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Is Autodesk Fusion 360 Manage PLM Suitable for Small Organizations?

Shaya Ghanbar
SolidCAD

Kyle Dawe
SolidCAD

Learning Objectives

- What the Autodesk Fusion 360 Manage PLM platform is, and what it does
- Common industry challenges for small businesses
- How PLM can help small businesses with their challenges?
- Decide if PLM is suitable for your business

Description

This session is intended to educate the audience on Autodesk Fusion 360 Manage product lifecycle management (PLM) software and how it can help small businesses improve processes. Small organizations are often hesitant to implement a PLM system due to the fear of implementation costs. They make the assumption that Autodesk Fusion 360 Manage is only for large businesses. This session will discuss the out-of-the-box functionalities of Autodesk Fusion 360 Manage, and how they can help small companies use PLM without a significant financial investment. Specifically, we'll look at some of the industry challenges that small businesses face today and how Autodesk Fusion 360 Manage can help them with Bill of Materials (BOM) management, change management, and project management.



Speakers

Shaya Ghanbar has a background in the manufacturing industry as a Mechanical Engineer. In 2010, Shaya co-published the Characterization of a Robotic Drug Delivery System Based on Magnetic Propulsion in the IEEE/ASME journal. Throughout his engineering career, Shaya has used several CAD and FEA applications. Currently, Shaya is managing the Enterprise Solutions team at SolidCAD. He is lucky to have an amazing team comprised of individuals with sales and technical backgrounds. Shaya is leading the Enterprise team to help SolidCAD's clients with their industry business challenges as they relate to PDM, PLM and business systems integration.

Kyle Dawe has over 10 years of experience working in the Autodesk partner channel, supporting and selling into the Design and Manufacturing sector. Partnering with clients who are looking for leading-edge solutions to assist in their digital transformation and operational performance. Prior to joining the Autodesk channel, Kyle worked in both the Manufacturing and Energy industries as a Production Manager and as a Territory Sales Representative respectively. In his current role, Kyle works on the SolidCAD Enterprise Solutions team supporting clients in discovering what PDM, PLM and System Integration solutions will best align with their processes and goals.

Introduction

This Industry Talk session is intended to help business owners and decision makers to identify if Fusion 360 Manage is a suitable platform for their business. There is a misconception that a PLM system is only beneficial for large organizations due to the cost of implementation. We would like to use this session to educate the industry that small businesses have successfully implemented PLM with a very limited budget.

What the Autodesk Fusion 360 Manage PLM Platform is, and What it Does?

Product Lifecycle Management (PLM) helps you accelerate your product development processes across all departments and locations by automating workflows, key tasks and delivering timely information. Autodesk's PLM software, Fusion 360 Manage (formerly known as Fusion Lifecycle), is a true cloud solution allowing everyone to have access to their data anytime, and anywhere.

In order to have a better understanding of a project / product lifecycle, let's have a look at a typical product lifecycle example.

If we look at the first stage of a project lifecycle, the cycle begins with a customer need. The customer need is then evaluated by the Sales and Project Managers to determine the product requirements. Based on the product requirements, engineering and design create drawings and CAD models. While engineering is busy with the design, Purchasing orders the required parts to build the product. Once the project is completed, the Quality department checks the product quality, after which your customer receives the product.

Well, this is actually only half of a project lifecycle!

Now if your customer reports an issue, you want to be able to capture the issue and report it back to the right people to make the right modifications.

With Fusion 360 Manage acting as the single source of product and project information, you can achieve a perfect lifecycle from the beginning of the project to the end. This will allow an organization to capture the product issues and report them to the right people, enabling them to make timely and effective adjustments.

Figure 1 represents a business process flow in an organization that is using Fusion 360 Manage. As you can see, the business process is managed, organized and standardized by PLM.

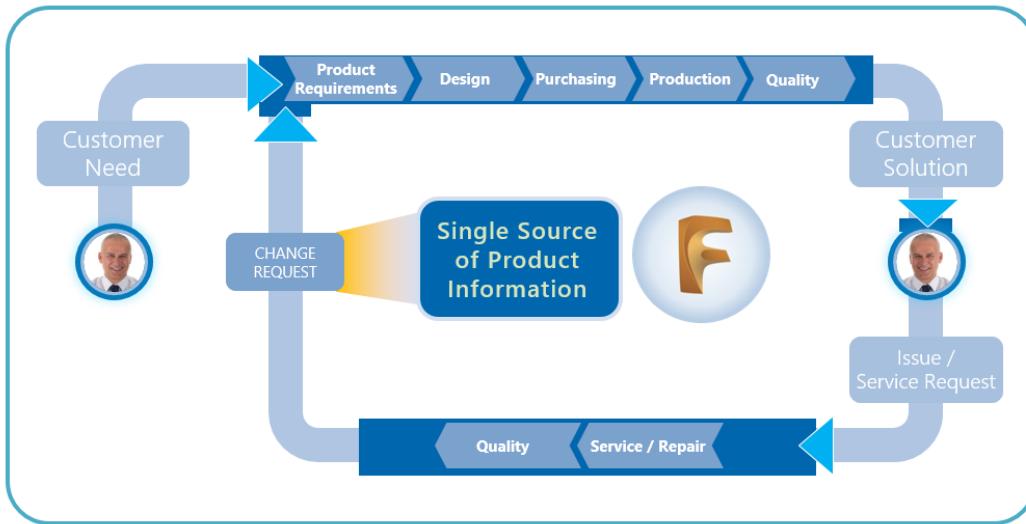


Figure 2: A business process that is managed by Fusion 360 Manage

Common Industry Challenges for Small Businesses

How do we define a small business?

Definitions of small business vary widely based on industry, revenue and employment. Generally, a small business is defined as a firm with revenue >\$50M and with employees ranging from 5 to 100.

Industry Challenges

There are often common challenges across the Design and Manufacturing industry regardless of what product or service is being delivered. At a high level, the following challenges are what are commonly addressed in the PDM/PLM evaluation process:

- Siloed information: lack of centralized connected data company-wide, improving collaboration across multiple teams.
- Visibility: single source of truth, allowing for a clear understanding of product/project statuses and assignments.
- Time to market: reduce non-value-add processes and keep timelines and profitability on schedule.
- BOM: A more structured process for creating and managing BOMs.
- Changes: Keeping track of product and project changes.
- Communication: notification of a change for a product or project.

- Scalability in teams and locations: as business grows so does the potential for complexity in processes that once worked at small scale. A true SaaS (software as a service) allows for quick time to value in the implementation as well as a solution that can expand and integrate on demand.

There are alternative solutions available in the PDM/PLM ecosystem, however not all are true SaaS solutions, therefore there are further investments to consider, such as:

- Larger investment of resources for implementation, customization and configuration.
- Larger resource demand and requirements from IT and/or IT infrastructure to be maintained and current.
- Specific process challenges:
 - BOM management.
 - Change communication.
 - Managing distributed design, project and sales teams.
 - New product introduction.
 - Longer time to value realization, lack of 'out-of-the-box' functionality.

How PLM Can Help Small Businesses with Their Challenges?

In the previous section of this handout, we discussed some of the common industry challenges that small businesses have in common. In this section, we will look at the Fusion 360 Manage and how it addresses these challenges.

Out-of-the-Box Workspaces

Autodesk PLM team have done a great job of loading Fusion 360 Manage with great out-of-the-box features and functionalities. These out-of-the-box features are truly based on the customers' needs. As a result, there is no need to implement from ground zero when you take advantage of the out-of-the-box features and functionalities. You may need to change some of the fields' names and/or add a couple of more fields, however no major financial investment is needed to utilize the platform.

Figure 3 represents the out-of-the-box environments, also called workspaces, and their relationships to each other. As shown below, Autodesk PLM can help your business from day one by using the features and functionalities that it comes with.

Current F 360M Process Map

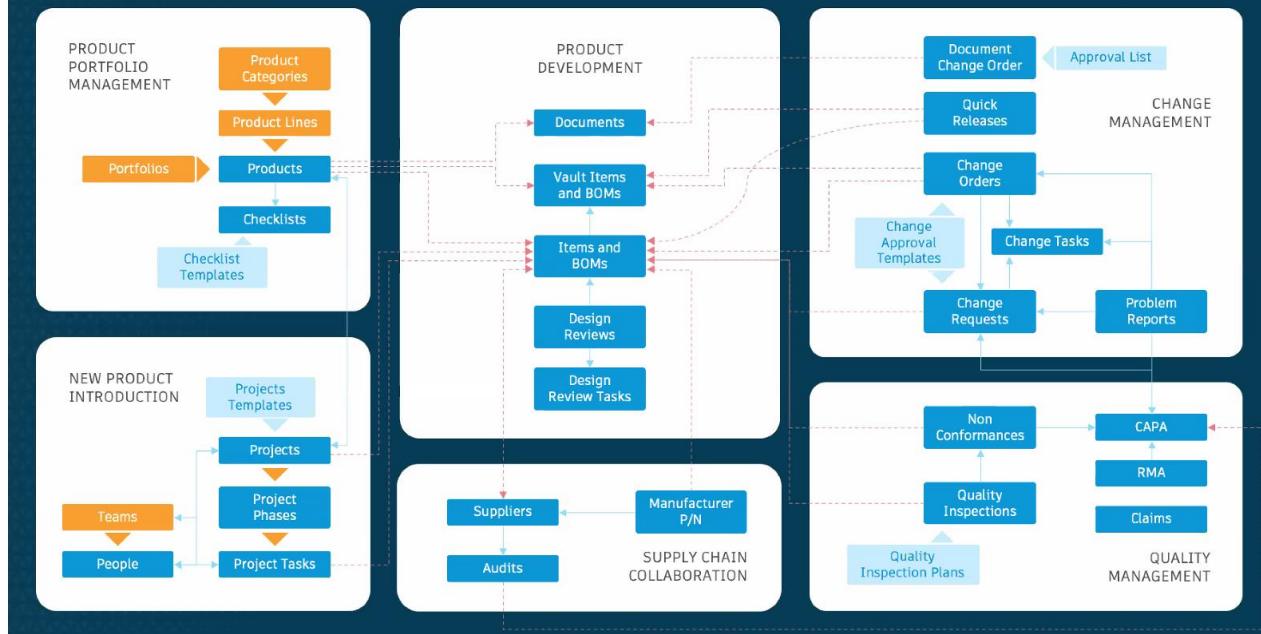


Figure 3: Fusion 360 Manage (F360M) Process Map

Solving Business Challenges with Out-of-The-Box Technology

Below are high level descriptions of the technical features and workspaces in PLM to resolve the corresponding challenges.

Challenge: A more structured process for creating and managing BOMs.

Solution: There is a dedicated workspace in PLM to import, export, create and/or reuse items and BOMs. This workspace allows users to capture item information, metadata and create relationships between items to construct a BOM. Since workspaces in PLM are connected to each other, information about suppliers, manufacturers or quality issues are visible to the organization via BOM views.

Challenge: Keeping track of product and project changes.

Challenge: Communication: notification of a change for a product or project.

Solution: The change manage workspaces in PLM allow users to quickly create a change notice. Not only is the change notice automatically communicated to the right people, it also flags the items affected by the change in the BOM. The change management features in PLM keeps track of the modification to products and/or projects and results in avoiding costs due to miscommunications. Additionally, dashboards and automatic tasks keep everyone up to date.

Challenge: Centralized system for easy accesses to documents and information.

Solution: Due to the inter connectivity between the workspaces in PLM, users can easily trace and find relevant information. Furthermore, having the ability to store project related documentation and product information in PLM, allows teams to have a centralized place to store data.

Free Apps

In addition to the workspaces that come with Fusion 360 Manage, Autodesk has a dedicated App store. The purpose of these Apps are to add additional features and functionalities to the existing workspaces. For example, the Asset Management App helps companies to keep track of their equipment. It reminds the maintenance team when an equipment is due for maintenance or calibration. Figure 4 is an example of the Apps provided by Autodesk.

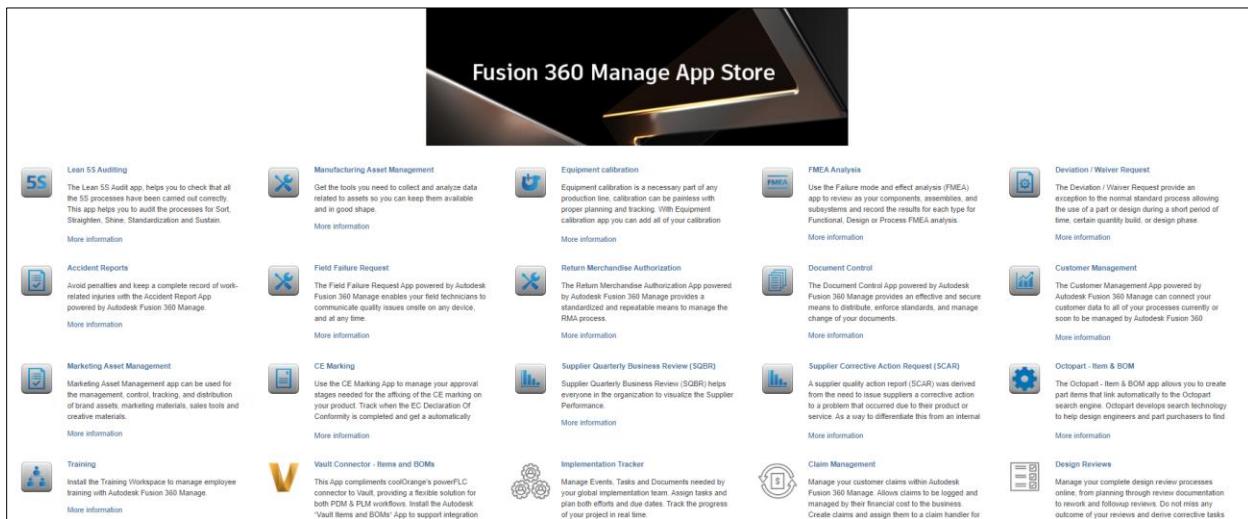


Figure 4: Example of Fusion 360 Manage Free Apps

Scalability

Fusion 360 Manage is a flexible and scalable platform that is suitable for both small businesses and large organizations. The flexibility in the platform allows modifications to the existing out-of-the-box features. This makes it easy for organizations to scale up their processes in PLM as the organization grows and more processes are needed in PLM. Below are a few advantages that Fusion 360 Manage offers as it relates to scalability:

- New users can be added as required. No infrastructure changes are needed.
- The true cloud allows scalability to add to new locations and teams.
- Additional processes and workspaces can be added at any time.
- You don't have to utilize the whole platform at once. You can scale up by using the phase-by-phase approach.

Decide if PLM is Suitable for Your Business

Working with a range of clients in both the successful evaluation and implementation phases of PDM/PLM selection, we work with a series of questions to ask internally within your organization.

- Do design teams manually export Bill of Materials (BOM) or build them in Excel?
- Is the design team manually re-entering product data into other enterprise system(s)?
- Do you have multiple CAD authoring products?
- Do external teams to the organization need access (albeit secure) to design data during and after development?
- How do you currently track change requests, notifications and orders?
- How do you track product design timelines?
- Do purchasing and manufacturing influence your product release schedule?

We have been working with variety of small businesses to identify if PLM is a suitable business solution for them. We would like to use this handout to share our findings with you. We hope that the information we share with you will help you with your decision making. In order to make our case even more realistic, we are going to use a specific customer story and their journey to implement PLM.

Customer Profile

3D-P consists of a team of mining and positioning technology experts. It was created to bring innovative thinking and new technologies to the mining industry. They have since evolved to bring this approach to several outdoor industrial environments around the world. They continue to work hard to understand the unique work environments and operational needs of their clients.

To learn more, visit: <https://3d-p.com/>

3D-P's Business Goal

In most cases, the company has an understanding of the challenges that exists. It may be the case that since you are used to the ways your organization works, you may not be critical enough to pinpoint all the issues.

Before searching for the challenges that you would like to resolve, we recommend setting business goals. Once these goals are set, you can reverse engineer your way back to pinpoint and understand the challenges that need to be resolved in order to achieve them.

This is what happened in the case of 3D-P. Below is what they defined as their goal:

Our goal is to have a centralized system that would help us identify changes and communicate them effectively with other parties involved. The solution also has to be cost effective with a short implementation turn around.

Business Challenges at 3D-P

Once the goal was set, 3D-P was able to reverse engineer their way back and identify their business challenges.

3D-P identified two specific business challenges they wanted to improve:

1. The inefficient design management that relied heavily on manual data entry, and outdated practices for managing their Bill of Materials (BOMs).
2. Challenges of change management and communication. As the company grew, they realized that a lot of their processes were slowing them down and needed to be optimized.

The Solution

Based on 3D-P's business goal and challenges, SolidCAD's Enterprise Team recommended Fusion 360 Manage PLM.

The most important part of the solution was the use of PLM's out-of-the-box features and functionalities. Autodesk PLM is loaded with excellent out-of-the-box features that will make the majority of small to medium implementation very cost effective with a fast time to market value.

The out-of-the-box features and functionalities in Fusion 360 Manage enabled 3D-P to achieve efficiency and control of their BOM's, documentation and change control processes.

The out-of-the-box features and functionalities of BOM management helped 3D-P to have more structured process when they create, modify, and manage both their electrical and mechanical BOMs. Since Autodesk PLM solution is in the cloud, 3D-P's manufacturing team always had access to the latest information. The company was able keep track of their changes and more importantly identify the business areas that required improvements.

Conclusion

Is Autodesk Fusion 360 Manage PLM Suitable for Small Organizations? Yes, Fusion 360 Manage is suitable for small organization and have been successfully utilized by multiple organizations. We highly recommend that you come up with a list of requirements and set goals. Next step is to work with an Autodesk partner that has successfully helped other businesses. Your Autodesk partner will be your guide to success.