

The logo for Tech-Clarity, featuring the word "Tech-Clarity" in a bold, sans-serif font. "Tech" is white and "Clarity" is yellow, both set against a dark blue rounded rectangular background.

Tech-Clarity

PDM Buyer's Guide

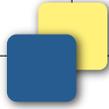
***Ensuring Maximum Value
from Product Data
Management***

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***This summary is an abbreviated version of the report and does not contain the full content. A link to download the full report is available on the Tech-Clarity website, www.tech-clarity.com.**

If you have difficulty obtaining a copy of the report, please contact the author at jim.brown@tech-clarity.com.



Introducing the PDM Buyer’s Guide

Product Data Management (PDM) is an important tool to help manufacturers overcome the complexities of designing, developing, producing, and supporting today’s products. Manual and ad-hoc approaches such as shared folders, FTP, Dropbox, and hard drives are simply not good solutions to manage critical, complex product information. These approaches may work for very small organizations, but quickly falter as organizations grow and people need to share information outside of a few core engineers. These techniques also fail to manage data relationships and complex file structures common to 3D CAD systems. PDM systems are purpose-built to address these issues. PDM is a structured, collaborative solution that helps manufacturers control, access, and share crucial product data. Selecting the right PDM system for your business has a large impact on productivity, product success, and profitability.

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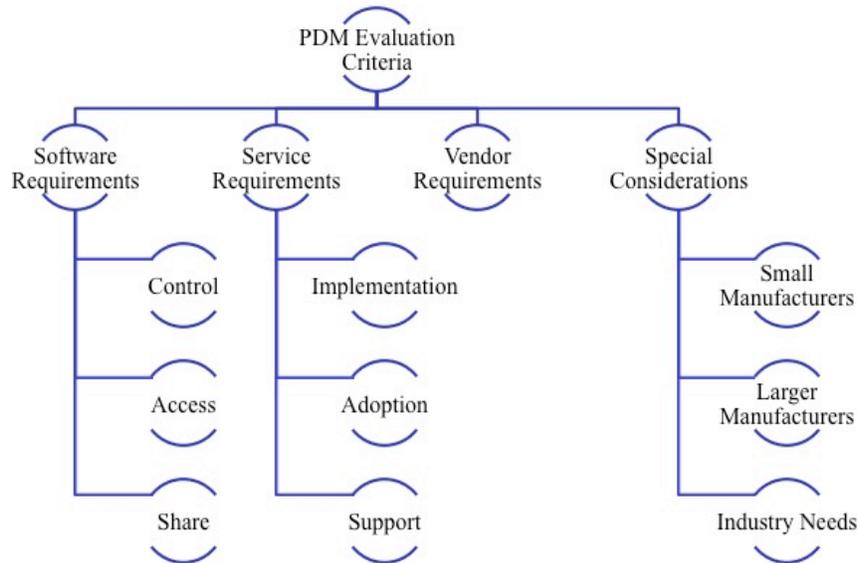


Figure 1: PDM Evaluation Framework

The PDM Buyer’s Guide is a reference tool to guide you on what to look for when selecting a PDM system for your company. The guide is composed of four sections covering software functionality, service requirements, vendor attributes, and special company considerations (Figure 1). Each of these sections includes a checklist with key requirements to investigate when selecting PDM software. The guide focuses on common requirements that form the foundation of PDM for manufacturers:

- Getting files under control so people can find the right revision with confidence
- Making sure concurrent updates don't overwrite each other to avoid "the last save wins" syndrome
- Making information available outside of engineering
- Ensuring Intellectual Property (IP) is captured and accessible regardless of who stored it
- Getting away from complicated shared drive structures that lead to errors
- Making sure people don't manufacture or purchase against the wrong drawing
- Provide "one version of the truth" versus multiple copies of designs

The guide and associated checklists include product, infrastructure, implementation, service, and business requirements – all of which impact the benefits received and total cost of ownership (TCO) of PDM.

Beyond these basics, there are special considerations for smaller companies and for the largest of enterprises. There are also special considerations for some industries. This Buyer's Guide points out some specific items to consider based on company size and offers a few special considerations to look for by industry. The guide goes beyond software functionality to focus on the entire experience of owning and operating the solution. The guide and associated checklists include product, infrastructure, implementation, service, and business requirements – all of which impact the benefits received and total cost of ownership (TCO) of PDM.

Beyond these basics, there are special considerations for smaller companies and for the largest of enterprises

The PDM Buyer's Guide is not intended to provide an all-encompassing requirements list. Instead it covers the high points that manufacturers should look for in a PDM system. Think of this as a "PDM Litmus Test" to see if a solution is a good high-level fit for your business before spending significant time and effort analyzing detailed features and functions.

Although the checklists focus only on PDM requirements, it's important consider more than your current needs when choosing a system. Many companies eventually want to grow beyond basic PDM. These companies start with PDM and evolve through a maturity process to a more full Product Lifecycle Management (PLM) environment. PLM extends the core PDM foundation to support more product development and engineering processes, manage a richer view of products, include more people in product development, and support processes further upstream and downstream from Engineering in the product lifecycle (Figure 2). Consider this potential when selecting your software and ensure that your solution has the capability to expand with your growing needs.



Figure 2: Four Dimensions of PLM Expansion

Conclusion

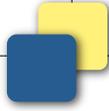
PDM helps manufacturers address market complexity and improve business performance. As Tech-Clarity's Managing Engineering Data concludes, "*Product data management is the fundamental building block of any engineering software strategy and helps companies get the most out of their precious engineering resources.*" When evaluating PDM, manufacturers need to take into account:

- Product requirements
- Implementation, adoption, and support requirements
- Vendor / business requirements
- Special requirements based on company size (particularly for very small or very large organizations)
- Special considerations to meet industry needs

The final collection of requirements for any given company will be unique and must be prioritized based on contribution to supporting your implementation and achieving your business objectives. Some evaluation criteria may be critical, while others should carry a lower weight. The key is to select a solution that best fits the needs of the business and can be realistically supported.

Using a high-level list of requirements can help you narrow down potential solutions by providing a quick "litmus test" to determine if a solution and partner are a good fit.

Using a high-level list of requirements such as the ones in this guide can help you narrow down potential solutions by providing a quick "litmus test" to determine if a solution and partner are a good fit before conducting detailed functional or technical reviews. For



example smaller companies may want to emphasize ease of implementation and support in their initial evaluation criteria. Larger manufacturers, on the other hand, might emphasize more mature engineering change processes and require a more scalable solution.

It's critical to consider both current and future needs when evaluating potential solutions.

Remember, it's critical to consider both current and future needs when evaluating potential solutions. You should consider the possibility that your company may want to expand into a more full-featured system and look for a PDM system that can serve as a foundation for a broader PLM implementation. You should also consider how likely it is that your business will grow and ensure that the solution you implement can scale to enterprise capabilities and provide enterprise functionality. From a PDM perspective, it's important to implement what is needed today, but know where the business is going and select a platform that can grow with the business (Figure 4).

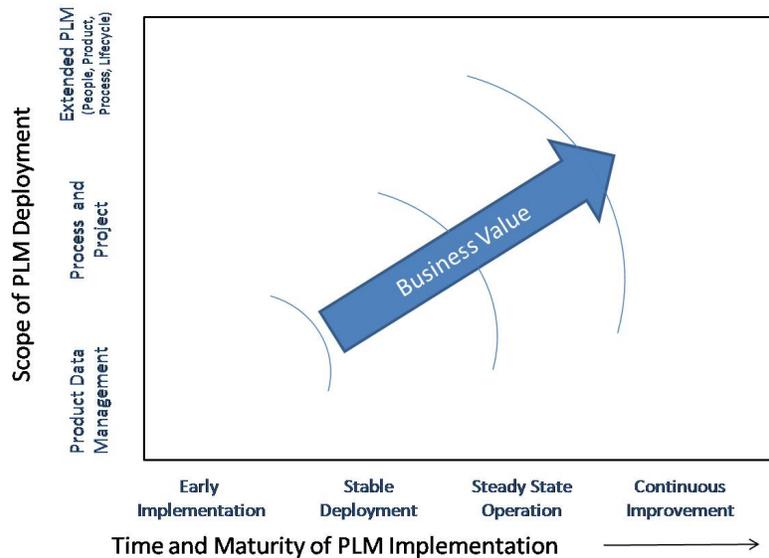


Figure 4: PLM Maturity Framework

Recommendations

Based on industry experience and research for this report, Tech-Clarity offers the following recommendations:

- Identify and weigh PDM requirements based on company needs, company size, industry, and any unique company needs
- Use high level requirements such as the ones in this guide to evaluate solutions based on business fit before engaging in detailed evaluations
- Consider using more simple, commodity technical solutions for smaller companies and those with limited IT resources
- Consider using more full-featured, scalable solutions for larger organizations that have more demanding process and scalability needs and can afford the IT resources required to support capabilities such as site synchronization
- Consider long-term business and process growth needs and the potential to expand to a more capable PLM system when choosing a PDM system, but start small and get value along the way during implementation

About the Author

Jim Brown is the President of Tech-Clarity, an independent research and consulting firm that specializes in analyzing the true business value of software technology and services. Jim has over 20 years of experience in software for the manufacturing industries, with a broad background including roles in industry, management consulting, the software industry, and research. His experience spans enterprise applications including PDM, PLM, ERP, quality management, service, manufacturing, and others. Jim is passionate about improving product innovation, product development, and engineering performance through the use of software technology and social computing techniques.

Jim is an experienced researcher, author, and public speaker and enjoys the opportunity to speak at conferences or anywhere that he can engage with people that are passionate about improving business performance through software technology.

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