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Mastering the Fusion Lifecycle App Store in 60 Minutes

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Learning Objectives

- Discover the Fusion Lifecycle App Store: What it is, What it is not, and Who can use it
- Discover what each of the apps do and whether or not they might be a good fit
- Learn how to install, configure, and enhance the App Store workspace to make it your own
- Learn what to do if the app from the App Store just isn't what you thought it was

Description

In this instructional demo, we will explore the built-in Fusion Lifecycle App Store. We will take an in-depth look at what apps are available, how to preview their contents, and what needs to be done to make them work in your tenant. Once you select install, the journey just begins, and we will walk through the steps of configuring the workspace(s) installed in your tenant. From setting the roles and permissions, to understanding the scripts, to reverse engineering the workflows, we will cover everything you need to know and do to make these out-of-the-cloud workspaces work in your tenant. We will also cover how to remove an app from the App Store, if you decide to not use it.

Speaker(s)

Pete Markovic is a Sr. Data Management Solutions Consultant with IMAGINiT Technologies specializing in PLM/PDM products and 3D CAD tools. He has over 25 years of experience working in many industries, including Construction Equipment, Automotive, Aerospace, Consumer Products, High Tech Electronics and Medical Device Manufacturing. Pete has been working with PLM/PDM products since 1995 and 3D CAD tools since 1992. Throughout his career, he has been involved with and has managed many PLM/PDM implementations of various systems, including Autodesk Fusion Lifecycle, Autodesk Vault, Teamcenter, Windchill PDMLink, Metaphase, and PTC Intralink. Pete specializes in working across multiple business areas to streamline business processes and adapt them to a PLM/PDM environment. Pete especially enjoys developing efficient data management solutions that address the challenges and business problems faced by manufacturing companies.

What is the Fusion Lifecycle App Store?

Apple introduced us to the concept of an App Store in July 2008. Since then, the concept of an app store has taken off across multiple platforms. Whether it is your phone, laptop, gaming device, etc., the ability to push new applications and functionality into connected devices and applications has been around for quite a while.

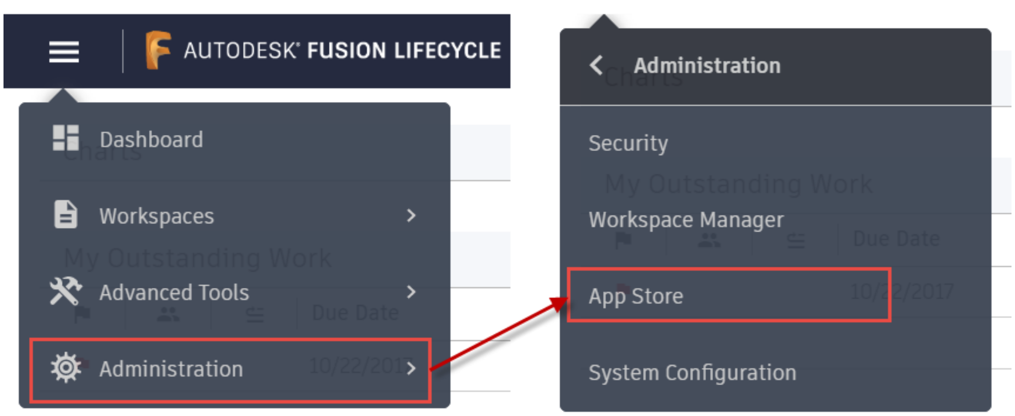
Fusion Lifecycle is a SaaS (Software as a Solution) application and a perfect candidate for utilizing app store functionality. Using this delivery system, it is easy to add new functionality/business processes to your Fusion Lifecycle tenant. Although it may be simple to just select 'Install' from the app store, there are a few things you need to know to master its capabilities.

What is a Fusion Lifecycle App?

Unlike a self-contained program or game you may find in the Apple App Store, a Fusion Lifecycle App is a collection of Workspace(s), Script(s), Role(s), Picklist(s) and Report(s) that represent a business process that can be managed in Fusion Lifecycle. Every FLC tenant comes with basic 'out of the cloud' workspaces for commonly used business processes in PLM (i.e. Items & BOMs, Change Management, Quality Management etc.) and the Apps in the FLC App Store are available for businesses to extend their use of PLM for other business processes. One of the advantages of Fusion Lifecycle is the ability to have as many workspaces as you want. There are no additional charges for having additional workspaces, so you can install as many apps as you would like. If you are unsure what the app is or does, there really isn't any harm in installing it to just take it for a test drive and if you are not interested in keeping it, we will go over how to remove the app from your tenant, later.

Accessing the Fusion Lifecycle App Store

Every Fusion Lifecycle tenant has a link to the App Store. You will need to have administrative permissions in your tenant, in order to access the App Store. If you do not have admin privileges to your tenant, you can sit down with your admin(s) and review the apps in the App Store together to understand what is available and how they can fit into your business requirements.



ACCESSING THE FUSION LIFECYCLE APP STORE

What the FLC App Store is not

The apps in the FLC App Store not public apps that can be used for anything outside of Fusion Lifecycle. You need to have an FLC tenant in order to reach the App Store. The apps are not expensive; in fact, they are free and available to be used immediately in any FLC tenant. Unlike other apps, like a phone app, the FLC apps from the App Store, do not automatically update in your tenant, if they are updated in the store. Once they are installed in your tenant, they are independent and disconnected. Although these apps are ready to use and are built upon business processes' best practices, there are a few things you will need to do after installing them into your tenant. We will go through these minor steps to make your app work in your tenant.

Getting Started

Starting the process of incorporating these apps into your tenant is simple. The first step is to investigate the apps you are interested in and understand what you will get with each one.

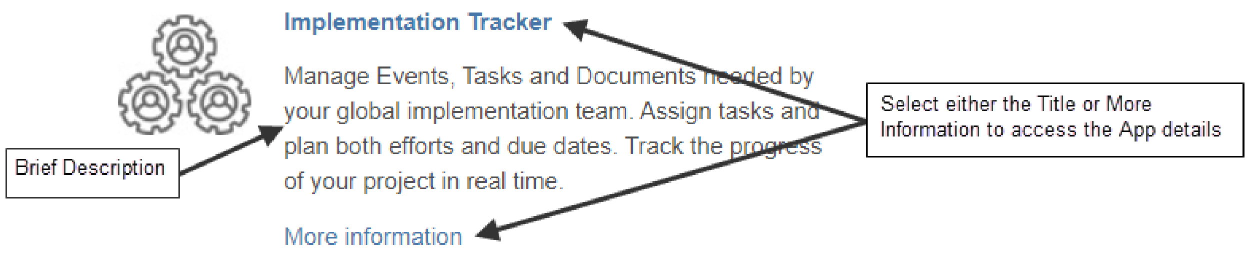
For many companies, the first processes in PLM are managing Items, Bills of Material and Change Management. These are generally the core of any PLM implementation. After a company has built out their core business process in PLM, the next step is to look at other business processes that Fusion Lifecycle PLM can manage for them, extending their ROI in the product. The FLC App Store has 20+ apps that can easily be installed/deployed into your tenant for immediate use.

Quality Management	**Lean 5S Auditing**	**Manufacturing Asset Management**	**Equipment Calibration**
FMEA Analysis	**Accident Reports**	**Design Reviews**	**Field Failure Request**
Return Merchandise Authorization	**Document Control**	**Customer Management**	**Marketing Assessment Management**
CE Marketing	**Supplier Quarterly Business Review (SQBR)**	**Supplier Corrective Action Request (SCAR)**	**Octopart - Item & BOM**
Training	**Autodesk Vault Connector - Items and BOMs**	**Implementation Tracker**	**Claim Management**

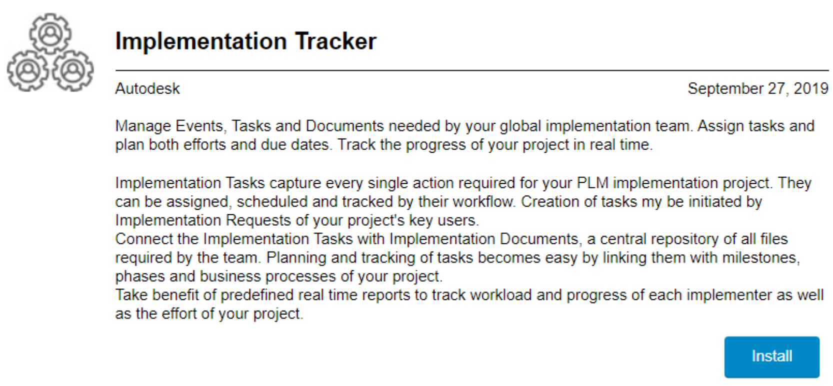
Fusion Lifecycle Apps

Review/Investigate the App

Each app has a brief description of the solution. Detailed information for each app can be found by selecting either the app title or the More information links.

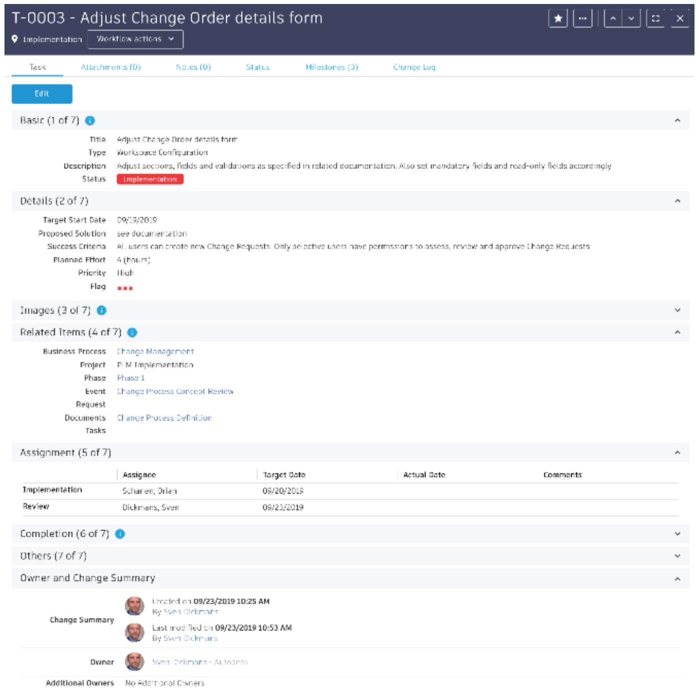


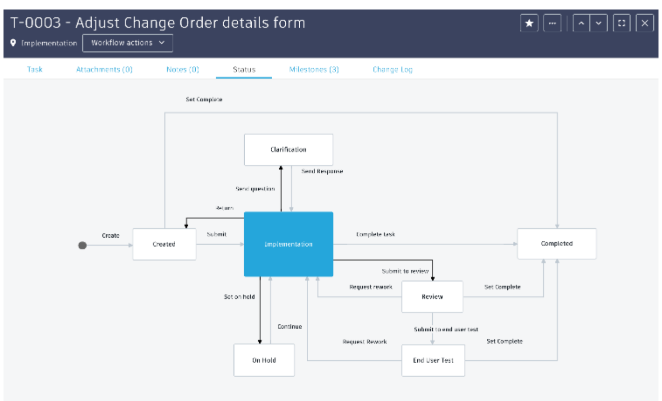
APPLICATION DESCRIPTION

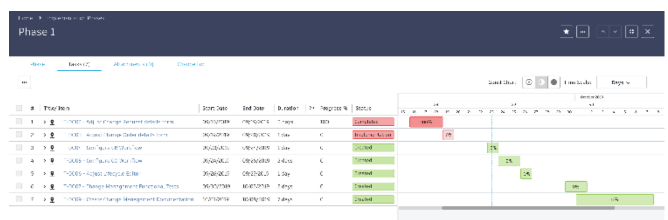


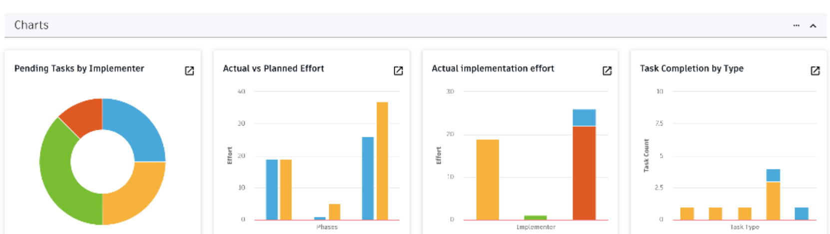
DETAILED DESCRIPTION

In each Detailed Description screen, screenshots are included to help you understand what the workspace(s), workflow(s), report(s) etc. will look like. Review each image for an idea of how the was app is constructed and the functionality it delivers.









FLC App Screen Captures

On the Detailed Description page for the app, selecting the Install button will open a dialog with all of the elements that will be installed by the app.

Before installing the app in to your tenant, review what will be installed by the app and take notes or screen grabs to follow up on after installation.

Category

Implementation Tracker

Workspaces

Implementation Events (WS_IMPLEMENTATION_EVENTS)
Implementation Requests (WS_IMPLEMENTATION_REQUESTS)
Implementation Documents (WS_IMPLEMENTATION_DOCUMENTS)
Implementation Tasks (WS_IMPLEMENTATION_TASKS)
Implementation Projects (WS_IMPLEMENTATION_PROJECTS)
Implementation Phases (WS_IMPLEMENTATION_PHASES)
Business Processes (WS_BUSINESS_PROCESSES)

Scripts

Implementation Tasks onEdit
Implementation Tracker Library
Implementation Tasks Workflow Conditions
Implementation Tasks Workflow Validations
Implementation Phases onCreate onEdit
Implementation Requests Workflow Actions
Implementation Tasks Workflow Actions

Roles

Implementation Projects [R/W]
Implementation Requests [REVIEW]
Implementation Requests [R/W]
Business Processes [R/W]
Implementation Tasks [R/W]
Implementation Events [R/W]
Implementation Phases [R/W]
Implementation Documents [R/W]

Public reports

Actual implementation effort
Actual vs Planned Effort
Task Completion by Type
Pending Tasks by Implementer

Pick Lists

[WS] Implementation Events
Users, ALL by Name
[WS] Implementation Phases (active)
[WS] Business Processes
Implementation Task Types
[WS] Implementation Requests
[WS] Implementation Projects
Implementation Tracker Priorities
Implementation Document Types
[WS] Implementation Tasks
[WS] Implementation Documents

The apps in App Store have been built using FLC configuration 'Best Practices' in terms of naming conventions. This will help you with understanding/reverse engineering the app to make any minor changes.

Ready to Install and Configure

Install

Once you have reviewed the app and are ready to add it to your tenant, it is as easy as selecting the ***Install*** button.

When selecting the Install button, you will not see a progress bar or dialog box declaring success…you will only see some browser activity in the lower left corner, indicating something is happening. The installation should take less than a minute and when it is complete, you will be returned into the Workspace Manager page.

Perform a quick review of the Workspaces that were installed, to verify success.

Implementation Documents - Basic Workspace
Implementation Events - Basic Workspace
Implementation Phases - Basic Workspace
Implementation Projects - Basic Workspace
Implementation Requests - Basic Workspace with workflow
Implementation Tasks - Basic Workspace with workflow

WORKSPACE MANAGER

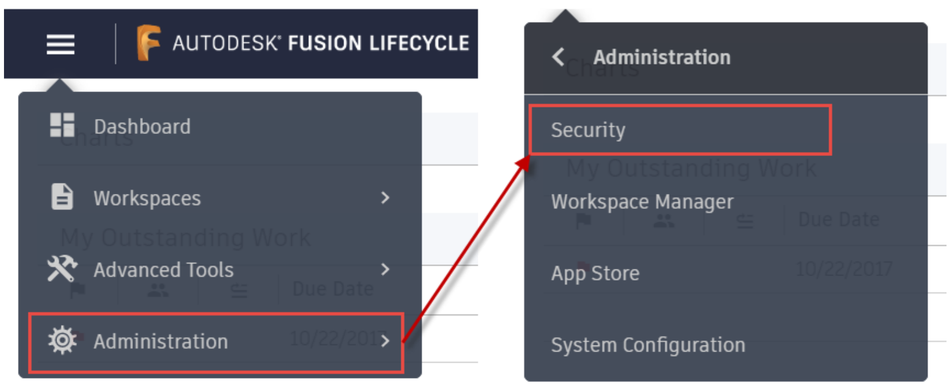
Configure

After you have done a quick review and inventory of what was installed, the next step is to do some simple configuration steps and start testing.

A Best Practice for any FLC Workspace development is to configure the workspaces to be visible to only yourself or a select few, not to everyone in a production environment. This can easily be accomplished by setting up a Development Group and only assigning the newly installed roles to that Group.

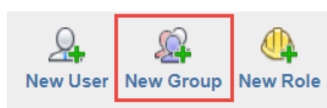
If you already have a Development Group in your tenant, you can utilize that group or create one specifically for these newly installed workspaces.

To create a new group, select Administration → Security

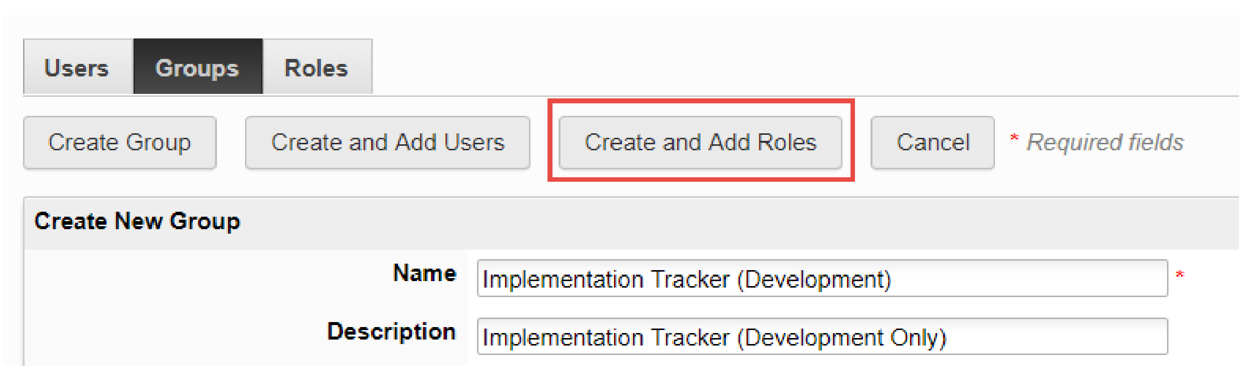


USERS, GROUPS & ROLES

Select ***New Group*** in the upper right corner.

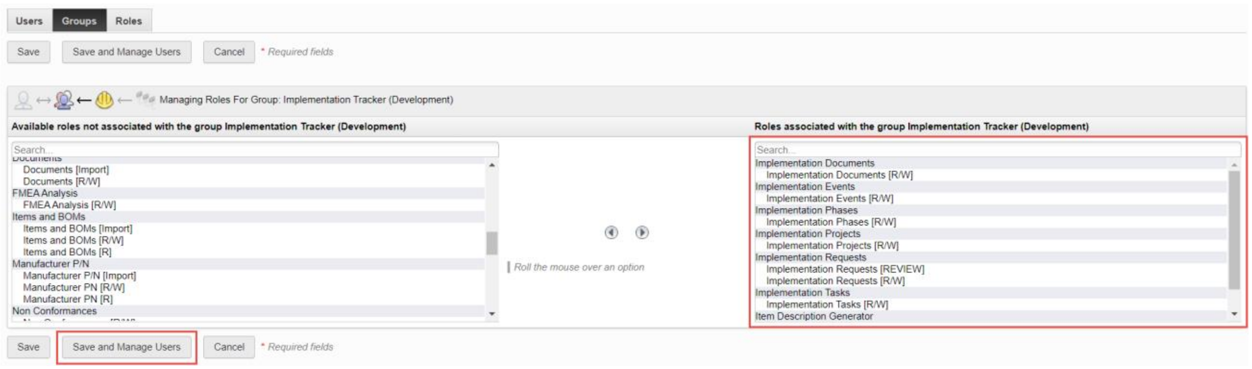


Using FLC Best Practices, create the group with a proper name that describes its purpose. After filling in the Name and Description, select ***Create and Add Roles***.



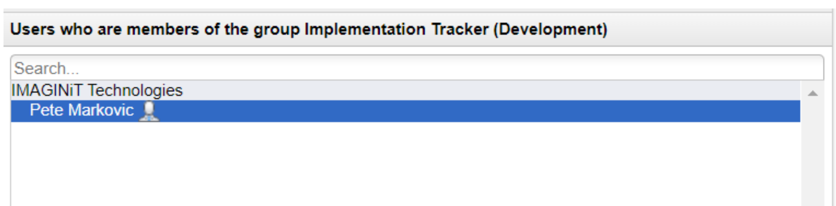
GROUP CREATION DIALOG

Add all of the newly added roles for the app. Reference your documentation or screen grabs from the App Store to make sure you include all of the new roles. After adding the Roles, select ***Save and Manage Users***.



ADD THE NEW ROLES

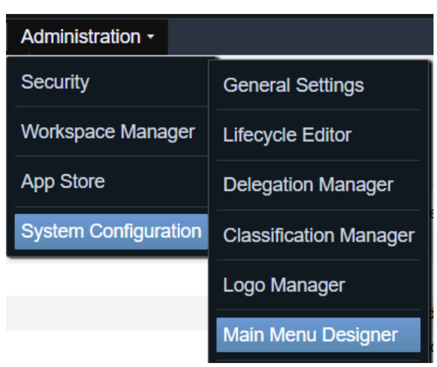
Select the user(s) that will be involved in development and testing of the new app. You can add additional users later if you want to keep these workspaces hidden from everyone until you are ready for User Acceptance Testing (UAT). After the user(s) have been added, select ***Save***.



USER(S) ADDED TO THE NEW DEVELOPMENT GROUP

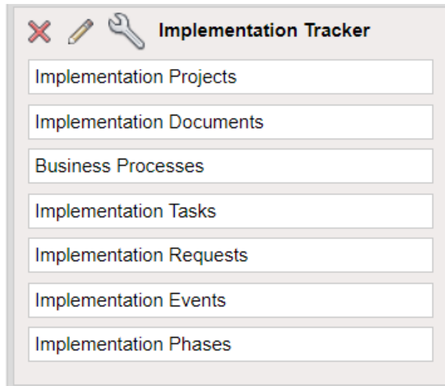
The user(s) in the new Development Group should now be able to see the new workspaces. Before you explore them, you can move them around in Main Menu Designer if you want them to be located in a certain category or location on the Menu tree.

The Main Menu Designer can be located under Administration → System Configuration → Main Menu Designer



MAIN MENU DESIGNER

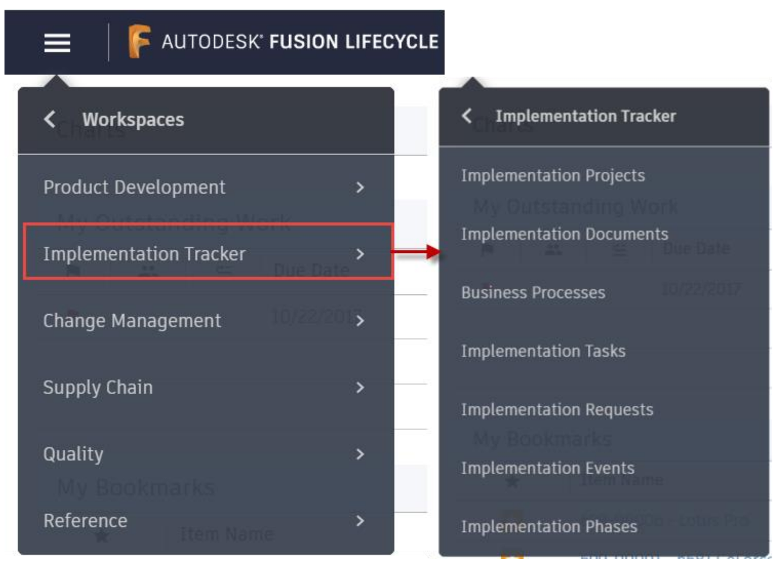
As you can see, a category was created when the app was installed and all of the newly created workspaces were placed in the new Menu Category.



MENU CATEGORY

If you would like to move the workspaces to a different category or move the entire category to a different location in the Menu, you are able to easily do so.

You may need to refresh your browser view, but the new workspaces should now appear in the Menu where you placed them.



NEW WORKSPACES

If you cannot see the new workspaces, try refreshing your browser (press F5) and verify your user is in the proper group with the new roles assigned to the new group.

Kicking the Tires

The next step is to test out the workspaces. There is no better way to figure out what minor changes you may need to make, than to work with the new workspaces. Start by creating some records, testing out the workflows, permissions, scripts, picklists etc., and understand where gaps may exist and then begin to address them.

Items to Review

Field Names
Section Names
Required Fields
Special Permissions Sections (Hidden)
Auto-Number Generator Fields
Picklist Values
Tab Names
Tab Order
Workflow States
Workflow Permissions
Workflow Scripts
Workspace Relationships
Workspace Scripts (On Create / On Edit)

After you have tested out the workspace(s) and identified any gaps/changes that need to be addressed, you are ready to expand your UAT to other users. Utilize the group you created for your access to add in additional users. In cases where you are controlling workflow permissions for particular users/group, you may need add some additional groups to accomplish specific requirements in you workflows. To begin with, it is easy and effective to leave permissions open to your UAT team until you have validated the basic requirement of Fields, Workflow, Approvals, etc. and lock down permissions after the initial UAT.

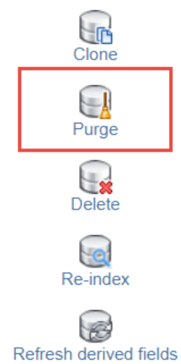
App Expectations

The apps in the App Store are built on FLC Best Practices as well as Industry Standards/Best Practices for the business processes they address. Creating your groups and assigning the roles are the minimum things you need to do, but for some cases, may be all you need to do. If your requirements are not fully met by the apps in their out of the box delivery, it is a great starting point to begin to tweak the necessary items to adapt the workspace(s) to your business. A novice/beginner PLM admin can easily install an app from the App Store and get it up and running very quickly, but depending on the extent of any changes or enhancements that need to be made, moderate to advanced PLM admin skills may be necessary.

Resetting the App

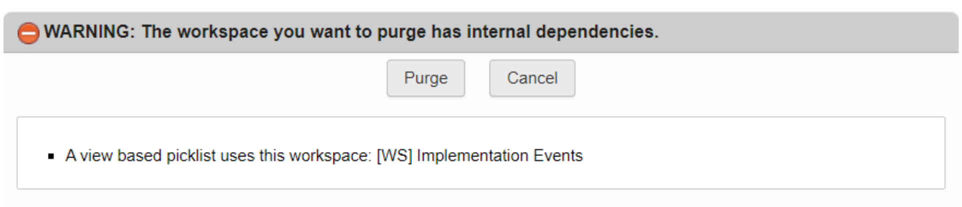
For each round of UAT and certainly before putting the app (workspace(s)) into production, you will want to purge the workspaces of any records created during testing. Some workspace serve as picklists for other workspaces and you may or may not want to purge their records. Reference workspaces are generally not purged, but depending on their purpose, they could be. Purging workspaces will also reset any auto-numbering fields back to zero.

To purge the records from a workspace, navigate to the Workspace Manager and expand the workspace you want to purge.



WORKSPACE PURGE

If a workspace has dependencies (being referenced as a picklist), you will be warned before purging. Select the **Purge** button to purge the workspace records.

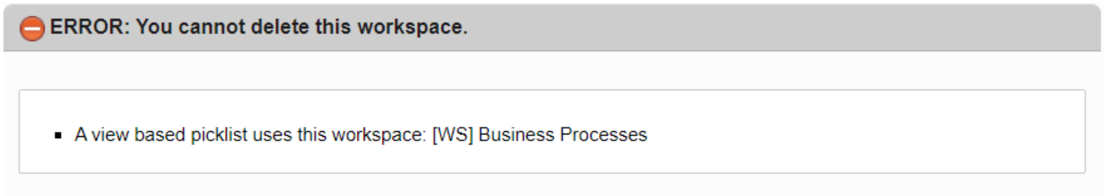


WORKSPACE PURGE CONFIRMATION

Removing the App

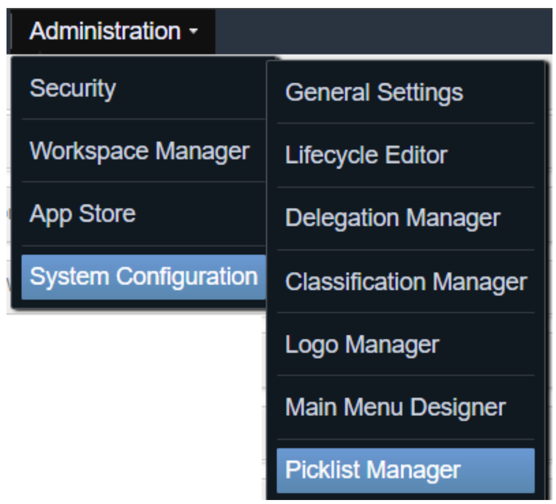
There are times where you may install an app from the App Store and decide not to use it or you were just checking something out of interest in the app. In either case, you can leave the app installed and if you do not apply any of the workspace roles to any groups, nobody will see the workspaces, except for admins in the workspace manager view. The picklist, scripts, roles, reports etc. will remain, but again, only admins will see these artifacts.

Removing workspaces can be a little tricky and will require some investigative work. There are relationships between objects that can cause some difficulty in deleting workspace(s). If a workspace is being used as a picklist of records, the picklist must be deleted first.



WORKSPACE DELETE ERROR

In order to delete a workspace driven picklist, it cannot be used/referenced by a workspace field. To determine where a workspace driven picklist is used, use the **Picklist Manager** under Administration → System Configuration



PICKLIST MANAGER

In the Picklist Manager, locate the workspace driven picklist and select **Where Used**.

Name	Description	Action		
[WS] Approval Board - Change Orders		Edit	Where Used	Delete
[WS] Approval Board - Change Request		Edit	Where Used	Delete
[WS] Approval Board - Design Review		Edit	Where Used	Delete
[WS] Approval Board - Document Change Order		Edit	Where Used	Delete
[WS] Audits		Edit	Where Used	Delete
[WS] Business Processes		Edit	Where Used	Delete

WORKSPACE DRIVEN PICKLISTS

Custom lookup Usage:

Used in Workspace	In Tab	By Field
Implementation Requests	Item Details	Business Process
Implementation Documents	Item Details	Business Process
Implementation Tasks	Item Details	Business Process
Implementation Tasks	Item Details	Previous Business Process

Close

PICKLIST WHERE USED

Once you have identified where the picklist is used, navigate to the workspace(s) and delete the fields referencing the picklist.

When the field(s) have been deleted, the picklist should show no usage.

Custom lookup Usage:

Used in Workspace	In Tab	By Field

Close

PICKLIST WHERE USED

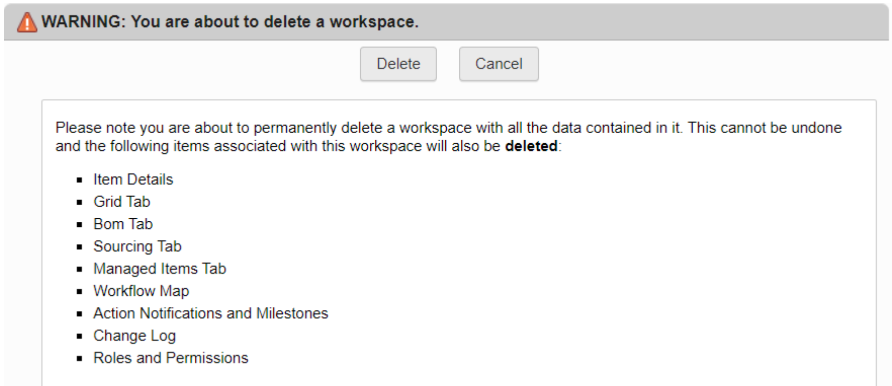
You will now be able to delete the picklist.

Name	Description	Action		
[WS] Approval Board - Change Orders		Edit	Where Used	Delete
[WS] Approval Board - Change Request		Edit	Where Used	Delete
[WS] Approval Board - Design Review		Edit	Where Used	Delete
[WS] Approval Board - Document Change Order		Edit	Where Used	Delete
[WS] Audits		Edit	Where Used	Delete
[WS] Business Processes		Edit	Where Used	Delete

WORKSPACE DRIVEN PICKLISTS

Repeat until all of the workspace driven picklists are deleted. After the workspace driven picklists have been deleted, you can then delete the workspace(s). Associated roles and reports to the workspace will be automatically deleted when the workspace(s) are deleted.

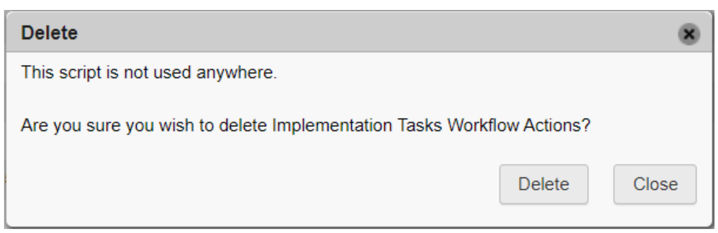
You will see a warning about deleting the workspace. You will see a list of the related elements that will also be deleted.



WORKSPACE DELETE CONFIRMATION

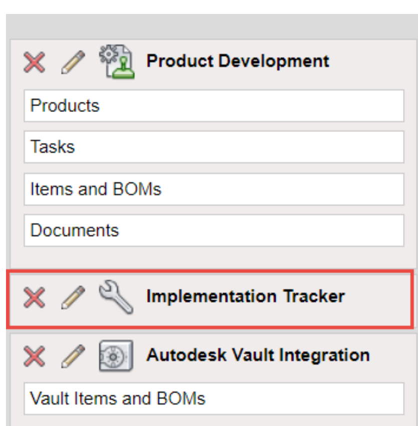
Once the workspace(s) have been deleted, any non-workspace driven picklists can be deleted as they will no longer have any usage.

After cleaning up any remaining picklists, you can delete the scripts that were added with the app. Utilize the app documentation to identify which scripts were installed. Verify the Script is not in use. This will display in the Delete dialog.



SCRIPT DELETE CONFIRMATION

The Menu Category created for the app can be deleted.

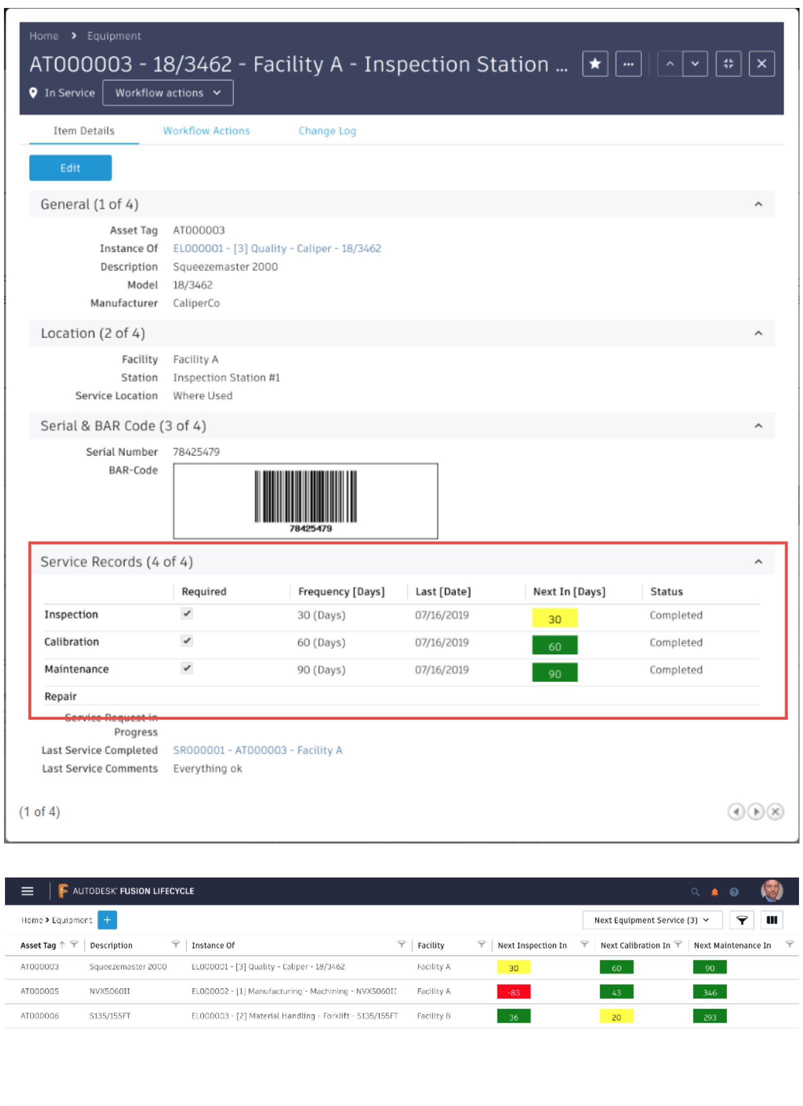


MENU CATEGORY

Other App Uses

The apps in the App Store can be utilized as a reference for other workspace development where you may not need the app, but you want some of the functionality in the app for another workspace.

For example, you might be developing a workspace where you want a field to be color-coded based on the value displayed in the field. Maybe a Green Pass and a Red Fail? If you look through the apps in the App Store, you can see in the Asset Management App a screen shot of the Items Detail showing an example of this as well as a screen shot of the same functionality on the Grid Tab.



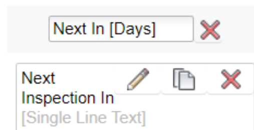
APP STORE SCREEN IMAGES FOR AN APP

Installing the app in your tenant and reverse engineering how something is being done is another great use for the App Store.

In this example, I will install this app to reverse engineer the color-coding of the fields. There is also some bar code functionality which I am interested in.

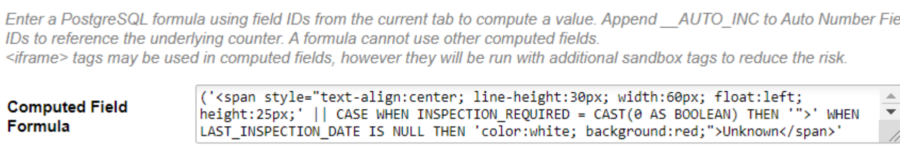
I will start by installing the app and then exploring the workspaces to figure out the functionality I am looking for.

Once the app is installed, I will look into the fields in the workspace's Item Details.
Using the Edit function, I can look at how the field is setup.



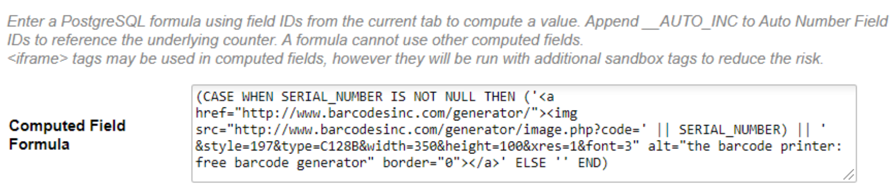
ITEM DETAILS FIELD

I can see the field is a Computed Field and I can then utilize this code, with some minor edits to accomplish similar functionality in another workspace I am developing.



COMPUTED FIELD

The barcode shown in this workspace is also of interest to me.



BARCODE GENERATOR

Since I am not planning to use this app for anything other than investigation, there is no reason to build out any groups or expose to anyone. It is up to you as to whether or not you want to go through the cleanup steps to remove the app or just leave it in your tenant, as you never know what other useful tidbits you might find in the app.