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Enhance Manufacturing Operations with a Formal Product Lifecycle Management Solution

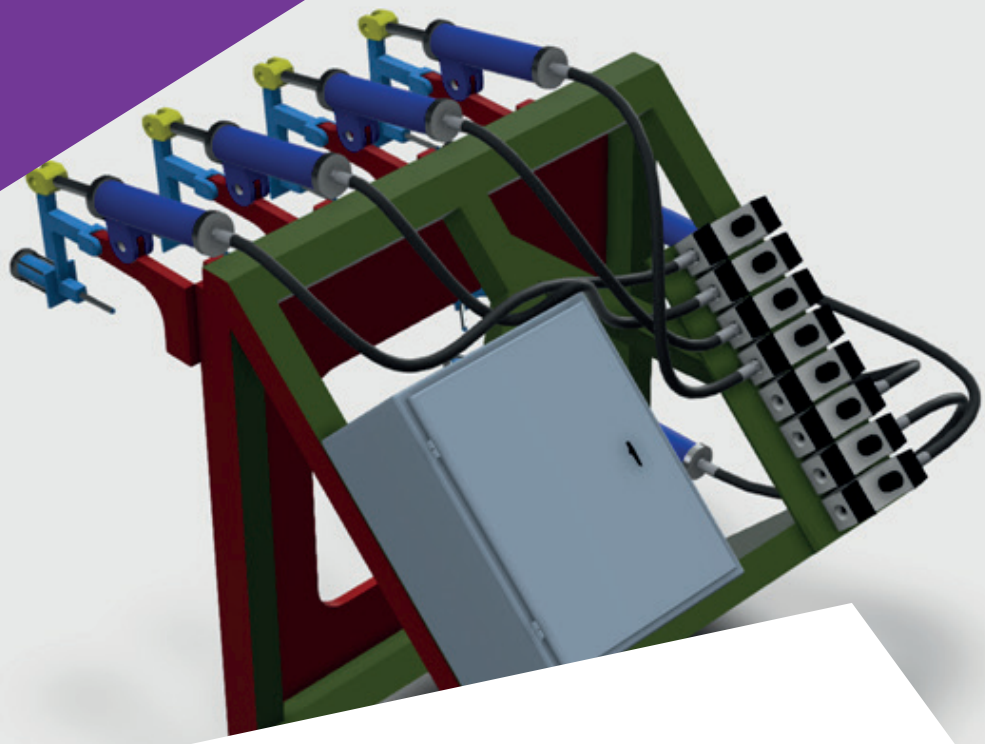

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TABLE OF CONTENTS

UNLOCK YOUR COMPANY'S POTENTIAL WITH AN EFFECTIVE PLM IMPLEMENTATION

Every manufacturing company, from the most traditional to the most advanced, does product lifecycle management (PLM). It's simply the processes used to manage the lifecycle of a product from inception through engineering design, manufacturing, service, and support. Maybe it's made up of databases, spreadsheets, emails, calls and in-person meetings. While the ways of the past may be convenient, disparate systems are not efficient, because tracking data is difficult, version control can be a problem, data can go unused, and files are easily lost. Implementing a formal system that brings together software, process optimizations and clear strategy can help a manufacturing business build better products at a lower cost.

To explain who needs a formal PLM solution, the benefits of PLM, and critical factors for a successful implementation; engineering.com met up with three PLM experts at IMAGINiT Technologies, a leading provider of Autodesk solutions to the engineering community:

- Jason Barnett, Director of Manufacturing and PLM
- Harper Coulter, Industrial Engineer and PLM Specialist
- John Dow, Senior Solutions Consultant and Project Manager

DOES YOUR COMPANY NEED A PLM SYSTEM?

Maybe your company's approach to product lifecycle management is working well, maybe it's not. Here are three simple questions to ask to determine if improved processes would benefit your company:

1. Is it hard to find the data you need?
2. Do you have high scrap and rework rates?
3. Does your current PLM approach depend on a variety of databases, spreadsheets and communication tools?

If you answered yes to any of these questions, you owe it to yourself, your company, and your company's stakeholders to explore PLM optimization.

BENEFITS OF PLM SYSTEMS TO PRODUCT MANUFACTURING COMPANIES

Any business that develops products can benefit from a formal PLM solution. And according to Jason Barnett, "Higher manufacturing volumes correlate to bigger benefits, because in high volume production, minor mistakes become very expensive if not discovered until downstream in the development process."

In a typical product development project, the design, manufacturing and supply chain teams operate in silos, with their own objectives such as delivery schedules, quality, and cost targets. When the project is passed from one silo to the next, inefficiencies are introduced. Often people don't trust that the data they get is correct because of the lack of visibility and revision control. The inefficiencies and mistrust can lead to delays, scrapped materials, rework … all a loss in productivity that impacts quality, customer satisfaction, as well as the top and bottom line.

"A formal PLM solution brings all the engineering data together, establishes a single way of doing things, and creates a platform for sharing information across the teams, even of the teams are in multiple locations or other companies," said Barnett. "It also eliminates the issues created when team members leave a company, taking their knowledge with them."

"On a higher level, there's more time for innovation, because a company spends less time in inefficient workflows. That innovation drives profitability," said Barnett.

CRITICAL SUCCESS FACTORS

"It's not enough to choose the right PLM software for your business," said Harper Coulter. "A PLM implementation is an opportunity to pinpoint and rehabilitate broken and inefficient processes before conforming them to the PLM system. An effective PLM solution adds automation, control and traceability to solid, efficient business processes already in place."

"From years of experience with helping companies of all sizes implement PLM solutions, we have identified several factors that are critical to the success of an implementation," said Coulter.

Insights and Recommendations:

1. **Get Executive Sponsorship**
   "Without executive sponsorship, we either fail or get lucky," said Coulter.

   Why is executive support so important? Some software solutions, such as Enterprise Resource Planning (ERPs) or Customer Relationship Management (CRMs), impact a specific department.

   "PLM rides across multiple departments," said Coulter. "Executive sponsorship ensures that the project has the financial resources required, and it helps get department leaders on board, so they can help address any resistance to change at the user level."

2. **Dispel Myths**
   Because a PLM implementation will impact so many people, and they all will have thoughts about PLM systems, it's important to correct any misunderstandings.

   Communicate early and often that the following common myths about PLM systems are NOT facts:

   a) It's a just another piece of management software, like CRM or ERP
   b) An ERP system can do double duty as PLM
   c) PLM software is the same as a PDM, document management or CAD management application
   d) It's very expensive
   e) It requires a large staff and commitment from IT
   f) It requires constant maintenance

3. **Define Goals**
   An essential part of a winning implementation strategy is well-defined goals, and these are most effective when tied to a number, whether a throughput target, quality target, or revenue or profitability number.

   "Numbers can't be negotiated. That's why they're a great tool for clear, precise communication," said Coulter.

4. **Use the "Agile" Approach**
   Agile development completes work deliverables in iterative cycles, while traditional waterfall approaches move all deliverables sequentially through lifecycle phases. "IMAGINiT recommends the agile approach," said Coulter. "The rigid waterfall methodology is difficult, may take a long time, may require more dedicated resources, and increases the chance that critical documentation and knowledge will slip through the cracks."

   "The sprints in the Agile approach break the implementation project into manageable parts, simplifying the process and allowing the team to get some early wins, which help bolster support for the project," said Coulter.

5. **Customize**
   The idea of adding customization can be daunting, because with some business software, 'customization' means tangling with source code and dealing with improvised custom tools. However, effective, low-code customization is possible, and it can add flexibility to the PLM solution.

   "IMAGINiT uses Autodesk's PLM solution, Fusion Lifecycle, which includes customization options for visual workflow engines and form builders with drag-and-drop interfaces, as well as a light scripting engine for automation of processes," said Coulter. "We do 80 to 90 percent of the customization up front. Then as we go through each phase, we teach the client how to make changes and automations that align with a company's business processes."

THE IMAGINIT TECHNOLOGIES DIFFERENCE

There are many ways to approach a PLM project. IMAGINiT has extensive experience with large and small manufacturers in all industries and can tailor an approach that is right for your business.

Here are some reasons to choose IMAGINiT for the development and implementation of your PLM solution:

EXTENSIVE EXPERIENCE

One significant advantage of partnering with IMAGINiT for your PLM implementation is that their experts have the knowledge and experience to identify risks and opportunities, ensuring each client has the most effective solution in place.

“We’ve done more Fusion Lifecycle PLM implementations than anybody on the planet,” said John Dow. “Our team of mechanical, industrial, and electrical engineering experts has decades of experience in manufacturing and business system integration.”

“When you look at all our experience together, it’s tremendous,” said Dow. “We’re all certified in Autodesk’s PLM solution, Fusion Lifecycle, and we follow proven best practices developed over decades of optimizing processes for clients through PLM implementations.”

PROPRIETARY SOFTWARE

Dow said, “People often ask, ‘What is the single source of truth if I have a PDM, and PLM and an ERP system?” He continued, “IMAGINiT Pulse, our proprietary software, connects these tools together and allows all systems to talk to each other, giving you a single source of truth.”

IMAGINiT Pulse is a SaaS-based business systems integration platform that integrates different types of applications—like CRB, ERP, and PDM—independent of platform, programming language or API. It extracts information from a system, sends it to a platform set up with the workflows, and then transmits the data to the destination system.

THE RIGHT SOLUTIONS FITTED TO THE USERS' NEEDS

The IMAGINiT team is made up of experts who customize solutions to meet the unique needs of each business and ensure that all software and processes work in harmony. They procure the right software, identify the right resources, and integrate the right technology solutions, so businesses can enhance communications, reduce errors, manufacturer high-quality products, and increase profits.

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For more information about implementing a successful PLM solution, visit imaginit.com/PLM

ABOUT THE CONTRIBUTORS:

Jason Barnett,
Director of Manufacturing and PLM,
IMAGINiT & ASI

Jason is a visionary business leader who has worked in the product development technology industry for 23 years. He specializes in driving business outcomes that help customers achieve their business goals and has experience in CAD, data management, PLM, design automation, and system integrations. Jason and his team have won multiple awards for their focus and expertise with implementing cloud PLM solutions for manufacturing companies.

Harper Coulter,
Industrial Engineer and PLM Specialist,
IMAGINiT & ASI

Harper is an Industrial Engineer who graduated from University of Louisville. She leverages the opportunity to employ business improvement by applying her process mapping and lean-thinking skills to configure tailored enterprise software solutions for her clients. Largely, Harper assists clients with the design, implementation, integration, and support of product lifecycle management applications which eliminates inefficient activity in manufacturers product development processes.

John Dow,
Senior Solutions Consultant and Project Manager,
IMAGINiT

John specializes in working across multiple business areas to help clients improve product quality and productivity by standardizing and integrating design systems with efficient workflow processes. He has over 20 years of experience working with product lifecycle management (PLM), document/product data management (PDM), Mechanical Design applications (CAD), design and process standards development, business systems integration and design automation.

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