Protected?

Transit?

Reopen Stores?

Buyer/Commodity Purchasing?

- When this flag is checked, inventory parts must be assigned to a commodity, not a buyer
- Commodity is a mandatory field on the part record when this flag is set

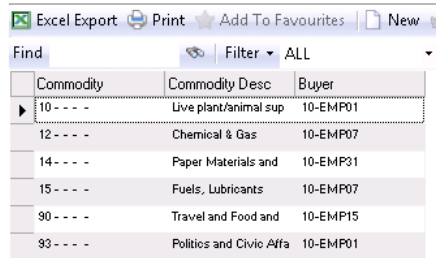
Use the Buyer/Commodity Purchasing option to require a buyer to be assigned to a commodity code. The buyer is assigned to the inventory part, based on the commodity code entered. The buyer then defaults onto requisition lines, based on the stock part entered.

Buyer/Commodity Purchasing

EAM Overview

Buyer/Commodity Purchasing

- Assign buyer to a commodity code



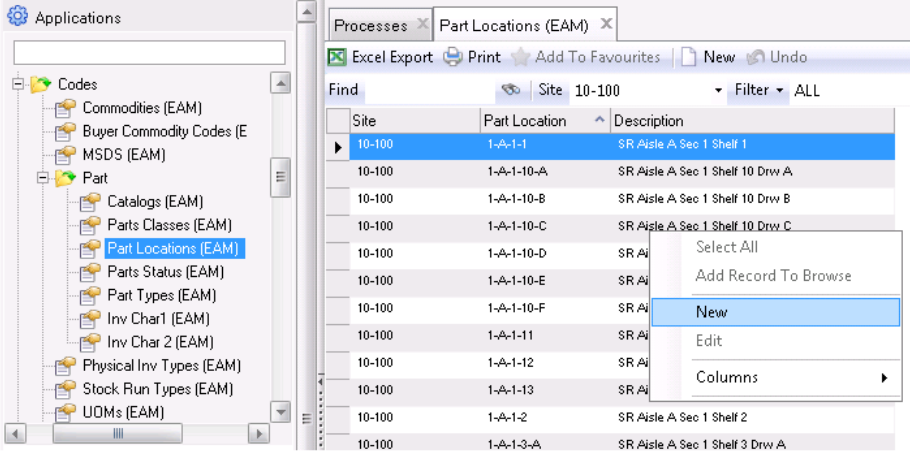
Commodity	Commodity Desc	Buyer
10 - - - -	Live plant/animal sup	10-EMP01
12 - - - -	Chemical & Gas	10-EMP07
14 - - - -	Paper Materials and	10-EMP31
15 - - - -	Fuels, Lubricants	10-EMP07
90 - - - -	Travel and Food and	10-EMP15
93 - - - -	Politics and Civic Affa	10-EMP01

- Buyer is assigned to purchase inventory parts based on commodity associated to part
- Buyer linked to part defaults on the req lines

Add Part Locations


EAM Inventory

Add Part Locations



Site	Part Location	Description
10-100	1-A-1-1	SR Aisle A Sec 1 Shelf 1
10-100	1-A-1-10-A	SR Aisle A Sec 1 Shelf 10 Drw A
10-100	1-A-1-10-B	SR Aisle A Sec 1 Shelf 10 Drw B
10-100	1-A-1-10-C	SR Aisle A Sec 1 Shelf 10 Drw C
10-100	1-A-1-10-D	SR Ai
10-100	1-A-1-10-E	SR Ai
10-100	1-A-1-10-F	SR Ai
10-100	1-A-1-11	SR Ai
10-100	1-A-1-12	SR Ai
10-100	1-A-1-13	SR Ai
10-100	1-A-1-2	SR Aisle A Sec 1 Shelf 2
10-100	1-A-1-3-A	SR Aisle A Sec 1 Shelf 3 Drw A

**Part Locations are set up separately from the Part itself.
One part may be stored in many locations.**


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Navigate to Inventory|Codes|Part| Part Locations (EAM).

Click New or right-click and select the New option.

Inventory Record: General

EAM Inventory

Inventory Record: General

Processes x Inventory (EAM) x Site: 10-100, Part No: AID-001 x

Site 10-100 Part No AID-001

Action [Save] [Print] [Refresh] [Close]

General | Stock Detail | Codes | Cost | PO Text | User Def

Order Detail

Description ALCOHOL Buyer 10-EMP31 JOE WATKINS

* Commodity [Lookup] Status A Active

Lead Days 5 Critical?

Sole Source? Rotable?

Consignment? Source Vendor

Area Pri Vendor 10S1004

Vendor Part No I-600 Manufacturer

Manuf Part No Prod Line [Lookup]

Initial Location

Inventory

- Notes
- Detail
- Requisitions
- Vendor Parts
- Vendor Cost
- Reserve Analysis
- FIFO/LIFO Stack
- Consignment Stack
- Alternates
- Common Names
- Manufacturers
- Accounts
- BOMs
- Revisions
- Inventory Descriptors
- Analysis
- Rotable Inventory

QAD 27

General Tab

Description: Enter the part's primary description.

Buyer: Use the lookup to select the buyer's employee ID.

Buyer Name: The buyer's name.

Lead Days: Enter the number of days a vendor requires to deliver an ordered part.

Status: Enter or select the status from the lookup.

Critical?: Select this check box if this part is critical. This setting enables sort and filter for stock replenishment selection.

Sole Source?: Select this check box to use sole sourcing and its expedited purchase process for stock replenishment.

Rotable?: Select this check box to identify a part as a serialized and repairable part.

Consignment?: Select this check box to indicate that this part is consigned from a vendor. **Note:** You cannot select both Consignment and Rotable for the same part.

Source: Select Vendor to buy the part or Internal to build the part.

Area: An internal build or fabrication location. **Note:** Area is required for an internally sourced part.

Pri Vendor: The primary vendor ID specified on the Vendor Parts submenu.

Vendor Part Number: The primary part number that the vendor uses to identify this part specified on the Vendor Parts submenu.

Manufacturer: The manufacturer for the part specified on the Vendor Parts submenu.

Manufacturer Part Number: The number the manufacturer uses to identify this part specified on the Vendor Parts submenu.

Initial Location: Enter the bin location of the part – Customers may have a TBD location to use initially if they do not know where to store a part until it arrives.

Inventory Record: Stock Detail

Stock Detail

Note: The values in the Levels box on this screen are all based on the issue UOM.

On-Hand: Displays the quantity (in the issue UOM) of the part currently in inventory at all bin locations for this site. When a part is received or issued, the on-hand quantity automatically changes. If necessary, you can change the on-hand quantity using the Adjust action, which is typically done after a physical inventory is performed and a discrepancy between the system record and the physical count is discovered. You cannot update this field.

Reorder Point: Enter the amount at which the part should be reordered. If you enter an amount in this field, you can run stock replenishment routines, based on the reorder point. You can also set the system to send an e-mail to the Notify user for the part if it is at or below reorder point.

Reserved: This is a system-calculated field that displays the total quantity of the part that is reserved on stores requisitions. When calculating the reserved quantity, the system looks at all of the stores requisitions that have reserved the part. You cannot update this field.

Note: You cannot reserve a part if the available quantity is 0.

On Hand Qty - Reserved Qty = Available Qty

Available: Displays the total quantity on hand at all bin locations within a site, minus the quantity on reserve. This quantity represents the parts available to be charged, issued against, issued, or reserved against other stores requisitions. You cannot update this field.

Safety Stock: Enter the minimum quantity to keep on hand for a particular part. The stock replenishment can be run to display all parts at or below safety stock or reorder point. If the part is at or below the safety stock level, the system can be set to send an e-mail to the Notify user for the part.

Short: The system calculates this field to show the number of parts reserved, but not available, in stores.

Mgt Max Qty: This field refers to the optimal amount to stock through stock replenishment, a quantity pre-set by management. This amount represents the minimum economical amount to order. When you create a requisition, there is a hierarchy for determining the order quantity. When a part record is created, the default value for this field is 0 UOM. If this field is set to 0 UOM, the quantity requested on the requisition equals the quantity ordered on the requisition as long as the quantity requested is greater than or equal to 1.

Reorder point + Minimum order quantity = Mgt max qty

Planned Order: Displays the planned order quantity for this part, which represents all requisitions with a status of P (planned). The planned order quantity is the quantity ordered on planned requisitions (not yet placed on order).

Order Unit: To order a part, enter the vendor-designated quantity or the multiple of this quantity to order. If you are ordering in a different UOM than that you use when issuing, enter the multiplier in order to order in whole number amounts. Example: 1 Case

On Order: Displays the part's total quantities on all Ordered status POs with that item listed.

Issue UOM: This field refers to a unit of measure, such as Each, used when issuing a part from stores.

Last Physical: The date of the last physical cycle count for the part.

Last Received: The date the part was last received from a purchase order.

Order UOM: Select the unit of measure to use when ordering the part.

ABC Code: Classify each part as A, B, or C, based on its relative inventory value used for cycle count planning.

Last Issued: The date that this part was last issued from inventory. Using reports and filters, you can identify parts only issued from a certain date, which enables you to identify inactive or slow-moving parts. You cannot update this field.

Physical Due: Displays the date of the next required physical inventory. You can search or filter for parts by this date.

Date Created: Displays the date this inventory record was created.

Inventory Record: Codes

Codes

Type: Use the part type for reporting and filtering purposes in inventory only.

Class: Use the part class for filtering and ordering purposes in inventory only.

Commodity: Group general classifications of parts with this user-defined table in inventory, requisition, and vendor modules. Associate a part with a user-defined commodity code copied to a requisition for that specific part.

Notify: Notify this user ID or group by e-mail when inventory stock drops to or below the reorder point or safety stock.

Catalog: The inventory table is hierarchical. The higher-level catalog can be a broad grouping of parts.

Sub Catalog: The lower-level subcatalog consists of types in the catalog.

Size: Select the size to assign to a part.

Planner: Select the employee code for the planner. The list is populated based on the Planner field of the Employee record.

MSDS No: Use the lookup to select a code that is tied to descriptions of the MSDS (Material Safety Data Sheet).

Notify: Notify this user ID or group by e-mail when inventory stock drops to or below the reorder point or safety stock.

Weight: This weight of the part.

Weight UOM: The weight unit of measure for this part; for example, pounds or kilograms.

Active?: This field indicates whether a particular part is active. Inactive parts do not display in lookups.

Add to BOM?: Select the check box to add the part to the equipment bill of materials on issue.

Auto Issue?: Select this option to not track a part's on-hand quantity in inventory.

Taxable?: If the part is taxable, select this check box.

Tax Code: The system copies the tax code for the part to the requisition for the part, unless assigned a project tax code. If the part has a special tax status, add a tax code to the part. Typically, you leave a part's Tax Code field blank.

Tax Class: The system copies the tax class for the part to the requisition.

Tax Usage: The system copies the tax usage for the part to the requisition.

Commodity Code: Enter a valid code based on a selection from the lookup for codes defined in Intrastat Commodity Code Maintenance in EE.

Inventory Record: Cost

EAM Inventory

Inventory Record: Cost

Site: 10-100 Part No: AID-001

Action - [Icons]

General | Stock Detail | Codes | **Cost** | PO Text | User Def

Inventory

Inv Dept: [] Inv Cost Ctr: []
 Inv Acct No: 1510 Inv Sub Acct: []

Adjustment

Adj Dept: [] Adj Cost Center: Adm
 Adj Acct No: 5910 Adj Sub Acct No: []

Primary Expense

Expense Site: 10-100
 Exp Dept: [] Exp Cost Center: []
 Exp Acct No: [] Exp Sub Acct No: []

Consignment


Cons Inv Dept: [] Cons Inv CC: []
 Cons Inv Acct: [] Cons Inv Sub: []
 Cons Adj Dept: [] Cons Adj CC: []
 Cons Adj Acct: [] Cons Adj Sub: []

Cost

Cost	2.14	DH Group	[]
Fixed	0.00	Rate (%)	0.00
Total Cost	2.14	Est Freight	0

Inventory

- Notes
- Detail**
- Requisitions
- Vendor Parts
- Vendor Cost
- Reserve Analysis
- FIFO/LIFO Stack
- Consignment Stack
- Alternates
- Common Names
- Manufacturers
- Accounts
- BOMs
- Revisions
- Inventory Descriptors
- Analysis
- Rotable Inventory

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The Cost tab is used to list unique accounting data for a part.

Inventory Record: PO Text

The screenshot shows the QAD EAM Inventory application interface. At the top, the title 'EAM Inventory' is displayed in blue, followed by the main heading 'Inventory Record: PO Text' in large black font. Below the heading, there are input fields for 'Site' (10-100) and 'Part No' (AID-001). A navigation bar contains tabs for 'General', 'Stock Detail', 'Codes', 'Cost', 'PO Text', and 'User Def', with 'PO Text' currently selected. The main content area is titled 'Purchase Order Text' and contains a large text box with the text 'ALCOHOL' entered. To the right of the main area is a vertical navigation menu with various options: 'Inventory', 'Notes', 'Detail', 'Requisitions', 'Vendor Parts', 'Vendor Cost', 'Reserve Analysis', 'FIFO/LIFO Stack', 'Consignment Stack', 'Alternates', 'Common Names', 'Manufacturers', 'Accounts', 'BOMs', 'Revisions', 'Inventory Descriptors', 'Analysis', and 'Rotable Inventory'. The bottom of the screen features the QAD logo on the left and the page number '31' on the right.

Enter an expanded description, specifications, or other data for you and the supplier to identify the part in the PO Text box. This information prints on the purchase order document. Use the Notes submenu for internal comments.

Inventory Record: User Defined

EAM Inventory

Inventory Record: User Defined

Site: 10-100 Part No: AID-001

Action: [Save] [Print] [Refresh] [Close]


General | Stock Detail | Codes | Cost | PO Text | User Def

User Defined Fields:

Inv Char 1	<input type="text"/>	Inv Char 2	<input type="text"/>
Inv Char 3	<input type="text"/>	Inv Char 4	<input type="text"/>
Inv Dec 1	0.0000	Inv Dec 2	0.0000
Inv Int 1	0	Inv Int 2	0
Inv Date	(none)	Inv Logic?	<input type="checkbox"/>

Inventory

- Notes
- Detail
- Requisitions
- Vendor Parts
- Vendor Cost
- Reserve Analysis
- FIFO/LIFO Stack
- Consignment Stack
- Alternates
- Common Names
- Manufacturers
- Accounts
- BOMs
- Revisions
- Inventory Descriptors
- Analysis
- Rotable Inventory

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The User Defined tab is used to track information against specific inventory in EAM. There are ten user-defined fields.


Inventory Records: Submenus

EAM Inventory

Inventory Records: Submenus

- Inventory
- Notes
- Detail
- Requisitions
- Vendor Parts
- Vendor Cost
- Reserve Analysis
- FIFO/LIFO Stack
- Consignment Stack
- Alternates
- Common Names
- Manufacturers
- Accounts
- BOMs
- Revisions
- Inventory Descriptors
- Analysis
- Rotable Inventory

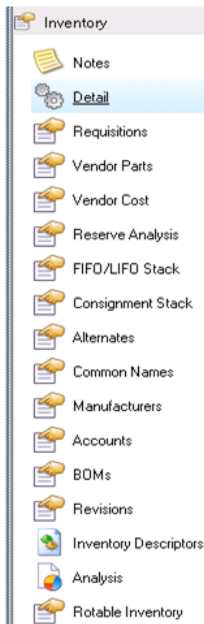
- Notes – add detailed internal notes
- Detail – see all details
- Requisitions – view all associated requisitions
- Vendor Parts – view and establish all vendors, vendor parts, minimum order quantities, and price schedules
- Vendor Cost – view price history for vendors
- Reserve Analysis – view all reserved quantities for stores requisitions
- FIFO/LIFO Stack – view the quantity and price of purchase receipts in LIFO or FIFO order for this part
- Consignment Stack – for consignment items, view the consignment history associated with this item and the vendor
- Alternates – view alternate part numbers that are used in other sites
- Common Names – view common names/nouns for a part
- Manufacturers – view the manufacturers and manufacturers' part numbers that are added


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Inventory Record: Submenus (cont.)

EAM Inventory

Inventory Record: Submenus (cont.)



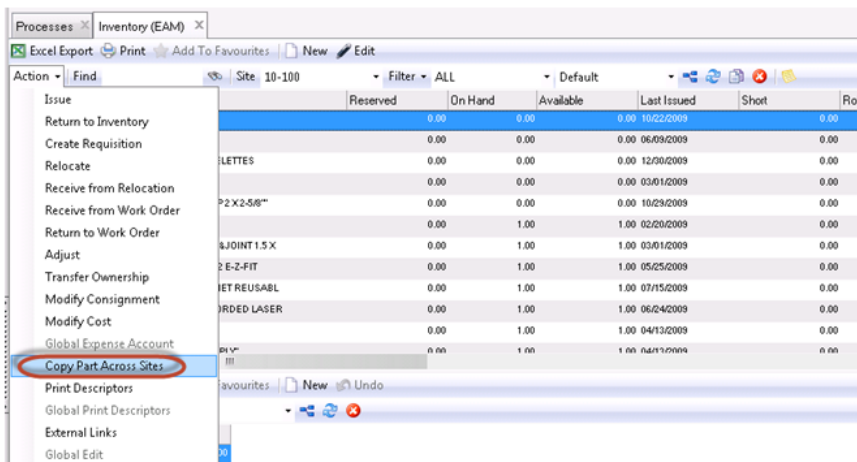
- Accounts – set up specific expense cost centers, departments, accounts, and sub-account numbers to restrict where MRO parts can be charged
- BOMs – displays all the equipment numbers where this part appears
- Revisions – provides an audit trail of all modifications that are made to this record, if active
- Inventory Descriptors – setup/view the Inventory descriptors for this item. Inventory descriptors allow users to set up a standard template for certain technical information. These descriptors can be associated to an MRO part
- Analysis – displays a part's current availability, general ledger transaction history, work order usage, purchase requisition history, and stock-out history. Can also view the on-hand and available balances for the same part at other sites
- Rotable Inventory – displays detailed information for each individual, serialized part

Copy Parts Across Sites

EAM Inventory

Copy Parts Across Sites

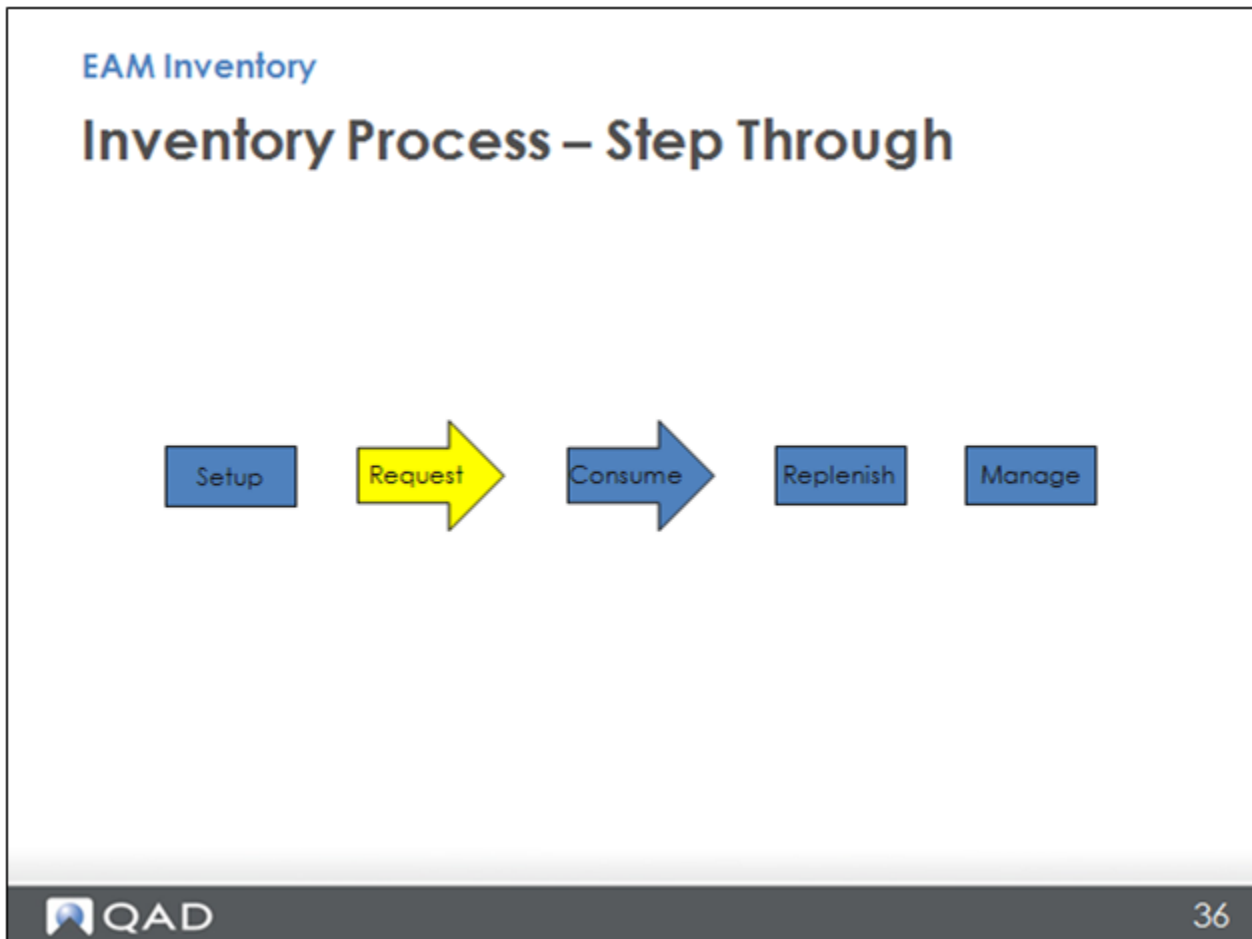
The second way to create a Part Number . . .



- Once a part is entered in one site, it can be copied to other sites within the same domain
- The Part Description cannot be changed after copy if the domain setting protects the part description

See Appendix A – Add Locations and Inventory

Inventory Process – Step Through




Requesting Inventory

EAM Inventory

Setup
Request
Consume
Replenish
Manage

Requesting Inventory

- Identify what part is needed
 - “Find” tool
 - Filters
 - Sorting and grouping on the browse
 - Key information
 - Description
 - Primary vendor and part number
 - Manufacturer and manufacturer part number
 - Equipment BOMs
 - Parts lists
 - Work order history


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You have several different options for finding the part numbers you need. These options can be used by both maintenance technicians, who want to find a part for a repair that they are working on, or by users, who need to request items for purchase such as pens and other repeat purchases.

As a general note, we often recommend that any item that will have a repeat purchase – regardless of inventory status or tangible nature (services) – be set up as an inventory item in order to make the purchasing process simpler in the future.


Requesting Inventory

EAM Inventory

Setup
Request
Consume
Replenish
Manage

Requesting Inventory

- Requesting part from stores
 - Manual walk-up
 - Stores request
 - Pick List
 - Associate to work orders for planning
 - Auto generated from a PM parts list when issued
 - Use to reserve inventory
 - Use for kitting
- Create a requisition
 - Action > Create Requisition from the Inventory browse.


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To reduce travel time, we recommend the use of the stores request feature. This feature improves processing and traceability. The Walk-Up option is generally necessary in emergency situations but should not be the norm. If the crib is not manned, then a procedure must be in place to ensure that inventory issues are captured. The inventory can easily get out of balance if parts are used, but not recorded. All too often, a technician takes a part and forgets to record it. As a result, inventory balances are not accurate and neither is the cost of ownership.

Stores Requisitions Lists

EAM Inventory

Stores Requisitions Lists

Stores Req No	Description	Status	WO No	Equip No	Project No	Cost Center	Requestor	Required Date	Mstr Pits No
60	M1 C&I Resistance Welders	S	226	RWELD-01		WCO3	sysadm	03/01/2015	9
59	M1 C&I Resistance Welders	S	225	RWELD-02		WCO3	sysadm	03/01/2015	9
58	M1 C&I Resistance Welders	S	224	RWELD-03		WCO3	sysadm	03/01/2015	9
57	M1 C&I Resistance Welders	S	223	RWELD-04		WCO3	sysadm	03/01/2015	9
56	Y1 Air Compressors Repair	S	208	C00001		Adm	sysadm	03/01/2015	11
55	Y1 Air Compressors Repair	S	207	C00002		Adm	sysadm	03/01/2015	11
54	Y1 Air Compressors Repair	S	206	C00003		Adm	sysadm	0	
53	M1 Motoman Greasing		197	CV0001		WCO1	10-EMP32	0	
52	Y1 Motoman Rebuild		193	CV0005		WCO1	10-EMP32	0	
51	M1 C&I Press Servicing		192	P00001		WCO1	10-EMP32	0	
50	M1 C&I Press Servicing		191	P00002		WCO2	10-EMP32	0	
49	M1 GREASER Lube		190	GREASER0001		WCO1	10-EMP32	0	

Line N	Part No	Description	Planned Qty	UOM	OH Group	Planned Cost	Issued	Reserved	Reserved
1	LUBE-001	PRO-KLEEN 10 CLEANING COM	2.00	GL		10.50	0.00		0.00
2	LUBE-011	PRO LUBE 720 AIR LUBE	1.00	GL		7.20	0.00		0.00

- Create or view pick lists to be used for a WO
- Lists can be generated manually or copied from a BOM or master parts list
- Items are displayed on the lower browse and can be manually issued, reserved, unreserved, returned, or requested (via a requisition).

Use Stores Requisition Lists to internally request stock items. You can create a detailed parts list for a work order or task. Print the stores requisition and use it as a stock item pick list, or process it directly online. After the items are pulled, issued, and staged, the transactions are completed, expensing costs directly to the work order, equipment, expense account data, or project code. Use Stores Requisition Lists to attach multiple parts lists to a work order. Pre-plan a work order by identifying all required parts. To separate parts lists by groups of technicians, categorize mechanical parts separately from electrical parts.

EAM automatically creates a stores requisition if you are:

- Issuing a stock part to a work order and no stores requisition has been designated
- Auto-issuing a non-stock part from a requisition without a contractor to a work order, and no stores requisition has been designated
- Issuing a PM with master parts lists

Route Stores Requisition Lists for Approval

EAM Overview

Route Stores Requisition Lists for Approval

- Stores Req approval groups are available
 - Groups are set up similarly to req approval groups but no monetary limits are associated with users
 - Allows approvals to go to a group rather than a single user
- The first user in the group who selects Approve authorizes the stores req list
 - Others in the group receive notification that the stores req has been approved

Stores Requisition Approval Groups have been added to EAM, allowing stores requisition lists to be routed for approval to a group rather than to a single user. The first approver in the group who selects Approve authorizes the stores requisition list.

Route Stores Requisition Lists for Approval

EAM Overview

Route Stores Requisition Lists for Approval

Site: 10-100 x Stores Requisition Approval Gr... Stores Requisition Lists (EAM) x Accounts x Accounts (EAM) x UserRoles (EAM) x Roles (EAM) x Co...

Site: 10-100

General | Purchase Order | Inventory | More Inventory | Maintenance | Authorization Options | Misc | MFG/PRO Options

Detail

PO Auth? Req Auth?

Use Hierarchy? Appr Mthd Cost Center

2nd Appr Mthd Acct No 3rd Appr Mthd Acct No

Use Over Budget? YTD Stores Auth? All by Group

Allow Req Auth over limit None

Projects Only (Simple)

Projects Only by Group

All (Simple)

All by Group

Suppress Password for Req Next Approver

Approval Group Options

Quality Sort Last Upd Appr Grp?

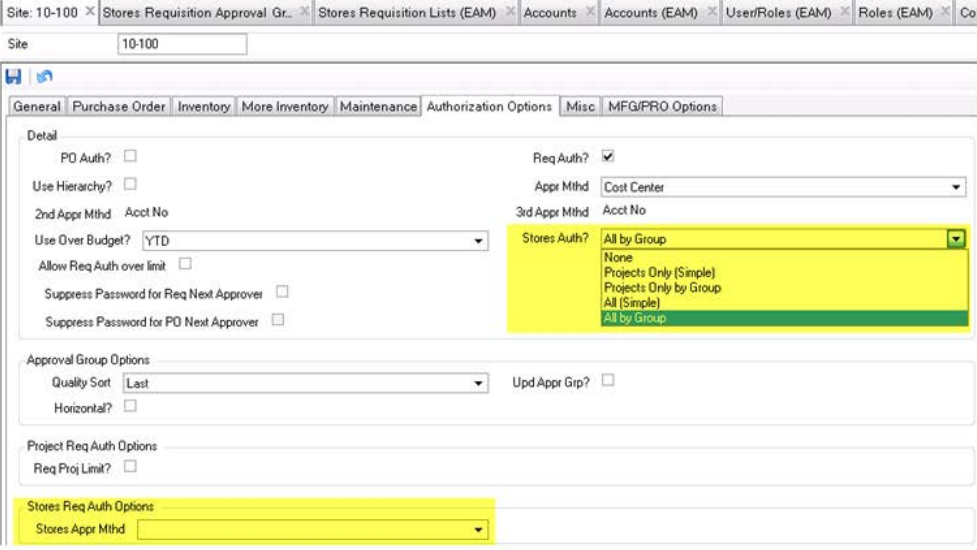
Horizontal?

Project Req Auth Options

Req Proj Limit?

Stores Req Auth Options

Stores Appr Mthd



QAD

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Route Stores Requisition Lists for Approval

EAM Overview

Route Stores Requisition Lists for Approval

- Routing Options are:
 - **None:** Turns off the need to Authorize
 - **Projects Only (Simple):** Project-related stores reqs require authorization by a single user
 - **Projects Only by Group:** Project-related stores reqs require authorization through assigned group
 - **All (Simple):** All stores reqs require authorization by a single user
 - **All by group:** All stores reqs require authorization by someone in the assigned group

- **None:** EAM does not require any authorization for a stores requisition. You can issue the stores requisition directly from the Action menu of the lower browse of Inventory|Stores Requisition Lists.
- **Project Only (Simple):** When parts are issued to a project, EAM requires approval from a single user with security to authorize a stores requisition.
- **Projects Only by Group:** When parts are issued to a project, EAM routes project stores requisitions through the assigned stores requisition approval group, as defined in the projects stores req approval group.
- **All (Simple):** EAM requires approval from a single user with security to authorize a stores requisition.
- **All by Group:** EAM routes all stores requisitions through the assigned stores requisition approval group, as defined in the Stores Appr Mthd field.

Route Stores Requisition Lists for Approval

EAM Overview

Route Stores Requisition Lists for Approval

- Stores Approval Methods include
 - This field is only active when a "by Group" option is selected in the previous field
 - AcctNo
 - Cost Center
 - User
- Based on the selection, the stores req groups will need to be added to the selected data element

The screenshot shows a web form with two sections. The top section is titled "Project Req Auth Options" and contains a checkbox labeled "Req Proj Limit?". The bottom section is titled "Stores Req Auth Options" and contains a dropdown menu labeled "Stores Appr Mthd". The dropdown menu is open, showing three options: "Acct No", "Cost Center", and "User".

The Stores Appr Mthd drop-down menu is active when either Projects Only by Group or All by Group is selected from the Stores Auth? drop-down menu. Select Acct No, Cost Center, or User. In all three instances, EAM stores requisition initiators must have a cost center or account group in their profiles. In this way, you can control who can purchase against cost center and account numbers.

Route Stores Requisition Lists for Approval

EAM Overview

Route Stores Requisition Lists for Approval

- For example, if the customer chooses to use cost-center based authorizations, the cost center table needs to be updated with stores req approval groups

Cost Center	Description	Active?	Req Appr Grp	Stores Appr Grp
Adm	Administration	<input checked="" type="checkbox"/>	Maint	storesreqapp
MFG	Manufacturing General	<input checked="" type="checkbox"/>	Maint	storesreqapp
WC01	Work Center 1	<input checked="" type="checkbox"/>	Maint	
WC02	Work Center 2	<input checked="" type="checkbox"/>	Maint	
WC03	Work Center 3	<input checked="" type="checkbox"/>		

Stores Requisition All Line

EAM Inventory


Stores Requisition All Line

Processes x Stores Requisition All Line (EA... x

Excel Export Print Add To Favourites New

Find Site 10-100 Filter ALL Default

Stores Req N	Line No	Part No	Description	Planned Qty	UOM	OH Group	Planned Cost	Issued	Reserved	Reserved	Short	Status	Required Date	PO No	Req
69	1	AIRLUE-002	PG7623 1/2 AIR LUB	1.00	EA		47.14	1.00	<input type="checkbox"/>	0.00	0.00				0
68	1	AIRFLOW001	EF208 1/4X1/4 FLO	1.00	EA		21.32	1.00	<input type="checkbox"/>	0.00	0.00				0
67	1	LUBE-006	#6V645 1004E TAP	3.00	EA		6.09	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0
66	1	LUBE-001	PRO-KLEEN 10 CLE	2.00	GL		10.50	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0
66	2	LUBE-010	PRO KDOL20 GRIN	1.00	GL		10.35	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0
66	3	LUBE-011	PRO LUBE 720 AIR	1.00	GL		7.20	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0
66	4	SHLDBOLT001	3/8 X 2 1/2 SHOUL	3.00	EA		3.24	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0
66	5	SHLDBOLT002	3/8 X 2 3/4 SHOUL	4.00	EA		4.32	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0
66	6	SHLDBOLT003	3/8 X 3 SHOULDER	5.00	EA		5.40	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0
66	7	SWITCH-029-2	871 TM-82N12-R3 1	2.00	EA		163.22	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0
65	1	SPRING 001	1 X 12 MED RED SP	1.00	EA		12.72	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0
65	2	SPRING 002	SS 775 CGH TESTE	1.00	EA		14.75	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0
65	3	SPRING 003	SPRING 120X012X1/	1.00	PK		14.75	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0
65	4	SPRING 004	SPRING 180X025X1/	1.00	PK		14.75	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0
64	1	SPRING 001	1 X 12 MED RED SP	1.00	EA		12.72	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0
64	2	SPRING 002	SS 775 CGH TESTE	1.00	EA		14.75	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0
64	3	SPRING 003	SPRING 120X012X1/	1.00	PK		14.75	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0
64	4	SPRING 004	SPRING 180X025X1/	1.00	PK		14.75	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0
63	1	LUBE-006	#6V645 1004E TAP	2.00	EA		4.06	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0
62	1	LUBE-006	#6V645 1004E TAP	2.00	EA		4.06	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0
61	1	LUBE-006	#6V645 1004E TAP	2.00	EA		4.06	0.00	<input type="checkbox"/>	0.00	0.00		03/31/2015		0


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The Stores Requisition All Lines browse, located in Inventory|Stores Requisition All Lines, displays all the stores requisition lines that have been created from stores requisition lists.

Create Requisition

EAM Inventory

Create Requisition

The screenshot displays two windows from the EAM Inventory system. The top window, titled 'Inventory (EAM)', shows a list of inventory items with columns for 'Reserved' and 'On Hand'. An 'Action' menu is open over the list, with 'Create Requisition' selected. The bottom window, titled 'Requisition', shows a requisition form with a table of requisition lines.

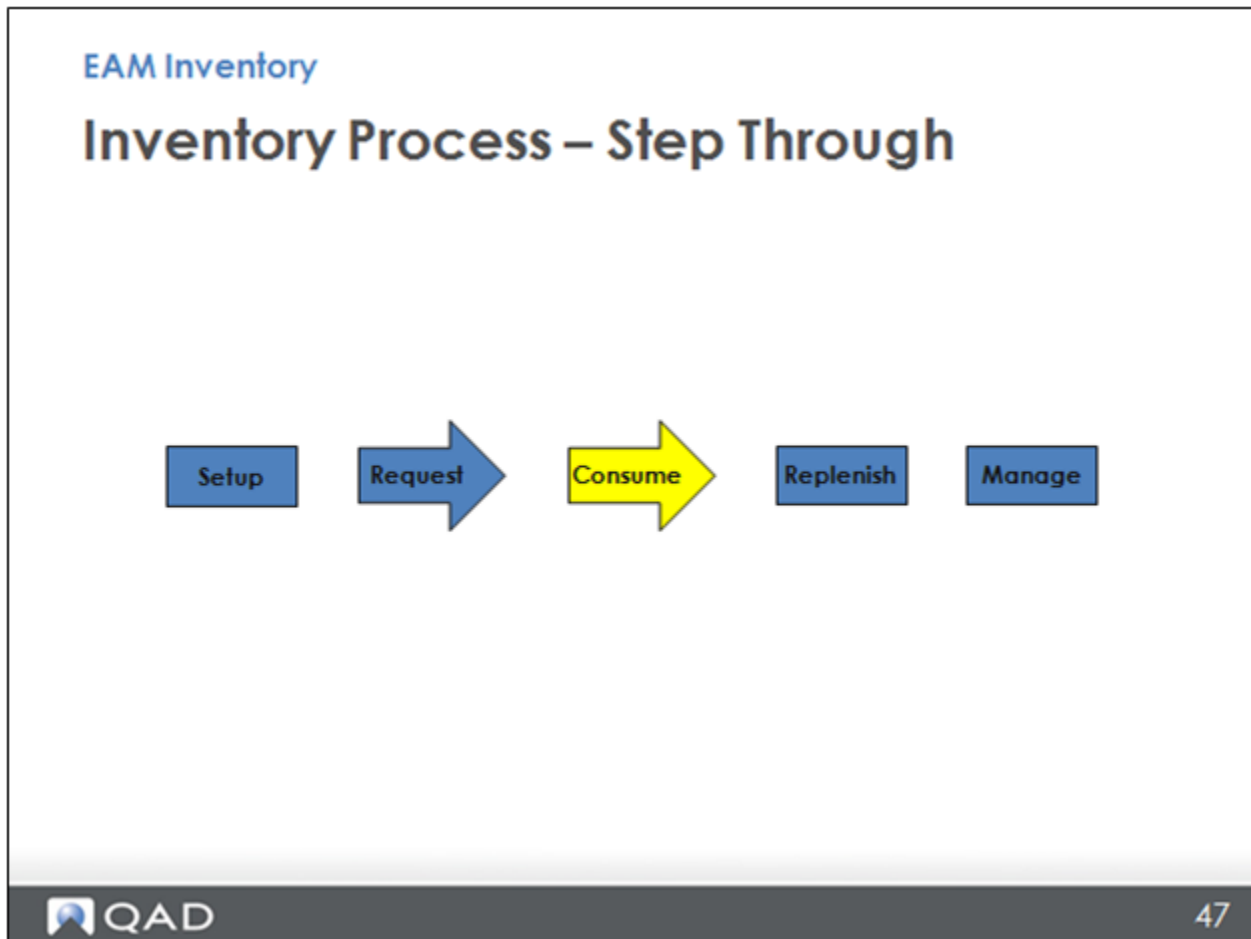
Req No	PO No	RFQ No	Statu	Description	Auth Status	Auth By	Date Due	Vendor Name	Buyer Name
7	0	0	P				05/24/2015	Sungro Chemicals	JOE WATKINS

line	Part No	Description	Status	Qty Ordered	Qty Received	UOM	Date Required	Date Due	Qty to Receive	Qty
1	AID-001	ALCOHOL	P	1.00	0.00	EA	05/24/2015	05/24/2015	0.00	

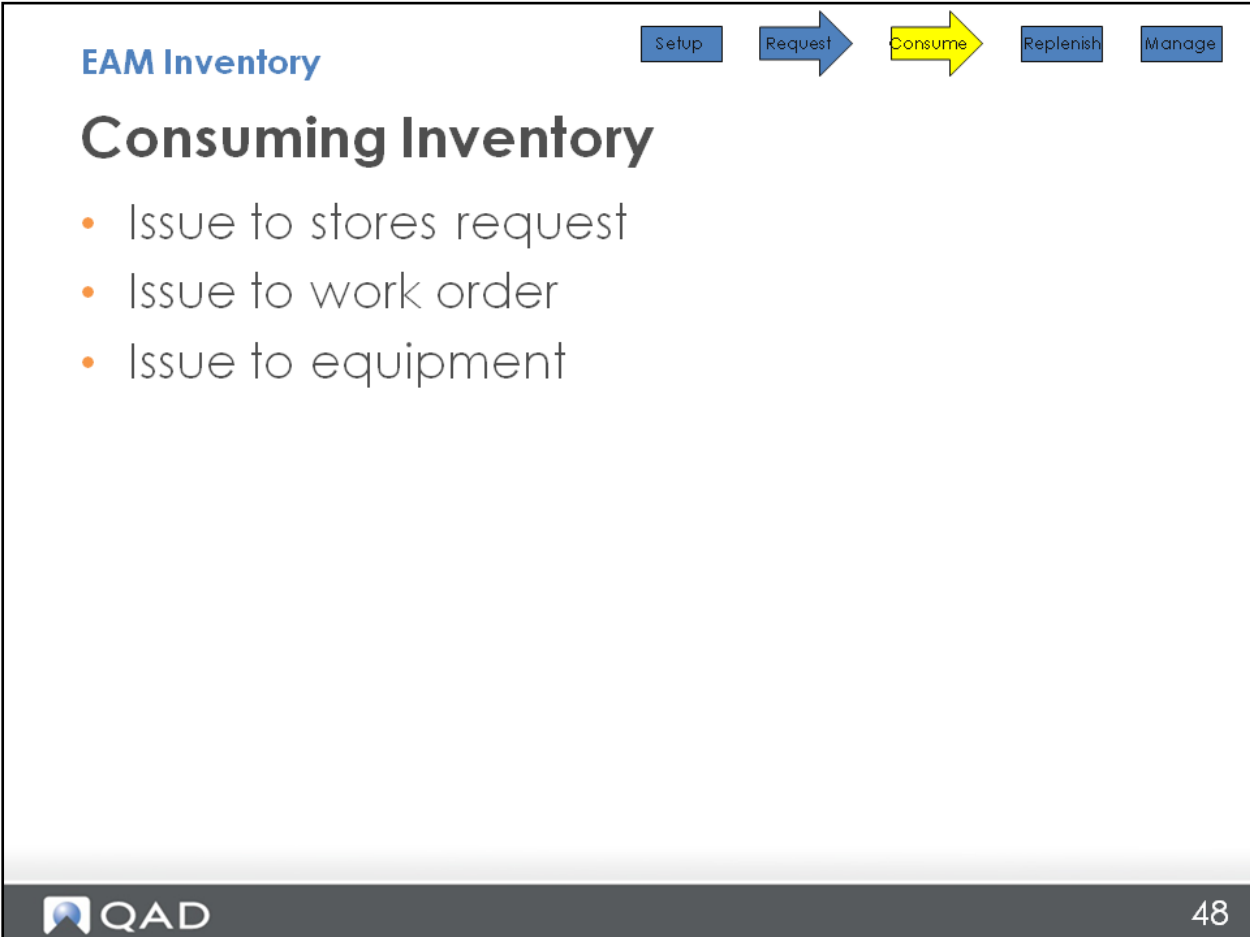
QAD 46

You can create a requisition for an inventory item from the Inventory browse by selecting the inventory item and going to Action > Create Requisition.

Inventory Process – Step Through



Consuming Inventory



EAM Inventory

Setup Request **Consume** Replenish Manage

Consuming Inventory

- Issue to stores request
- Issue to work order
- Issue to equipment

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Inventory Issue To Options

EAM Inventory

Inventory Issue To Options

- **WO No:** If the part will be issued and expensed to a work order, use the lookup to select the WO number.
- **Stores Requisition Number:** Stores requisitions have unique numbers. Use the lookup to charge the part to a stores requisition.
- **Equipment Number:** Use the lookup to select the unique equipment number to which the part is charged.
- **Rebuild:** If this issue transaction is expensed to a serialized part, identify the current rebuild location of the part.
- **Serialized Part:** Displays the serialized part to which the part is charged.
- **Serial Number:** The serial number of the part with which the work order is associated.

Inventory Issue To Options

EAM Inventory

Inventory Issue To Options

To

To Site	10-100	Requestor	sysadm
WO No	0	Stores Req No	0
Reserved	0	Equip No	
Rebuild		Rotable Part	
Serial No		Project No	
Job No		System	
Assembly		Expense Site	10-100
Dept		Cost Center	MFG
Acct No	5020	Sub Acct No	

From

Source Site	10-100	Part No	AID-009
Location	1-A-1-3-C	On Hand (Location)	50.00
On Hand	50	Qty	0.0000
UOM	EA	OH Group	
UOM Cost	7	Date	2/2/2015
Comment			

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To Site: Use the lookup to select the site to which this part will be issued.

Requestor: Use the lookup to select the employee number of the person who requested the part.

WO No: If the part will be issued and expensed to a work order, use the lookup to select the WO number.

Stores Requisition Number: Stores requisitions have unique numbers. Use the lookup to charge the part to a stores requisition.

Reserved: Displays the quantity that is reserved by the system.

Equipment Number: Use the lookup to select the unique equipment number to which the part is charged.

Rebuild: If this issue transaction is expensed to a serialized part, identify the current rebuild location of the part.

Serialized Part: Displays the serialized part to which the part is charged.

Serial Number: The serial number of the part with which the work order is associated.

Issue to Stores Request

EAM Inventory

Setup
Request
Consume
Replenish
Manage

Issue to Stores Request

Note links to WO and Equip. What is the advantage of that?

Stores Req No	Description	Status	WO No	Equip No	Project No	Cost Center	Requestor	Required Date	Mstr Pnt
65	M1 C&I Press Servicing	S	236	P0001	WC01	sysadm	03/31/2015	1	
64	M1 C&I Press Servicing	S	235	P0002	WC02	sysadm	03/31/2015	1	
63	M1 GREASER Lube	S	234	GREASER001	WC01	sysadm	03/31/2015	12	
62	M1 GREASER Lube	S	233	GREASER002	WC01	sysadm	03/31/2015	12	
61	M1 GREASER Lube	S	232	GREASER003	WC01	sysadm	03/31/2015	12	
60	M1 C&I Resistance Welders	S	226	RWELD-01	WC03	sysadm	03/31/2015	9	
59	M1 C&I Resistance Welders	S	225	RWELD-02	WC03	sysadm	03/31/2015	9	
58	M1 C&I Resistance Welders	S	224	RWELD-03	WC03	sysadm	03/31/2015	9	
57	M1 C&I Resistance Welders	S	223	RWELD-04	WC03	sysadm	03/31/2015	9	
56	Y1 Air Compressors Repair	S	208	C0001	Adm	sysadm	03/31/2015	11	
55	Y1 Air Compressors Repair	S	207	C0002	Adm	sysadm	03/31/2015	11	
54	Y1 Air Compressors Repair	S	206	C0003	Adm	sysadm	03/31/2015	11	

Action	Find	Planned Qty	UOM	OH Group	Planned Cost	Issued	Reserved	Reserved	Short	Status	PO No
Unreserve											
Reserve		1.00	EA		12.72	0.00	<input type="checkbox"/>	0.00	0.00	0	
Issue	TER SPRING	1.00	EA		14.75	0.00	<input type="checkbox"/>	0.00	0.00	0	
Partial Issue	XX1/2	1.00	PK		14.75	0.00	<input type="checkbox"/>	0.00	0.00	0	
Global Issue	XX1/2	1.00	PK		14.75	0.00	<input type="checkbox"/>	0.00	0.00	0	
Returns											
Create Requisition											
Global Unreserve											
Global Reserve											
Global Create Requisition											

With the WO and equipment number listed on the Stores Requisition List, you can see where the inventory is set to be issued. You can also view the Stores Requisition list from the Work Order submenu.

Questions? Visit community.qad.com

Issue to Work Order

The screenshot shows the 'Issue to Work Order' form in the EAM Inventory system. The form is titled 'Issue to Work Order' and has a navigation bar at the top with buttons for 'Setup', 'Request', 'Consume', 'Replenish', and 'Manage'. The 'Consume' button is highlighted in yellow. The form itself is titled 'Issue Inventory' and contains various fields for data entry. Red circles and boxes highlight specific fields: 'W/O No', 'Stores Req No', 'Equip No', 'Project No', 'Dept', 'Acct No', 'Location', and 'Qty'. A 'Save' button is located to the left of the form. A note on the left states: 'Note: Issue to Dept in EAM, but does not flow to ERP'. A list on the right titled 'Issue to:' includes: 1. Work order, 2. Stores req, 3. Equip No, 4. Project No. Another note on the right states: 'Automatically defaults accounting'. The QAD logo is in the bottom left corner, and the number 52 is in the bottom right corner.

EAM Inventory

Issue to Work Order

Setup Request **Consume** Replenish Manage

Issue Inventory

Detail

To

To Site USA-1 Requestor

W/O No Stores Req No

Reserved 0

Rebuild

Serial No

Job No

Assembly

Dept

Acct No 7200

Stores Req No

Equip No

Serialized Part

Project No

System

Expense Site USA-1

Cost Center Mig

Sub Acct No Mech

From

Source Site USA-1 Part No A/C120

Location CONTRACTOR On Hand 41

Qty 0.0000 UOM EA

OH Group UOM Cost 80

Date 5/25/2010

Comment

Save

Note: Issue to Dept in EAM, but does not flow to ERP

Issue to:

1. Work order
2. Stores req
3. Equip No
4. Project No

Automatically defaults accounting

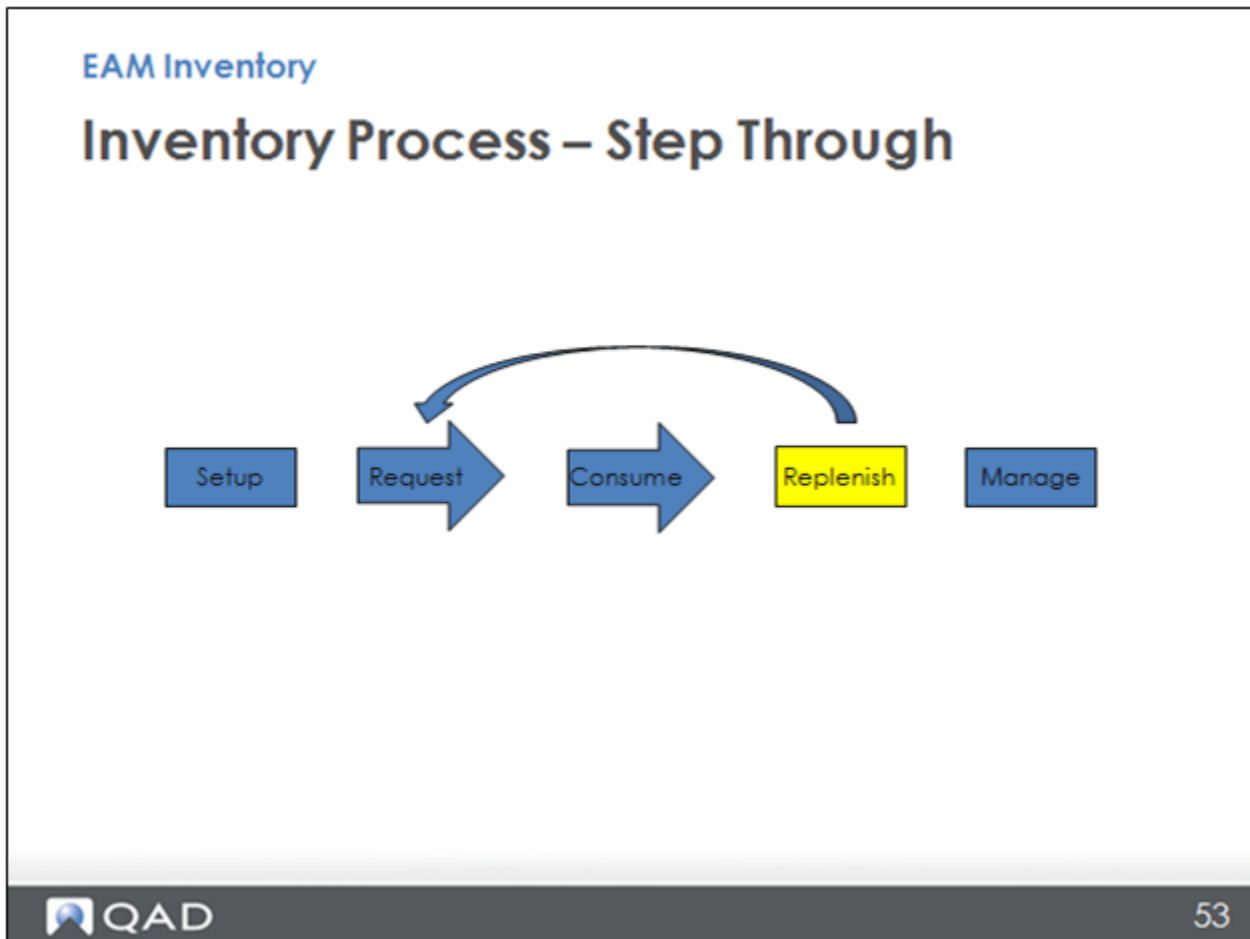
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To issue to a work order; enter the work order number, location, and quantity, and click Save. **Note:** When selecting this function from the Work Order screen, work order data is pre-populated.

You can also issue to a stores requisition, to an Equipment record, or to a project number – all of which default in the proper accounting.

A less common approach is to directly select the cost center, account number, and/or sub-account number.

Inventory Process – Step Through



Stock Replenishment

EAM Inventory

Stock Replenishment

- Use the Stock Replenishment browse to replenish stock automatically.
 - Ways to replenish stock
 - Manually create a stock run. Use Global Add to review All or use with specific filter criteria such as part type, vendor, critical, and consignment.
 - Use Stock Replenishment Job Program
- EAM compares a part's current on-hand or available balance to the reorder point.
- If a part meets the filter criteria and is at or below the reorder point/safety stock level, the system lists it with a suggested quantity to order based on the management max value.
- Create the request after reviewing parts on a stock run.
 - Requisitions are generated for vendor-sourced items
 - Work orders are created for internally sourced items.

Create a Stock Replenishment

EAM Inventory

Create a Stock Replenishment

Use Stock Replenishment to identify parts at or below reorder point or safety stock level. Create requisitions or work orders to replenish inventory.

Create a stock replenishment header or stock run in the top frame.

Globally add parts or attach individual parts to a stock run.

Print the list of items below reorder point or safety stock level for review in the bottom frame.

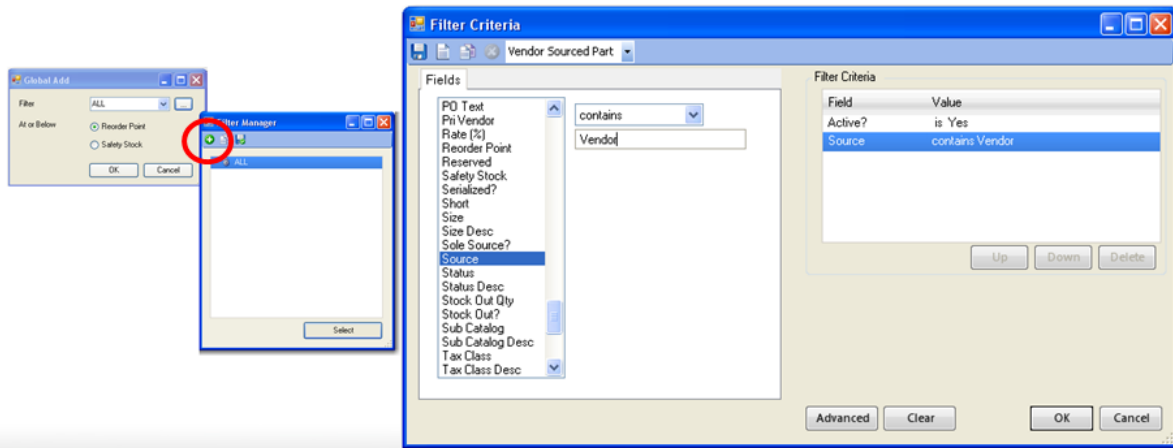
The stock run number is copied to the requisition or work order, noting its origin.

Add Parts to a Stock Replenishment

EAM Inventory

Add Parts to a Stock Replenishment

- Use the Global Add action and select or create a filter to find all active, vendor-sourced parts to reorder or specify other details to filter by



Review Parts on a Stock Replenishment

EAM Inventory

Review Parts on a Stock Replenishment

QAD EAM Development
3555 Koger Blvd
 Suite 300
 Duluth, GA 30096
 Phone: 770-723-1011
 770-723-0033

Menu Search

- Inventory Transfer Document
- Inventory Usage Analysis
- Inventory Value
- Inventory Value at Date
- Inventory With Location
- Inventory Without Price Schedule
- Physical Inventory
- Pick List
- Pick Ticket
- Stock Replenishment
 - Stock Replenishment (EAM)
- Labor
- PM
- Project
- Purchasing

Stock Replenishment

Site: 10000 QAD EE Site - NJ Plant

Stock No: 1
 Originator: sysadm
 Orig Date: 06/29/1999

Planned Order: 327.00
 Last Received: 09/17/1999

Line	Part No	Description	On Hand	Mgt Max Qty	Lead Days	To Order	Issue UOM	Critical?	Planned Order	Last Issued	On Hand	Total
1	TTT			2100		100.00	EA	No	327.00	12/16/2002	1,912.00	102.00
	Location	test	On Hand	1,094.00		0		1.00			1.02	
		ga		0.00								
											Pri Vendor	102.00
											Stock Replenishment	102.00

Auth by: _____

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Edit, review, and approve parts to order.

Create Stock Replenishment Requests

EAM Inventory

Create Stock Replenishment Requests



The screenshot displays the 'Stock Replenishment (EAM)' window. The 'Action' menu is open, showing 'Create Requests' as the selected option. Below the menu, a table lists requisitions with columns for Vendor, Part No, Description, To Order, Mgt Max Qty, and On Hand.

Vendor	Part No	Description	To Order	Mgt Max Qty	On Hand
10S1003	BEARING 004	INA NK 14/16 BEARING	3.00	4.00	
10S1003	BEARING 005	INA 51103J BEARING	3.00	4.00	
10S1003	BEARING 006	SFK 6003 RSJEM BEARING	3.00	4.00	
10S1003	BEARING 007	INA NK 20/16 BEARING	3.00	4.00	
10S1006	BEARING 001	B8-SA RBC BEARING SETS	4.00	6.00	

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Use the Create Requests action to add requisitions.

Close a Stock Replenishment

EAM Inventory

Close a Stock Replenishment

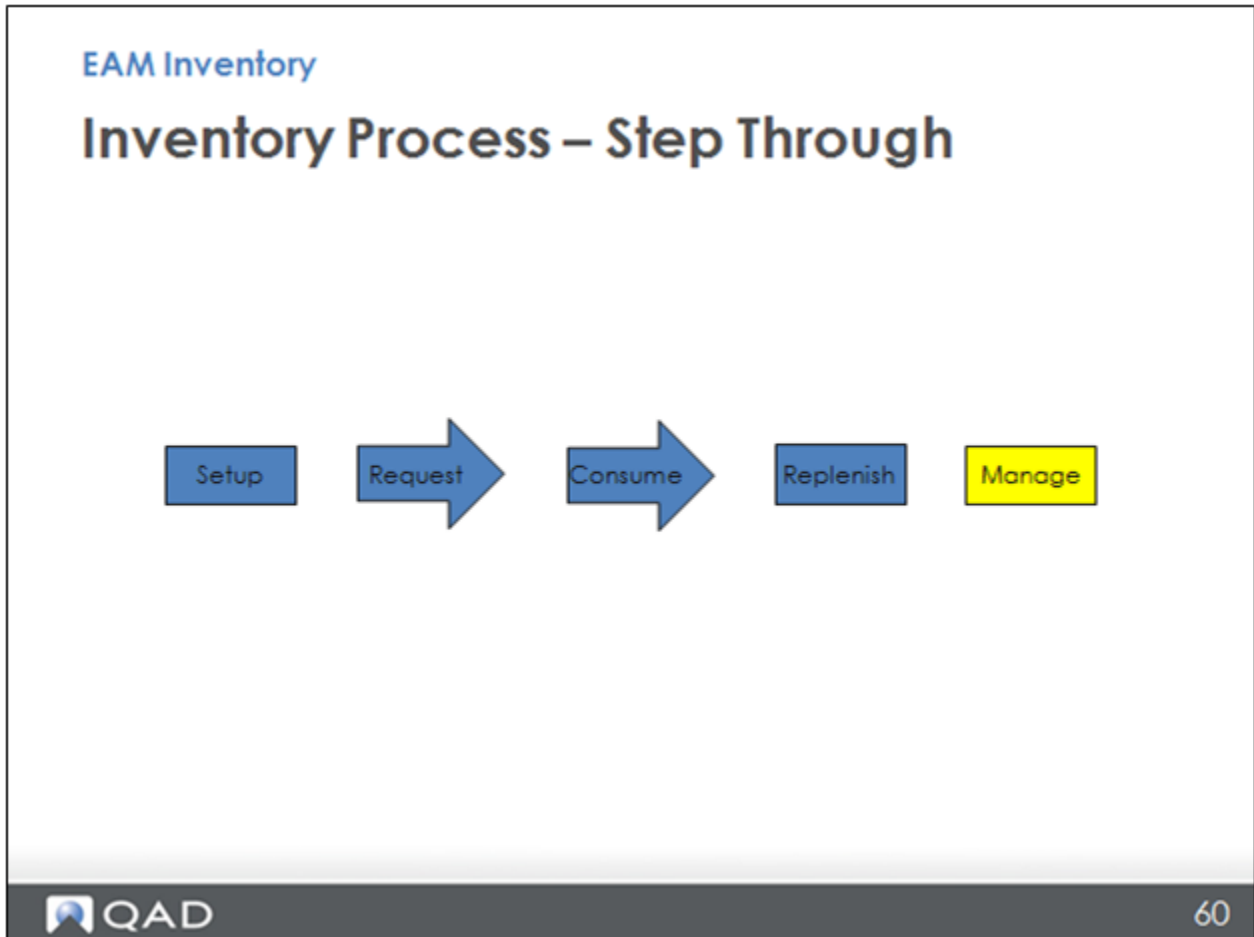
- Once the requisitions or work orders are created, the stock replenishment automatically closes.

The screenshot shows the 'Stock Replenishment (EAM)' interface. The top table has columns: Stock Run No, Description, Type, Status, Originator, and Orig Date. The first row shows '1' for Stock Run No, 'Bearing orders' for Description, and 'C' for Status (circled in red). Below this is a detailed table with columns: Vendor, Part No, Description, To Order, Mgt Max Qty, and On Hand.

Stock Run No	Description	Type	Status	Originator	Orig Date
1	Bearing orders		C	jones	15/07/2010

Vendor	Part No	Description	To Order	Mgt Max Qty	On Hand
1051003	BEARING 004	INA NK 14/16 BEARING	3.00	4.00	4.00
1051003	BEARING 005	INA S1103J BEARING	3.00	4.00	4.00
1051003	BEARING 006	SFK 6003 RSJEM BEARING	3.00	4.00	4.00
1051003	BEARING 007	INA NK 20/16 BEARING	3.00	4.00	4.00
1051006	BEARING 001	80-SARBC BEARING SETS	4.00	6.00	6.00
1051006	BEARING 002	FAFNIR 205PP BEARING	4.00	5.00	5.00
1051006	BEARING 003	INA S1105 BEARING	4.00	5.00	5.00

Inventory Process – Step Through




Physical Inventory

EAM Inventory

Setup
Request
Consume
Replenish
Manage

Physical Inventory

- Formal inventory counting function, usually associated with an audit process
- Created for all inventory or for specific sections
 - Physical due date
 - Active flag
 - Consignment flag
 - etc
- Freezes all transactions while in process
- Provides a count sheet
- Closing physical:
 - Generates GLs to ERP
 - Unfreezes the parts


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Use the physical inventory module to:

- Pick a group of parts based on user-defined criteria to count and print count sheets.
- Verify the quantity in inventory and enter count results.
- Make adjustments to the on-hand inventory quantity automatically after the closing count.

EAM includes only active parts in physical inventory lists and the physical inventory add lookup.

Create a Physical

EAM Inventory

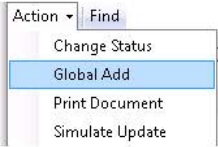
Create a Physical

Inv No	Control No	Type	Consignment?	Vendor No	Created Date	Status	Closed Date	Closed By
3	Training		<input type="checkbox"/>		05/19/2015	S		
1	100	SPOT	<input type="checkbox"/>		09/29/2010	C	09/29/2010	jones

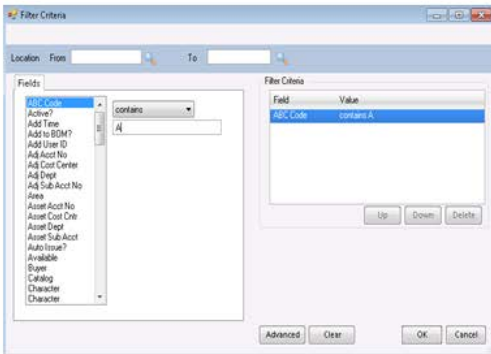
Create a Physical – Global Add

EAM Inventory

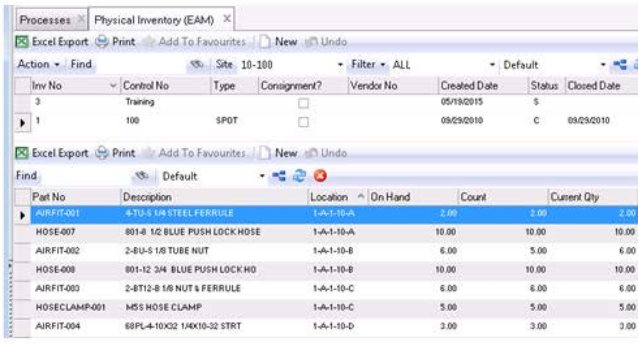
Create a Physical – Global Add



The 'Action' menu is open, showing options: Change Status, Global Add (highlighted), Print Document, and Simulate Update.



The 'Filter Criteria' dialog box is shown. The 'Fields' list on the left includes 'ASC Code'. The 'Filter Criteria' table on the right shows 'ASC Code' with the value 'contains A'. Buttons for 'Advanced', 'Clear', 'OK', and 'Cancel' are at the bottom.



The 'Physical Inventory (EAM)' window is shown. It displays a table of inventory items with columns: Part No, Description, Location, On Hand, Count, and Current Qty. The 'New' button is highlighted in the top toolbar.

Part No	Description	Location	On Hand	Count	Current Qty
AIRFIT-001	4-TU-3 1/8 STEEL FERRULE	1-A-1-10-A	2.00	2.00	2.00
HOSE-007	801-8 1/2 BLUE PUSH LOCK HOSE	1-A-1-10-A	10.00	10.00	10.00
AIRFIT-002	2-8U-5 1/8 TUBE NUT	1-A-1-10-B	6.00	5.00	6.00
HOSE-008	801-12 3/4 BLUE PUSH LOCK HD	1-A-1-10-B	10.00	10.00	10.00
AIRFIT-003	2-8T12-8 1/8 NUT & FERRULE	1-A-1-10-C	6.00	6.00	6.00
HOSECLAMP001	M5 HOSE CLAMP	1-A-1-10-C	5.00	5.00	5.00
AIRFIT-004	68PL-4-10X22 1/4X10-32 STRT	1-A-1-10-D	3.00	3.00	3.00

You can manually add parts to the physical inventory by selecting New in the lower browse.

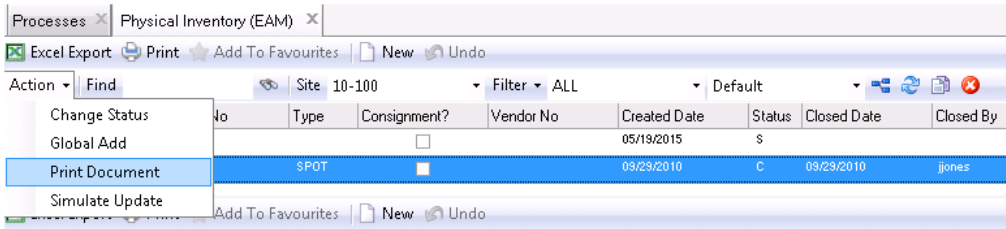
Note: No inventory transactions can be made for a part that is associated with an active physical.

Questions? Visit community.qad.com


Print a Physical Inventory Count Sheet

EAM Inventory

Print a Physical Inventory Count Sheet



No	Type	Consignment?	Vendor No	Created Date	Status	Closed Date	Closed By
	SPOT	<input type="checkbox"/>		05/19/2015	\$		
				09/29/2010	C	09/29/2010	jones


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Navigate to Inventory|Physical Inventory.

Highlight the run number.

Select Action > Print Document.

You can also print the count sheet from the Analysis section.

Update Physical with Counts

EAM Inventory

Update Physical with Counts

Inv No	Control No	Type	Consignment?	Vendor No	Created Date	Status	Closed Date
3	Training		<input type="checkbox"/>		05/19/2015	S	
1	100	SPOT	<input type="checkbox"/>		09/29/2010	C	09/29/2010

Part No	Description	Location	On Hand	Count	Current Qty
AID-001	ALCOHOL	1-A-1-1		0.00	0.00
AID-018	EAR PLUGS: C-312-1222 E-Z-FIT	1-A-1-3-F		1.00	1.00
AID-065	# 119180 POLYSAFE CLEAR GOGGLE	1-A-1-8-D		10.00	10.00

After items have been physically counted, enter the counts for each part in the lower browse.

Questions? Visit community.qad.com


Simulate Update

EAM Inventory

Simulate Update

Action Find

- Change Status
- Global Add
- Print Document
- Simulate Update



Ultrasound Mfg Site

Simulate Update

Site 10-100 Ultrasound Mfg Site

Inv No 2

Part No.	Description	Location	Location Qty	Count	Difference	Stack Qty	UOM Cost	Simulated Cost
RIVETOR-001	8000-16 JAW LIFT PLUNGER	1-A-1-10-D	0	20	20	20	86.25	1725
Total Simulated Cost Per Part								1725
RIVETOR-003	8000-18 UPSTOP BLOCK	1-A-1-10-F	0	10	10	10	59	590
Total Simulated Cost Per Part								590
WELD 005	#831.0023 BINZEL REAMER BIT	1-A-1-1	0	4	4	4	123.2	492.8
Total Simulated Cost Per Part								492.8
Total Simulated Cost Per Physical								2607.8


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Action > Simulate Update generates a report displaying the financial impacts of the entered quantity count versus the quantity on-hand known by the system.

It is recommended that you view this report before you generate the financial transactions associated with closing the physical inventory.

Close a Physical

EAM Inventory

Close a Physical

The screenshot displays the QAD EAM Inventory interface. The 'Action' menu is open, with 'Change Status' circled in red. A 'Lookup' dialog box is also open, showing a table of status options:

Status	Description
C	Closed
X	Canceled-1

The main window shows a table of physical inventory items:

Part No	Description	Location	On Hand
AID-001	ALCOHOL	1-A-1-1	
AID-018	EAR PLUGS: C-312-1222 E-Z-FIT	1-A-1-3-F	
AID-065	# 119180 POLYSAFE CLEAR GOGGLE	1-A-1-8-D	

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Close the physical by selecting the Change Status option from the Action menu.

Closing a Physical

EAM Inventory

Closing a Physical

- EAM automatically makes any necessary adjustments to the part in inventory
- EAM generates the necessary financial transactions based on the adjustment account assigned

Before

Part No	Description	On Hand	Location	Count	Current Qty
20-0238	Coupler,Hydraulic #B-330070	40	TBD	40	40
93350-M-20-1	Oil,soluble,coolant,20:1,Mob.	2	A2	4	4
93350-M-20-1	Oil,soluble,coolant,20:1,Mob.	2	p200	0	0
CP101	Hose,18"Alomite #P1425wh-18	0	TBD	30	0
F100-01	red apple in 10000	0	p100	0	0
F102	F102 in site 10000	0	p100	0	0
p116	p116-site 10000	0	p100	1	0
SB-No-Sched	Part Without Scheduling	107	1234567890	0	0
SB-No-Sched	Part Without Scheduling	107	test	107	107

After

Part No	Description	On Hand	Location	Count	Current Qty
20-0238	Coupler,Hydraulic #B-330070	40	TBD	40	40
93350-M-20-1	Oil,soluble,coolant,20:1,Mob.	2	A2	4	4
93350-M-20-1	Oil,soluble,coolant,20:1,Mob.	2	p200	0	0
CP101	Hose,18"Alomite #P1425wh-18	0	TBD	30	0
F100-01	red apple in 10000	0	p100	0	0
F102	F102 in site 10000	0	p100	0	0
p116	p116-site 10000	0	p100	1	0
SB-No-Sched	Part Without Scheduling	107	1234567890	0	0

Inventory Transactions

EAM Inventory

Inventory Transactions

- Transaction types:
 - Issue
 - Return to inventory
 - Relocate
 - Receive from relocation
 - Receive from work order
 - Return to work order
 - Adjust
 - Transfer ownership
 - Modify consignment
 - Modify cost

See Appendix B – Inventory Transactions

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The **Issue** action is used to record that a part was used for a specific work order or equipment.

Return to Inventory is used when parts that were issued are no longer needed and are brought back to the crib for use elsewhere.

Adjust is used to change the inventory level for a part when it is different than what is shown in the system and the reason for the difference is unknown. This changes the quantity and immediately generates a GL transaction to ERP.

Relocate is used to change the bin location of where a part is stored or to transfer parts from another site.

Receive from relocation is used when a part is transferred across sites with the In Transit option turned on.

Receive from work order is for internally fabricated parts that have been moved to the storeroom.

Transfer ownership allows the owner of record on consigned inventory to be changed.

The **Modify Consignment** option is used to modify a part's consignment information.

The **Modify Cost** option is used to change the part's cost, generating general ledger entries based on the changes. Use this option only with approval from your Finance department.

Inventory Transaction History

EAM Inventory

Inventory Transaction History

Effective	Code	GL Description	Part No	Qty	UOM	Total Cost (Rep)	To Site	Currency	Vendor No	Vendor Name	Stores
05/19/2015	I	ISS-WO-236	SPRING 003	1.00	PK	14.75	10-100	USD			65
05/19/2015	I	ISS-WO-236	SPRING 001	1.00	EA	12.72	10-100	USD			65
03/01/2015	I	ISS-WO-144	AIRLUB-002	1.00	EA	47.14	10-100	USD			0
03/01/2015	I	ISS-WO-145	AIRFLOW001	1.00	EA	21.32	10-100	USD			0
03/01/2015	R	RECV-PO-1003-REQ-5	BEARING 007	3.00	EA	33.75	10-100	USD	10S1003	Heron Surgical Su	0
03/01/2015	R	RECV-PO-1003-REQ-5	BEARING 006	3.00	EA	32.25	10-100	USD	10S1003	Heron Surgical Su	0
03/01/2015	R	RECV-PO-1003-REQ-5	BEARING 005	3.00	EA	36.00	10-100	USD	10S1003	Heron Surgical Su	0
03/01/2015	R	RECV-PO-1003-REQ-5	BEARING 004	3.00	EA	36.00	10-100	USD	10S1003	Heron Surgical Su	0
09/13/2013	V	ADJ-COST-I-WIRE-001	WIRE-001	8.00	EA	-126.08	10-100	USD			0
09/13/2013	V	ADJ-COST-I-WELD 044	WELD 044	0.00	EA	0.00	10-100	USD			0
09/13/2013	V	ADJ-COST-I-STNMFIT 005	STNMFIT 005	0.00	EA	0.00	10-100	USD			0
09/13/2013	V	ADJ-COST-I-SPGCAN 001	SPGCAN 001	0.00	EA	0.00	10-100	USD			0
09/13/2013	V	ADJ-COST-I-SCREWS 001	SCREWS 001	0.00	EA	0.00	10-100	USD			0
09/13/2013	V	ADJ-COST-I-SANDBELT 001	SANDBELT 001	0.00	EA	0.00	10-100	USD			0
09/13/2013	V	ADJ-COST-I-SAFETY-001	SAFETY-001	0.00	EA	0.00	10-100	USD			0
09/13/2013	V	ADJ-COST-I-PIPEFIT-015	PIPEFIT-015	0.00	EA	0.00	10-100	USD			0
09/13/2013	V	ADJ-COST-I-PIPEFIT-014	PIPEFIT-014	0.00	EA	0.00	10-100	USD			0
09/13/2013	V	ADJ-COST-I-PIPEFIT-013	PIPEFIT-013	0.00	EA	0.00	10-100	USD			0
09/13/2013	V	ADJ-COST-I-PIPEFIT-012	PIPEFIT-012	0.00	EA	0.00	10-100	USD			0
09/13/2013	V	ADJ-COST-I-HOSE-008	HOSE-008	0.00	EA	0.00	10-100	USD			0

- The Inventory Transaction browse displays the inventory activity history for inventory parts.

The Inventory Transaction History browse is available in the application menu under Inventory|Inventory Transaction History. This information is also available in a report.

Vendor Cost

EAM Inventory

Vendor Cost

The screenshot shows the 'Vendor Cost (EAM)' application window. The window title is 'Vendor Cost (EAM)'. Below the title bar, there are menu options: 'Excel Export', 'Print', 'Add To Favourites', and 'New'. A search bar contains 'Find' and 'Site 10-100'. A filter dropdown is set to 'ALL'. The main area displays a table with the following columns: Vendor No, Part No, Last Cost, Last Cost Date, and Currency. The table contains 20 rows of data, all with Vendor No '10S1002' and Currency 'USD'.

Vendor No	Part No	Last Cost	Last Cost Date	Currency
10S1002	AID-001	2.14		USD
10S1002	AID-002	2.14		USD
10S1002	AID-003	5.25		USD
10S1002	AID-008	4.60		USD
10S1002	AID-009	7.00		USD
10S1002	AID-010	5.00		USD
10S1002	AID-012	8.25		USD
10S1002	AID-018	32.75		USD
10S1002	AID-019	25.00		USD
10S1002	AID-020	15.00		USD
10S1002	AID-023	3.25		USD
10S1002	AID-024	3.10		USD
10S1002	AID-025	2.50		USD
10S1002	AID-026	1.75		USD
10S1002	AID-027	1.65		USD
10S1002	AID-029	9.00		USD
10S1002	AID-030	1.40		USD
10S1002	AID-032	0.75		USD
10S1002	AID-034	17.50		USD
10S1002	AID-035	28.95		USD
10S1002	AID-038	12.50		USD

- The Vendor Cost browse displays the last received cost for parts by vendor.

The Vendor Cost browse can be accessed from the application menu under Inventory|Vendor Cost

Additional Inventory Features



We have gone through the inventory basics but there is more functionality available.

Other EAM Inventory Features

EAM Inventory

Other EAM Inventory Features

- Vendor part data
- Inventory transactions
- Inventory receive/returns
- Consignment inventory
- Rotable inventory

The following slides explain other functionality available in the EAM Inventory module.

Add Vendor Part Data

EAM Inventory

Add Vendor Part Data

Note that a single part can have multiple vendors

Note that a single vendor can have multiple vendor part numbers (example: different brands of C cell batteries)

Note that a single vendor part can have multiple price lists designated by quantity and exp date

In the top-level browse, select a vendor from the lookup.

In the middle browse, enter the vendor's part number and add manufacturer details such as the name and the manufacturer part number.

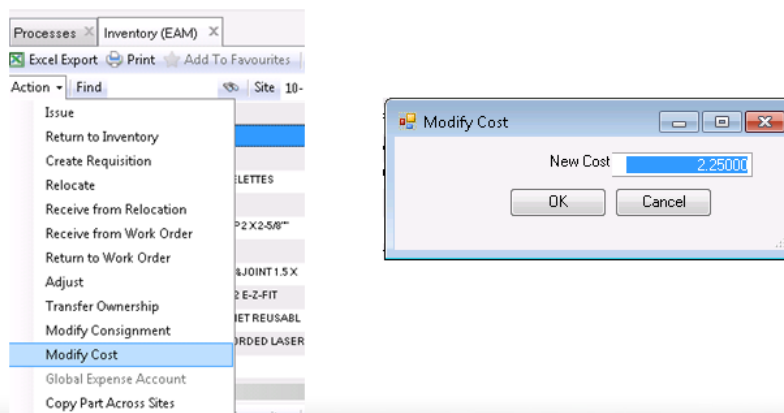
In the lower browse, indicate the price schedule for the vendor. Be sure to include an expiration date with the calendar. If the price schedule is expired, the price schedule is not used on requisitions.

Modify Cost

EAM Inventory

Modify Cost

- The Modify Cost action allows you to change the cost of a part.
 - When this action is performed, general ledger entries are generated based on the changes
- To modify cost, highlight the consignment inventory item and select Modify Cost from the Inventory Action menu.



This action is typically restricted to a limited number of users.

Adjust

EAM Inventory

Adjust

Part No	Description	Reserved	On Hand
AID-056	ACE BANDAGE: 2 X5	0.00	0.00
AID-057	ACE BANDAGE: 4 X5	0.00	0.00
AID-058	GAUZE ROLL 2 X 4-12 YARDS	0.00	0.00
AID-063	881832 WRIST SUPPORT	0.00	0.00
AID-064	VISTOR GLASSES REGULAR	0.00	0.00
AID-065	# 119180 POLYSAFE CLEAR GOGGLE		10.00
AID-066	SPLINTER REMOVAL NEEDLES		0.00
AID-067	#89022 TENNIS ELBOW STRAP		3.00
AID-076	#550530 KEVLAR SLEEVE W/OUTH		10.00
AID-077	S501-00-M MED STAND.501 ANTMV		0.00
AID-078	Eyewash Solution Concentrate 180 Oz		1.00

Location	On Hand
1-A-1-8-D	10.00

Used to adjust on-hand quantity for a part as a result of a spot check.

Note difference between Adjust and the more formal Physical Inventory Count.

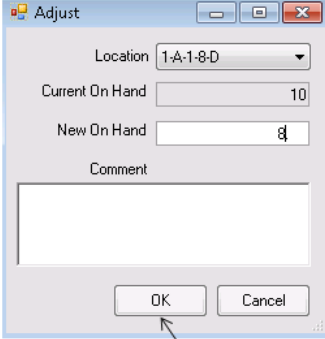
If necessary, you can change the on-hand quantity using the Adjust action, which is typically done after a physical inventory is performed and a discrepancy between the system record and the physical count is discovered.

Questions? Visit community.qad.com

Adjust

EAM Inventory

Adjust



On select of OK:

1. Immediately updates inventory On-Hand Qty
2. Generates GL to ERP

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Inventory adjustments have an impact on the GL. In the Posted GL Transactions browse, the code J indicates inventory adjustments.

Adjust

EAM Inventory

Adjust

Processes x Inventory (EAM) x

Excel Export Print Add To Favourites New Edit


Action Find Site 10-100 Filter ALL Default

Part No	Description	Reserved	On Hand	Available	Last Issued
AID-056	ACE BANDAGE: 2 X5	0.00	0.00	0.00	0.00 04/12/2009
AID-057	ACE BANDAGE: 4 X5	0.00	0.00	0.00	0.00 04/21/2009
AID-058	GAUZE ROLL 2 X 4-12 YARDS	0.00	0.00	0.00	0.00 04/13/2009
AID-063	881832 WRIST SUPPORT	0.00	0.00	0.00	0.00 09/04/2009
AID-064	VISTOR GLASSES REGULAR	0.00	0.00	0.00	0.00 06/19/2009
AID-065	# 119180 POLYSAFE CLEAR GOGGLE	0.00	8.00	8.00	8.00 05/03/2009
AID-066	SPLINTER REMOVAL NEEDLES	0.00	0.00	0.00	0.00 06/09/2009
AID-067	#889022 TENNIS ELBOW STRAP	0.00	3.00	3.00	0.00 03/08/2009
AID-076	#550530 KEVLAR SLEEVE W/OUTH	0.00	10.00	10.00	0.00 04/01/2009
AID-077	S501-00-M MED STAND.501 ANTVI	0.00	0.00	0.00	0.00 03/18/2009
AID-078	Eyewash Solution Concentrate 180 Oz	0.00	1.00	1.00	0.00 05/07/2009

Excel Export Print Add To Favourites New Undo

Find Default

Location	On Hand
1-A-1-8-D	8.00

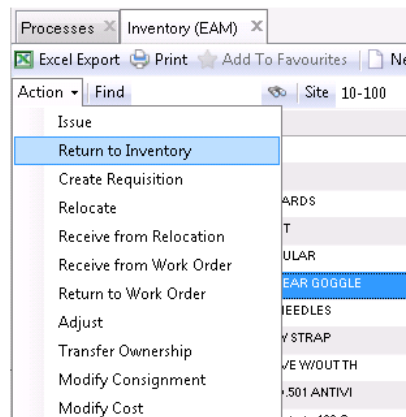

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Review the new on-hand quantity.

Return to Inventory

EAM Inventory

Return to Inventory



Return to Inventory:

Used to put part back into inventory after issue

Reverses previous issue transaction

Use this option to put an unused part back into inventory.

Note: If items have been issued to a machine and need to be returned to the vendor for any reason, they must be returned to inventory first.

Return to Inventory

EAM Inventory

Return to Inventory

The 'Lookup' window displays the following data:

Date	Qty	To Site	W/O No	Net Qty
05/25/2010	1	US-A-1	45	1
05/25/2010	1	US-A-1	0	1
02/04/2010	2	US-A-1	10	2
02/04/2010	2	US-A-1	10	2
02/04/2010	2	US-A-1	10	2

The 'Return to Inventory' dialog box contains the following fields:

- Location: CONTRACTOR
- Qty to Return: 2.00
- Date Returned: 05/25/2010

Callout 1: Select Issue Transaction to reverse . . .

Callout 2: Specify Location, Qty, and Effective Date. NOTE: Cannot return more than was originally issued.

QAD 80

Select the transaction to reverse.

Indicate the location, the quantity to return, and the date.

Click OK.

Receive from Work Order

EAM Inventory

Receive from Work Order

Purpose:
Internally fabricated parts inventory is replenished by a Fabricated Work Order.

This function allows the newly fabricated parts to be received into inventory and sets cost of part to the cost of the WO.

Note that a WO is required, and the lookup list is automatically sorted to open WOs for the selected fabricated part.

Part No	Description	Reserved
AID-409	EAR PLUGS #050227CORDED LASER	
AID-423	GAUZE PADS 3 X 3	
AID-424	GAUZE PADS 2 X 2 X 1/2"	
AID-425	GAUZE PADS #ERLUX ROLL 2-1/4" EA"	
AID-426	GLASSES SAFETY BLUE 8-7070-B	0.00 10.00
AID-427	GLASSES TOMAHAWK BLACK	0.00 10.00
AID-428	OINTMENTS TRIPPLE ANTI BIODIC	0.00 0.00
AID-430	#TR8201 STANDARD COLD PACKS	0.00 2.00
AID-432	HYDROGEN PEROXIDE	0.00 0.00
AID-434	SALVES BURN JEL FOL PACKS	0.00 1.00
AID-435	DERMA SHIELD 120Z CAN	0.00 0.00

Site	WO No	Status	Rebuild	Qty
LANP	2149	0		2

QAD 81

Use Receive From Work Order for internally fabricated parts.

Use the lookup to select the work order. The lookup is filtered to display only open work orders for the particular internal part.

If the system does not send GL transactions for labor, the default cost does not include labor costs.

Return to Work Order

EAM Inventory

Return to Work Order

Purpose:
Reverses previous
Receive from Work
Order transaction.
Returns fabricated
part to Rebuild area
for repair.

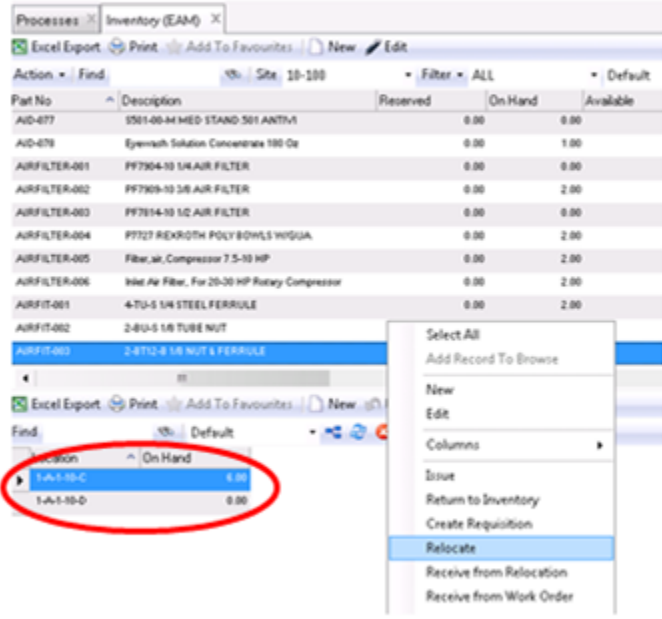
The screenshot shows the QAD EAM Inventory application interface. At the top, there are tabs for 'Processes' and 'Inventory (EAM)'. Below the tabs are buttons for 'Excel Export', 'Print', 'Add To Favourites', 'New', and 'Edit'. A search bar contains 'Site 10-100' and a filter dropdown set to 'ALL'. The main area displays a table of inventory items with columns for Part No., Description, Reserved, On Hand, Available, and Location. The table lists various parts such as EAR PLUGS, GAUZE PADS, and GLASSES. A context menu is open over the 'GLASSES: SAFETY BLUE B-7070-B' row, with the 'Return to Work Order' option highlighted by a red circle. Other options in the menu include 'Select All', 'Add Record To Browse', 'New', 'Edit', 'Columns', 'Issue', 'Return to Inventory', 'Create Requisition', 'Relocate', 'Receive from Relocation', 'Receive from Work Order', 'Adjust', and 'Transfer Ownership'.

Part No.	Description	Reserved	On Hand	Available	La
AID-020	EAR PLUGS:#250227CORDED LASER	0.00	1.00	1.00	06/
AID-023	GAUZE PADS: 3 X3	0.00	1.00	1.00	04/
AID-024	GAUZE PADS:2 X2" X8PLY"	0.00	1.00	1.00	04/
AID-025	GAUZE PADS: KERLUX ROLL2-14",EA"	0.00	1.00	1.00	09/
AID-026	GLASSES:SAFETY BLUE B-7070-B			10.00	05/
AID-027	GLASSES:TOMAHAWK BLACK			10.00	05/
AID-029	OINTMENTS: TRIPPLE ANTIBIOTIC			0.00	04/
AID-030	#T883201 STANDARD COLD PACKS			3.00	04/
AID-032	HYDROGEN PEROXIDE			0.00	01/
AID-034	SALVES:BURN JEL FOIL PACKS			1.00	02/
AID-035	DERMA SHIELD 120Z CAN			0.00	10/

Use this option to return a fabricated part to a work order added to build that part.

Relocate

EAM Inventory Relocate



Part No	Description	Reserved	On Hand	Available
AID-077	S501-00-M-MED STAND-501 ANTYV	0.00	0.00	
AID-079	Eye-wash Solution Concentrate 100 Oz	0.00	1.00	
AIRFILTER-001	FF7904-10 1/4 AIR FILTER	0.00	0.00	
AIRFILTER-002	FF7909-10 1/8 AIR FILTER	0.00	2.00	
AIRFILTER-003	FF7814-10 1/2 AIR FILTER	0.00	0.00	
AIRFILTER-004	FF727 REXROTH POLY BOWLS W/GUA	0.00	2.00	
AIRFILTER-005	Fiber, Air Compressor 7.5-10 HP	0.00	2.00	
AIRFILTER-006	Inlet Air Filter, For 20-30 HP Rotary Compressor	0.00	2.00	
AIRFIT-001	4-TU-5 1/4 STEEL FERRULE	0.00	2.00	
AIRFIT-002	2-8U-5 1/8 TUBE NUT	0.00	2.00	
AIRFIT-003	2-8U-5 1/8 NUT & FERRULE			

Can move a part:

- Between a site's locations (Note: must be associated to part first!), or
- To another site

Relocating across sites:

- EAM functionality depends upon "Transit?" flag
- Push/Pull vs. Pull
- Parts must be in the same domain

Use this option to send a part to another site, or to move a part between one site's store room bin locations.

Relocate

EAM Inventory

Relocate

Can change From site to pull part into your own site

Description	Reserved	On Hand
5501-00-M MED STAND.501 ANTVI	0.00	
Eyewash Solution Concentrate 180 Oz	0.00	
PF7904-10 1/4 AIR FILTER	0.00	
PF7909-10 3/8 AIR FILTER	0.00	
PF7914-10 1/2 AIR FILTER	0.00	
P7727 REXROTH POLY BOWLS W/GUA	0.00	
Filter,air, Compressor 7.5-10 HP	0.00	
Inlet Air Filter, For 20-30 HP Rotary Compressor	0.00	
4-TU-S 1/4 STEEL FERRULE	0.00	
2-BU-S 1/8 TUBE NUT	0.00	
2-BT12-B 1/8 NUT & FERRULE		

Relocate

From Site: 10-100

Part No: AIRFIT-003

On Hand: 6

Available: 6

Location: 1-A-1-10-C

On Hand: 6

Qty to Relocate: 3.00

To Site: 10-100

Location: 1-A-1-10-D

On Hand: 0

Comment:

OK Cancel

- Select All
- Add Record To Brows
- New
- Edit
- Columns
- Issue
- Return to Inventory
- Create Requisition
- Relocate
- Receive from Relocation
- Receive from Work Order

Cross-site relocations:

If Transit? flag = no, then the transaction is complete.

If Transit? flag = yes, there is one more step . . . Receive from Relocation

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Note: GL transactions are not created for relocation from one bin location to another (within a site). For the movement of inventory across sites, intercompany transactions are used move the cost.

Indicate the quantity to relocate and indicate the new location.

Receive from Relocation

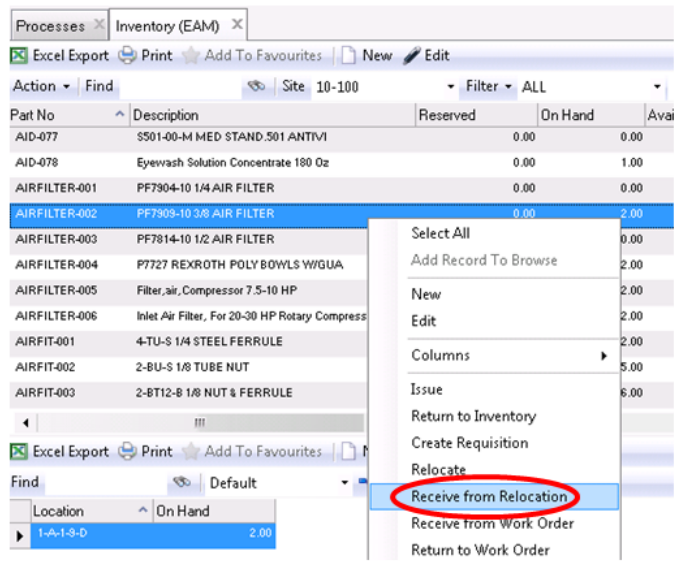
EAM Inventory

Receive from Relocation

Purpose:

If Transit? is set to yes, cross-site inventory transfers involve a push to an In-Transit account.

The Receive from Relocation is the second step to pull that inventory from the In-Transit Account into the site inventory.



Use this option to receive a part from another site. This option applies only if In-Transit? is set to Yes in the system control settings.

Consignment Inventory

EAM Inventory

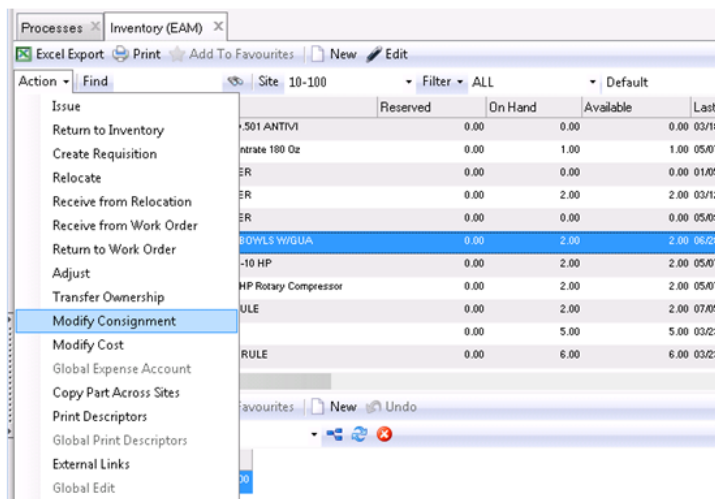
Consignment Inventory

Setting Up Consignment Inventory

EAM Inventory

Setting Up Consignment Inventory

- Adding a consignment part
 - Create an item in Inventory and mark it as Consigned by selecting Action > Modify Consignment



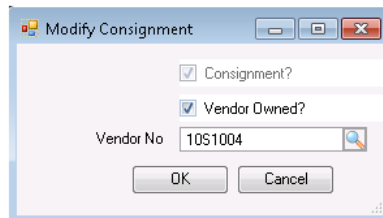
Note: Prior to using the consignment inventory functionality, you must set accounting defaults at site level.

Setting Up Consignment Inventory

EAM Inventory

Setting Up Consignment Inventory

- Vendor Owned?: By default, this check box is selected, indicating that the consignment part is vendor owned. If the consignment part is not owned by the vendor, clear this check box.
- Vendor No: If the consignment part is vendor owned, use the lookup to select the vendor.



Use the Modify Consignment window to indicate if the consigned inventory item is vendor owned, and who the owner is (if applicable).

Consignment Inventory Transactions: Issue

EAM Inventory

Consignment Inventory Transactions: Issue

- To issue consignment inventory, select the item in the Inventory browse and choose Action > Issue



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The Issue Consignment Inventory window contains consignment-related fields, which are used for vendor information. This window also contains standard inventory-related fields.

Vendor Owned: Use this check box, which only appears when issuing consignment parts, to indicate if a consignment part is owned by the vendor or by the company. Select this check box to issue a vendor-owned consignment part.

Vendor No: If the consignment part is vendor owned, select the vendor who owns the part.

On Hand (Vendor): Depending on the vendor specified in the Vendor No field, this field displays the available on-hand quantity for the vendor-owned consignment part.

On Hand (Company): Displays the available on-hand quantity for the company-owned part.

Consignment Inventory Transactions: Relocate

EAM Inventory

Consignment Inventory Transactions: Relocate

- To relocate consignment inventory, select the item in the Inventory browse and choose Action > Relocate

The Relocate window contains consignment-related fields, which are used for vendor information. This window also contains standard inventory-related fields.

Vendor Owned: Select this check box to indicate that the consignment part is owned by a vendor. If this check box is not selected, the on-hand quantity is considered to be company owned.

Vendor: If the consignment part is vendor owned, select the vendor that owns this part.

On Hand (Vendor): Depending on the vendor specified in the Vendor field, this field displays the on-hand quantity of the vendor-owned consignment part.

Once you have entered the relocation information, click OK to relocate the part.

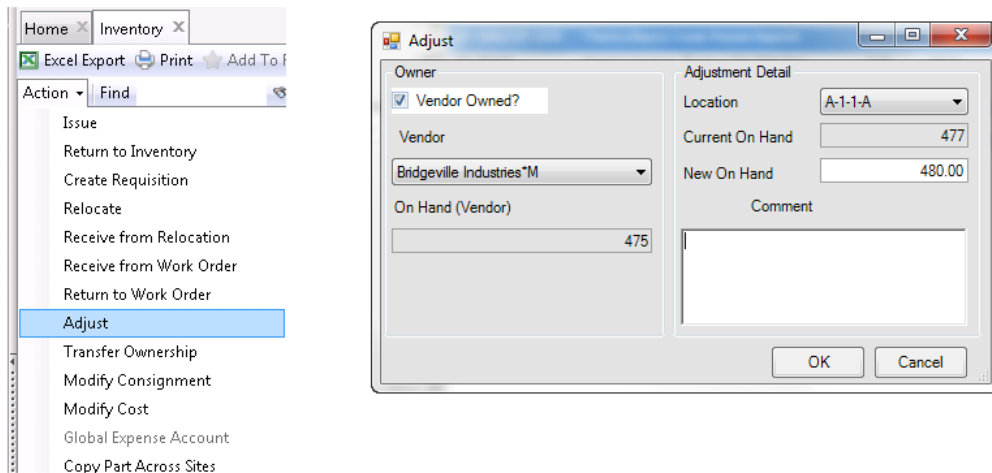
If you are relocating a part to another site, the system informs you that the part has been put in transit. If necessary, click Yes to print the inventory transfer document. To complete the relocation, receive the parts in the new site by performing the Receive from Relocation action.

Consignment Inventory Transactions: Adjust

EAM Inventory

Consignment Inventory Transactions: Adjust

- To adjust the on-hand consignment inventory quantity, select the item in the Inventory browse and choose Action > Adjust



The Adjust window contains consignment-related fields, which are used for vendor information. This window also contains standard inventory-related fields.

Vendor Owned: Select this check box to indicate that the consignment part is owned by a vendor. If this check box is not selected, the on-hand quantity is considered to be company owned.

Vendor: If the consignment part is vendor owned, select the vendor that owns the part.

On Hand (Vendor): Depending on the vendor specified in the Vendor field, this field displays the on-hand quantity for the vendor-owned consignment part.

Location: Select the consignment inventory location for which the adjustment must occur.

Current On Hand: System-generated field displaying the system's current on-hand quantity.

New On Hand: Enter the new amount.

View Consignment Stack

EAM Inventory

View Consignment Stack

- From the Consignment Stack submenu within an inventory record, view:
 - The number of consignment parts that are available for each vendor
 - A part's next-issue cost, which is based on FIFO, for each vendor
 - Whether the part is vendor or company owned

Date	Add Time	Qty	UOM Cost	Vendor Owned?	Vendor No	Vendor Name
06/27/2014	33077	10.00	34.10	<input type="checkbox"/>		
06/27/2014	33621	15.00	36.65	<input type="checkbox"/>		
06/27/2014	31611	20.00	37.00	<input checked="" type="checkbox"/>	82900	SEBU Supplier
06/27/2014	30422	20.00	36.65	<input checked="" type="checkbox"/>	C2001	Kamuda Industrial Su
06/27/2014	30787	90.00	34.10	<input checked="" type="checkbox"/>	D2003	Ullacher & Sons

The consignment stack is available from the Inventory submenu.

Transferring Ownership

EAM Inventory

Transferring Ownership

- The Transfer Ownership action allows you to indicate the part is now company owned.
- To transfer ownership of a consignment part to company-owned:
 - Open the Inventory browse and highlight the part record.
 - Select Transfer Ownership from the Inventory Action menu. The Transfer Ownership window opens. Enter the relevant information.

The screenshot shows a 'Transfer Ownership' dialog box with the following fields and values:

Section	Field	Value
From	Vendor	Kamuda Industrial Supply
	On Hand (Vendor)	45
To	On Hand (Company)	10
	Qty to Transfer	15.00

Use the Transfer Ownership function when the item is ready to be issued for use.

Rotable Inventory

EAM Inventory

Rotable Inventory

Rotable Inventory

EAM Inventory

Rotable Inventory

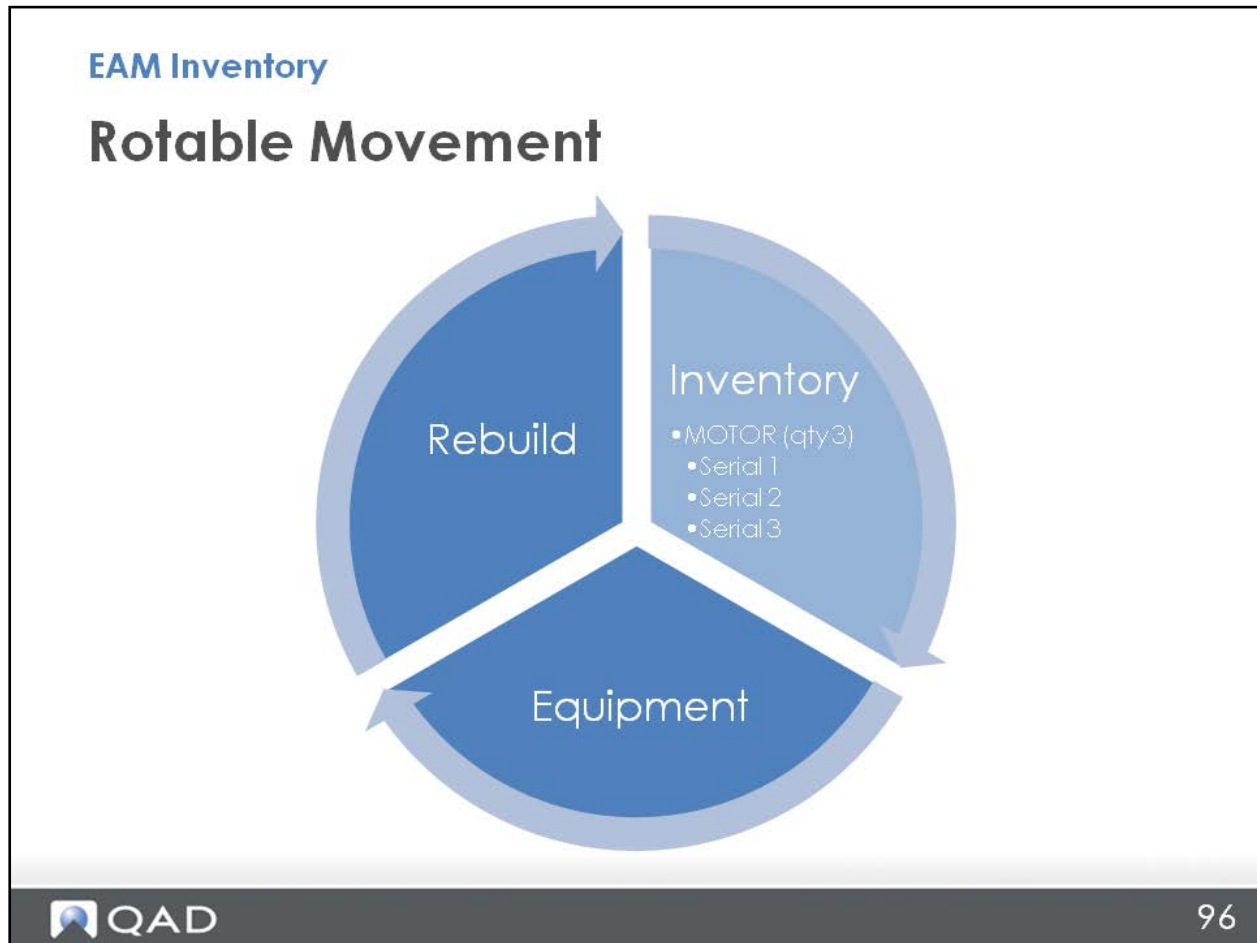
- Track rotatable components that are purchased and stocked in inventory
- Maintain movement history
- Capture costs to repair

What is Rotable Inventory? It is a component, like a motor or pump, that is purchased and stocked in inventory. Each item has a serial number that creates a unique identifier for a single component so users can track rotatable components. Even if the item does not have a serial number, management may want to track repairs to the item. Maintenance must assign a serial-type number to the component to track it individually.

History is maintained for each individual component, based on the unique serial number. The history contains the component's current position or location, which could be either in inventory, on a piece of equipment, or in a rebuild location for repair.

If repaired, all costs to repair the component are captured. When the component is returned to inventory, the costs are seen as new parts or components to be reissued at a later date.

Rotable Movement



Let's look at an example of tracking the movement of a rotable item. In the top right corner, you can see that a motor is in inventory. There is a quantity of three, with three different serial numbers: serial 1, serial 2, and serial 3.

Using the Inventory Issue action, you can issue serial 1 to a piece of equipment. Now, the inventory only shows two motors on hand, serial 2, and serial 3.

At some point, you will need to repair or rebuild the motor used on the piece of equipment. The correct approach is to issue the part from equipment back into inventory, then reissue to a rebuild location. Since you have removed the rotable item from the equipment, you need to replace that motor with another motor that is sitting in inventory. As a result, you now have serial 2, which is the replacement motor, on the equipment, and serial 1 is in rebuild for repair.

While in rebuild, all costs associated to rebuilding the motor are captured. Labor cost, material issues, and even purchase orders sent out to an outside supplier are all captured in the rebuild cost of the motor. In this example, the total is \$500.00.

Once rebuilt, you return the motor to inventory. Serial number 1 has a new value of \$500.00. The next time it is issued, this value is charged to the equipment that the motor is used on next.

Another design feature of rotatable is that you can issue more than one rotatable item to a single piece of equipment. If a piece of equipment requires a motor and a pump, which are both rotatable items, they both can be issued to the one piece of equipment.

Rotable Inventory Setup

EAM Inventory

Rotable Inventory Setup

Inventory | Inventory Maintenance

Part No	Description	Reserved	On Hand	Available	Last Issued	Short	Rotable?	Issue UOM	Active?	Add Time
SP2125	Submersible Pump, 2-1/4 HP	0.00	5.00	5.00	07/30/2014	0.00	<input checked="" type="checkbox"/>	EA	<input checked="" type="checkbox"/>	38469
SP300	Submersible Pump, 3 HP	0.00	10.00	10.00	08/13/2014	0.00	<input checked="" type="checkbox"/>	EA	<input checked="" type="checkbox"/>	25797
SP400	Submersible Pump, 4 HP	0.00	3.00	3.00	08/03/2014	0.00	<input checked="" type="checkbox"/>	EA	<input checked="" type="checkbox"/>	39977
SP500	Submersible Pump, 5 HP	0.00	1.00	1.00	08/13/2014	0.00	<input checked="" type="checkbox"/>	EA	<input checked="" type="checkbox"/>	39517
TRIS-12009	Monitor Assembly, 20 in LCD Touch	0.00	2.00	2.00	09/15/2014	0.00	<input checked="" type="checkbox"/>	EA	<input checked="" type="checkbox"/>	44219
0001		0.00	0.00	0.00		0.00	<input type="checkbox"/>	EA	<input checked="" type="checkbox"/>	28146
01010	Medical Ultrasound	101.00	192.00	91.00	07/24/2014	0.00	<input type="checkbox"/>	EA	<input checked="" type="checkbox"/>	24285

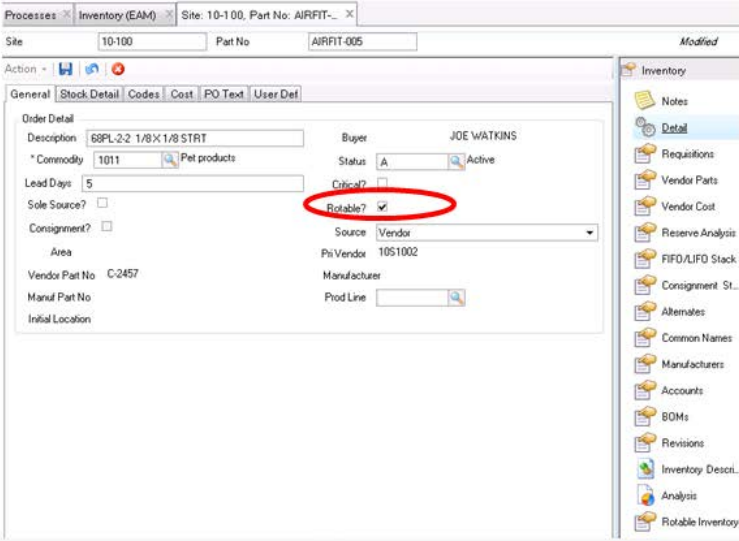
To set up a rotatable inventory part, select Inventory|Inventory Maintenance from the EAM menu. On a part record, there is a check box called Rotable?. If selected, it identifies the part as rotatable and takes on the behavior of a rotatable item rather than a standard part record. There is also a Rotable Inventory submenu that illustrates movement history for a specific rotatable item. In the next few slides, you will see these fields and screens.

Rotable Inventory Setup


EAM Inventory

Rotable Inventory Setup

Inventory | Inventory Maintenance



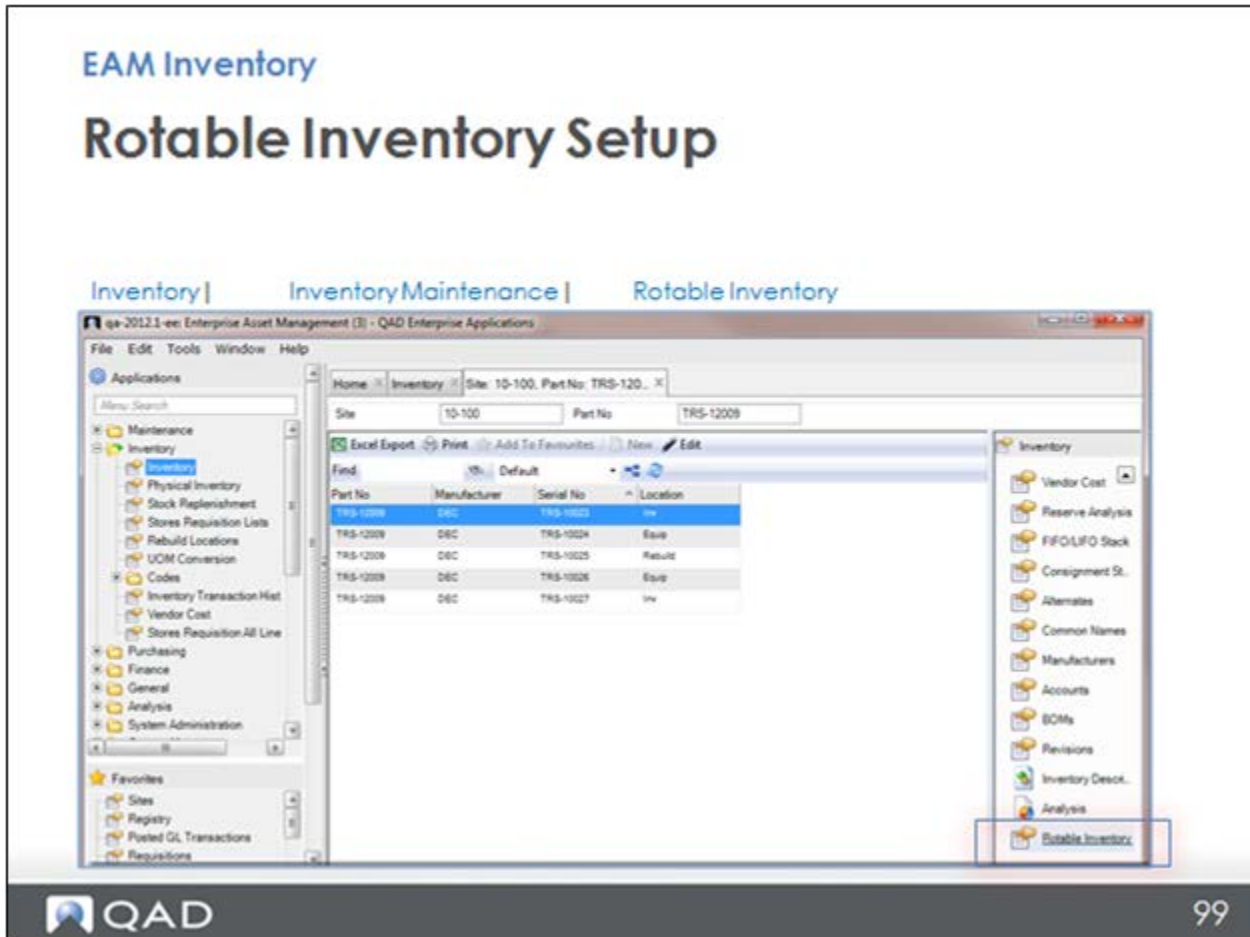
The screenshot shows the 'Inventory (EAM)' window for Site 10-100 and Part No. AIRFIT-005. The 'Order Detail' section includes fields for Description (68PL-2-2 1/8X1/8 STRT), Buyer (JOE WATKINS), Status (A Active), Lead Days (5), and Commodity (1011 Pet products). The 'Rotable?' checkbox is checked and circled in red. Other fields include Sole Source?, Consignment?, Area, Vendor Part No (C-2457), Pi Vendor (1051002), Manufacturer, and Prod Line.


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When creating a new part number, select Rotable to identify the part as rotatable, which drives specific functionality for the part.

As indicated earlier, rotatable items are differentiated by a unique serial number. Each serial number represents the quantity on hand for the rotatable item.

Rotable Inventory Setup



This section describes an optional step that is not part of the rotatable setup requirements. Once rotatable parts are established in the system and transactions have occurred, go to the Rotable Inventory submenu. You will see a display of all serial numbers identified and their current location.

In an upcoming demonstration, you will learn how to receive parts, to issue parts to equipment, and to rebuild parts, and then to return parts to inventory to illustrate a movement cycle for a rotatable item. This process demonstrates how useful the Rotable Inventory submenu is when tracking the locations of rotatable items.

Review

EAM Inventory

Review

- Add your inventory parts and modify parts
- Copy parts across sites
- Use actions from the action menu to:
 - Adjust
 - Issue
 - Return (to inventory)
 - Receive (from a work order or site transfer)
 - Relocate
 - Transfer ownership
 - Modify consignment or cost



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For further information on how to carry out these actions in EAM, view the *QAD Enterprise Asset Management User Guide* available on <http://documentlibrary.qad.com/>.

Inventory – Review

EAM Inventory

Inventory – Review

- Create and record a physical inventory count
- EAM creates GLs to send to QAD ERP for:
 - Inter-site transfers
 - Work orders for fabricated parts
 - Inventory issues, returns, adjustments
 - Price adjustments (with qty on hand)
 - Consignment stock usage
 - PO receipts
- Consignment inventory
- Rotable inventory

CHAPTER 4

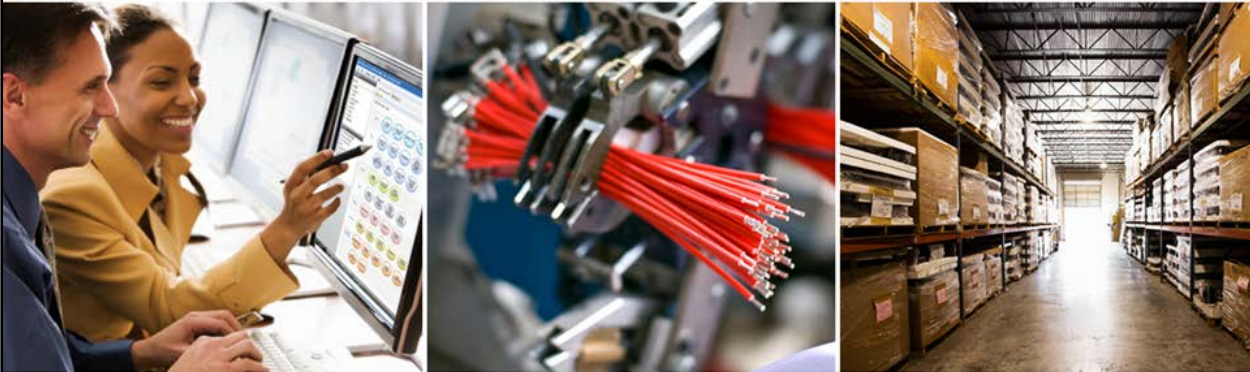
Purchasing

Purchasing

EAM Purchasing

Purchasing

EAM 2015



Our Passion. Your Advantage.

Purchasing – Overview

EAM Purchasing

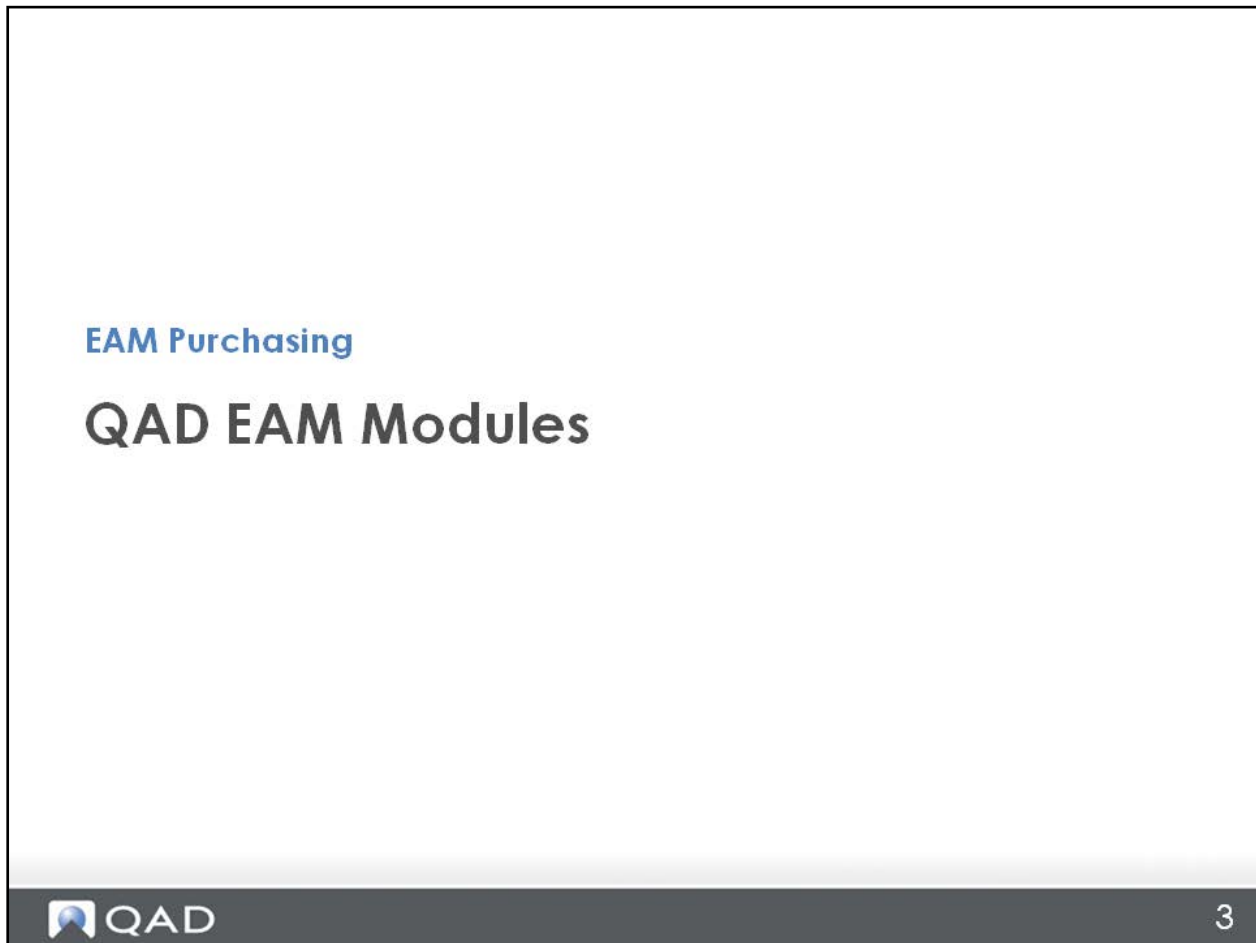
Purchasing – Overview

- EAM modules
- Key concepts
- EAM Purchasing set up
 - Configuration
 - Approval groups
- Introduction to the purchasing process
 - Requisitions
 - Purchase orders
 - Receiving
 - Return to vendor by receiver
 - Stock replenishment
- Blanket orders

Supporting documentation for EAM includes the *QAD Enterprise Asset Management User Guide*, available on <http://documentlibrary.qad.com/>. This guide includes cross-reference sections of the UG, when applicable.

As a reminder, you need access to a linked ERP system to view GLs and vouchers.

QAD EAM Modules



Let us start by talking about the four EAM modules and review how they all work together.

QAD EAM Overview – Modules

EAM Purchasing

QAD EAM Overview – Modules

- Maintenance
 - Equipment efficiency
 - Plant reliability
- Inventory
 - Right size MRO/indirect inventory
 - The right parts when you need them
- **Purchasing**
 - **Control MRO/indirect spend**
 - **Comply with corporate financial approvals**
- Project Controls
 - Manage project spend
 - Track true acquisition cost of assets

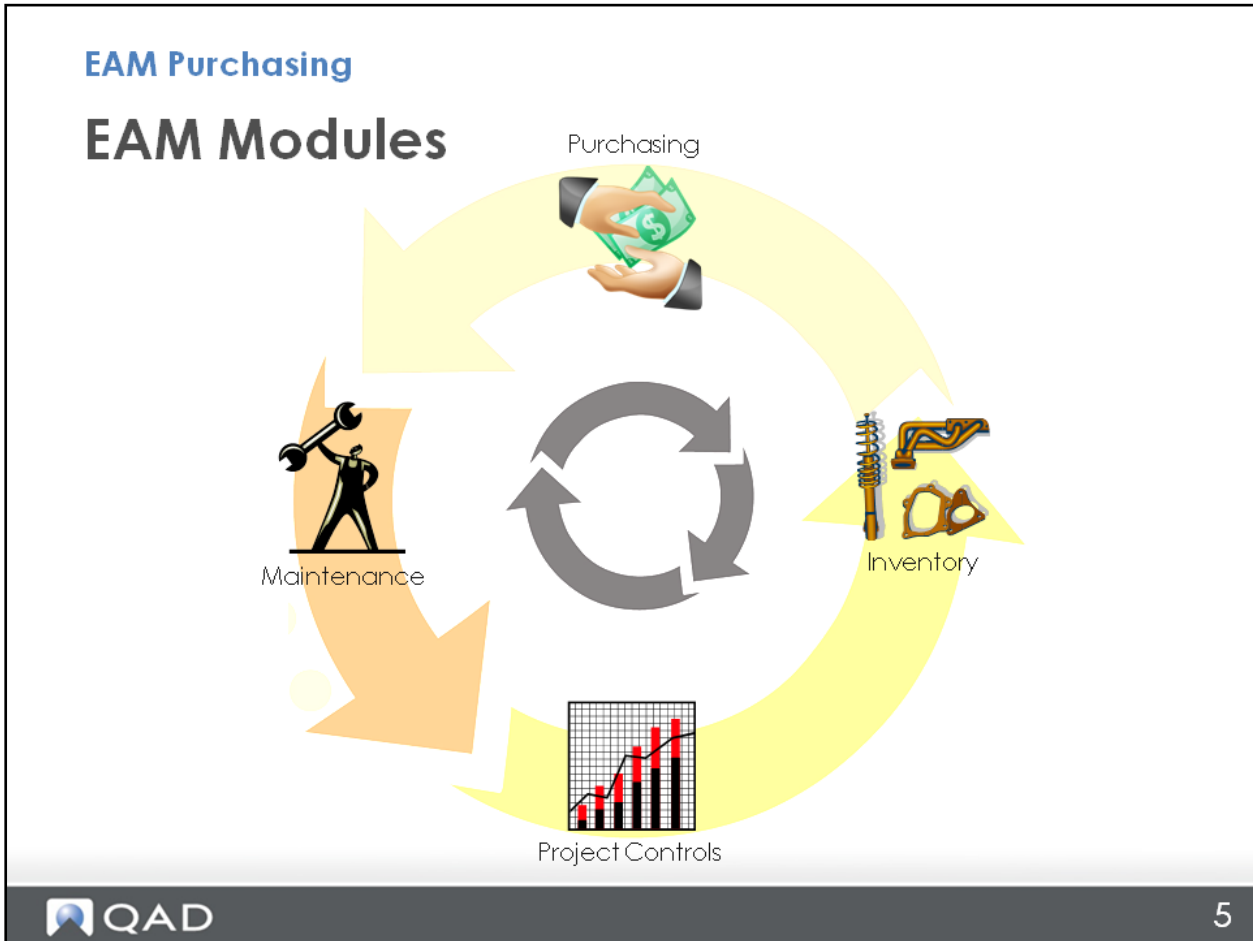


As we continue through this guide, it is important to keep in mind that EAM has four major modules, or areas of operation, as well as to keep in mind how each area contributes to a facility's overall reliability, lean initiatives, and cost controls. Understanding the value proposition for each area and how all the areas work together will assist you in designing the proper solution for any business need around EAM.

Notice how each of these modules addresses business drivers. As you begin to link business drivers with EAM functionality, you will better understand the overall domain space of EAM.

This section of training pertains directly to Purchasing.

EAM Modules



- Purchasing
- Inventory
- Maintenance
- Project Controls

These modules are the portals with which users interact to accomplish their daily tasks. Notice how, in this slide, each of these modules forms a piece of a complete circle. While certain elements of EAM can be implemented without implementing others, EAM is at its best when all four modules work together to form a true Enterprise Asset Management solution.

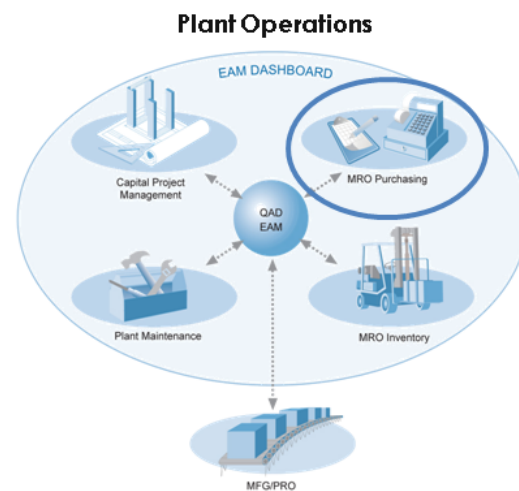
In the various sections of this EAM training guide, we explore each of these modules and explain the business space of each.

Purchasing Overview

EAM Purchasing

Purchasing Overview

- Source purchases from approved suppliers as quickly as possible at the lowest possible cost
- Accelerate approval cycles via electronic requisition approval
- Monitor spending against budget
- Leverage buying power through shared services
- Evaluate vendors based on delivery performance



When anything other than raw materials (production components) needs to be purchased, the EAM Purchasing module is the solution.

In business today, Purchasing is perhaps one of the most competitive and outwardly facing EAM modules. As companies work to reduce costs while continuing to provide high-quality, on-time products, purchasing departments require more and more data more quickly in order to make critical sourcing decisions.

At the same time, financial control requirements continue to grow more stringent as companies seek to satisfy requirements for reporting on their publicly held companies.

For these reasons, the EAM Purchasing module contains a variety of robust controls and data collections to empower today's requestors and buyers. These are designed to help companies:

- Purchase the right parts at the right price from the right suppliers
- Ensure timely, but electronically controlled, approval processes
- Access data to monitor their spending against budgets in a real-time fashion
- Consolidate their purchasing power in shared services with the goal of leveraging their buying power

- Evaluate vendor performance to select the proper vendor base to support their operations

Users of the EAM Purchasing module use it to create and maintain requisitions, standard clauses, and approval groups; revise vendors; and add routing substitutions. Because businesses typically do not carry every possible replacement part in inventory, EAM provides purchasing functionality to support all indirect buys, including both services and materials. Additionally, the software includes requisition functionality for the creation, approval, and conversion of a purchase request into a purchase order (PO).

Purchasing connects the cost of inventory, spot-buys, and services to work orders, projects, equipment, and other documents. Finally, EAM provides all this financial information back to the ERP system for reporting purposes and to support Accounts Payable processes.

Who uses EAM Purchasing?

EAM Purchasing

Who uses EAM Purchasing?

- Requestors
- Buyers
- Approvers
- Receivers
- Accounts Payable
- Vendors



The audience for EAM Purchasing can be from a broad range of roles. In general, users who use Maintenance, Inventory, and Project Controls are probably also invested in the Purchasing functionality.

Now, add to that list the users from the Purchasing department (Buyers, Purchasing Supervisors), Approvers, Accounting, and Accounts Payable, and you see that you could conceivably have the largest population of EAM users concentrated in this one module.

Purchasing — Key Concepts



To lay the foundation for this Purchasing training, there are some key concepts that are helpful for understanding the overall functionality.

In this section, you will review which activities take place in EAM versus the ERP (Enterprise Resource Planning) system, or as you may know it, the QAD core product. Then, you will review the high-level purchasing process along with the key features that make up the EAM functionality, including electronic authorization, approval options, inventory vs. non-inventory purchases, and the use of stock replenishment to maintain inventory levels.

Purchasing — Key Concepts

EAM Purchasing

Purchasing — Key Concepts

EAM vs. ERP activities

- EAM 2015 is under the ERP AppShell but EAM purchasing is still separate from ERP purchasing.
- EAM activities
 - Request a purchase
 - Approve
 - Create/manage purchase order
 - Receive/return
- ERP activities
 - Invoice from supplier
 - Match
 - Purchase order (source: EAM)
 - Receiver (source: EAM)
 - Voucher/invoice (source: supplier – directly into QAD)
 - Pay



Understanding the EAM Purchasing module's place in the overall supply chain is the key to implementation success.

Aside from ties to Financials, EAM Purchasing is also integral to Accounts Payable functions within ERP. The two groups are usually separated due to Segregation of Duties requirements. For indirect purchasing, the purchasing activities all take place within EAM, but the payment for those purchases, also known as Accounts Payable, takes place in the ERP system.

Purchasing is a process that may involve any number of requesters, but only a select few in an organization are typically allowed to place the order for items or services with a supplier. Those responsible for processing orders are referred to as buyers. In EAM, an employee may be designated as a buyer in the employee record. Also, in the system control settings, the flag Any Buyer? determines if buyers may work on each other's orders or only their own. This is usually also driven by a company's business requirements.

The Accounts Payable group is responsible for ensuring that payment is made to suppliers/vendors for goods or services received. Their role functions within the ERP system. The key elements required for payment for goods/services received are the purchase order and the receiver, which come from EAM to the ERP system,

and the invoice itself, which comes from the supplier. These three are typically matched prior to actual payment in ERP, which is often referred to as a three-way match for payment.

Separate group from Purchasing due to Segregation of Duties

Three Primary AP Documents:

Purchase Order (Source: EAM)

Receiver (Source: EAM)

Voucher/Invoice (Source Supplier – directly into QAD)

Purchasing — Key Concepts (cont.)

EAM Purchasing

Purchasing — Key Concepts (cont.)

Purchasing process overview

- Starts with a requisition
- Supports
 - Parts purchases
 - Non-stock purchases
 - Services purchases
 - Consignment purchases
 - Quotes
 - Automated stock replenishment
- Vendor numbers from ERP system
- EAM purchase orders = ERP memo POs



Where does a purchasing process start? It always starts when someone, somewhere, identifies the need to purchase something. In EAM, that need to purchase something results in a requisition (purchase request).

While the basic request for a purchase is fairly straightforward, it is important to emphasize that the requests can encompass a variety of purchase types including the purchase of EAM inventory items, non-stock (or spot-buy) purchases, contractor services, and even consignment-type items.

When the actual supplier and/or cost is not known, the EAM requisition can be converted to a request for quote (RFQ) to support proper sourcing.

The Stock Replenishment function, which also creates requisitions, is an automated way to identify which inventory items need to be purchased and in what quantity in order to maintain the pre-defined desired stock levels.

As far as sourcing, or selecting the proper supplier, is concerned, if the ERP is the Accounts Payable system (which it is), then it makes sense that the vendor records in EAM must match exactly those in ERP. For this reason, EAM looks to the ERP system for vendor records and these records must be kept synchronized with the ERP list.

As mentioned earlier, regardless of whether you are purchasing items to put on a shelf, EAM part numbers do not exist in the ERP system. It stands to reason then that even if you are purchasing inventory in EAM, as far as the ERP system is concerned, EAM purchase orders are always considered to be memo purchase orders.

Purchasing — Key Concepts (cont.)

EAM Purchasing

Purchasing — Key Concepts (cont.)

Key features

- EAM purchases can be expensed on receipt or go to an inventory account
- Receipt sent to ERP
 - Receiver
 - GL transactions
- Electronic approval options
 - Requisition level – budgetary
 - Purchase order level – second signature



Many companies expense their indirect items as soon as they are received into the system, and as a result, often think that there is no way to manage those items as inventory. But an important key feature of the EAM purchasing process, as it relates to buying inventory items, is the fact that EAM allows you to maintain inventory quantities and cost even if the actual purchase was financially expensed on receipt.

When a PO for an EAM inventory item is received in EAM, the system puts that cost into an intermediate holding bucket for accounting. Typically, that bucket is configured to use an expense-type account, which means the purchase is expensed on receipt. In this situation, when an item is later issued from inventory, its cost is moved from the general inventory bucket to its final expense resting place in accounting.

For those few companies that keep indirect inventory on the books, however, that general inventory bucket can be set up to use an asset-type account rather than an expense-type account. Whether the items are expensed on receipt or kept as inventory on the books, EAM provides the flexibility for either approach, or even a combination of the two depending upon configuration.

Another key feature to keep in mind is that when a purchase order is received in EAM, two primary transactions take place in ERP:

1. The associated general ledger transactions are passed to support Finance

2. A receiver is generated in ERP to support Accounts Payable

And, finally, as mentioned earlier, EAM provides robust functionality to support electronic approvals, and nowhere else in EAM is the potential configuration complexity greater than in Requisition and PO Approvals. In general, companies use requisition approval to represent budgetary approval to spend the money to purchase what has been requested. It is becoming more and more common to also include a second level of approval at the PO level. Purchase order approval is commonly used where financial requirements limit the value of a PO that a buyer can commit without having a second signature on the order.

Purchasing — Key Concepts (cont.)

EAM Purchasing

Purchasing — Key Concepts (cont.)

Electronic routing

- E-mail driven
- Routing groups
- Routing hierarchy (project, CC, acct, user)
- User limits
 - Req expense
 - Req capital
 - Req project
- "Wait hours"
- Routing substitution
- Re-routing capabilities



As you know, EAM provides for a variety of electronic, or online/paperless, approval routings. Since the electronic routing in EAM is such a pivotal area of functionality, it is important to discuss its concepts a bit further.

One important concept is that all electronic approvals in EAM are driven by e-mail. EAM contains its own internal e-mail system, which may also be set up to pass those e-mails to your corporate mail account, like MS Outlook or Gmail. At this time, you cannot take action on those e-mails from your corporate mail, but must log in to EAM to take approval steps. Future versions of EAM plan to allow approvals from devices such as smart phones or android devices, but for the time being, ensure all approvers have login access to EAM.

Another important concept regarding electronic approvals in EAM in general, and to the purchasing process specifically, is that the behavior of the approval routings can vary significantly from company to company depending upon how the routing is configured. It is important to understand that the behavior of the associated electronic approval is driven by several key configurations:

- The definition of routing groups
- The configuration of the routing hierarchy
- The approval limits defined on the approver's EAM user ID

Other concepts worth noting:

- Wait hours – EAM can be configured to set a maximum amount of time that an electronic request for approval can be ignored in an approver’s queue before it is automatically forwarded to the next approver.
- Routing substitutions – to efficiently manage approval routings when approvers are traveling or on vacation, EAM provides the ability for approvers to designate substitute approvers in their place for a particular duration of time. During that time, the designee inherits the approver’s spending limits.
- Rerouting capabilities – EAM can force re-approval based not just upon the cost of the requisition, but also based upon a variety of fields that, if changed, force either a reroute or at least an e-mail notification.

Purchasing — Key Concepts (cont.)

EAM Purchasing

Purchasing — Key Concepts (cont.)

Approval options

- Horizontal/vertical approval
 - Vertical (standard)
 - Horizontal
- Quality approvers
 - Cons Limit? (Consider Limit) = No
 - Permanent or one-time only
- Types of purchasing approvals
 - Requisition
 - Purchase order
 - Blanket order



EAM provides two approval options. In a vertical approval approach, there is a list of approvers, in ascending order of approval limits. A record becomes approved once someone in the chain with a limit higher than the record approves it.

In addition to the base Electronic Routing configuration, EAM allows for a concept in routing known as horizontal approval. With horizontal approval, organizations can specify that once vertical approval requirements are met, additional approvals can be required. For example, some organizations may require that Finance provide final sign-off on purchases after the budget owners in the vertical approvals have approved.

Another key concept in EAM approvals is the idea of a Quality Approver. In the initial setup of an Approval Group, the system administrator can add a Quality Approver to the list. In the Approval Group, the Quality Approver has the flag Cons Limit? (Consider Limit) set to No, which means when this approver is approving a request, EAM does not consider this person as a dollar approver. For example, an organization may add an IT person to all requests against IT accounts to ensure that any software purchases meet the company's IT standards. Because of the different focus in approving the quality of a purchase, the system prompts you if an approver is overriding a quality approver.

There are two ways to include a Quality Approver in a routing. The quality approver can be included in the official routing group and is always a part of that group, or requesters can add a quality approver to a record's routing at the time they route the request for approval. This approach adds the quality approver for that particular routing's list and does not add that approver to the overall routing group.

Finally, it is important to understand that there are two types of approval available in the purchasing process: Requisition Approval and Purchase Order Approval. Either, both, or neither may be required based upon system configuration and business requirements.

Requisition Approval routing is the most commonly employed type of approval. This is typically referred to as "spending" approval and usually involves budget owners providing their approval to spend money from their budget for this purchase request.

Purchase Order Approval is becoming more popular as more companies are limiting the amount of money a buyer can commit without having to acquire supervisor approval. For example, if a company allows buyers to commit up to \$50k on their own, but purchase orders larger than \$50k require supervisor sign-off, you would recommend enabling Purchase Order Authorization.

Purchasing — Key Concepts (cont.)

EAM Purchasing

Purchasing — Key Concepts (cont.)

Inventory vs. non-inventory

- Terminology
 - Stock vs. non-stock
 - Part number vs. non-part number
- Part No. field: supports inventory part purchase, but can be a free-form entry
- Auto-issue
- Commodity



As we have discussed, EAM Purchasing can be used to purchase various indirect items, including storeroom/MRO parts, spot-buys for non-stock items, and services from third parties.

Terminology can vary from company to company, but within EAM, the following are important terms to understand:

- **Stock versus Non-Stock:** Part Numbers can represent inventory items (Stock Items) OR items that you regularly purchase but do not store in inventory (Non-Stock Items). The Auto-Issue? flag on the part number controls this and is explained in the following pages.
- **Part versus Non-Part Number:** In addition to allowing the purchase of part numbers, EAM allows the purchase of items for which no part number exists. These are often referred to as spot-buys.

The Part No field on a purchase request is a unique type of field. It does have a lookup, but the requestor can also enter any type of identifier required.

The Auto-Issue? flag on a purchase request drives important functionality. Anything you plan to place in inventory must (1) have a part number and location, and (2) must be marked as Auto-Issue? = No, meaning that you intend to manually issue the part to its final expense resting place in the future when it is used.

Setting a purchase to Auto-Issue? = No, does NOT mean that the item is not expensed on receipt. It simply means that the cost is maintained in an inventory expense accounting bucket until it is issued to its final expense bucket.

Auto-Issue

No – I will manually issue the part later

Yes – Please automatically issue the part from inventory to its final expense accounting

The field defaults to Yes for:

- Non-part number purchases
- Purchases against a WO, equipment, or project
- Part number purchases where the part is marked Auto-Issue? = Yes

Purchasing — Key Concepts (cont.)

EAM Purchasing

Purchasing — Key Concepts (cont.)

Stock replenishment

- Stock replenishment similar in concept to MRP in the ERP system.
- Manual and automated options.
- Utilizes on-hand quantity, reorder point, and management max values.
- May be manipulated prior to order.
- Create the request after adding parts to a stock run.
 - Vendor sourced: Generates purchase of one requisition per vendor
 - Internal fabricated: Generates work order



This section introduces the EAM Stock Replenishment functionality.

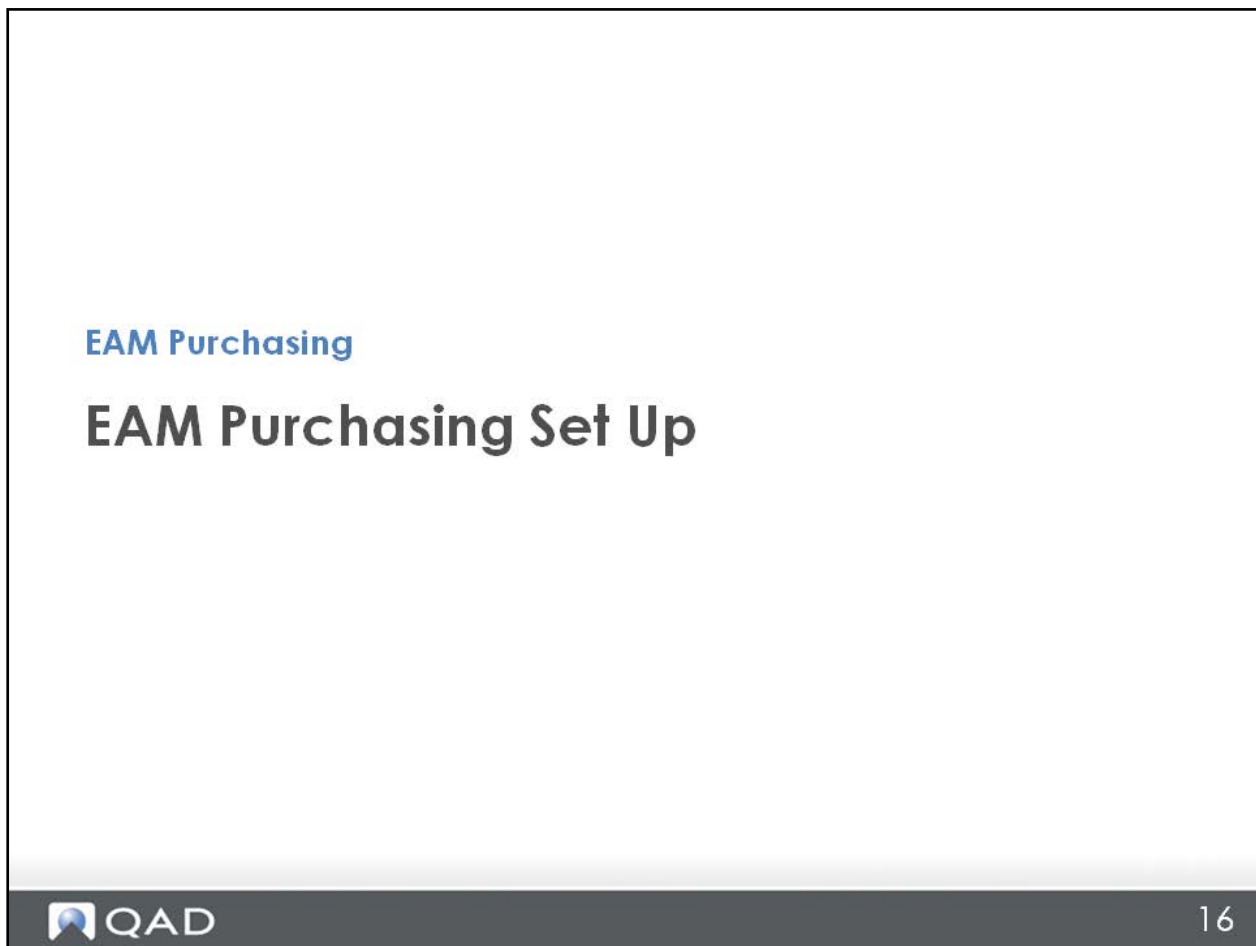
The EAM Stock Replenishment is similar in concept to ERP's MRP functionality in that it is a routine that automatically identifies what should be purchased to bring inventory quantities to their required levels. Keep in mind that while MRP replenishes inventory to support production, EAM Stock Replenishment reorders inventory to support operations.

Key points regarding EAM Stock Replenishment include:

- Companies may run Stock Replenishment manually or, if they have highly accurate inventory with a well-disciplined work force, they can choose to automate the entire process. Companies can use both options together, identifying certain parts to automatically reorder, while still manually managing the other parts. These automatic reorder parts are called Sole Source parts in EAM.
- As with MRP, the EAM Stock Replenishment is dependent upon how a company defines each part's reorder point and min/max values.
- With Stock Replenishment, companies can run a report to see what items are suggested for reorder and then manually manipulate the items/quantities prior to actually committing the order.

- Once a Stock Replenishment is converted to requisition, EAM automatically creates a purchase event (for purchased items) or an EAM work order (for internally fabricated parts).

EAM Purchasing Set Up



Now that we have reviewed the many key concepts associated with EAM Purchasing, but before we talk about the actual purchasing transactions, let us take a quick look at what configuration is associated with EAM Purchasing and how it is set up.

Purchasing Setup – Overview

EAM Purchasing

Purchasing Setup – Overview

- QAD shared tables
- EAM registry settings
- Domain settings
- Site settings
- MFG/PRO interface settings
- Employee set up
- User set up
- Cost center/account group
- Approval groups
 - Requisition approval
 - Purchase order approval
- COA approval option



To properly configure EAM Purchasing, there are many control settings and record setup areas to visit.

The following pages include details on the purchasing setup, but for step-by-step configuration details, see the QAD Services EAM configuration documentation. Also, because new configuration options are always being added, reference the latest user guide documentation available on <http://documentlibrary.qad.com/>.

The goal of this section is to familiarize you with the primary configuration requirements.

Purchasing Set Up

EAM Purchasing

Purchasing Set Up

Shared tables/information

QAD	EAM
Address Master	Ship To
Address Master	Bill To
Currency / Exchange Rate	Currency / Exchange Rate
Master Comments	Standard Clauses
Terms	Terms
Supplier	Vendor
Project	Project

Much of the base data required to enable the purchasing functionality to communicate with QAD ERP is actually from QAD itself. Think of QAD, or the ERP system, as being the system of record for all vendors, currency data, addresses such as Ship-To/Bill-To, and payment terms.

In addition, keep in mind that all financial chart of accounts structures are also dependent upon the ERP system setup, which includes not only accounts, sub-accounts, and cost centers, but also project numbers, which are integral to the financial reporting.

All of this data is downloaded from ERP to EAM and then maintained via Job Programs that update EAM with any changes to records that were downloaded to EAM previously.

Purchasing Set Up: Registry

EAM Purchasing

Purchasing Set Up: Registry

Registry settings

- Place-holder settings
- Not typically revisited after implementation
- Key settings:
 - Commodity Code format
 - Unauthorize PO upon any change
 - ERP enforce purchasing field size
 - Project/refresh spending/PO order
 - Allow req auth when spending limit exceeded
 - PO integration enhanced logging



The commodity code format allows you to set the format of the commodity codes and allows you to build a hierarchy like the job number.

The Unauthorize PO setting causes the PO to become unauthorized if any PO fields are modified.

Enforce ERP Purchasing Field size allows the customer to use ERP limitations instead of EAM limitations to ensure that all data are sent to QAD ERP without being truncated because field sizes in ERP are generally smaller than EAM field sizes.

Purchasing Setup: Domain

EAM Purchasing

Purchasing Setup: Domain

Domain settings

- Buying options
 - Any Buyer? flag
 - Reopen Closed PO? flag
 - Use only Vendor Currencies? flag
 - Buyer limits
 - Determines the tolerances for which a buyer can adjust the total value (cost * quantity) of the requisition
 - A combination of absolute value & % can be set up and the system takes the greater of the two.

Buyer Limits		Use Enforce Buyer Limits for BO? <input type="checkbox"/>	
Enforce Buyer Limits? <input checked="" type="checkbox"/>		Increase %	<input type="text" value="10"/>
Increase Amount	<input type="text" value="100"/>	Decrease %	<input type="text" value="100"/>
Decrease Amount	<input type="text" value="_999999999"/>		



20

The following are the key domain-level settings that affect the EAM purchasing functions.

Any Buyer? Flag: When this option is selected, any designated buyer in any site in any domain can modify an approved PO. When the Any Buyer? option is cleared, only the buyer who approved a PO can modify or edit the purchase order.

Reopen Closed PO? Flag: When this option is selected, users with the required security setting can reopen POs or requisitions once they have been closed. Reopen the closed PO before you make adjustments such as a return to vendor or additional receipts.

Use only Vendor Currencies? Flag: Restrict currencies based on the vendor's ability to receive purchase orders in a different currency other than the vendor's primary currency.

A history of all purchase prices by different currencies needs to be visible and used when creating future purchase requisitions.

Notes on vendor currencies: In some instances, vendors request that purchase orders be issued in the currency in which they pay their suppliers rather than in their own currency. For example, assume that a vendor is located in the US. However, this vendor receives materials from its own suppliers from Canada and

the Canadian suppliers request to be paid in Canadian dollars. To avoid currency exchange rate conversions, it is easier to pay the US vendor in Canadian dollars, which is the currency the vendor needs to pay its supplier.

Purchasing Setup: Domain

EAM Purchasing

Purchasing Setup: Domain

Domain settings

- Receiving limitations
 - Determines the tolerance in which the receiver is able to over-receive a PO.

Options

Any Buyer?

Base Currency: USD

Upd Receiver?

Receipt Limit Amount: 0

Receipt Limit %: 0

Receiver? MFGPRO

Use Only Vendor Currencies

Reopen PO/Reqs?

NStock UOM: EA

Receipt Limit

EAM Recv Prefix:

Receiving Limitations:

EAM is configurable as to (1) whether there are any limits on over-receiving a PO, and (2) if so, what those limits are in terms of amount and percentage.

If the Receiver Limit? field is set to Yes, then the receipt limit amount and percentage are enforced. If the field is set to No, then no limits are imposed on what can be received over the original purchase order amount. As a knee jerk reaction, many will companies will configure the setting to ensure that no over-receipts are ever allowed. However, best practice dictates that, wherever there is a physical transaction, there should also be a system transaction. So, if you order 10 of an item, and 12 physically arrive, it is best practice to receive 12 and return 2 (or to keep them, as business practice dictates). Therefore, when the invoice arrives, Accounts Payable has transactional history to explain the disparity between the PO and the invoice.

If the Receipt Limit? field is set to Yes, then you also must enter the limits to enforce in terms of amount and percentage. When an order exceeds the cost on the purchase order, the system checks the receipt limit. You can receive the item if the cost does not exceed the specified percentage or amount (whichever is greater). Enter the percentage, amount, or both.

Buyer/Commodity Purchasing

EAM Overview

Buyer/Commodity Purchasing

- Domain Level Setting

The screenshot shows a software interface for 'PGIReqs' with the following details:

- Domain: 10USA
- Ordering:
 - Inv Cost Mthd: FIFO
 - Cons Res/Short?
 - Cons Reserves?
 - Cons Res Orders?
- ABC:
 - A Percent: 20
 - B Percent: 30
 - C Percent: 50
 - A Days: 90
 - B Days: 180
 - C Days: 365
- Options:
 - Reserve Inv?
 - Del Acct Period?
 - Part Description Protected?
 - Transit?
 - Reopen Stores?
 - Buyer/Commodity Purchasing?

- When this flag is checked, inventory parts must be assigned to a commodity, not a buyer
- Commodity is a mandatory field on the part record when this flag is set

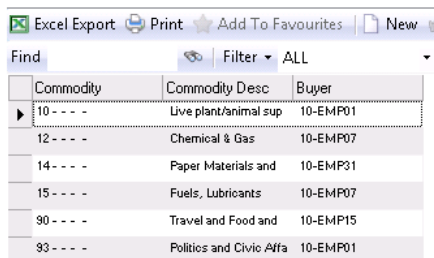
Use the Buyer/Commodity Purchasing option to require a buyer to be assigned to a commodity code. The buyer is assigned to the inventory part based on the commodity code entered. The buyer then defaults onto requisition lines based on the stock part entered

Buyer/Commodity Purchasing

EAM Overview

Buyer/Commodity Purchasing

- Assign buyer to a commodity code



Commodity	Commodity Desc	Buyer
10 - - - -	Live plant/animal sup	10-EMP01
12 - - - -	Chemical & Gas	10-EMP07
14 - - - -	Paper Materials and	10-EMP31
15 - - - -	Fuels, Lubricants	10-EMP07
90 - - - -	Travel and Food and	10-EMP15
93 - - - -	Politics and Civic Affa	10-EMP01

- Buyer is assigned to purchase inventory parts based on commodity associated to part
- Buyer linked to part defaults on the req lines

Use the Buyer/Commodity Purchasing option to require that a buyer be assigned to a commodity code. The buyer is assigned to the inventory part based on the commodity code entered. The buyer then defaults onto requisition lines based on the stock part entered

Purchasing Setup: Site

EAM Purchasing

Purchasing Setup: Site

Site settings

- Accounting defaults
 - Defines defaults for purchasing transactions
 - Stock
 - Non-stock
- Authorization options
 - Approval hierarchy
 - Suppress password



In addition to the domain-level settings, there are settings on the site level that also have a direct impact on EAM's behavior in the purchasing process. The two most important setup areas on the site level are the accounting defaults and the authorization options.

The accounting defaults determine the accounting structure used for stock and non-stock receipts debit and credit, the AP liability accounting, and the rounding defaults to use in the situation where currency conversion may leave tiny quantities remaining.

The authorization options drive whether requisition and PO approvals are used, and if so how EAM selects the proper approval group for requisition approval. In addition, in the authorization options, there is a setting that allows you to configure whether approvers are required to enter their password to approve the record after a requisition has been put in routing.

Note: The Suppress Password? field must be set to Yes if you intend to use the global authorize option to streamline approving records in your queue.

Purchasing Setup: Site

EAM Purchasing

Purchasing Setup: Site

Accounting defaults – PO receipts

If no accounting is specified on purchase, the following defaults are used at the time of receipt

- Debit –
 - Stock
cost center/account/sub-account
 - Non-stock
cost center/account/sub-account
- Credit – unvouchered receipts
 - Stock
cost center/account/sub-account
 - Non-stock
cost center/account/sub-account



Field Detail

If no accounting structure is specified for the debit side of the receipt transaction, EAM uses the accounts specified in the PO Receipts Defaults - Debit section. When items are issued out of inventory, then the same accounting structure is credited.

PO Receipts Defaults – Credit

When a part is received into stores from a PO, the PO Receipt Debit accounting structure (stock or non-stock) is debited. An off-setting AP Liability accounting structure, also known as Expensed Items Receipt, is then credited for accounts payable. You can specify an AP Liability accounting structure in the PO Receipts Defaults - Credit section.

Purchasing Setup: Site

EAM Purchasing

Purchasing Setup: Site

Accounting defaults – misc

- Bill To – Defaults on PO header and can be overridden. Supplier should be sending invoices to this address.
- Ship To – Site code that defaults on PO header and can be overridden. Supplier should be shipping items to this address.
- Packing Slip by Vendor – If this check box is selected, the packing slip entered during receipt process must be unique for each vendor.

The Bill To and Ship To values default on the PO header, but the buyer can change them.

Note: POs cannot be submitted to QAD ERP without valid values.

Purchasing Setup: Site

EAM Purchasing

Purchasing Setup: Site

Authorization options

- The most common setup for the approval hierarchy is
 - Account
 - User
 - Cost center
- Project always trumps

Note: The system automatically looks for a project req approval group and then a COA matrix approval group before looking to the hierarchy logic.

The screenshot shows the 'Authorization Options' tab in the QAD Purchasing Setup: Site configuration. The 'Detail' section contains the following settings:

- PO Auth?
- Use Hierarchy?
- 2nd Appr Mthd: User
- Use Over Budget: Current Period
- Req Auth?
- Appr Mthd: Acct No
- 3rd Appr Mthd: Cost Center
- Stores Auth?: None

When using EAM for the electronic authorization of requisitions, it is important to understand the hierarchy logic employed to determine the proper approval group.

Decision Point 1: Will your company use EAM for electronic routing for purchase orders and requisitions?

The first step in setting up the hierarchy of approval is on the Authorization Options tab page in the site settings. PO Authorization and Requisition Authorization are enabled on this page by setting them to Yes. Once Requisition Authorization is turned on, then the hierarchy fields are enabled for data setup.

Decision Point 2: If you are using requisition authorization, do you prefer simplified routing hierarchy or a more complex decision tree?

If you want to use simplified routing, then the Use Hierarchy? check box should be cleared. This configuration allows only one Approval Method to be selected. Typically, if the hierarchy is not used, the Approval Method is set to Cost Center-based approval, since most companies use the cost center to represent different departments, and budgets. The other options are Account-based routing or User-based routing. Whichever option you select, EAM always uses the approval group associated with those records to route requisitions for approval **except** in the case of purchasing against a project number that has its own requisition approval group.

If your company requires a more complex decision tree, then set the Use Hierarchy? flag to Yes. This allows you to select not only the first approval method, but also the second approval method, and the third approval method. To make the best use of the hierarchy, always place the most common option in the 3rd Appr Mthd field. The Approval Method and 2nd Approval Method fields should contain exceptions to the general routing method.

It is important to understand that if using the hierarchy, as with the simple routing, anytime you are purchasing against a project number with its own requisition approval group, project always trumps any other options in the decision tree. Project always comes first.

Decision Point 3: Does your company ever have a situation where EAM should select a routing group based upon a combination of chart of account information such as by cost center and sub-account?

If this even more complex routing is desired, then in addition to setting the hierarchy options on the site level, you must also go the COA Requisition Approval screen to define situations in which routing must be determined by a combination of chart of accounts (COA). This is discussed further in the following pages.

So, in the most complex decision tree, EAM follows this hierarchy to determine which routing group to use. As EAM goes down this hierarchy and encounters an associated requisition approval group, it uses that group for approval.

1. Is the requisition for a project with an associated approval group? (Remember, project always comes first.)
2. Is the requisition for a particular COA combination that has an associated approval group?
3. Does the value in the first Appr Mthd field have an associated approval group?
4. Does the value in the 2nd Appr Mthd field have an associated approval group?
5. Does the value in the 3rd Appr Mthd field have an associated approval group?

If EAM makes it all the way through the decision tree without finding an appropriate approval group, then EAM displays an error that no approval group could be found when attempting to route the requisition for approval.

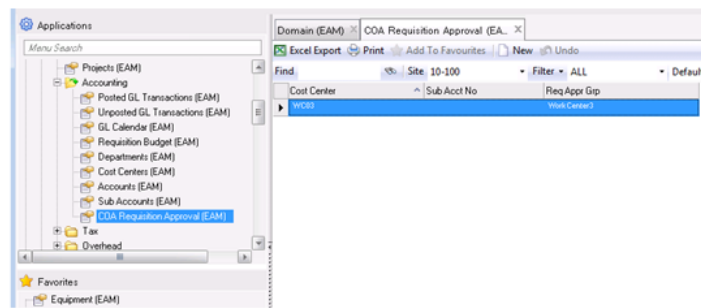
Purchasing Setup: Site

EAM Purchasing

Purchasing Setup: Site

COA approval option

- COA = Chart of Accounts
- An alternative approach to selecting a purchase requisition approval group
- The COA approval group is based on a combination of a cost center and/or sub-account
- EAM | Finance | Accounting | COA Requisition Approval



As mentioned earlier, another option is available for configuring the routing hierarchy logic. This is the chart of account (COA) approvals matrix. This feature is designed for customers who need the flexibility to route a purchase requisition approval to an approval group based on a specific cost center and/or sub-account combination.

The current requisition approval methods only look at a single cost center or account and do not account for sub-account. If this matrix is filled, the system compares the requisition's cost center and sub-account to the matrix and, if there is a match, the approval is routed to the group indicated here. Otherwise, EAM looks to the system site's requisition approval method and routes accordingly.

Currently, this functionality does not include the account number on the matrix, but it will be introduced in a future release.

Purchasing Setup: Site

EAM Purchasing

Purchasing Setup: Site

Suppress password option

- Still requires password to START routing
- Streamlines approval
- Supports global authorization

Site: 10-100

General | Purchase Order | Inventory | More Inventory | Maintenance | Authorization Options | Misc | MFG/PRO Options

Detail

PO Auth? Req Auth?

Use Hierarchy? Appr Mthd User

2nd Appr Mthd Cost Center 3rd Appr Mthd Acct No

Use Over Budget Stores Auth? None

Allow Req Auth over limit Suppress Password for Req Next Approver

Suppress PO Auth Prompt

One other key setting on the site level is Suppress Password for Req Next Approver? It is important to note that regardless of how this flag is set, EAM still requires you to enter a password when first initiating a requisition approval routing.

If this flag is set to No, then all subsequent approvers must enter their own passwords to approve/disapprove a requisition.

If this flag is set to Yes, then all subsequent approvers can approve/disapprove a requisition without having to enter their passwords. Also, this flag must be set to Yes to enable the use of the new global authorization functionality, which is discussed later in this guide.

Purchasing Set Up: Employee

EAM Purchasing

Purchasing Set Up: Employee

Buyer records

- Defined on EMPLOYEE record
- Associate a PO approval group, if used
- Associate a BO approval group, if used
- Provides PO functions outside of security
 - Modify authorized requisition
 - Close or Cancel purchase order



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The definition of who is a buyer in EAM is critical to supporting the purchasing functionality.

Buyers are special types of records, because in addition to having an appropriate security group to support what the buyer needs to access within the system, a user that is set up as a buyer has additional functionality available that is outside of security access.

Individuals are set up as buyers on the Employee record. EAM uses the employee ID to link to a buyer ID to reduce the need for mass changes to existing records when workers change jobs or responsibilities. If an employee who has been a buyer moves to a new job, the buyer ID associated with the departing employee can be assigned to the new employee and purchasing can proceed uninterrupted.

In the Buyer-Sites sub-module of the Employee record, you can set up a person as an official buyer. If a buyer functions in multiple sites, then each site must be added to the employee record's Buyer-Sites table. This is also where PO approval groups and BO approval groups are defined.

Requisition Approval Setup

EAM Purchasing

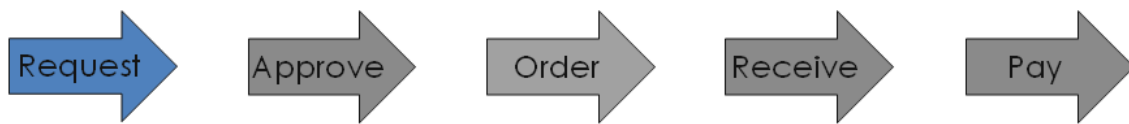
Requisition Approval Setup

- Financial controls
 - Approval limits by user
 - History of approvals and re-approvals
 - Routing substitutions
 - Quality approvers
 - Horizontal approvers

Purchasing Process – Step Through

EAM Purchasing

Purchasing Process – Step Through



Purchasing Process

EAM Purchasing

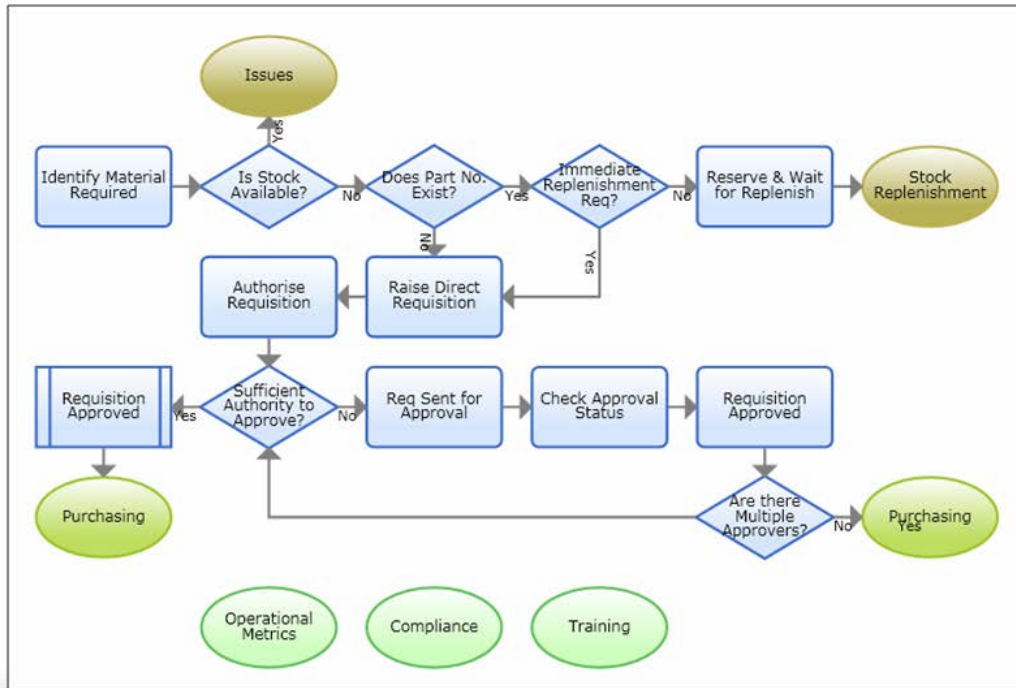
Purchasing Process

- Submit requisition for routing
 - Approval routing is initiated
 - Requisition is approved
- Buyer combines approved requisitions into purchase orders
 - Buyer gets quotes or confirms price with supplier
 - Purchase order is ordered and submitted to supplier
- Parts/services are received into EAM
 - Items are received into inventory or charged to designated area
 - EAM e-mails requestor

Requisition Creation & Approval

EAM Purchasing

Requisition Creation & Approval



Requisition Setup

EAM Purchasing

Requisition Setup

- Requisition approval
 - The routing system is set up during EAM implementation. EAM uses approval groups linked to project, user, cost center, or account number. EAM can use a hierarchical approach to accommodate available criteria.
 - Approvers can designate substitutes during a leave of absence.
 - Requisition routes to approvers through internal and external e-mail. Routing continues until a manager with enough spending authority approves the requisition.
 - Approvers can access current spending information against budget during the approval process.
 - Quality approvers, who do not approve the amount, can be in approval groups.
 - Requestor receives e-mail notification of approval or rejection.

Over Budget Requisition Routing Authorization

EAM Overview

Over Budget Requisition Routing Authorization

- Control of req approvals by lowering spend authorization when budgets are reached (for month or year)
- Budgets can be downloaded from QAD ERP
- View budget analysis for reqs to assess expense vs. budget (for month or year)
- Reporting available by Budget Amounts or Budget Activity based on Account or Cost Center



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The Use Over Budget option allows you to control requisition approvals by lowering spend authorization when the budget has been reached for either the month or year. A requisition budget can be entered manually when integrated with QAD Enterprise Edition. Standard Edition users can automatically download the budget and refresh the budget as needed. You can view the budget analysis for requisitions to assess expense vs. budget for either the month or the year. Additionally, reporting is provided for Budget Amounts and Budget Activity by Account or Cost Center.

Over Budget Requisition Routing Authorization

EAM Overview

Over Budget Requisition Routing Authorization

- To use Over budget,
 - Ensure that a requisition budget is defined in Accounting | Requisition
 - Specify YTD or Current Period in the General | Business Units | Sites | Authorization Options tab.
 - Define budget options in General | Business Units | Sites | Purchase Order tab.
 - Add a Req over Budget Limit amount in System Administration | Users | Detail tab.

When a requisition is routed for authorization through the Action menu, EAM checks the budget limit and over budget limit of the individual user tasked with authorizing the requisition, or the users within the approval group. If the requisition amount does not exceed any limits, it moves to the next step of the authorization process. However, if the budget amount reaches its limit but is within the over budget limit of the specified authorizer or approval group, a routing is created for the requisition and a line is placed in the associated e-mail informing the user that the over budget amount was used. If the requisition amount exceeds all over budget limits, the routing is stopped and a message displays indicating that no one in the approval group has a high enough dollar value to authorize the requisition

Over Budget Requisition Routing Authorization

EAM Overview

Over Budget Requisition Routing Authorization

Site Level Setup

User Setup

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When a requisition is routed for authorization through the Action menu, EAM checks the budget limit and over budget limit of the individual user tasked with authorizing the requisition, or the users within the approval group. If the requisition amount does not exceed any limits, it moves to the next step of the authorization process. However, if the budget amount reaches its limit but is within the over budget limit of the specified authorizer or approval group, a routing is created for the requisition and a line is placed in the associated e-mail informing the user that the over budget amount was used. If the requisition amount exceeds all over budget limits, the routing is stopped and the user sees a display message that no one in the approval group has a high enough dollar value to authorize the requisition.

Over Budget Requisition Routing Authorization

EAM Overview

Over Budget Requisition Routing Authorization

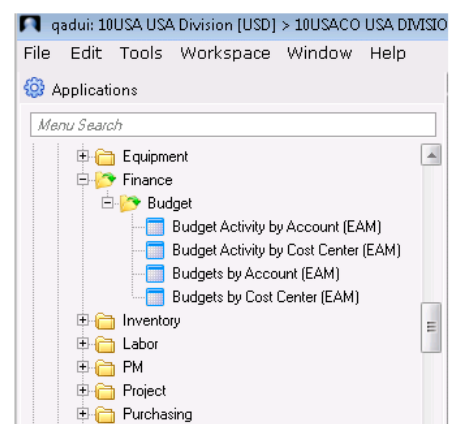
- When reqs are routed, EAM checks the budget limit and over budget limit of the individual user tasked with authorizing the requisition, or the users within the approval group
- If the requisition amount does not exceed any limits, it moves to the next step of the authorization process.
- If the budget amount reaches its limit but is within the over budget limit of the specified authorizer or approval group, a routing is created for the requisition and a line is placed in the associated e-mail informing the user that the over budget amount was used.
- If the requisition amount exceeds all over budget limits, the routing is stopped and the user sees a display message that no one in the approval group has a high enough dollar value to authorize the requisition

Budget Analysis Reports

EAM Overview

Budget Analysis Reports

- Four new reports are available for budget analysis:
 - Budget Activity by Cost Center
 - Budget Activity by Account
 - Budget by Cost Center
 - Budget Amounts by Account



Requisition Setup

EAM Purchasing

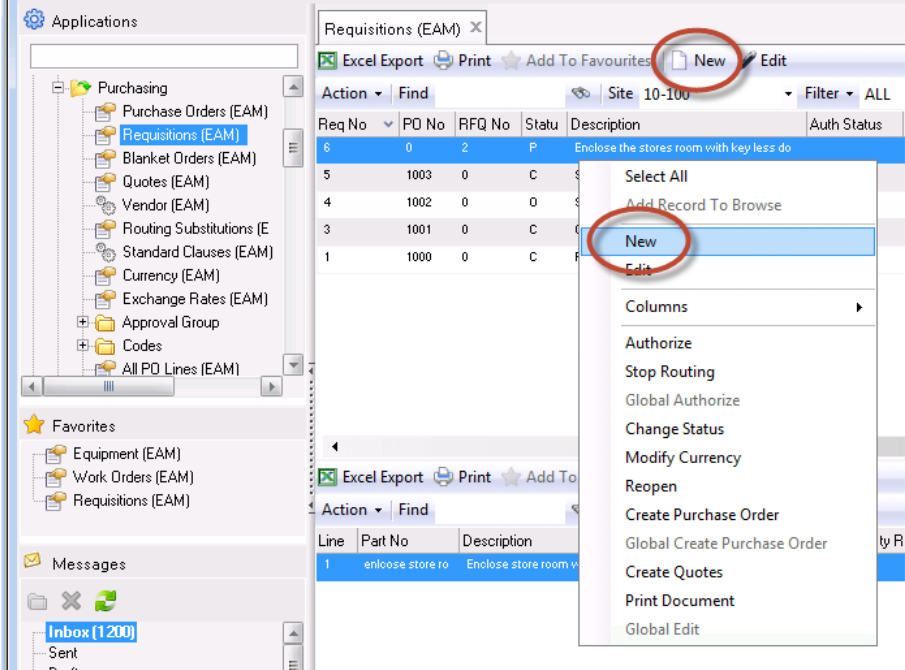
Requisition Setup

- Convert requisitions to purchase orders
 - Individually convert to purchase order
 - Attach to an existing purchase order
 - Globally create multiple purchase orders simultaneously, combining requisitions to each vendor on the same purchase order

Create a Requisition

EAM Purchasing

Create a Requisition



Req No	PO No	RFQ No	Status	Description	Auth Status
6	0	2	P	Enclose the stores room with key less do	
5	1003	0	C		
4	1002	0	O		
3	1001	0	C		
1	1000	0	C		

Navigate to Purchasing|Requisitions.

Click New or right-click and select the New option in the upper browse to create the requisition header.

Create a Requisition: Header

EAM Purchasing

Create a Requisition: Header

Action ▾ 🖨 🔍 ✖

Detail Expense

General


* Description <input type="text" value="Office Supplies"/>	* Date Required <input type="text" value="3/11/2015"/>
Requestor <input type="text" value="srose"/> Sara Rosenberger	
Total Cost (B) 0.00	Total Cost In Vendor Currency 0.00
Contractor? <input type="checkbox"/>	Auto Issue? <input checked="" type="checkbox"/>
Stock Run No	

Order

PO No <input type="text" value="0"/>	Status P
Vendor No <input type="text" value="201638"/> FASTENAL COMPANY	
Vendor Pri Contact	Vendor Phone No 803-356-4334
Consignment? <input type="checkbox"/>	Currency USD
Exchange Rate 1.00	Exchange Rate 2 1.00
* Buyer <input type="text" value="srose"/> Sara Rosenberger	Notify <input type="text" value="srose"/> Sara Rosenberger
Date Due <input type="text" value="3/10/2015"/>	

Authorization

Auth? <input type="checkbox"/>	Auth Status
Auth By	Auth Cost 0.00
Base Currency USD	Approval Group


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Enter the req header description, update the requestor if necessary, and enter the date due and date required.

Note: Date required is the date the requestor needs the goods, and the date due is the date communicated to the buyer. For example, Jim needs the parts for work first thing Monday morning. His date required is Monday. The buyer understands that the supplier must deliver the parts by close of business on Friday. The date due is Friday.

Create a Requisition: Header

EAM Purchasing

Create a Requisition: Header

Action - 📄 🔍 ✖

Detail | Expense

Charge

WO No <input style="width: 90%;" type="text" value="0"/>	Stores Req No <input style="width: 90%;" type="text" value="0"/>
Equip No <input style="width: 90%;" type="text"/>	Rebuild <input style="width: 90%;" type="text"/>
Serialized Part <input style="width: 90%;" type="text"/>	Serial No <input style="width: 90%;" type="text"/>
Project No <input style="width: 90%;" type="text"/>	Job No <input style="width: 90%;" type="text"/>
System <input style="width: 90%;" type="text"/>	Assembly <input style="width: 90%;" type="text"/>
Expense Type Expense	

Expense

Expense Site <input style="width: 90%;" type="text" value="USA11"/>	Cost Center <input style="width: 90%;" type="text" value="1234"/>
Dept <input style="width: 90%;" type="text"/>	Sub Acct No <input style="width: 90%;" type="text"/>
Acct No <input style="width: 90%;" type="text" value="11111"/>	

Tax

Taxable? <input checked="" type="checkbox"/>	Tax Code <input style="width: 90%;" type="text" value="USA"/>
Tax Class <input style="width: 90%;" type="text"/>	


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Enter the expense information for this requisition. This detail can be changed on the line but it is important to note that the routing occurs based on the header detail.

Work through the fields, left to right, top to bottom.

Do you have a WO number? Project ID? Equipment ID? Etc.

At minimum, most customers enter the cost center, account, and, sometimes, the sub-account.

Create a Requisition: Lines

EAM Purchasing

Create a Requisition: Lines

Req No	PO No	RFQ No	Statu	Description	Auth?	Auth Status	Auth By	Next Approver	Date Due	Cost Center	Acct No	Sub Acct No	Project No	Job No	Ad
1657	0	0	P	Stock Run N	<input type="checkbox"/>				03/04/2015	1015	479120			--	42
1583	0	0	X	PINEVIEW F	<input type="checkbox"/>				03/02/2015					--	53
1571	0	0	X	#35 Multi-Slid	<input type="checkbox"/>				03/04/2015	170000			SC15T028	--	56
1556	945	0	X	LEGACY MR	<input type="checkbox"/>				02/27/2015	138000		9010		--	43
1529	0	0	P	MTS REMOV	<input type="checkbox"/>				02/26/2015					--	40
1390	0	0		Replacement	<input checked="" type="checkbox"/>				02/23/2015	4508	477000			--	35
1382	0	0	X	TEST	<input type="checkbox"/>					170000			SC15T002	--	36
1347	0	0	P	place emer	<input type="checkbox"/>					1065	478200			--	31
1229	0	0	P	2015 coders	<input type="checkbox"/>				12/31/2015	1090	478210			--	28
1000	0	0	P	Audi Brack	<input type="checkbox"/>				02/11/2015	4208	477000			--	25

Excel Export Print Add To Favourites New Edit

Line	Links	Part No	Description	Statu	Auto Issue?	Qty Ordere	Qty Received	UOM	Date Required	Date Due	Source Sit	Order Cos	Total Cost	Total Cost (B)	BO No	Release No

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Click New in the lower browse to add a line item.

Create a Requisition: Lines

EAM Purchasing

Create a Requisition: Lines

Site Req No

Line

Action ⏪ ⏩ ⏴ ⏵


Detail | Expense | PO Text | User Defined

Part Information

Source Site <input type="text" value="USA1"/>	* Part No <input type="text" value="Pens"/>
* Description <input type="text" value="NON-STOCK PART"/>	* Qty Ordered <input type="text" value="100.0000"/>
Order Cost <input type="text" value="0.2500"/>	* UOM <input type="text" value="EA"/>
Total Cost <input type="text" value="25.00"/>	Req Currency <input type="text" value="USD"/>
Location <input type="text"/>	Commodity <input type="text"/>
Vendor Part <input type="text"/>	Weight/UOM <input type="text" value="0.0000"/>
Contractor? <input type="checkbox"/>	Weight UOM <input type="text"/>
Auto Issue? <input checked="" type="checkbox"/>	Total Weight <input type="text" value="0.00"/>
From Schedule? <input type="checkbox"/>	OH Group <input type="text"/>
Est Freight <input type="text" value="0.00%"/>	Freight <input type="text" value="0.00"/>
Prod Line <input type="text"/>	

Order

Status <input type="text" value="P"/>	* Requestor <input type="text" value="srose"/> Sara Rosenberger
Created By <input type="text"/>	* Date Required <input type="text" value="(none)"/>
Date Created <input type="text"/>	Notify <input type="text"/>
Orig Date Due <input type="text" value="2/23/2015"/>	Date Due <input type="text" value="3/7/15"/>
Buyer <input type="text" value="srose"/> Sara Rosenberger	


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The line is where the detail of the part is entered. This includes the part number, quantity, and cost. You can enter any number of lines for the vendor specified in the header.

Again, it is important to note that the requisition routes based on the header detail so when you change the accounting information on the line, it does not affect how the req is routed. You should create a new req when the accounting varies for the line.

Create a Requisition: Lines

EAM Purchasing

Create a Requisition: Lines

Requisition Line

- Detail
- History
- Inventory
- Inventory Analysis
- Purchase Order
- Receipts
- Vendor
- Vendor Parts
- Detail
- Revisions

Action -

Detail | Expense | PO Text | User Defined

Charge

WO No <input type="text" value="0"/>	Stores Req No <input type="text" value="0"/>
Equip No <input type="text"/>	Rebuild <input type="text"/>
Serialized Part <input type="text"/>	Serial No <input type="text"/>
Project No <input type="text"/>	Job No <input type="text" value="--"/>
System <input type="text"/>	Assembly <input type="text"/>
Expense Type <input type="text" value="Expense"/>	

Expense

Expense Site <input type="text" value="USA1"/>	Cost Center <input type="text" value="1234"/>
Dept <input type="text"/>	Sub Acct No <input type="text"/>
* Acct No <input type="text" value="11111"/>	

Asset

Asset Source Site <input type="text" value="USA1"/>	Asset Cost Cntr <input type="text"/>
Asset Dept <input type="text"/>	Asset Sub Acct <input type="text"/>
Asset Acct No <input type="text"/>	

Tax Information

Taxable? <input checked="" type="checkbox"/>	Tax Code <input type="text" value="USA"/>
Tax Class <input type="text"/>	

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Review the expense detail and verify that the header information that defaulted is valid for the part being purchased.

Create a Requisition: Lines

EAM Purchasing

Create a Requisition: Lines

Action | Home | Refresh

Detail | Expense | PO Text | User Defined

Purchase Order Text

PO Text
Ball point pens BIC Pens

QAD 48

Enter PO text for this line.

The PO Text is searchable and prints on the PO.

If the part number or description requires more characters than allowed, enter the information in the PO Text field.

Create a Requisition: Lines

EAM Purchasing

Create a Requisition: Lines



Line	Links	Part No	Description	Statu	Auto Issue?	Qty Ordere	Qty Received	UOM	Date Required	Date Due	Source Sit	Order Cos	Total Cost	Total Cost (B)	BO No	Release No
1		Pena	NON-STOC	F	<input checked="" type="checkbox"/>	100.00	0.00	EA	03/16/2015	02/23/2015	2000	0.25	25.00	25.00		

QAD 49

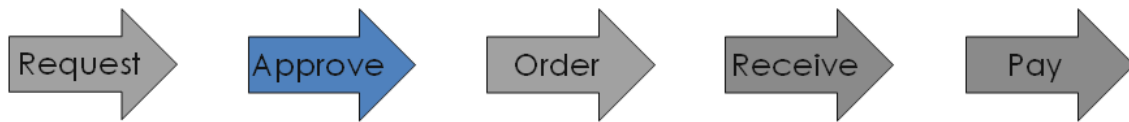
Continue to add lines until the requisition includes all parts that need to be purchased from the vendor specified on the header.

You are now ready to route the requisition for approval.

Purchasing Process – Step Through

EAM Purchasing

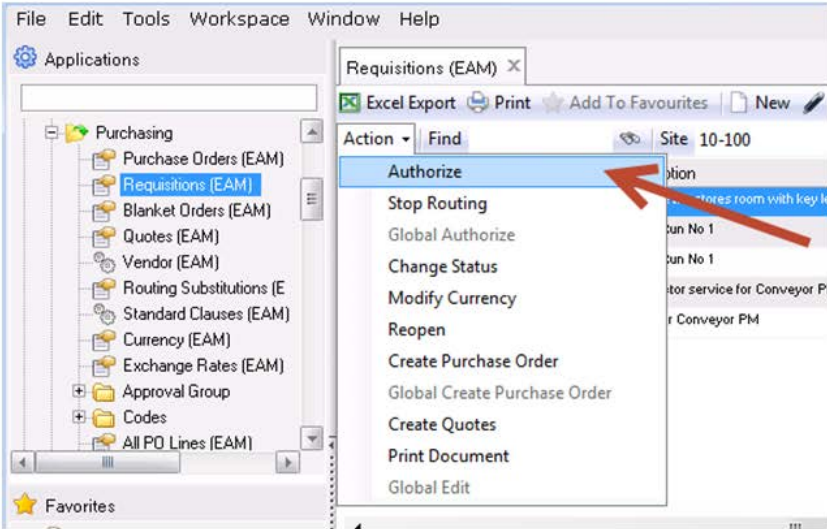
Purchasing Process – Step Through



Authorize a Requisition

EAM Purchasing

Authorize a Requisition



The screenshot displays the QAD EAM Purchasing application interface. On the left, a tree view under 'Applications' shows 'Purchasing' expanded, with 'Requisitions (EAM)' selected. The main window shows a list of requisitions with columns for 'Action', 'Find', and 'Site'. The 'Action' menu is open, and the 'Authorize' option is highlighted. A red arrow points to the 'Authorize' option. Other options in the menu include 'Stop Routing', 'Global Authorize', 'Change Status', 'Modify Currency', 'Reopen', 'Create Purchase Order', 'Global Create Purchase Order', 'Create Quotes', 'Print Document', and 'Global Edit'. The 'Site' column shows '10-100'.

QAD 51

Select Authorize from the Action menu.


Authorize a Requisition

EAM Purchasing

Authorize a Requisition

The screenshot displays the 'Authorize a Requisition' process in the EAM Purchasing system. It consists of three windows:

- Enter Password:** A window with fields for 'User ID' (jidepp) and 'Password'. It includes a green arrow button and a red X button. Copyright QAD Inc.
- Authorization Action:** A window with fields for 'Req No.' (74), 'Vendor' (Tube City), and 'Total Cost' (1000). It has a 'High Priority' checkbox, a 'Comment' field with a dropdown set to 'Normal', and a 'Wait Hours' field (1). A text area contains 'Training test'. Buttons for 'Submit routing' and 'Add Quality' are at the bottom.
- Message:** A small dialog box with the text: 'An authorization request has been sent to jrosinto(Rosintoski Joseph)'. It has an 'OK' button.

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1. Enter a password.
2. Enter comments.
3. Click Submit routing.
4. Click OK.

Authorize a Requisition

EAM Purchasing

Authorize a Requisition

Req No	PO No	Status	Auth Status	Date Due	Vendor Name	Total Cost	Consignment	Ordered By Name	Description
74	200081	O	Routing	07/15/2009	Tube City	1000	<input checked="" type="checkbox"/>	Rosintoski Joseph	
73	0	P				0	<input type="checkbox"/>		
72	200080	O		07/11/2009	Southern Container Supply	276	<input type="checkbox"/>	Adam Ant	
71	0	P			NORTHLAND ELECTRIC	0	<input type="checkbox"/>		
68	200084	O	Authorized	08/17/2009	Tube City	2007.4	<input type="checkbox"/>	Adam Ant	
67	0	P				0	<input type="checkbox"/>		Training Requisition
57	200079	O		06/03/2009	NORTHLAND ELECTRIC	2263.35	<input type="checkbox"/>	Rosintoski Joseph	
56	200078	O		05/31/2009	Plastic Supply Corporation	2634	<input type="checkbox"/>	Rosintoski Joseph	Stock Run No 15
55	200077	P			Borg Warner	1000	<input type="checkbox"/>		Stock Run No 14

Authorize a Requisition

EAM Purchasing Authorize a Requisition

The screenshot displays the EAM Purchasing application interface. The main window shows a table of requisitions with columns for Req No, PD No, RFQ No, Status, Description, Auth Status, Auth By, Date Due, and Vendor Name. A context menu is open over the selected requisition, with the 'Authorize' option highlighted by a red arrow. Below the main window, the 'Authorization Action' dialog box is visible, containing fields for Req No (74), Vendor (Tube City), and Total Cost (1000). The dialog also includes a 'Comment' field and buttons for 'Approve', 'Disapprove', 'Hold Up', 'No Comment', 'OK', and 'CANCEL'. At the bottom left, a 'Message' dialog box displays the text: 'Requisition has been authorized. A message has been sent to the originator: jdepp'.

The approver uses the Authorize action to authorize the requisition or to begin routing for the approval of the requisition.

E-mail Approval Notification to Originator

EAM Purchasing

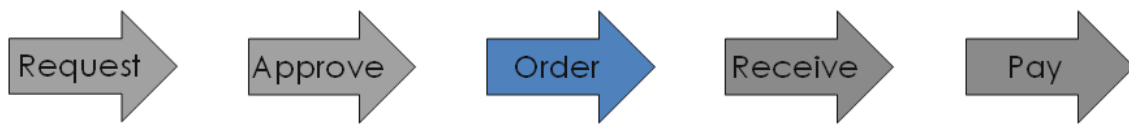
E-mail Approval Notification to Originator



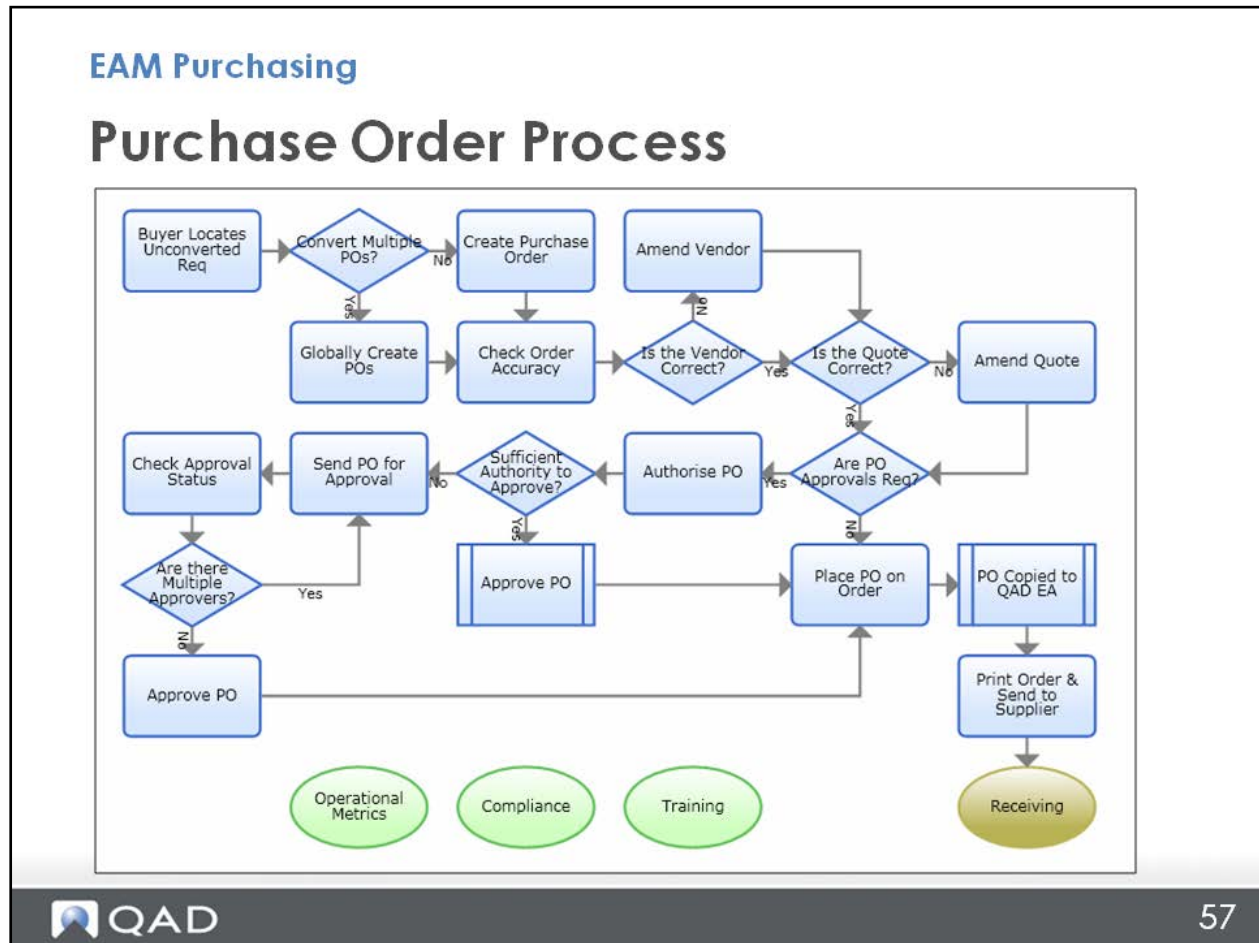
Purchasing Process – Step Through

EAM Purchasing

Purchasing Process – Step Through



Purchase Order Process



Purchase Orders

EAM Purchasing

Purchase Orders

- Contract to supplier
- Sent to ERP for accounts payable
- POs can be created in two ways:
 - Individually
 - Globally



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POs are sent to ERP for the Accounts Payable module.

POs can be created in two ways:

- Individually
- Globally, create multiple purchase orders simultaneously, combining requisitions to each vendor on the same purchase order

Types of Purchase Orders

- Blanket Purchase Orders. Pre-negotiated orders with suppliers for a specified period of time. Buyers can create releases against valid blanket purchase orders. Blanket purchase orders can restrict the items that can be purchased on the blanket or can be left open.
- Consignment Orders. Stored in EAM's purchase order table, but are flagged as a consignment order. Consignment orders are not sent to QAD ERP application.
- Standard Purchase Orders

Purchase Order Types

EAM Purchasing

Purchase Order Types

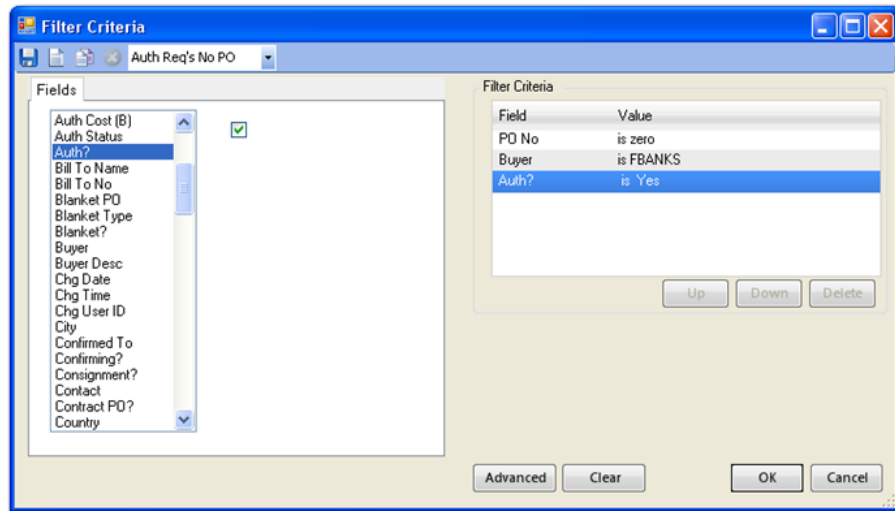
- Types of purchases
 - Standard purchase order
 - Blanket purchase orders
 - Pre-negotiated orders with suppliers for a specified period of time. Buyers can create releases against valid blanket purchase orders. Blanket purchase orders can restrict the items that can be purchased on the blanket or be left open.
 - Consignment order
 - Stored in EAM's purchase order table, but are flagged as a consignment order. Consignment orders are not sent to QAD ERP application.

Globally Create Purchase Orders

EAM Purchasing

Globally Create Purchase Orders

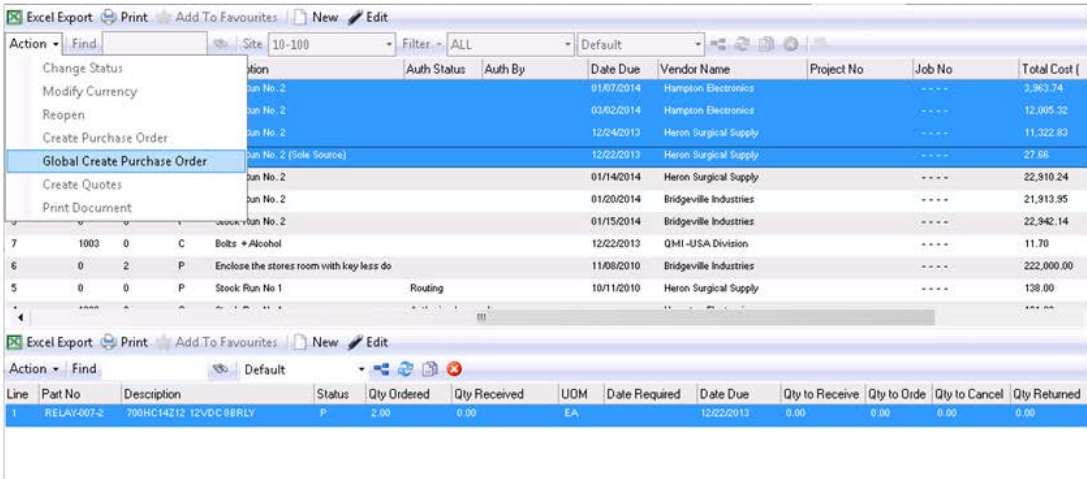
- Optionally filter all approved requisitions that need to be converted to purchase orders



Globally Create Purchase Orders


EAM Purchasing

Globally Create Purchase Orders



The screenshot displays the QAD EAM Purchasing interface. At the top, there are navigation options: 'Excel Export', 'Print', 'Add To Favourites', 'New', and 'Edit'. Below this is a search bar with 'Find' and a 'Site' dropdown set to '10-100'. A filter dropdown is set to 'ALL' and a 'Default' dropdown is visible. A context menu is open over a requisition row, with 'Global Create Purchase Order' selected. The menu also includes 'Change Status', 'Modify Currency', 'Reopen', 'Create Purchase Order', 'Create Quotes', and 'Print Document'. The requisition list below shows columns for 'Action', 'Auth Status', 'Auth By', 'Date Due', 'Vendor Name', 'Project No', 'Job No', and 'Total Cost'. The selected row is highlighted in blue.

Line	Part No	Description	Status	Qty Ordered	Qty Received	UDM	Date Required	Date Due	Qty to Receive	Qty to Orde	Qty to Cancel	Qty Returned
1	RELAY007-Z	700HC14212 12VDC 08RLY	P	2.00	0.00	EA		12/22/2013	0.00	0.00	0.00	0.00


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Select two or more requisitions.

Select Action|Global Create Purchase Order.

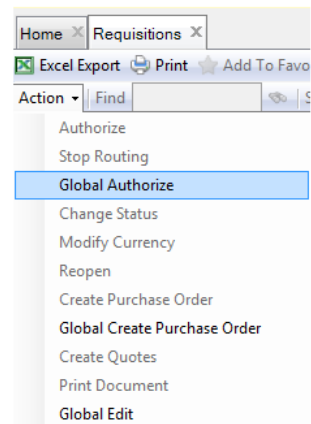
Global Authorize POs & Reqs

EAM Purchasing

Global Authorize POs & Reqs

- Approvers are able to select multiple POs ready to be authorized
- When multiple records are selected the Global Authorize Action is available

Note: Approver should first filter the browse by Next Approver prior to using this function in Requisitions



Place PO on Order

EAM Purchasing

Place PO on Order

The screenshot displays the QAD EAM Purchasing application interface. The left sidebar shows a tree view with 'Purchase Orders (EAM)' selected. The main window shows a list of purchase orders with a context menu open over the 'PO Order' option. The context menu includes options such as 'Return To Vendor', 'Lock/Unlock', 'Reopen', 'Modify Currency', 'PO Order', 'Global PO Order', 'Order Added or Modified Lines', 'Receive', 'Global Edit', 'Change PO Status', 'Global Authorize', 'Submit PO/Receipts to ERP', 'Print Document', 'Global Print Document', 'Email PO', and 'Global Email PO'.

Status	Vendor Name	Buyer	Vendor No	Aut
	Heron Surgical Supply	10-EMP17	10S1003	
	Hampton Electronics	10-EMP31	10S1006	
	Hampton Electronics	10-EMP31	10S1006	
	Bridgeville Industries	10-EMP17	10S1002	

Total Cost (B)	Total Cost	PO Line No	Part No	Description
131.08	131.08	1	BEARING 001	88-SA RBC BEARING S
		2	BEARING 002	FAFNIR 205PP BEARIN

When a purchase order is assigned the Ordered status, the PO is written to the ERP system.

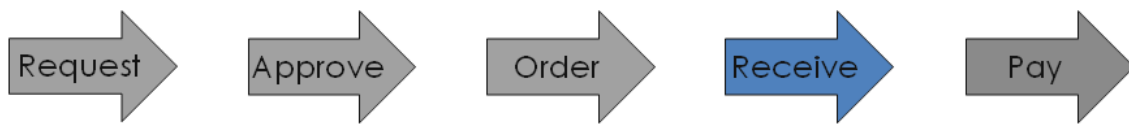
Note: The PO cannot be received until it is placed on order.

Placing the PO on order should be the point when the PO is sent to the vendor.

Purchasing Process – Step Through

EAM Purchasing

Purchasing Process – Step Through



Distribute PO

EAM Overview

Distribute PO

- User may print external links associated with the PO
 - Works for individual PO printing and Global PO printing
 - If external links are found when printing a PO, the system will prompt the user

When selecting Print Document or Global Print Document for purchase orders, you now can print the documents and links attached to the purchase orders.

E-mail PO to Supplier

EAM Overview

E-mail PO to Supplier

- E-mail a PO to a supplier from EAM
- Configuration of IP Address of SMTP server is required
- Error handling has been added to point to any specific issue when the system fails to send PO via email



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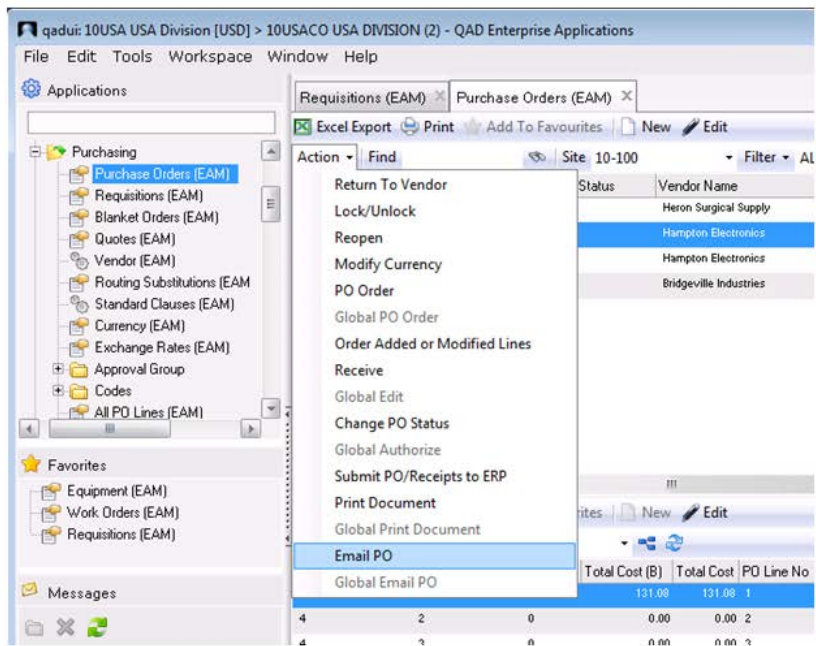
You can e-mail purchase orders to the supplier from the Purchase Order browse. The error handling of the Email PO Action in the Purchase Order browse has been improved. Now, instead of a generic message, you see a detailed message that indicates the problem that EAM encountered when sending the e-mail, if there were any issues.

The Email PO functionality required a change to EAM e-mail. EAM now sends e-mails from the EAM client (Email PO) as well as from the EAM server (all other e-mails). When EAM sent e-mails only from the server, you could specify "localhost" as the SMTP Server value in the System Control\Maintenance screen. However, the client does not recognize "localhost," which means you now must specify the actual DNS Name or the IP Address of the SMTP server in order for e-mail to work on the client side. This setting is needed only if you use the Email PO functionality, and the change does not affect other types of e-mail.

E-mail PO to Supplier

EAM Overview

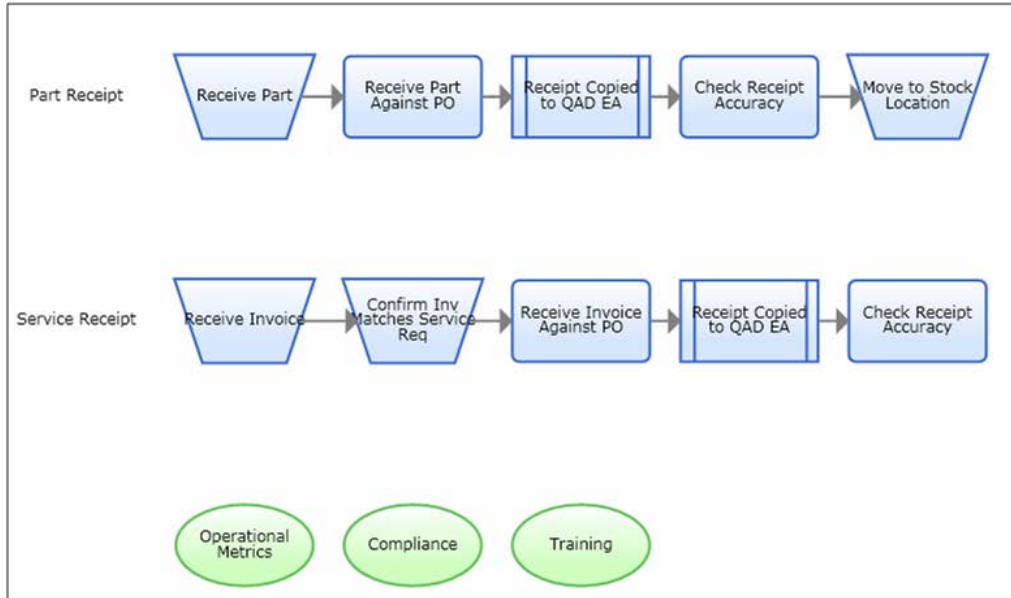
E-mail PO to Supplier



PO Receiving

EAM Purchasing

PO Receiving



PO Receiving

EAM Purchasing

PO Receiving

- Available from Purchase Order screen
- Usually limited by security
- Results
 - Notification to requestor
 - Receiver record to ERP for accounts payable
 - GLs created
 - EAM Inventory quantity updated (if Auto-Issue = No)
 - Expensed on receipt



Available from Purchase Order screen

Usually limited by security to a few individuals to comply with Segregation of Duties regulations (i.e. buyers should not be allowed to receive)

The creation of EAM receipts causes several actions, such as:

- A notification to a requestor
- A receiver record is sent to ERP for Accounts Payable
- GL transactions are created
- The EAM inventory quantity is updated (if Auto-Issue = No)

Receive Against a PO

EAM Purchasing

Receive Against a PO

The screenshot shows the QAD Enterprise Applications interface. The main window displays a list of purchase order lines. A context menu is open over the selected line, with 'Receive' highlighted. A 'Receive POs' dialog box is also visible, showing a table with columns for Rec?, Part #, Description, Order Qty, Open Qty, Rec Qty, Cancel Qty, UoM, Loc, and Comments. The dialog box has fields for Packing Slip No., Receive Date, Ship Date, and Receiver, and buttons for RECEIVE and CANCEL.

Rec?	Part #	Description	Order Qty	Open Qty	Rec Qty	Cancel Qty	UoM	Loc	Comments
✓	Pump.1hp.3450...		1	0	0	0	EA	TBD	
✓	05-01-0111	Motor Mount	10	0	0	0	EA	01-A1	

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Select the line or lines to be received. Update the quantity to receive, as needed. Enter the packing slip number, if required. Update the Receipt Date and Ship Date, as needed.

Then, select Receive.


The system asks if you want to print the Receiver Document. Select Yes to display the document to screen. Select No to return to the Purchase Order browse.

Reprint Receiver Document

EAM Purchasing

Reprint Receiver Document

The screenshot shows the QAD EAM Purchasing application interface. A 'Filter Criteria' dialog box is open, allowing users to define search criteria for a report. The dialog includes a list of fields to filter by, with 'PO No' selected. The 'Filter Criteria' section is currently empty. The 'Group By' section is configured with 'Project No' as the primary group and 'Req No' as the secondary group. The 'Sort By' section is set to 'Desc'. The 'Site Code' is set to '10-100'. The background shows a table of Purchase Orders with columns for PO No, Type, Status, Auth Status, Vendor Name, Buyer, Vendor No, Auth By, Total Cost (B), and Total Cost (B).


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You may want to print receivers in batches rather than one at a time. Using the Receiver report, you can print a single receiver or a group of receivers.

Enter in the desired filter criteria.

Print Receiver Document

EAM Purchasing

Print Receiver Document



QAD EAM Development
 3555 Koger Blvd
 Suite 300
 Duluth, GA 30096
 Phone: 770-723-1011
 770-723-0033

Receiver

Vendor	NIF	Receiver	Er441
Site	10000	Date Received	08/14/2009
		PO No	S 200086
		Received By	_____
		Packing Slip	FOB
		Shipped Via	_____
		Date Shipped	_____
		Auth By	_____

Req No	Line No	Part No	Description	Location	Receive Cost	Ext Cost	OH Group	Tax	Qty Ordered	UOM
Auto Issue?	Equip No	WO No	Project No	Job No	Requestor	Qty Canceled	Qty Received	UOM	Total Received	UOM
80	1	AIRFIT-066	H9CP 3/8D NIPPLE	A1	1.25	37.50			30.00	EA
No			0		Adam Ant	0.00	30.00	EA	30.00	EA
80	2	AIRFIT-067	COUPLER FOR QUICK DISC	A1	20.58	308.70			15.00	EA
No			0		Adam Ant	0.00	15.00	EA	15.00	EA
80	3	AIRFIT-069	Y68ML-5/2-2 FITTING	A1	2.25	168.75			75.00	EA
No			0		Adam Ant	0.00	75.00	EA	75.00	EA
80	4	AIRFIT-070	10/32 MPT X 1.8 FEMALE BR SW	TBD	3.25	113.75			35.00	EA
No			0		Adam Ant	0.00	35.00	EA	35.00	EA
Number of Records									4	
									Total Qty Received	155.00
									Total Amount Received	628.70

The Receiver number is a QAD ERP application receiver number.

Receipt GLs Created When Received

EAM Purchasing

Receipt GLs Created When Received

- EAM-posted GL Maintenance and QAD ERP Unposted Transaction Inquiry

Home x Inventory Transaction History x

Excel Export Print Add To Favourites New

Find Site 10-100 Filter ALL Default

Effective	Code	GL Description	Part No	Qty	UOM	Total Cost (Rep)	To Site	Currency	Vendor No	Vendor Name	Receiver	PO No	PO Line No
06/25/2014	R	RECV-PO-1008-REQ-15	WELD 015	25.00	EA	56.25	10-100	USD	10S1006	Hampton Electroni	R1010856	1008	116
06/25/2014	R	RECV-PO-1008-REQ-15	WELD 030	3.00	EA	158.64	10-100	USD	10S1006	Hampton Electroni	R1010856	1008	115
06/25/2014	R	RECV-PO-1008-REQ-15	WELD 017	2.00	EA	17.42	10-100	USD	10S1006	Hampton Electroni	R1010856	1008	114
06/25/2014	R	RECV-PO-1008-REQ-15	WELD 029	2.00	EA	110.60	10-100	USD	10S1006	Hampton Electroni	R1010856	1008	113
06/25/2014	R	RECV-PO-1008-REQ-15	WELD 050	2.00	EA	24.50	10-100	USD	10S1006	Hampton Electroni	R1010856	1008	112
06/25/2014	R	RECV-PO-1008-REQ-15	WELD 021	6.00	EA	500.16	10-100	USD	10S1006	Hampton Electroni	R1010856	1008	111
06/25/2014	R	RECV-PO-1008-REQ-15	SANDMOUNT001	8.00	EA	12.80	10-100	USD	10S1006	Hampton Electroni	R1010856	1008	110
06/25/2014	R	RECV-PO-1008-REQ-15	SCREWDRIVER 001	1.00	EA	3.65	10-100	USD	10S1006	Hampton Electroni	R1010856	1008	109

Processes x GL Transactions View x

Actions Setup Cancel Add to Favorites Stored Searches

Search (Posting Date = 6/25/2014)

Posting Date equals 6/25/2014 Search Clear All

Viewing 1 - 100 of 230 Records per page: 100

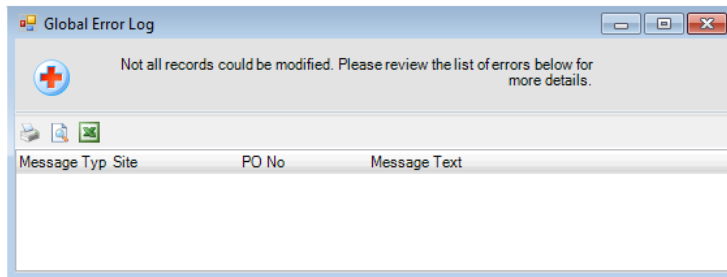
GL Account	Posting	Daybook	Voucher	BC Debit	BC Credit	Sub-Acc	Cost Ce	Project	Description	Origin Daybook Number
1510	6/25/2014	JE	000000001	57.80	0.00				RECV-PO-1008-REQ-14	JE
2550	6/25/2014	JE	000000001	0.00	57.80	Gserv			RECV-PO-1008-REQ-14	JE
1510	6/25/2014	JE	000000002	2.14	0.00				RECV-PO-1008-REQ-14	JE
2550	6/25/2014	JE	000000002	0.00	2.14	Gserv			RECV-PO-1008-REQ-14	JE

Global Authorize POs

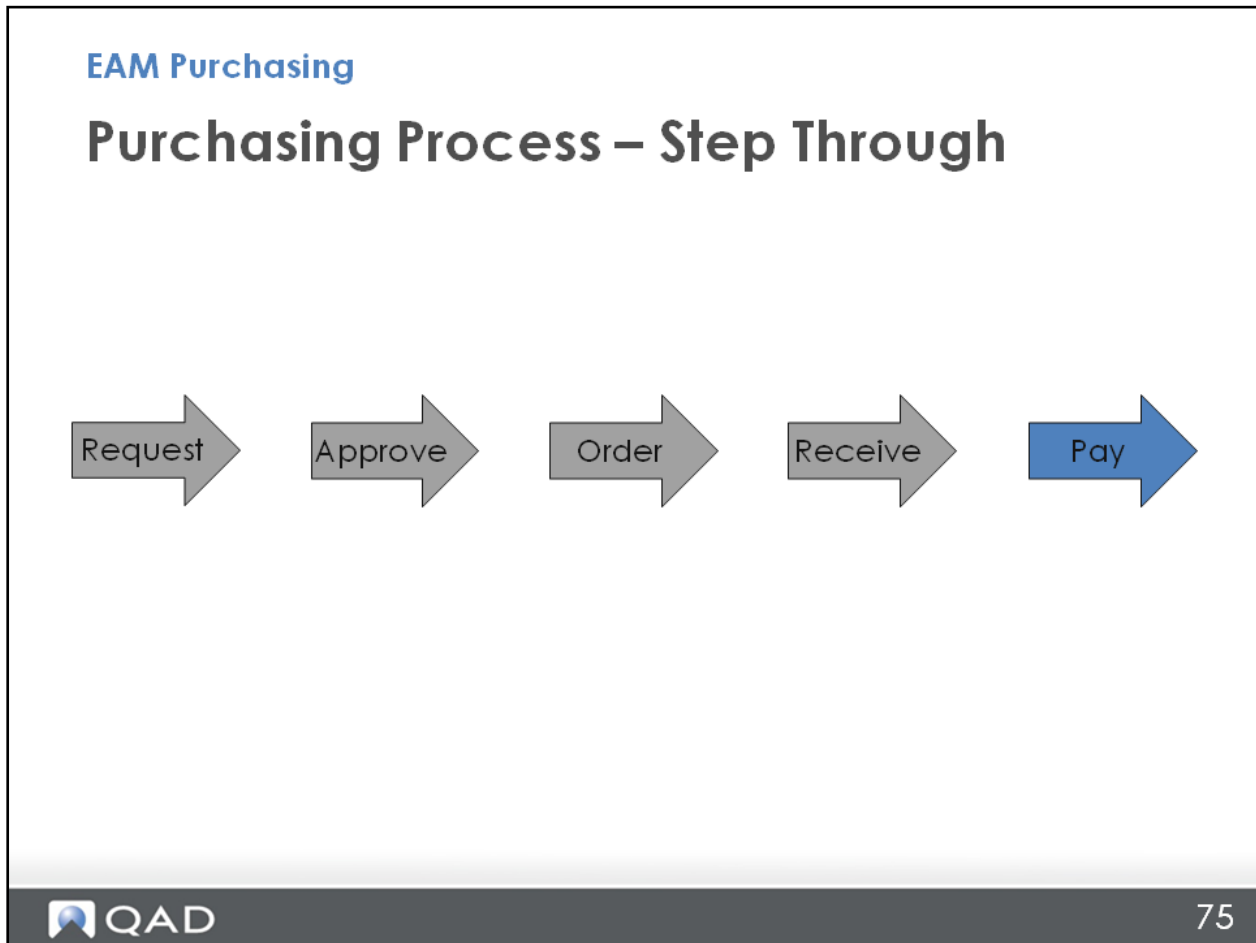
EAM Purchasing

Global Authorize POs

If there are errors that occur with any of the reqs or POs selected for authorization, the system provides an error log indicating the details of the error.



Purchasing Process – Step Through



Pay

EAM Purchasing

Pay

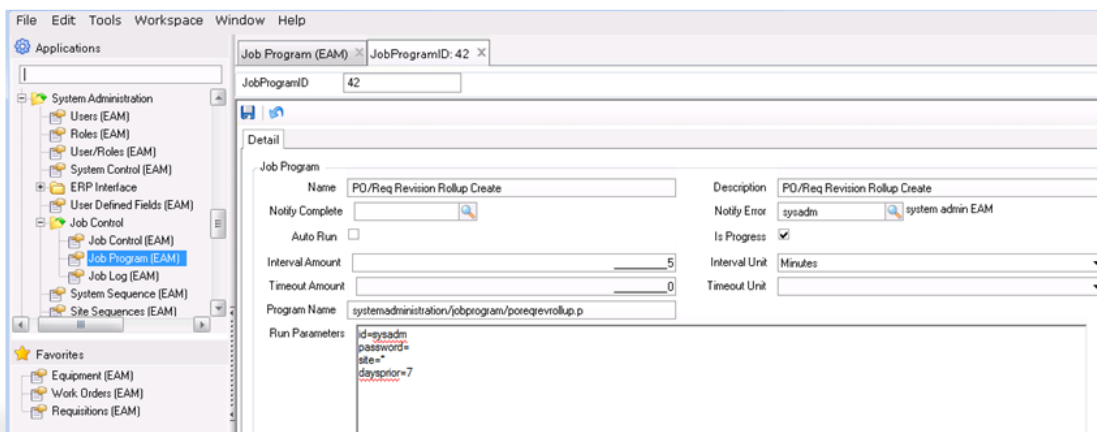
- All accounts payable activities take place in ERP
- When the supplier sends an invoice, the invoice is matched to:
 - Purchase order
 - Receiver
- After match has been satisfied, accounts payable generates payment to supplier

All PO/Req Revisions

EAM Purchasing

All PO/Req Revisions

- This browse shows all revisions that occur for both purchase orders and requisitions
- A job program must run to update this browse on a pre-defined interval



Return to Vendor



Now that you have created a req, PO, placed it on order, and received it, we can discuss how to perform a return.

Return to Vendor by Receipt

EAM Purchasing

Return to Vendor by Receipt

- Provides multiple lines returned at one time
- Return by filtering to a specific packing slip, receiver, or ship date
- Allows you to match up a return to vendor with a specific purchase order receipt resulting in more accurate reconciliation with accounts payable.

The Return to Vendor function allows you to return multiple lines at one time with the added flexibility of filtering based on a packing slip, receiver number, or received date. When you filter by one of these items, EAM displays all inventory receipt transactions that are linked to the packing slip, receiver, or received date.

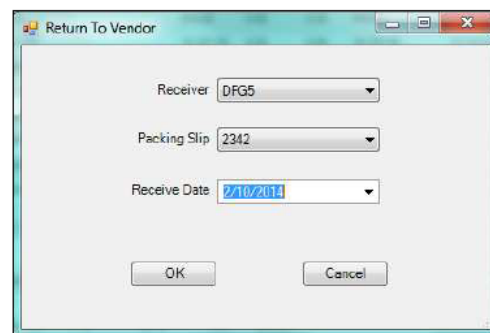
Return to Vendor by Receipt Process

EAM Purchasing

Return to Vendor by Receipt Process

1. Select PO that requires a return and select the Return to Vendor action
2. Enter one or more of the following:
 - Receiver
 - Packing slip
 - Receive date

Note: The system filters the lines by the criteria selected



Return To Vendor

Receiver DFG5

Packing Slip 2342

Receive Date 2/10/2014

OK Cancel

No data setup is needed to use the Return to Vendor by Receipt functionality. The Return to Vendor screen has been redesigned to support this functionality.

Return to Vendor by Receipt

EAM Purchasing

Return to Vendor by Receipt

- Select the lines to return and enter the quantity to return, reason codes, etc.

The screenshot shows a software window titled "Return to Vendor". It contains a table with the following columns: Return?, PO Line, Receiver, Packing Slip, Receive Date, Part No., Description, Qty Received, UCM, On Hand, Qty to Return, Return UCM, Location, Return, Cancel?, and Connect?. The table has two rows of data:

Return?	PO Line	Receiver	Packing Slip	Receive Date	Part No.	Description	Qty Received	UCM	On Hand	Qty to Return	Return UCM	Location	Return	Cancel?	Connect?
<input checked="" type="checkbox"/>	2	DF05	2542	02/10/2014	A-430202	Cutting Inflow	10.00	EA	100	0.00	EA	TBD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/>	3	DF05	2542	02/10/2014	63354	Motex 1/6 Ho.	10.00	EA	61	0.00	EA	TBD	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Below the table, there is a "Date Returned" dropdown menu set to "02/10/2014" and two buttons: "Return" and "Cancel".

- Print the Return to Vendor form

Stock Replenishment

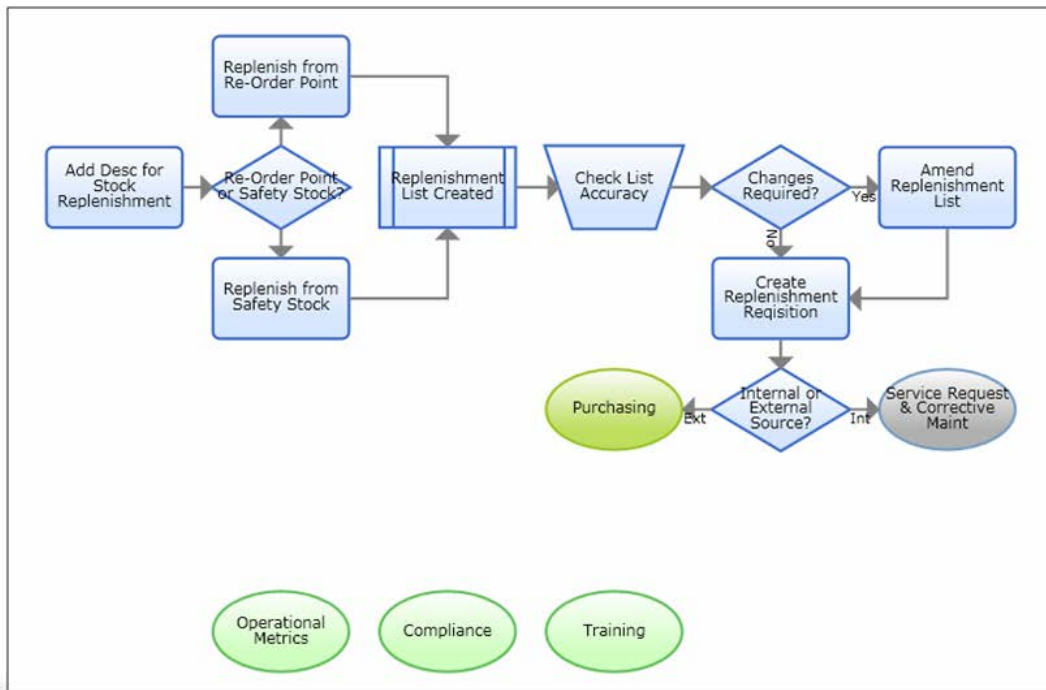


Another way to create requisitions is via stock replenishment.

Stock Replenishment

EAM Purchasing

Stock Replenishment



Stock Replenishment

EAM Purchasing

Stock Replenishment

- Use the Stock Replenishment module to replenish stock.
 - Ways to replenish stock
 - Manually create a stock run with a specific filter criteria such as part type, vendor, critical, and consignment.
 - Use Job Program
- EAM compares a part's current on-hand quantity to the reorder point and management max values.
 - $\text{Reorder Qty} = (\text{Max}) - (\text{On-Hand Qty})$
- If a part's current on-hand quantity is at or below the reorder point, it lists as a part to reorder, with a reorder quantity suggestion.
- Create the request after adding parts to a stock run. The requisitions or work orders are generated.

Create a Stock Replenishment

EAM Purchasing

Create a Stock Replenishment

Vendor	Part No	Description	On Hand	Planned Ord
1051003	BEARING 004	INA NK 14/16 BEARING	3.00	4.00
1051003	BEARING 005	INA 51103J BEARING	3.00	4.00
1051003	BEARING 006	SFK6003 RSJEM BEARING	3.00	4.00
1051003	BEARING 007	INA NK 20/16 BEARING	3.00	4.00
1051006	BEARING 001	B8-SA RBC BEARING SETS	4.00	6.00
1051006	BEARING 002	FAFNIR 205PP BEARING	4.00	5.00

Use Stock Replenishment to identify parts below the reorder point or safety stock level. Create requisitions or work orders to replenish depleted inventory.

Create a stock replenishment header or stock run in the top frame.

Globally add parts or attach individual parts to a stock run.

Print the list of items that are below the reorder point or safety stock level for review in the bottom frame.

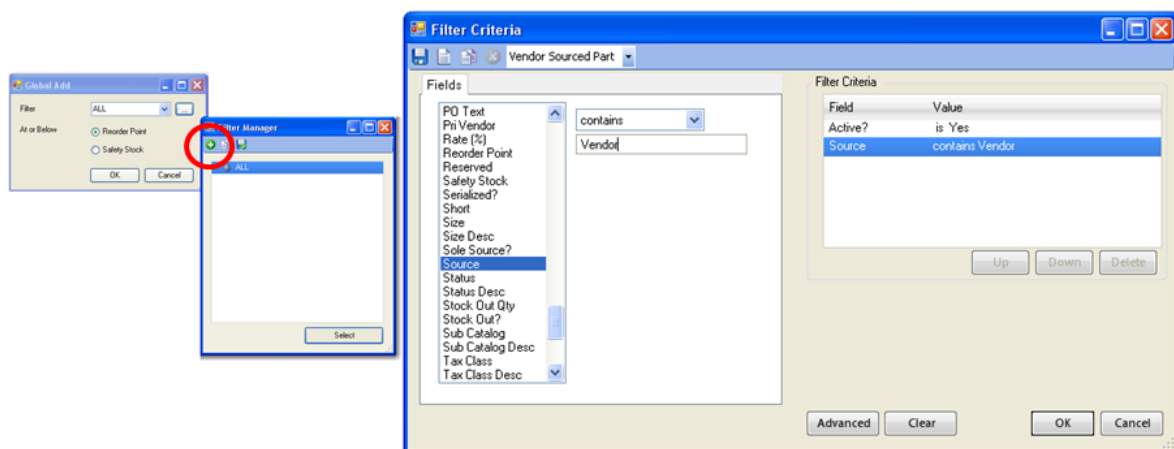
The stock run number is copied to the requisition or work order, noting its origin.

Add Parts to a Stock Replenishment

EAM Purchasing

Add Parts to a Stock Replenishment

- Use the Global Add action and create the selected filter to find all active, vendor-sourced parts to reorder.



1. Select Global Add from the Stock Replenishment Action menu.
2. Click the ellipsis (...) button.
3. Click the Add button (green addition sign).
4. Build a vendor-sourced parts filter.
5. Select the Active field.
6. Select the Source field.
7. Select “contains” from the drop-down menu.
8. Enter Vendor in the empty field below “contains”.
9. Click OK.
10. Add other parts by clicking New in the lower browse.
11. You only need to create the filter once. Save it for reuse.

Review Parts on a Stock Replenishment

EAM Purchasing

Review Parts on a Stock Replenishment

QAD EAM Development
3555 Hoger Blvd
 Suite 300
 Duluth, GA 30096
 Phone: 770-725-1011
 770-725-0033

Stock Replenishment

Site 10000 QAD EE Site - NJ Plant

Stock No 1


Originator sysadm

Orig Date 06/29/1999

Pri Vendor

Line	Part No	Description	Mgt Max Qty	To Order	Issue UOM	Critical?	Planned Order	Last Issued	On Hand	Total
	Location	On Hand	Lead Days	On Order			Last Received	UOM Cost		
1	TTT		2100	100.00	EA	No	327.00	12/16/2002	1,912.00	102.00
	Location	test ga	On Hand 1,894.00 0.00				09/17/1999	1.02		
									Pri Vendor	102.00
									Stock Replenishment	102.00

Auth By _____


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Edit, review, and approve parts to order.

Create Stock Replenishment Requests

EAM Purchasing

Create Stock Replenishment Requests

The screenshot shows the 'Stock Replenishment' application interface. The 'Action' menu is open, and 'Create Requests' is highlighted. Below the menu is a table of requisitions. The table has columns: Action, Find, Site (10000), Filter (ALL), and Default. The requisitions are listed with columns: Item No., Description, Type, Status, Originator, and Orig Date.

Item No.	Description	Type	Status	Originator	Orig Date
18	Vendor parts		C	aaat	08/14/2009
16	Vendor 1	SOLE	P	josinto	07/06/2009
15	MORE SERIALIZED PARTS		C	josinto	05/26/2009
14	Serialized Parts		C	josinto	05/26/2009
13	Make parts		C	josinto	04/21/2009
12	Make Parts Apr 21		C	josinto	04/21/2009
11	Parts for Building		C	josinto	04/16/2009
10	Parts		C	josinto	04/16/2009
9	Emergency Parts Build		C	josinto	04/16/2009
8	Made Parts 16 Apr		C	josinto	04/16/2009
7	Made Parts 13 Apr		C	josinto	04/15/2009
6	Today's Run	TEST	C	josinto	03/03/2009
5	By Vendor	V1011	P	josinto	01/15/2009
4	Batch Stock Replenishment		P		01/14/2002

Below the requisitions table is a detailed view of a requisition. The table has columns: Part No., Description, To Order, Mgt Max Qty, On Hand, and Plan.

Part No.	Description	To Order	Mgt Max Qty	On Hand	Plan
05-01-0089	Oil, synthetic 20w/50w	125	130	5	0
05-01-0111	Motor Mount	6	18	45	0
05-01-0444	Element,filter,7x5.5'80cfm	10	15	88	153

Use the Create Requests action to add requisitions.

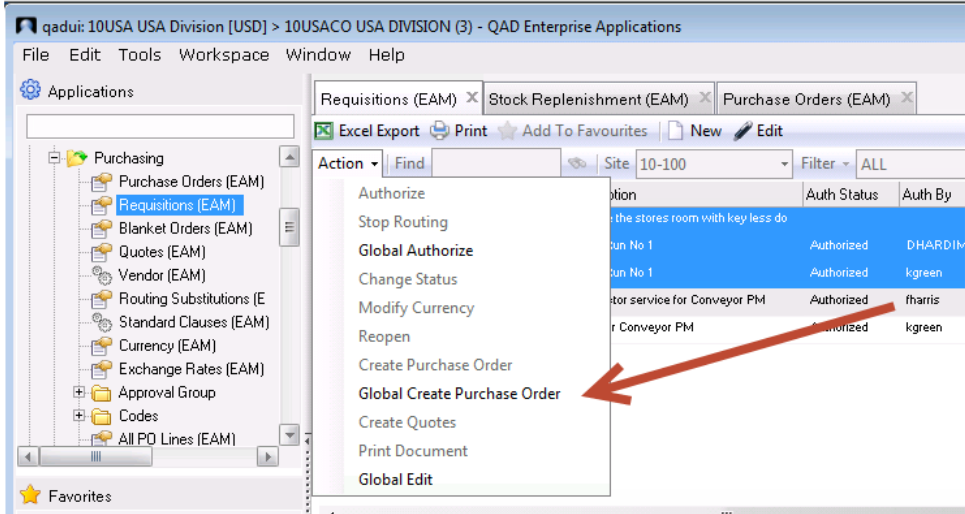
Task

Click Create Requests in the Stock Replenishment Action menu.

Globally Create Purchase Orders

EAM Purchasing

Globally Create Purchase Orders



The screenshot shows the QAD Enterprise Applications interface. The left-hand navigation pane is expanded to 'Purchasing', with 'Requisitions (EAM)' selected. The main window displays a table of requisitions. An 'Action' menu is open over the table, with 'Global Create Purchase Order' highlighted by a red arrow. The table has columns for 'Auth Status' and 'Auth By'.

	Auth Status	Auth By
the stores room with key less do	Authorized	DHARDIN
Run No 1	Authorized	kgreen
Run No 1	Authorized	kgreen
stor service for Conveyor PM	Authorized	fharris
r Conveyor PM	Authorized	kgreen

Create POs from the stock replenishment.

Close a Stock Replenishment

EAM Purchasing

Close a Stock Replenishment

- Once the requisitions or work orders are created, the stock replenishment automatically closes.

The screenshot shows a web application window titled 'Stock Replenishment'. It features a menu bar with 'Excel Export', 'Print', 'Add To Favourites', 'New', and 'Undo'. Below the menu is a toolbar with 'Action', 'Find', 'Site SANF', 'Filter ALL', and 'Default'. The main content area displays a table with the following data:

Stock Run No	Description	Type	Status	Originator	Orig Date
700	3 reqs, one consigned	new1	C	janie	07/17/2009
699	2 reqs	new1	C	janie	07/17/2009
698	checking the reqs	new1	C	janie	07/17/2009
697	checking vendor	new1	C	janie	07/16/2009
696	for internal	new1	C	janie	06/18/2009
695	checking Reqs	new1	C	janie	06/18/2009
694	Internal	new1	P	rir	04/06/2009

Below the table is another toolbar with 'Excel Export', 'Print', 'Add To Favourites', 'New', and 'Undo'. At the bottom, there is a 'Find' section with 'Default' and a search icon. A summary table is visible at the bottom of the application window:

Part No	Description	To Order	Mgt Max Qty	On Hand	Planned Order	On Order
123	Part 123	1	6	30	20	0

Blanket Orders

EAM Purchasing

Blanket Orders

Blanket Orders – Overview

EAM Purchasing

Blanket Orders – Overview

- BO overview
 - What is a blanket order?
 - Business requirements and benefits
- Setup
- Approvals
- Releases
- Additional benefits

Blanket Order Overview

EAM Purchasing

Blanket Order Overview

What is a blanket order (BO)?

A **blanket order** is a **negotiated order** a customer makes with its supplier that is expected to have multiple releases over a defined period of time, often negotiated to take advantage of predetermined pricing. A BO is normally used when there is a recurring need for parts, goods, or services.

Let us first discuss what a blanket order is and how it differs from a standard purchase order. Then, the guide describes how to set up a blanket order in EAM.

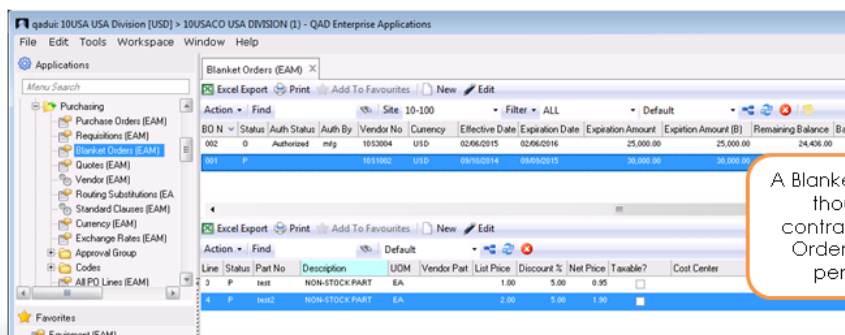
By definition, a **blanket order** is a **negotiated order that** the customer makes with its supplier that is expected to have multiple releases over a period of time, often negotiated to take advantage of predetermined pricing. A BO is normally used when there is a recurring need for parts, goods, or services.

Blanket Order Overview

EAM Purchasing

Blanket Order Overview

- Business requirements and benefits
 - Manage negotiated price schedules from a central contract
 - Enforce spending controls by setting expiration date and value
 - Track changes to contracts for audit compliance



BO N	Status	Auth Status	Auth By	Vendor No	Currency	Effective Date	Expiration Date	Expiration Amount	Expiration Amount (B)	Remaining Balance	Bal
002	0	Authorized	mtg	1013004	USD	02/06/2015	02/06/2016	25,000.00	25,000.00	24,436.00	

Line	Status	Part No	Description	UGM	Vendor Part	List Price	Discount %	Net Price	Taxable?	Cost Center
3	P	ISS	NON-STOCK PART	EA		1.00	5.00	0.95		
4	P	ISS	NON-STOCK PART	EA		2.00	5.00	1.90		

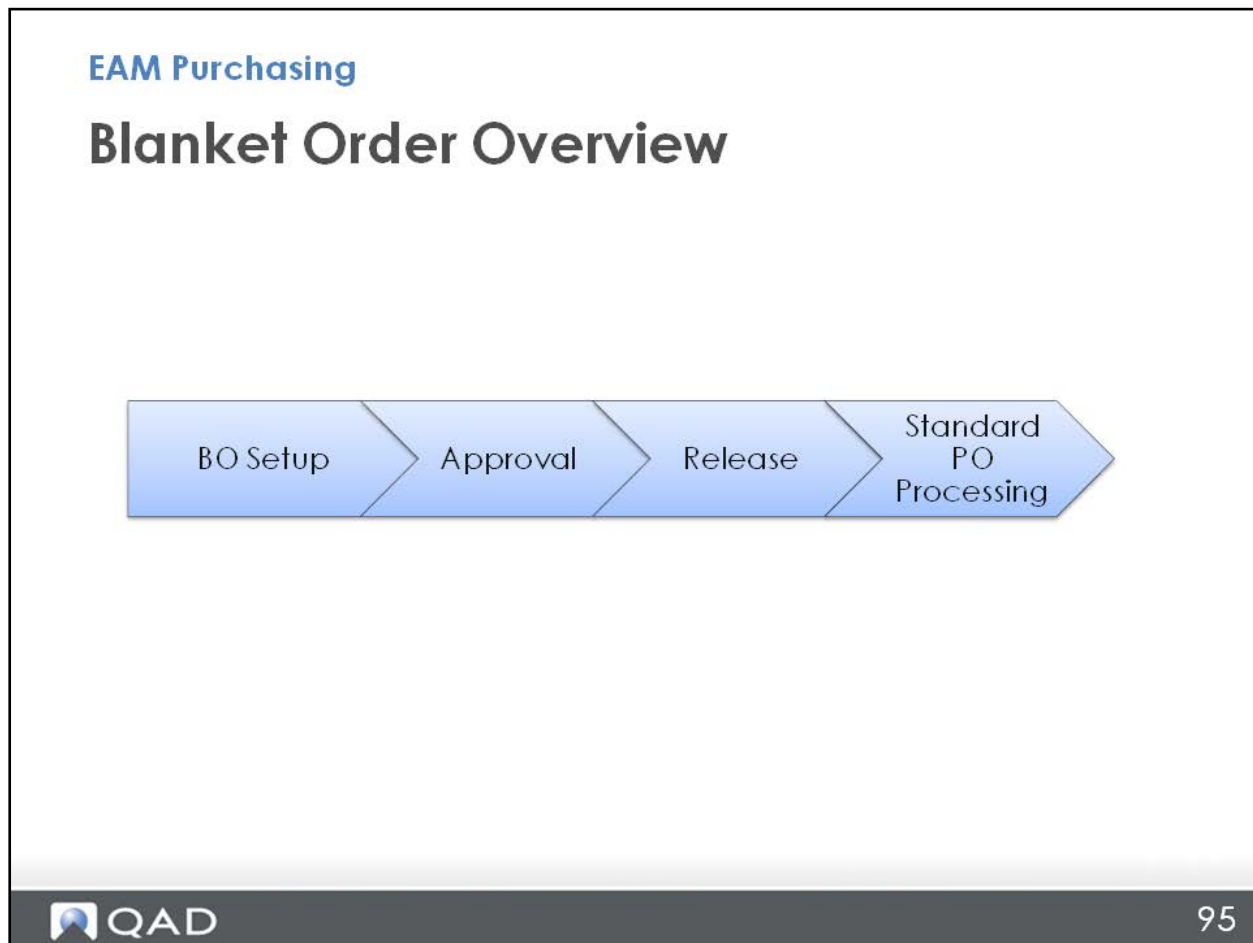
A Blanket Order can be thought of as a contracted Purchase Order issued over a period of time.



Blanket orders add value to the buyer by allowing the buyer to process orders efficiently for high volume items. It gives buyers a way to capture negotiated prices with suppliers and to control spending by having the system automatically expire the order, based on the monetary value and/or date.

Blanket orders also allow buyers to track changes to contracts for efficient audit compliance.

Blanket Order Overview



This section introduces the following concepts:

- Setting up a BO header
- Setting up BO lines
- BO approvals
- BO releases

The process flow in the slide illustrates what the BO process.

Blanket Order: Set Up Header

EAM Purchasing

Blanket Order: Set Up Header

BO Setup

BO Approval

BO Release

Standard PO Processing

Create new Blanket Order

Select Vendor

Select Expiration Date

Enter Expiration Amount

Enter a Discount % and Buyer

96

Creating a blanket order is simple. A buyer selects the vendor and then enters the expiration date, expiration amount, which is a monetary value, and any discount percentage that can be applied. This discount percentage is automatically added to the items being purchased, but can be overwritten if necessary.

Much of the blanket order detail defaults from the site configuration and vendor record.

Blanket Order: Set Up Line Detail

EAM Purchasing

BO Setup
BO Approval
BO Release
Standard PO Processing

Blanket Order: Set Up Line Detail

The screenshot shows the 'Blanket Order: Set Up Line Detail' form. The 'Part Info' section includes:

- Source Site: USA-1
- Part No: 00999 (highlighted with a red box)
- UOM: EA (highlighted with a red box)
- List Price: 125.0000 (highlighted with a red box)
- Discount %: 0.2000 (highlighted with a red box)
- Net Price: 124.75

Create new line

↓

Select a part

↓

Enter a list price

↓

Update Discount % if necessary

- Select a stock part or enter a non-stock part number

97

For each line on a blanket order, you select the part, quantity, and list price. If a discount was entered on the blanket order header, it is populated here, but can be changed for this particular line. Once the list and discount are entered, a unit price is calculated.

Blanket Order: Approvals

EAM Purchasing

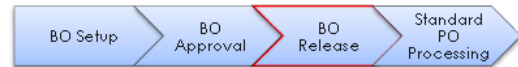


Blanket Order: Approvals

- Separate approval groups from standard POs
- Approval limits set on the user record
- The following cause an authorized BO to require re-approval
 - Reopening a canceled BO
 - Adding a line
 - Modifying the expiration date
 - Modifying the expiration amount
 - Note: A configuration setting exists to determine if buyer limit tolerances should be applied to BOs

Blanket Order: Release

EAM Purchasing



Blanket Order: Release

- The BO site configuration setting determines whether the BO release generates a Planned or Ordered PO

Blanket Orders

Status on Release

Planned

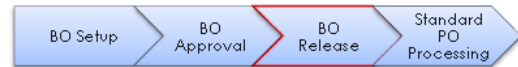
Ordered

Planned

- Release Number
 - The release number replaces the PO number
 - Format: BO Number – Release Iteration

Blanket Order: Release

EAM Purchasing



Blanket Order: Release

- Override accounting
 - Allows the individual doing the release to change the expense accounting for all lines on that particular release.

Release?	Line	Part No	Description	Location	Due Date	Qty	UOM	List Price	Disc %	Net Price	Cost	Can release?	Reason
<input checked="" type="checkbox"/>	1	GENPRINT 014	BUSINESS CARDS	1-A-2-B	03/25/00	40	EA	15	5	14.25	576.00	yes	
<input type="checkbox"/>	2	GENPRINT 015	LETTERHEAD ENVE...	1-A-2-B	03/14/00	0	EA	2.5	5	2.38	0	yes	

Vendor No: 1051002 Blanket Order: 001 Balance: 30,000.00 Total Cost: 570.00 Available: 29,430.00 Min Ord Amt

Ship To: 10-100

Override Expense Accounting

WD No: 0

Project No: []

Expense Site: 10-100

Expense Type: Expense

Acct No: 5020

Equip No: AC0005

Job No: []

Cost Center: Adm

Sub Acct No: []

Contractor?

Blanket Order: Release

EAM Purchasing



Blanket Order: Release

- BO requisitions
 - Requisitions created due to a BO release have a description indicating the origin of the request

Req No	PO No	RFD No	Statu	Description	Auth Status	Auth By	Date Due	Vendor Name	Cost Center
12	1004	0	P	Release of BO 001	Authorized	prastins	02/02/2015	Bridgeville Industries	Adm
11	0	0	P	Contract Services for Building Repairs	Routing			Bridgeville Industries	MFG
10	0	0	P	Replenish Bearing Order	Routing			Heron Surgical Supply	MFG
9	0	0	P	Parts for Work Order	Routing			Bridgeville Industries	MFG
8	1003	0	C	Motor - 25HP	Authorized	rharris		Taylor & Fulton Fruit Co.	MFG
6	0	2	P	Enclose the stores room with key less do			11/06/2014	Bridgeville Industries	MFG
5	0	0	P	Stock Run No 1	Authorized	DHARDIMON	10/11/2014	Heron Surgical Supply	MFG
4	1002	0	X	Stock Run No 1	Authorized	kgreen	10/11/2010	Hampton Electronics	MFG
3	1001	0	C	Contractor service for Conveyor PM	Authorized	rharris		Hampton Electronics	WC01
1	1000	0	C	Parts for Conveyor PM	Authorized	kgreen	09/08/2010		MFG

Requisitions created due to a BO release have a description that indicates the origin of the request.

Blanket Order: Additional Benefits

EAM Purchasing

Blanket Order: Additional Benefits

- Integrated with Stock Replenishment Processing
 - If a part falls below its reorder point and a valid BO exists, a BO release is created rather than a standard req/PO when stock replenishment is run
- Mandatory fields
- Data load program allows legacy BOs to be loaded via EAM Data Load Utility

Blanket Order: Additional Benefits (cont)

EAM Purchasing

Blanket Order: Additional Benefits (cont)

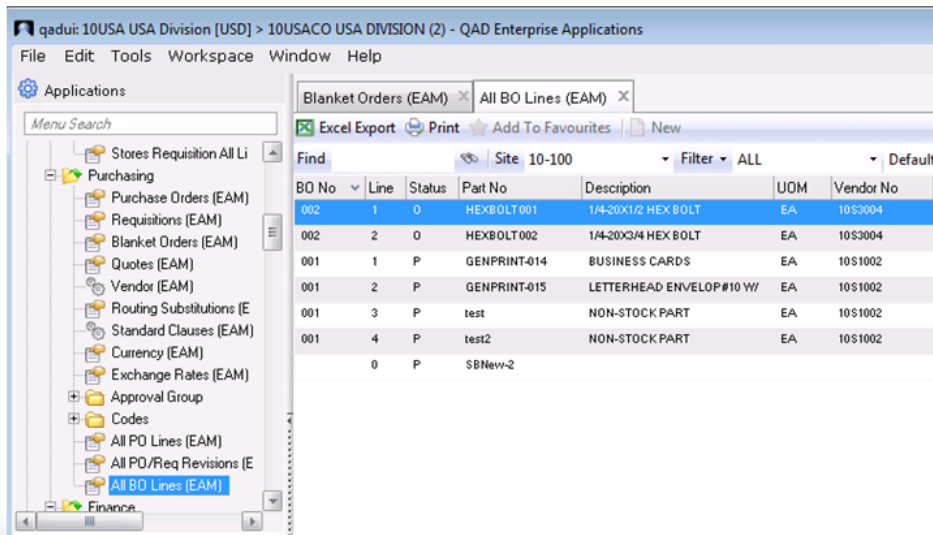
- Revisions
 - Change tracking
- Notifications
 - When a line is modified, a system generated e-mail is sent to the buyer notifying the buyer of the change

All BO Lines Browse

EAM Purchasing

All BO Lines Browse

- Site-specific browse
- Allows reporting across all BO lines



Purchasing – Review

EAM Purchasing

Purchasing – Review

- Use Purchasing to set up and create requisitions and purchase orders, and to replenish stock.
- Globally create work orders to save time.
- EAM uses an automated approval process integrated into the mail system.
- EAM sends GLs and vouchers to QAD ERP when parts are received.
- The Return to Vendor process is by Receiver.
- Stock replenishment
- Blanket orders

CHAPTER 5

Project Controls

Project Controls



The banner features a large white area with the text "Project Controls" in a bold, dark font, followed by "EAM 2015" in a smaller font. Below this text are three images: a man and a woman in business attire looking at a computer screen, a close-up of red cables being processed by a machine, and a long aisle in a warehouse with high shelves. At the bottom left is the QAD logo, and at the bottom right is the slogan "Our Passion. Your Advantage." in a light grey font.

The business space around EAM Project Controls is a unique niche. Project Controls is often referred to as project accounting, though the engineering and operations groups are more comfortable with the term project controls to describe what they do. Also, using the term project controls helps to avoid confusion between what EAM does and what a fixed asset accounting solution does.

In this section, we will review previously covered business space concepts and add in some additional information.

Project Controls – Overview

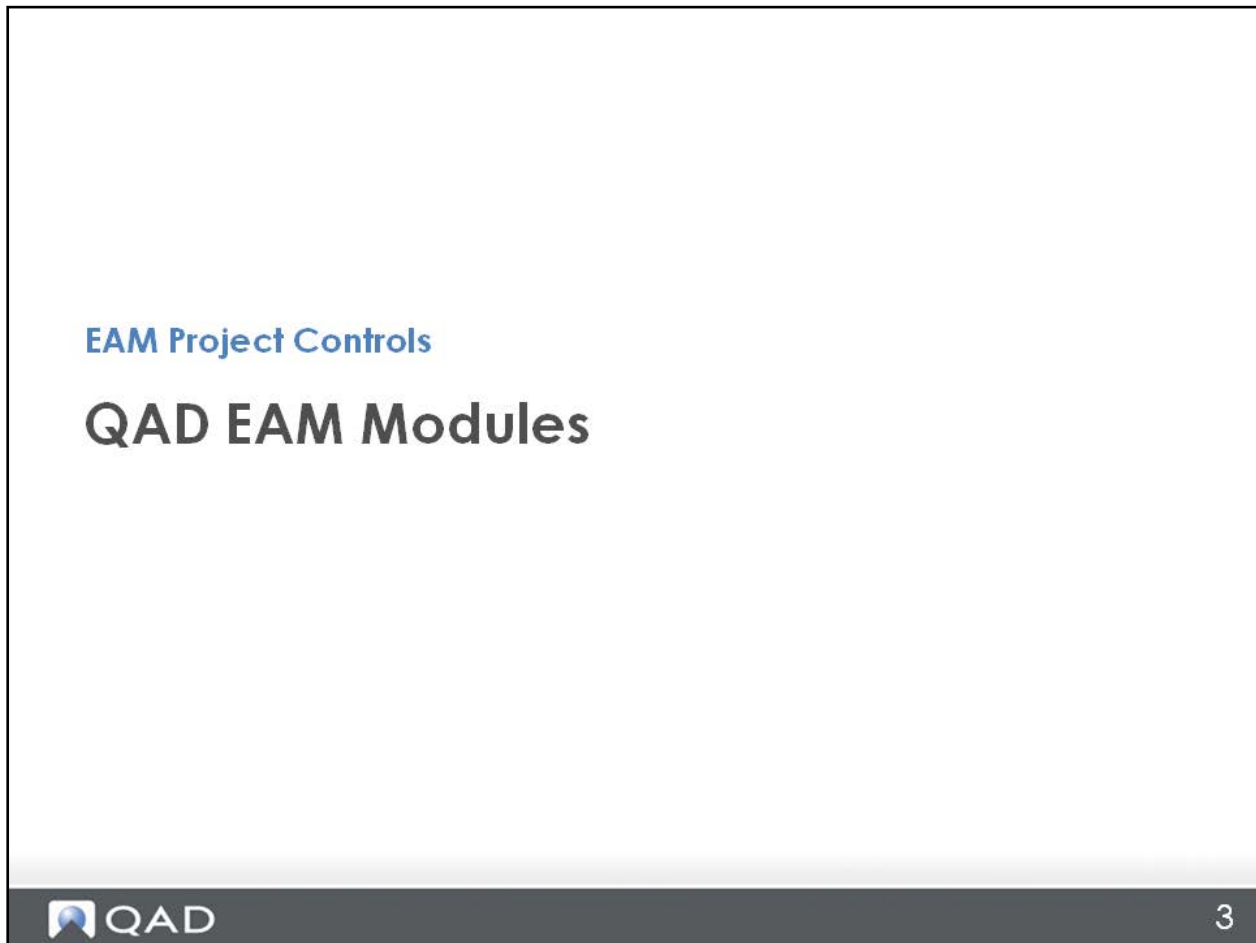
EAM Project Controls

Project Controls – Overview

- EAM modules
- Key concepts
- EAM projects setup
 - Configuration
 - Approval groups
- Introduction to the Project Accounting Process
 - Plan
 - Project download/setup
 - Approve
 - Authorization
 - Work
 - Spend
 - Track
 - Reporting
 - Capitalize assets
 - Complete
 - Project closure

Supporting documentation for EAM includes the *QAD Enterprise Asset Management User Guide*, available on <http://documentlibrary.qad.com/>. This guide includes cross-reference sections of the UG, when applicable.

QAD EAM Modules



Now that we have covered general navigation, maintenance, inventory, and purchasing, we are now going to look at project controls.

QAD EAM Overview – Modules

EAM Project Controls

QAD EAM Overview – Modules

- Maintenance
 - Equipment efficiency
 - Plant reliability
- Inventory
 - Right size MRO/indirect inventory
 - The right parts when you need them
- Purchasing
 - Control MRO/indirect spend
 - Comply with corporate financial manual approvals
- **Project Controls**
 - **Manage project spend**
 - **Track true acquisition cost of assets**

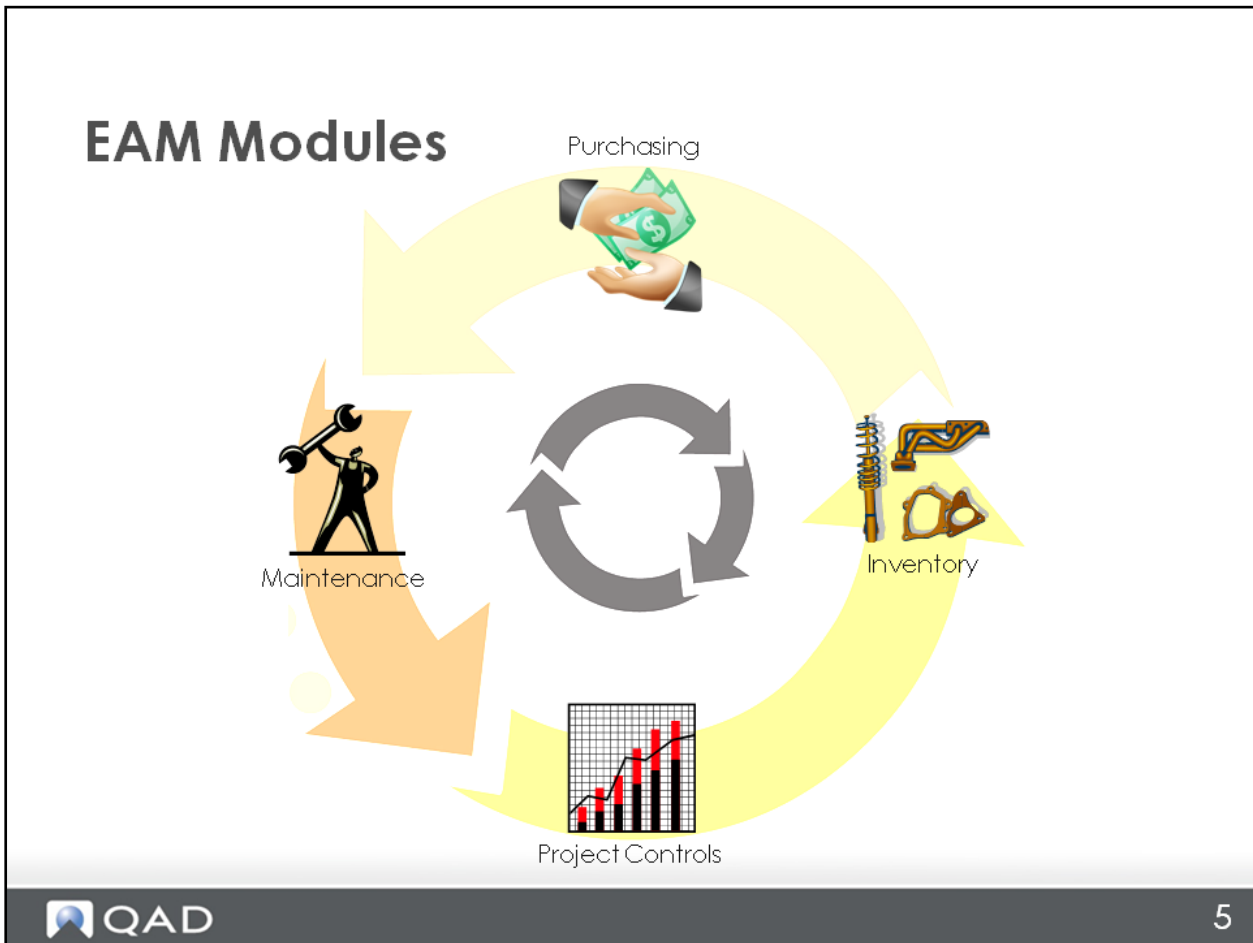


As you continue through this guide, it is important to keep in mind that EAM has four major modules, or areas of operation, as well as to keep in mind how each area contributes to a facility's overall reliability, lean initiatives, and cost controls. Understanding the value proposition for each area and how they work together will assist you in designing the proper solution for any business need around EAM.

Notice how each of these modules addresses business drivers. As you begin to link business drivers with EAM functionality, you will better understand the overall domain space of EAM.

This section of training pertains directly to project controls.

EAM Modules



- Purchasing
- Inventory
- Maintenance
- Project Controls

These modules are the portals with which users interact to accomplish their daily tasks. Notice how, in this slide, each of these modules forms a piece of a complete circle. While certain elements of EAM can be implemented without implementing others, EAM is at its best when all four modules work together to form a true Enterprise Asset Management solution.

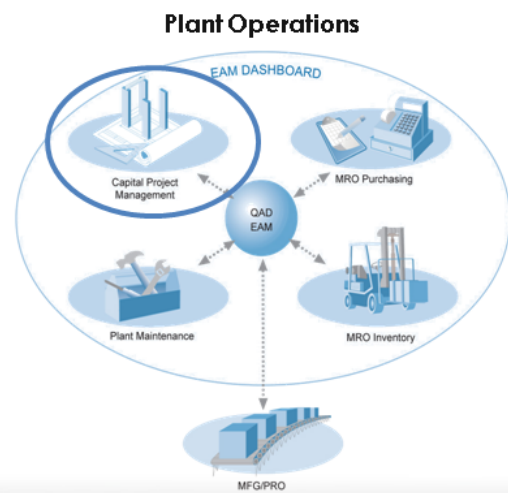
The various sections of this EAM training guide explore each of these modules and explain the business space of each.

Project Controls

EAM Project Controls

Project Controls

- Manage project accounting to consistently deliver on time and on budget
- Track acquisition costs
- Monitor and control spending
 - Against budget
 - By project, job, or sub-job
 - Reallocate budgets from one project to another
- Track scheduled payments and reimbursements
- Capitalize assets



6

Project Control, also known as Project Accounting, is one of the most visible modules in EAM, often all the way up to corporate leadership. It is also one of the best-selling features of EAM.

Why is that? Companies use projects to manage budgets on all types of major expenditures, and the ability to deliver on these projects on time and on budget is critical to the profitability of a business. Going over budget or missing deadlines means, in the simplest terms, losing money.

For this reason, businesses strive to improve the controls, reporting, and traceability of their projects. EAM Project Controls has been designed to be the tool a company uses to accomplish these goals.

The Project Controls module is located under the Finance menu in EAM. During a facility's lifespan, engineering and maintenance groups manage facility and equipment through design, construction, start-up, improvements, additions, transfers to another facility, shut down, and retirement. All of these requirements define a project.

Project Controls users use EAM to plan activities and costs, to collect actual costs, to track scheduled payments/reimbursements, and to create equipment to put into service. During this process, EAM collects acquisition costs, as opposed to the cost of ownership discussed so far.

High-level goals achieved through use of project controls include the ability to:

- Manage capital projects to consistently deliver on time and on budget.
- Move new equipment into production as soon as possible.
- Monitor and control spending against the budget or reallocate budgets from one project to another.

Who uses EAM Project Controls?

EAM Project Controls

Who uses EAM Project Controls?

- Finance
- Engineering
- Maintenance
- Inventory
- Purchasing
- Quality
- Fixed Asset Accounting
- Even sometimes – Manufacturing



As with Purchasing, the Project Controls module is used by individuals in many of the same roles that you have seen in previous modules plus some new roles such as project engineering, quality, fixed asset accounting, or even manufacturing leadership itself. As you identify requirements around project controls, keep in mind that all of the people behind these roles will have an opinion about the project controls functionality they need to do their jobs more effectively.




Project Controls – Key Concepts

Project Controls – Key Concepts

Key Concepts – Three Types of Projects

EAM Project Controls

Key Concepts – Three Types of Projects

- Capital  **Key Characteristic: Results in new assets**
 - Profit enhancements
 - Increase capacity
 - Replacement
- Expense  **Key Characteristic: No assets created**
 - Annual rebuilds
 - Marketing/legal/etc.
- Customer-Funded  **Key Characteristics:**
 - Tooling
 - Prototype
 - Very common in Automotive Verticals
 - Customer owns Asset
 - Customer pays you to build new production line to produce a part for them
 - Customer reimburses you for the cost
 - When project is complete, the new equipment stays at your facility, BUT you do not own the production equipment – the customer does

EAM controls the following types of projects:

- Capital Projects

Capital projects usually result in a new asset or group of assets that must go into the company books. The capital used in these projects comes from money that is held aside for investment purposes such as increased holdings or assets. In privately held companies, capital requests typically go through stringent reporting and approval processes, such as a return on investment analysis, and must be approved by the Board of Directors.

- Expense Projects

Expense projects usually involve previously anticipated operational costs, or “costs of doing business.” An expense project does not result in a new asset. Expense projects include refinishing a parking lot or painting a building. For instance, a plant has a summer shutdown. During that summer shutdown, the maintenance staff does a complete facility overhaul. An expense project tracks what must be done, who is doing what, what work orders have been assigned, and in the end, accumulates the overall costs of doing the overhaul. The next year, maintenance can streamline the preparation process by copying the expense

project from last year, creating a new one, and creating all the work orders, all the purchase requests, and all the records associated with the original project.

- Customer-Funded Projects

Customer-funded projects are those in which a customer reimburses you to build a new production line in order to produce parts for the customer in the future. Customer-funded projects are most common in the automotive industry, but can be found in other verticals as well. One key attribute of this type of project is that, while you may be spending capital money, that cost will be reimbursed and you will not own a new asset at the end of the project. Instead, the customer owns the equipment, though it may reside physically inside your own facility.

- ETO (Engineer to Order) Projects - NOT IDEAL FOR EAM

ETO projects are similar to production, and in fact, result in a product that is sold and shipped to a customer. What makes an ETO project unique from production though, is that the parts being sold often are produced to customer-specific requirements and frequently include down-payments and subsequent scheduled payments for reimbursement. ETO projects are different from customer-funded projects at the end of the project life cycle, when the equipment built is sent to the customer's location for installation.

The advantages of project accounting are:

- Traceability. Group together all work orders that result in the overall cost calculation for this event.
- Reusability. Copy the project and recreate vital records associated with it. Save time and manpower for the same operation the next time.

Key Concepts

EAM Project Controls

Key Concepts

- Authorized spend
- Req project limit
- Margin approvals
- Allocations
- Spend at this level
- Warning limit
- Refresh
- Capitalize asset
- Lock

Key Concepts – Key Features

EAM Project Controls

Key Concepts – Key Features

- Fully integrated with other EAM modules
- Real-time cost is reflected and broken down by each step of the spend process
- Spend can be limited to the jobs
- Warning limits allow notification when spend reaches a specified amount & can be updated through the project
- Projects are included in the GL transactions
- Assets can be capitalized from EAM
- Project reporting can be done from EAM or QAD
 - Job reporting can only be done in EAM

Key Concepts – Costs Collection

EAM Project Controls

Key Concepts – Costs Collection

- Purchasing
 - External materials
 - Subcontractor services
- Labor
- Internal materials
- Manual GL

Note: All costs applied to a project must be processed in EAM in order to update project spend, available funding, and any EAM reporting



EAM collects purchasing (materials and services), labor, inventory, and manual GL's costs against the project/job, similar to the way it collects work order data. However, the project is like a super work order in the reporting, controls, and levels of traceability it provides over those of a regular work order.

EAM Project Controls Set Up Process

EAM Project Controls

EAM Project Controls Set Up Process

Project Controls – Configuration

EAM Project Controls

Project Controls – Configuration

- Registry settings
 - Business segment format
 - Job format
 - Refresh spending/PO order
- Domain settings
 - GL options for project number
 - Reopen Project? flag
- Site settings
 - Approval options
 - Calculation options
 - Acquisition options
 - Req Proj Limit?



EAM has domain and site settings associated with project functionality. At the domain level, you can define whether closed projects can be reopened and how project-related GL transactions are sent to ERP.

As usual, default accounting is defined at the site level. You also set electronic approvals for projects at the site level.

The MFG/PRO Interface settings drive whether EAM sends financials to ERP.

The Business Segment and Job fields, which are configurable, are unique to a project. Both fields are 15 characters in length and can be divided into sections to provide a hierarchical structure. How you define the job format in registry settings, for example, determines how many job levels you can have on your projects.

Project Controls Setup – Key Settings

EAM Project Controls

Project Controls Setup – Key Settings

- User ID
 - Project approval limits
 - Two options for project requisition approval routing
 1. Standard requisition: capital & expense
 2. Project requisition

Req Capital
&
Req Expense

Project Req

- Security (Role-based)
- Project approval groups (based on dollar spend)
- Project requisition approval groups
- Project approvals
 - Project margin approval groups
 - Project budget approval groups
- Record level control – OWNER groups

To support project and project requisition approvals, you must define these limits on the appropriate users' IDs and set up project and project requisition approval groups.

In addition, proper security roles must be created and associated to the appropriate user IDs. Particularly with project controls, some areas are tightly controlled, such as the ability to reopen a closed project. Often you need separate roles for project managers, engineers, and finance.

A final consideration in projects is the concept of owner groups. As you learned in Introduction to Maintenance, the Owner field is a form of a record-level security. If the Owner field is used to control who can modify which projects, you should use owner groups instead of placing the name of a single individual in that field.

Margin Approvals

EAM Project Controls

Margin Approvals

- Margin Approval allows project managers to authorize projects based on projected profitability **for customer-funded projects**
- Project approvals based on profitability vs. total cost/budget
- Approval groups (users) are routed based on margin percentage to approve
- The lower the forecasted margin, the higher in the organization the project needs to be approved



Margin Approvals bring value to customers by giving project managers the ability to authorize projects based on projected profitability rather than only on costs versus budget.

This is a major benefit for the automotive industry.

Margin approval is an alternative approach when authorizing projects that are customer funded. With customer-funded projects, the manufacturer's customer agrees to reimburse the manufacturer a specified amount against the cost of the project. In many cases, manufacturers expect to make a profit against the project. In these situations, the manufacturer may want to evaluate the project's financial performance based on the projected margin or profit.

The higher the total cost or the lower the margin, the higher in the organization the project needs to be approved. This capability enables customers to choose to authorize projects based on the forecasted margin. In addition to approving projects based on profitability, project managers can monitor actual profitability through standard reports.

Project Controls Setup – Codes

EAM Project Controls

Project Controls Setup – Codes

- Project level
 - Business segments
 - Project status
 - Project types
- Job level
 - Job types
- Activity codes
- Fixed asset interface
 - Fixed asset location
 - Fixed asset class
- Write off reason codes

Fixed asset interface – location and class codes interface with the QAD ERP.

Write Off Reason Codes are used when the customer does not reimburse for costs.

Project Accounting

EAM Project Controls

Project Accounting

- EAM project code matches project number from QAD ERP
 - Can be downloaded – dependent on finance requirements
- All project management is controlled in EAM
- Financial transactions feed to QAD ERP
 - Purchase receipts (material and contract labor)
 - Material issues from EAM inventory
 - Labor transactions
 - Other (Manual GLs, such as interest expense)
- Shared tables/information

<u>QAD ERP application</u>	<u>EAM</u>
Project Master	Project

Project/Job Setup and Controls

EAM Project Controls

Project/Job Setup and Controls

- Projects
 - Project-level budget
 - Project authorization
 - Special requisition authorization by project
 - Audit traceability
- Jobs
 - Work breakdown to smaller, more controllable components
 - Parent/child hierarchy
 - Spend control, lock, and close functions at job level
 - Job-level requisition approval groups



If you have worked with a product like Microsoft Project, you may be familiar with the concept of a work breakdown structure. This structure breaks a large project into subtasks, which can also have subtasks, many layers deep. This structure allows for reporting progress at the lowest task level, which then rolls up the structure to provide reporting on higher levels.

The same concept applies to the way in which EAM projects can be set up, except that, in EAM, tasks and subtasks are known as jobs. Budgets can be controlled at both the project and job levels; special requisition approval routing can be defined at the project and job levels; and each level has similar controls around locking and closing.

The project level in EAM provides more robust analysis data, but, in most cases, you can drill down into the data to the actual job or record (such as work order or purchase order) of interest.

Project Accounting Features

EAM Project Controls

Project Accounting Features

- Project controls
 - Record-level security
 - Job hierarchy
 - Enables project engineers to break a project into smaller, more controllable components
 - Project authorization
 - Restricts internal and external spending until the project has been electronically authorized
 - Lock (stop spending on) a project or job
 - Prevents further spending against the job while final receipts against open purchase orders are processed
 - Audit traceability
 - Asset Capitalization

Project Accounting Features

EAM Project Controls

Project Accounting Features

- Project administration
 - Copy project
 - Reduce the effort of repeatedly creating similar projects
 - Budget reallocation
 - Enables budgeted dollars to be reallocated from one project to another
 - Create equipment from project
 - Bridges the process of turning over the asset to operations

Project Accounting Features

EAM Project Controls

Project Accounting Features

- Project reporting
 - Consolidate projects based on business segment (REQUIRES CUSTOM REPORT or THIRD-PARTY REPORTING SYSTEM)
 - Business segment can represent a plant or group of plants. With customer-funded projects, the business segment may be a client.
 - Report spending by fiscal year and lifetime
 - EAM Project Accounting reports

Project: Spending Allocation

EAM Project Controls

Project: Spending Allocation

- Control spending at the job
- Provide visibility of allocated funds across jobs
- Enable additional funds to be allocated

The screenshot shows the 'Funding' section of the EAM Project Controls interface. A red circle highlights the 'Action' menu, which includes options like 'Details', 'Cost', 'Lookup', and 'Def'. The 'Funding' section displays various financial metrics such as 'Orig Estimate', 'Allocated', 'Unallocated Balance', and 'Total Spent'.

The Job Allocation viewer allows me to see funding allocation across all jobs



Job No	Description	Available From P...	Allocated	Allocated To Chi...	Unallocated
100		300000	50000	50000	0
10001		0	25000	0	25000
10002		0	25000	0	20000
200		300000	50000	0	50000
20001		50000	0	0	0

Project Spending Allocation allows finance or an engineer to control spending down to the job level. Consequently, as funds are allocated to a job, EAM only allows up to that allocated amount to be spent against the job.

Using the Job Allocation viewer, you can easily view where the funds have been allocated across all jobs for a specific project. This feature allows for a quick view so that updates or changes can be made more easily.

Project: Spending Allocation

EAM Project Controls

Project: Spending Allocation

The screenshot displays the 'Project: Spending Allocation' interface. The 'Requested Funding' field is highlighted in red, showing a value of 500,000.0000. The 'Authorized Funding' field is also highlighted in red, showing a value of 500,000.0000. The 'Net Budget' is 0. The 'Orig Estimate' is 500,000.0000, and the 'Warning Limit' is 400,000.0000. The 'Use Allocations?' checkbox is checked. The 'Spend at this Level?' checkbox is unchecked. The 'Uncapitalized Amt' is 0. The 'Funding Estimate' section shows 'Est Net Avail Funding' as 500,000. The 'Spending Estimates' section shows 'Date/Time' as 05/17/2012 03:56, 'Spending Est' as 0, '% Spending Est' as 0, and 'Over Spend Est' as 0. The 'Material/Contract Cost' section shows 'Int Mtrl Cost' as 0, 'Received' as 0, and 'Ext Mtrl Cost' as 0. The 'Planned Internal' is 0, 'Committed' is 0, and 'Auth Purchases' is 0. The 'Est to Complete' is 0, 'Bal to Commit' is -50,000, and '% Utilized' is 0. The 'Allocated to Jobs' is 550,000, and the 'Unallocated Balance' is -50,000. The 'Total Spent' is 0, and the 'Total Spent At This Level' is 0.

Flowchart steps:

- Request Funding
- Route for approval
- Authorized Funding
- Allocate to Jobs

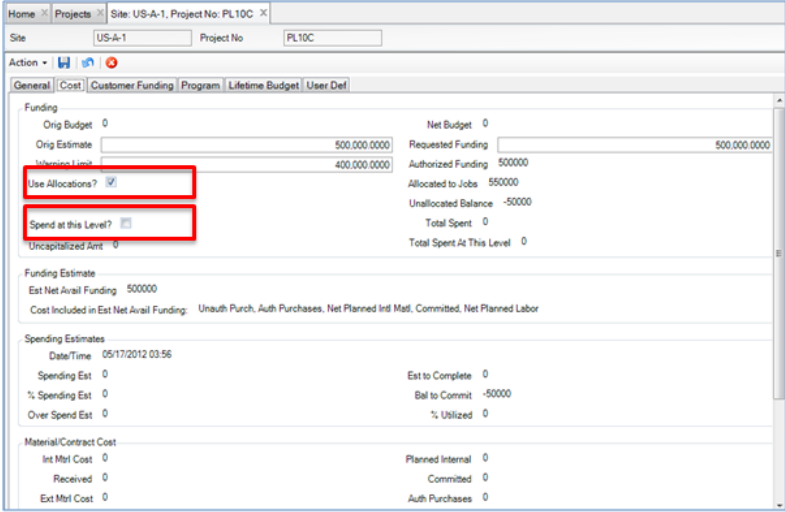
QAD 24

On the project header, you can control cost by initiating an approval for the Requested Funding amount. Once authorized, this funding amount can be allocated to the jobs. If further funding is required, you update the Requested Funding amount again and request approval. The additional approved funds then are available for further allocation.

Project: Spending Allocation

EAM Project Controls

Project: Spending Allocation



Use Allocation:

- Enables spending control at jobs

Spend at this Level:


- Allows costs to be charged at the project

Use Allocation:

- Enables spending control at jobs

Spend at this Level:

- Allows costs to be charged at the project


25

A few controls are included on the project header record to add flexibility so allocation is not a required feature.

If the Use Allocations? field is selected, funds are allocated to jobs. At the project header level and at the job level, there is another setting called Spend at this Level?. If you select this setting, you can transact and charge cost to the overall project. If the setting is not selected, as in this example, you must direct cost to a job and not to the project.

The Spend at this Level? option is also available at each job, providing you with even tighter control on charging costs to jobs. There may be a parent job but only a specific lower-level job or child can have cost charged.

Project: Spending Allocation – Job

EAM Project Controls

Project: Spending Allocation – Job

Home Projects Project No: PL10C, Site: US-A-1, Job No: 01

Project No: PL10C Site: US-A-1

Job No: 01

Action: [Icons]

Details Cost User Def

Funding

Orig Estimate	250,000,000	Avail From Parent	500,000
Allocated			250,000,000

Allocated to Children: 300,000

Spend at this Level?

Total Spent: 0

Warning Limit: 0.0000

Fund Estimate

Est Net Avail Funding: 250,000

Cost Included in Est Net Avail Funding: Unauth Purch, Auth Purchases, Net Planned Int'l Matl, Committed, Net Planned Labor

Spending Estimates

Spending Est: 0.0000 Est to Complete: 0

Material/Contract Cost

Int Mtrl Cost	0	Planned Internal	0
Received	0	Committed	0
Ext Mtrl Cost	0	Auth Purchases	0
Cont Cost	0		

Avail from Parent

↓

Allocated

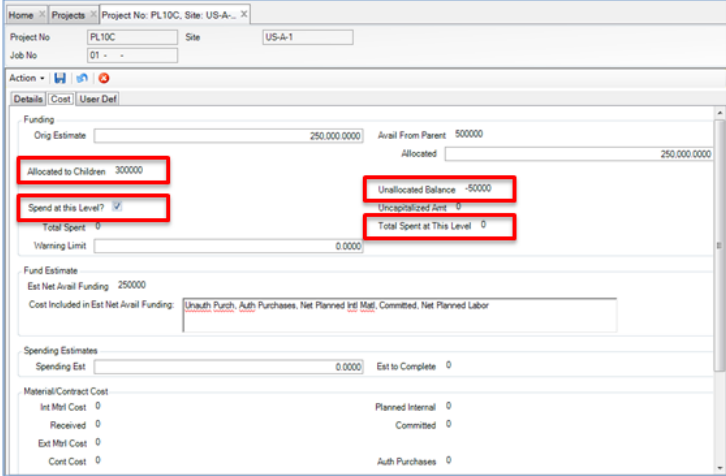
QAD 26

Looking at the detail of a job, you see that EAM populates what is currently available from the parent. EAM displays the funding amount that has not been consumed or previously allocated. You enter the amount to allocate to this job in the Allocated field.

Project: Spending Allocation – Job

EAM Project Controls

Project: Spending Allocation – Job




Allocated to Children:
-Amount previously allocated to children

Spend at this Level:
-Allows costs to be charged to the job

Unallocated Balance:
-Available to be allocated

Total Spent at This level:
-Amount spent on this job


27

Still looking at a job, the field **Allocated to Children** is a system-calculated field. When a job is a parent with associated children, then you can see at the highest level how much money has been allocated down to lower-level jobs.

The **Unallocated Balance** is the funding available to be further allocated.

You can control spending at the job level by selecting or clearing the **Spend at this Level?** field, as you can on the project header. If **Spend at this Level?** is cleared, costs must be directed to a job and cannot be directed only to the project. This is especially helpful when controlling cost for a future asset.

Total Spent at This Level is the last highlighted field. This is another system-calculated field that tracks how much has currently been spent against the project or specific job level. This value is checked against the allocated value to control how future cost is charged at any given level.

Project: Job Allocation View

EAM Project Controls

Project: Job Allocation View

Job No	Description	Available From P...	Allocated	Allocated To Chi...	Unallocated
100		300000	50000	50000	0
10001		0	25000	0	25000
10002		0	25000	0	20000
200		300000	50000	0	50000
20001		50000	0	0	0

The Job Allocation viewer allows me to see funding allocation across all jobs.

QAD 28

Imagine that you have allocated funds for a project that has multiple levels of jobs. Instead of having to view each job in detail one at a time, an action called Job Allocation viewer is available that allows you to quickly see where the funds are allocated across all jobs for a specific project.

Fixed Asset Integration

EAM Project Controls

Fixed Asset Integration

- Business requirements:
 - The ability to create an asset from a job
 - The ability to include trailing charges
 - Add FA's Class and Location fields to EAM projects
 - Ability to enter a Fixed Asset ID
 - Ability to enter a Service Date
 - Have visibility into capitalized and uncapitalized amounts



Next, let us examine the integration between EAM's Project Accounting module and QAD's Enterprise Edition Fixed Asset module. For projects that use jobs to represent the asset that is being created, you can create an asset and provide the capitalizing function from the job itself. This aids data integrity as specific data from the job, such as the fixed assets class and location codes, is automatically populated for you when you choose this action.

The Use Job Allocation and Spend at this level features ensure that the cost of the asset is driven to the right job by controlling where cost can be charged. This, in turn, ensures that the full value of the asset is contained to that job.

The service date is also added in the process. If any charges occur after the initial capitalization, you can add cost to the existing fixed asset and send it to the Fixed Asset module. There are also several other features added to Fixed Asset Integration.

Capitalize New Job Amount

EAM Project Controls

Capitalize New Job Amount

Job No	Description	Status	Locked?
100- -		NN	<input type="checkbox"/>
100-01- -		NN	<input checked="" type="checkbox"/>
200- -		NN	<input type="checkbox"/>
200-01- -		NN	<input type="checkbox"/>

30

Using an action at the job level, the Capitalize New Job Asset screen automatically populates the Fixed Asset ID, Description, Class, and Location. Class and Location are data driven from QAD's EA Fixed Asset module and are used to determine how the asset is depreciated. You enter the Service Date and New Capitalized Amount. As you see in this screen, EAM tracks the total spent against this job, Capitalized Amount, which is what has already been capitalized for this asset, and Uncapitalized Amount, which is the amount that has currently been charged to the job but not yet capitalized.

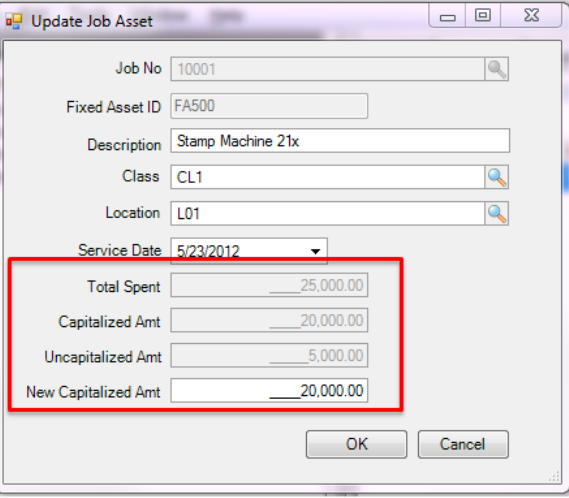
In the example, the user is ready to capitalize \$20,000.00 out of the Total Spent value of \$25,000.00. This is entered in the New Capitalized Amount field.

Only one asset can be created from a single job. If a project produces multiple assets, then they must be initiated by multiple jobs.

Modify Job Capitalized Amount

EAM Project Controls

Modify Job Capitalized Amount

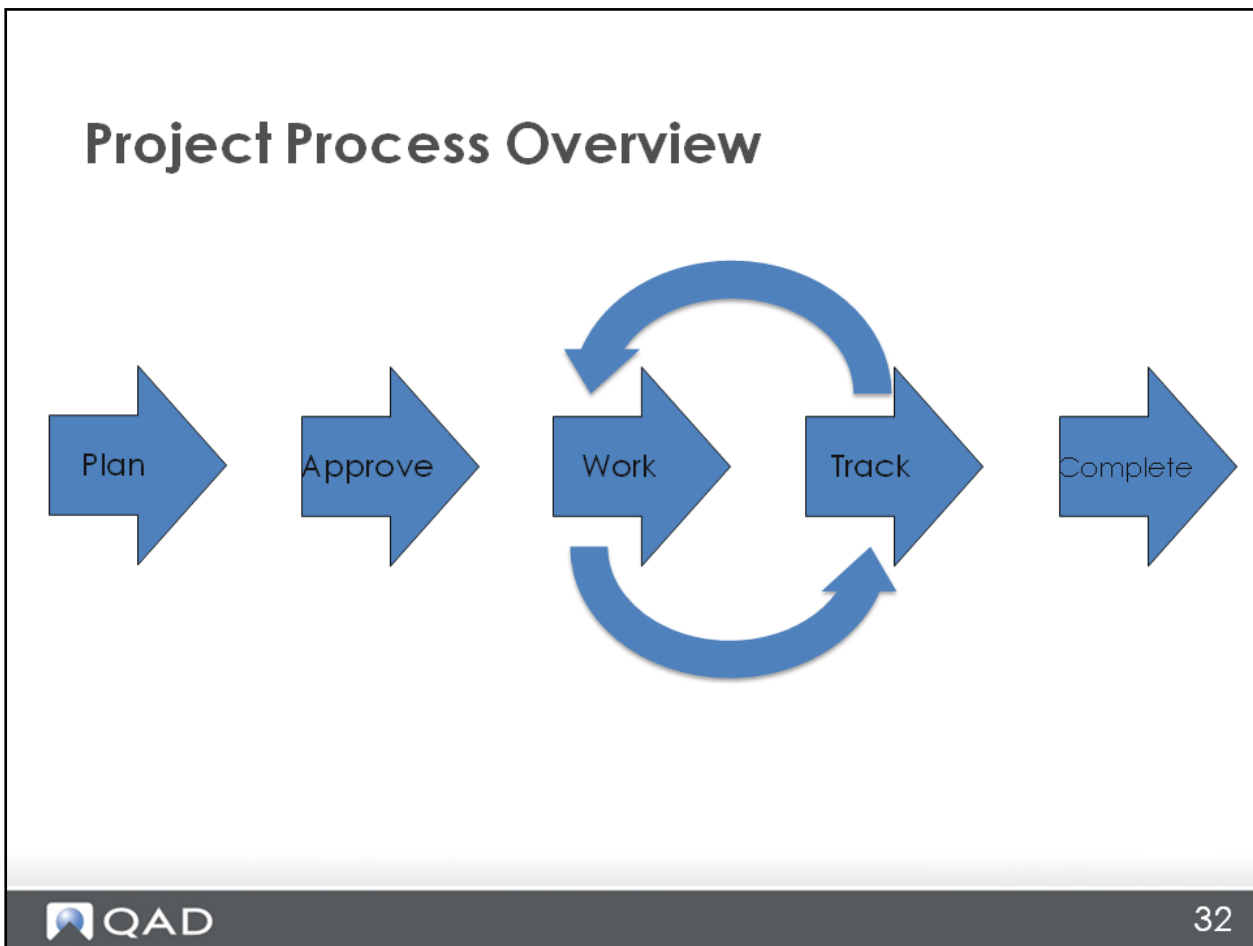


Field	Value
Job No	10001
Fixed Asset ID	FA500
Description	Stamp Machine 21x
Class	CL1
Location	L01
Service Date	5/23/2012
Total Spent	25,000.00
Capitalized Amt	20,000.00
Uncapitalized Amt	5,000.00
New Capitalized Amt	20,000.00

QAD 31

Here is the result. EAM automatically updates the Capitalized Amount of \$20,000.00, leaving an Uncapitalized Amount balance of \$5,000.00.

Project Process Overview



So, you are building a new home – what steps would you take?

Suggestions:

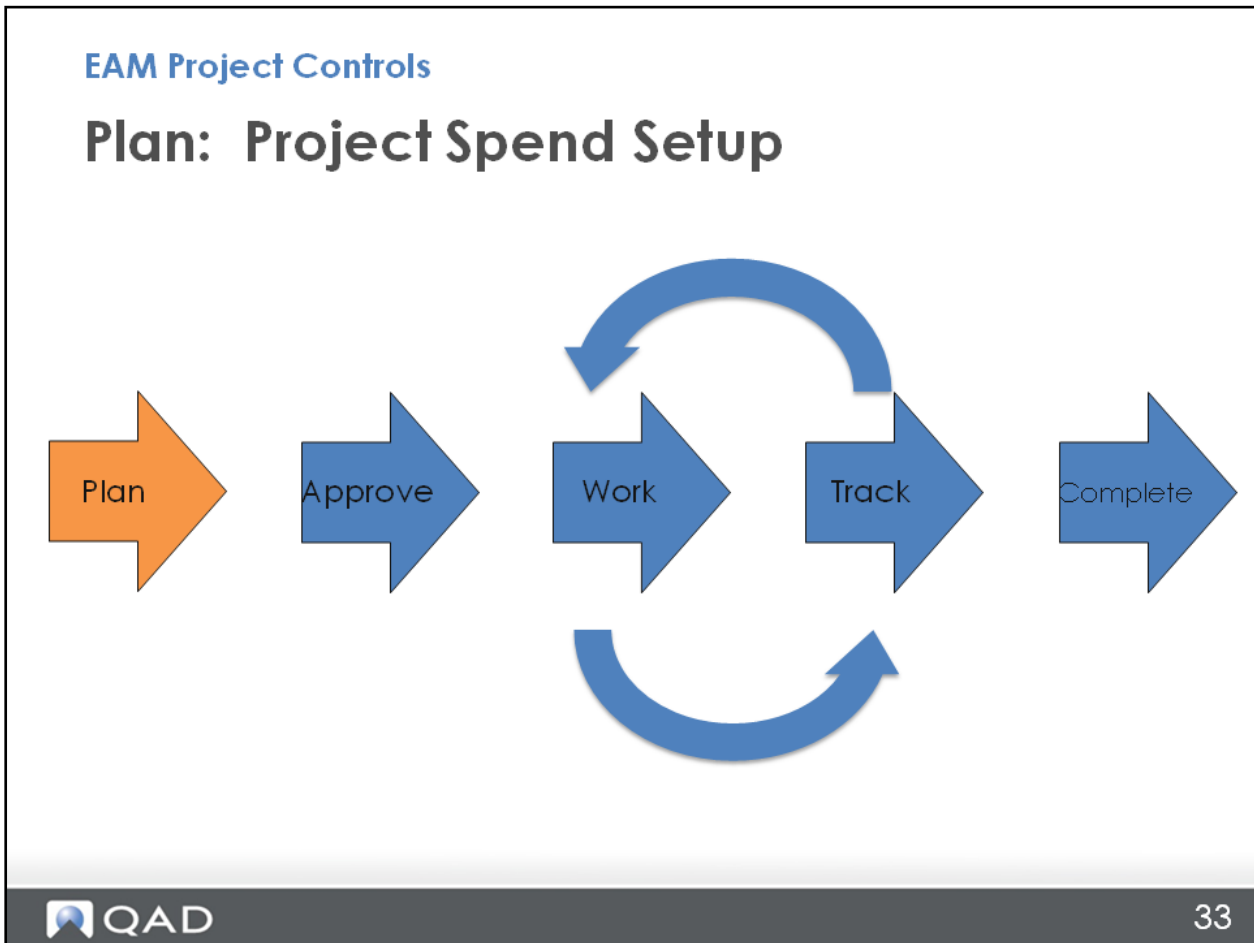
1. Plan your design and estimate cost (project planning/estimating).
2. Apply for a construction loan (project approval).
3. Break down the project into tasks (create jobs/sub-jobs and assign budget and limits).
4. Find contractors/subcontractors (purchase contractor services).
5. Purchase materials (purchase external material).
6. Use materials from your existing home such as light fixtures (internal materials).
7. Pay your bills (AP process).

Ask yourself questions.

1. Would you start building the house without having a plan for what it will look like, what it will cost, when it will be complete?

2. How do you know when a phase or step is complete? Would you want to approve work prior to paying the final bill?
3. What might change your budget? How do you control that?
4. What choices might you make if you realize you are going over budget?
5. What might you do if you are coming in under budget? Add more features? Choose to complete the project early and save costs?

Plan: Project Spend Setup



Plan

EAM Project Controls

Plan

- Anticipate and estimate costs in order to determine the expected cost of the project
 - Internal labor
 - External labor
 - Internal materials
 - External materials

This often starts outside of the system, with an idea from someone that a project is needed.



Phase 1 of the project in the system involves anticipating and estimating outside services and materials that are required.

In the tracking phase, you revise all of your estimates.

In the do phase, the reqs are entered and contracts are signed.

Does your project have contingencies? Where will extra money come from?

You cannot put requisitions into the system without an authorized project.

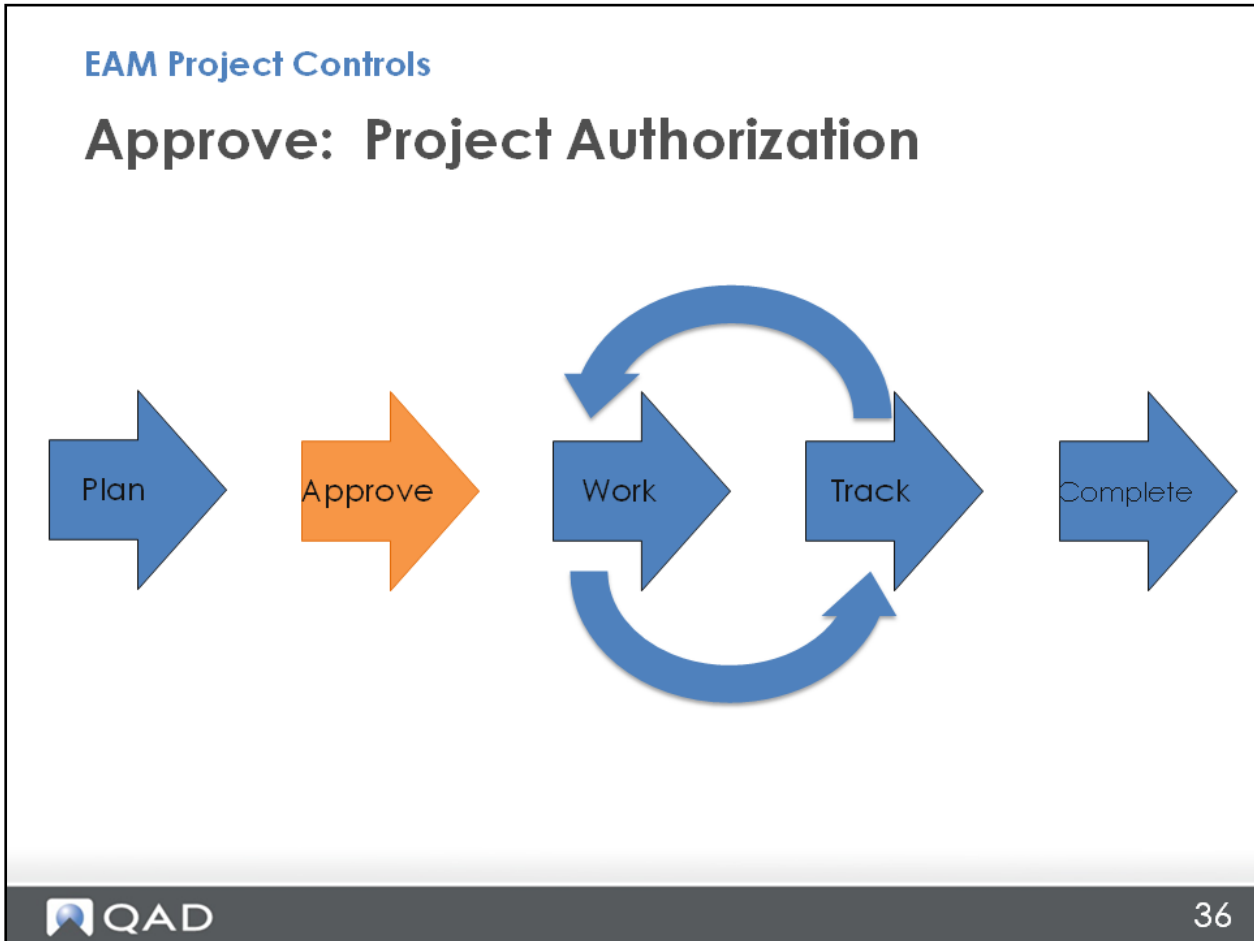
Plan – Steps

EAM Project Controls

Plan – Steps

- Set up project in QAD
- Download to EAM
- Set up project details, if known
- Enter Spend Limit for project
- Attach external information via external links
- Set up warning limits, if known

Approve: Project Authorization



Approve

EAM Project Controls

Approve

- Route the project through the proper channels to get approvals required in order to proceed with work
- There are two approval mechanisms: by spend limit or by margins (for customer-funded projects)
- While this step is often done outside the system, it is recommended customers do it inside the system in order to allow traceability
 - External links should be used to link important documentation to the project

Phase 2 of the project in the system involves acquiring approvals, either through margin approvals or by verifying spend limits.

The approvals go through the project approval group that is linked to the project header. Like requisitions, once a user with a high enough project approval limit authorizes it, the status changes to Authorized.

You are encouraged to perform the approval routing in EAM so that you can track who has looked at the documentation and who is holding up the process.

Approve – Steps

EAM Project Controls

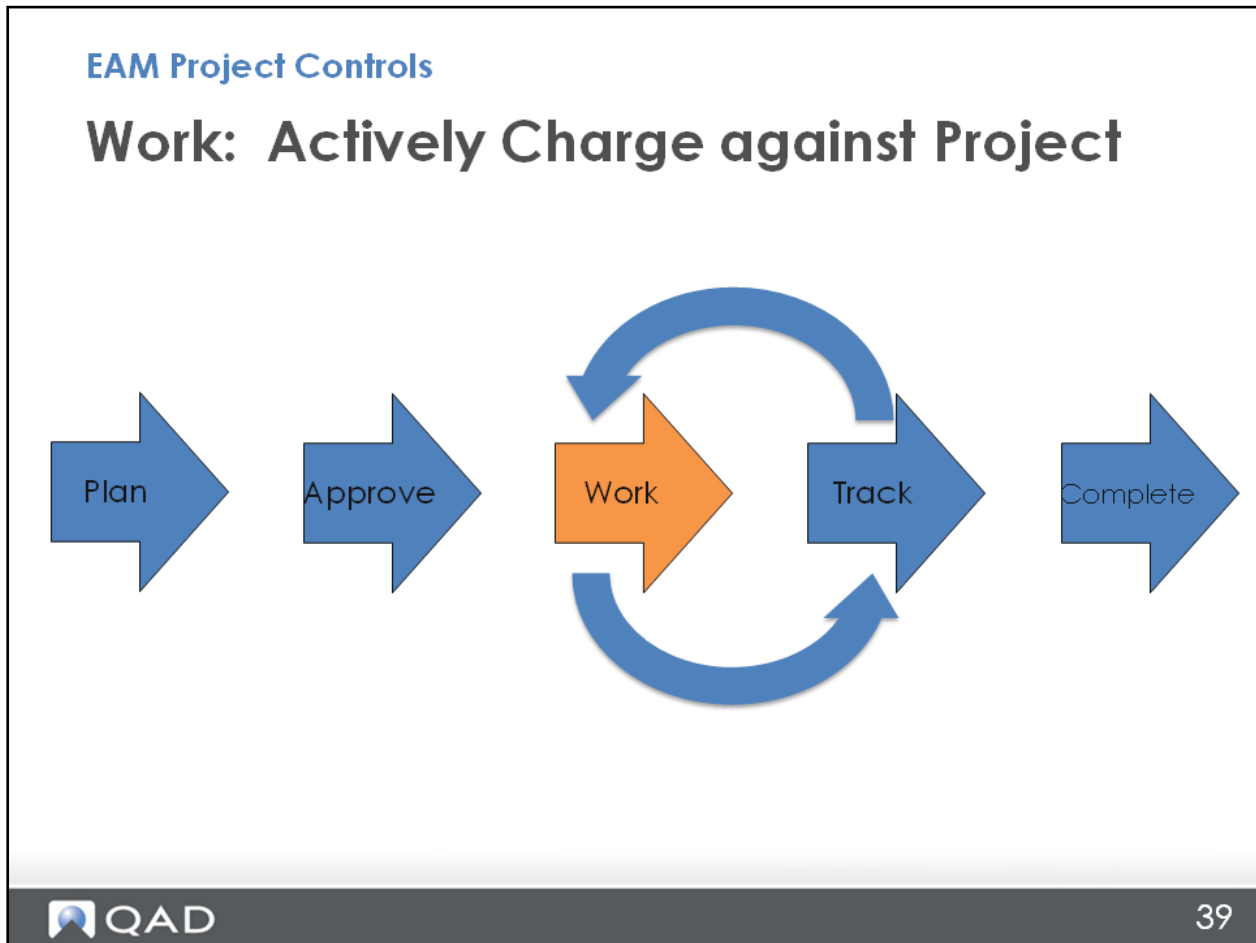
Approve – Steps

- Project manager routes project for authorization
- System notifies first approver
- When project is fully approved, the authorization status changes to Authorized

This approval process looks and feels a lot like the requisition process. There is a field on the user record to enter the project approval limit.

The system uses the group that has been assigned on the project header.

Work: Actively Charge against Project



Work

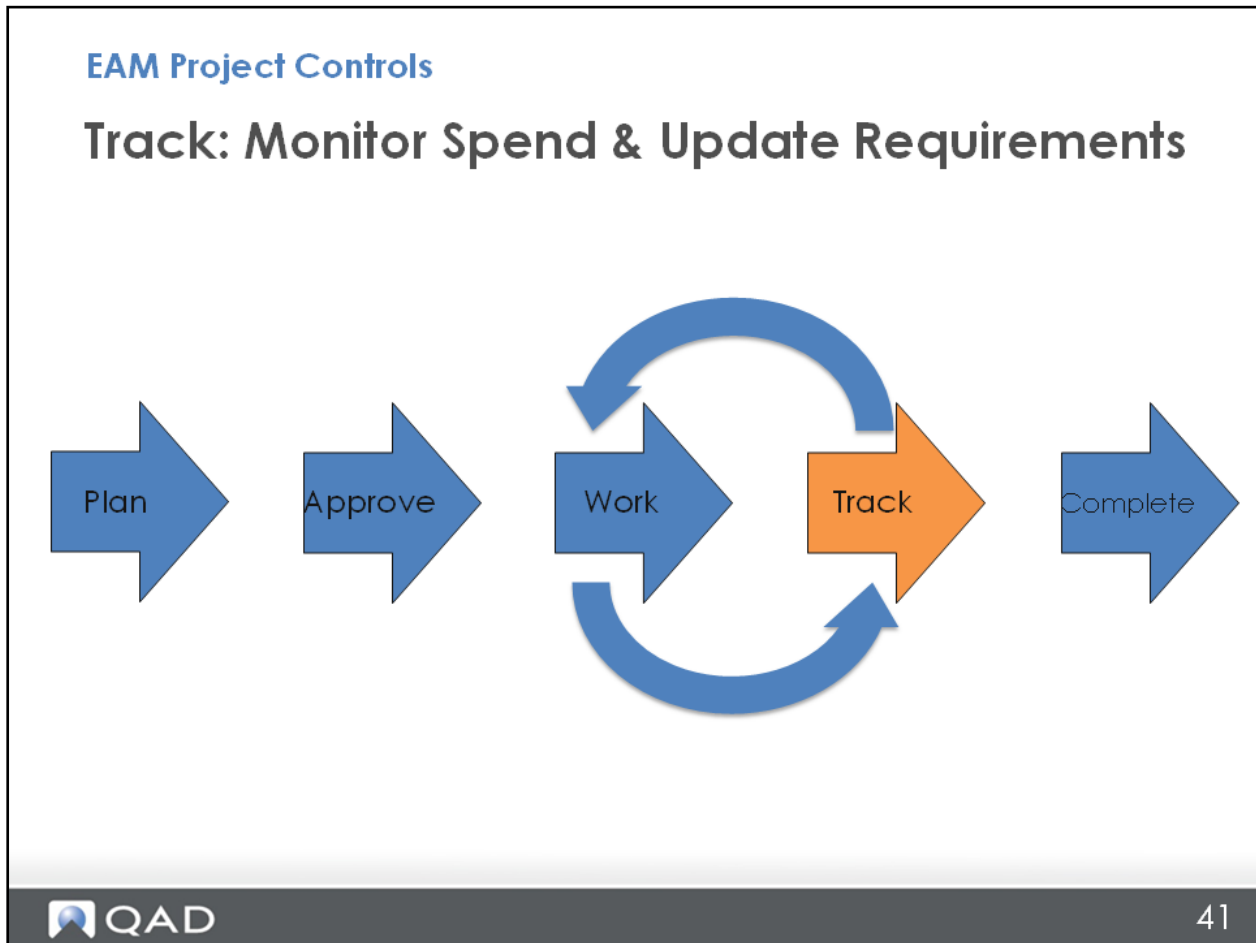
EAM Project Controls

Work

- If jobs are being used, the budgets should be set up in the first round of Work.
- Spend authorized money!
 - Enter requisitions/POs
 - Build WOs
 - Enter Stores Requests for parts needed from the crib

1. Get contracts in place with suppliers.
2. Get requisitions started.
3. Build work orders.
4. Enter stores req lists for internal items.
5. Proceed with work.
6. If the job structure is going to be used, set up the budgets for the jobs.
7. Start buying items and doing the actual work.
8. Record labor.

Track: Monitor Spend & Update Requirements



Track

EAM Project Controls

Track

- Work and Track are iterative processes that go hand in hand.
- Verify everything is recorded properly.
- Verify you still have money left.
- Are we on time?
- Are there any assets ready to be put in service? - Capitalize and close out that portion of the project.
- Any jobs ready to close?
- Project contingencies needed?
- REFRESH REFRESH REFRESH!

You cannot put warning limits and spending limits on jobs until the project has been approved.

After work has been done, the warning limits and spending limits may require further refinement.

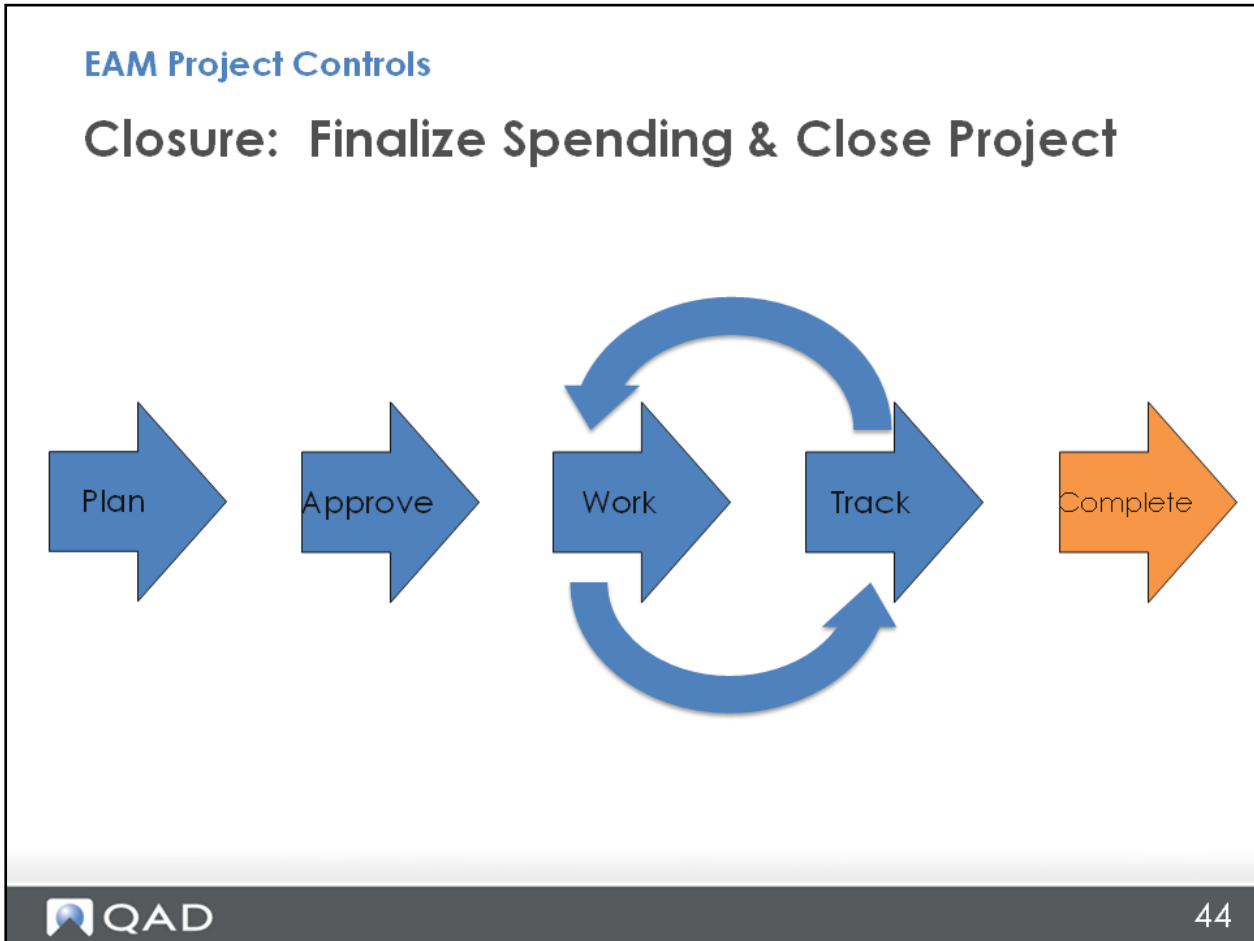
Track – Steps

EAM Project Controls

Track – Steps

- Refresh the relevant project to ensure all of the latest spend has been pulled in
- Review project cost tab and run necessary reports
- Update spend limits and warning limits, if necessary
- Prepare to capitalize assets ready to be put in service
- Lock/close any jobs that are complete or nearing completion

Closure: Finalize Spending & Close Project



Closure

EAM Project Controls

Closure

- Lock project so only final receipts can be done.
- Is everything received?
- Any open POs?
- Any reqs that were never processed?
- Has everything been paid?
- Are the assets ready to be capitalized?
 - Collect info for capitalizing assets.