Next Generation Cloud-Based PLM Solutions

CIMdata Commentary

Key takeaways:

- *Traditional PLM often has low user adoption rates while cloud-based PLM solutions tend to ramp up quickly once selected*
- *Cloud-based PLM solutions incorporate technology to support mobile devices, enabling access to PLM anywhere*
- *PLM solutions of the future will leverage some aspects of cloud-based technology - Autodesk is doing it today*

The tools that most companies use for PLM have been around for many years. However, today there are still many companies that have not been able to successfully implement a complete end-to-end PLM solution. Why is this true? Some companies have implemented several different flavors of PLM and have ended up with a maze of solutions with limited integration. Others have implemented one common standard for most of their organization, but user acceptance rates are often low. There are still others that have avoided PLM altogether. One of the reasons for this limited success is that most companies have not been able to implement all the capabilities supported by PLM technology solutions.

The fact is that most companies still operate with many disconnected information silos. These silos are often a result of acquisitions, independent operations, or the inability to easily create local information repositories to meet workgroup needs. Today there are a variety of tools such as Dropbox or Microsoft SharePoint that can be used to easily create shared storage locations for important corporate information. But, these silos are usually not easily managed and their information is disconnected from other data.

On top of these information silos is often a collection of Microsoft Excel spreadsheets that serve as a guide for product BOM and configuration information. Excel can do many things well, but managing engineering changes and configurations is not one of them. Once the product information is captured with various spreadsheets, the ability to share and make changes quickly, with required traceability and validation, is severely hampered or lost altogether.

With collections of independent, disconnected data sources it is increasingly difficult for anyone to find what they need (especially in a timely manner). Those who know which particular silo houses a specific type of information may eventually find what they are looking for by asking others, performing multiple searches, or browsing. However there is no possible way to search across all the information repositories to get all the related data. There is also no way to see work status as it progresses because the process' data is not connected to processes.

In many cases, traditional PLM has proven costly and too complex for small and medium businesses (SMBs) with modest requirements for engineering change and product information management. These SMBs need basic capabilities that can support their design efforts. With traditional PLM systems they are often forced to purchase more software with more capability than is needed. This has caused many SMBs to avoid traditional PLM solutions and to look for other approaches to their product data management issues.

Cloud-Based PLM

There has been a lot of information recently from many PLM solution providers about the cloud. The question is often asked: "What is the cloud and what does it do?"

The advent of cloud-based computing is providing new, highly flexible PLM delivery paradigms that address many of the issues with traditional PLM delivery. While "the cloud" has many competing definitions, characteristics of cloud-based solutions usually include:

- On-demand solutions with new cost models that have lower upfront costs for software licenses, subscriptions, or rights-to-use, allowing smaller companies to afford PLM
- Hosted computing services and environments that do not require investments in infrastructure, providing access to information for anyone at any time while minimizing administrative overhead
- The ability to add and increase scope of capability and the performance of the solution and processes without requiring additional investment in the underlying IT infrastructure
- Global access to required application functions, information, and processes

Cloud-based PLM solutions leverage the cloud's ubiquitous access and provide tools that enable personnel in multiple internal and external organizations to collaborate using workflows that extend across extended-enterprise and organizational boundaries.

Cloud solutions often have advantages when creating user interaction. Newer cloud options are able to leverage modern Internet and IT technologies, making them much easier to deploy outside of engineering and even across enterprise boundaries. This can often have a positive effect on user adoption rates.

In the past, many IT organizations were hesitant to put information on cloud-based platforms. Today CIMdata is seeing more solutions that support cloud options and provide access to large amounts of information across the enterprise. Most PLM vendors today have some kind of cloud option for their solutions. This shows that now, more than ever, there is recognition that the cloud provides a viable platform for PLM solutions. We will see more of this in the future as businesses become more comfortable with the benefits of cloud-based solutions.

Mobility

One of the key aspects of a cloud-based PLM solution is support for mobile devices. This allows users to access the information they need at any time on any device. Since most users carry smartphones and tablets 24 hours a day, this makes access and collaboration easy and efficient. This kind of access also provides the flexible environment global teams need to collaborate 24x7. These mobile tools can accommodate rapid changes, provide extensive access, and support stellar communication throughout the product lifecycle.

BOM and Change Management

Another key area of interest for PLM solutions is engineering change management. This includes BOM management, workflow management, and collaboration. These key areas are often overlooked and underserved by traditional MS Excel- and SharePoint-based solutions. CIMdata's experience has shown that this is one of the key reasons companies look for a PLM solution.

Cloud-based PLM solutions that manage engineering change and collaboration can enable significant advances in product innovation and development processes. Providing better, faster access to data across the enterprise leads to more people exchanging more ideas earlier in the design process. Supplier collaboration is enhanced and interactions with the supply chain become a strong foundation of support for product processes. This inevitably leads to more innovative products with greater quality getting to customers more quickly.

Focus On Autodesk PLM 360

PLM 360 leverages Autodesk's traditional strengths while addressing the high cost and complexity of traditional PLM solutions. While many in the PLM market talk about the importance of cloud and mobile, Autodesk is thinking differently about this market and appears to be leading the way with potentially game-changing offerings. Their broadening portfolio covers much of the traditional PLM space and should extend Autodesk's footprint within SMBs. It may also get them on the short list in increasingly larger enterprise deals. These are some of the reasons why CIMdata added Autodesk to our list of "PLM Mindshare Leaders" in our recent PLM market analysis. This is not "your father's Autodesk," and they are now competing head to head in the traditional PLM market.

Conclusion

What will the next generation of PLM solutions look like? It is a good bet that the move to the cloud has just begun. With more technology appearing on the horizon to support cloud-based solutions, a shift in adoption of the cloud is happening now. One of the major issues that companies cite when discussing the cloud—data security—appears to be diminishing in importance as adoption of cloud-based solutions increases. It may well be that next-generation companies will exist mostly on the cloud.

While many PLM solution providers are stepping gingerly towards cloud-based solutions, Autodesk has faced the challenge boldly, and are staking their bet on cloud-based PLM. If this turns out to be a correct strategy they will have an advantage and a large head start on their competition.

CIMdata believes that Autodesk has made great progress in advancing their PLM 360 strategy, offering, and go-to-market since we were briefed at Autodesk University in December. Focusing on key business challenges like BOM management, change management, security, and supplier collaboration among others, helps Autodesk to help its customers achieve a rapid time to value.

They are making the needed changes in their go-to-market strategy, learning from SaaS market leaders like Salesforce.com, and their partner NetSuite. These changes, and their customer successes, are helping to breed more success, bringing many new customers into the Autodesk user community.

About CIMdata

CIMdata, an independent worldwide firm, provides strategic management consulting to maximize an enterprise's ability to design and deliver innovative products and services through the application of Product Lifecycle Management (PLM). CIMdata provides world-class knowledge, expertise, and best-practice methods on PLM. CIMdata also offers research, subscription services, publications, and education through international conferences. To learn more about CIMdata's services, visit our website at http://www.CIMdata.com or contact CIMdata at: 3909 Research Park Drive, Ann Arbor, MI 48108,

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