Is PLM Mobility the Right Place to Start?

By taking a holistic view of product mobility, organizations can transcend insular thinking and unlock the true potential of product lifecycle management to help grow their businesses.

Executive Summary

Although product lifecycle management (PLM) has been instrumental in product development for decades, it has, until recently, remained tethered to terra firma. PLM is now entering a new playground: mobility - where it is maturing into a self-sustained offering. Current PLM mobility capabilities are very limited in reach and approach, however, because there is no clear definition of and perspective on PLM mobility’s value proposition. As a result, many enterprises are churning out mobile product development capabilities that do not necessarily address their overall needs and fulfill real business objectives.

Limited value and vision, as well as numerous unanswered questions and a poor partner ecosystem, are also significantly impacting enterprises’ further investment in PLM mobility. PLM vendors, on the other hand, are building mobility capabilities that address singular challenges and predominantly focus on workflow-based approvals enabled on mobile devices. This has created another stumbling block, as enterprise decision-makers often view limited approval capabilities as de rigueur for PLM mobility, which should not be the case.

This point of view (PoV) position paper offers our perspective on mobility in the context of product development.

Product Mobility or PLM Mobility?

To understand PLM mobility, a good place to start is product development.

Figure 1 shows the three main stages for a new product development initiative. It starts with vision and strategy, followed by product management, which includes key business processes of product marketing, quality and performance, enabled by a strong PLM backbone to manage information across products. It is important to note that strategy, business processes and the PLM system work in collaboration, not in isolation.

Now, let's add a mobility perspective to understand how product development behaves. First, a definition of mobility is in order. Mobility, in simple terms, means: “The quality or state of being mobile.” And, hence, adding a mobility perspective to product developments means making a product mobile. In this context, product movement refers to the movement of information around the product from one life stage to another; hence, it is the product information that is mobile.

And with this amalgamation of terms comes “product mobility.” However, it must be noted that a product has spheres of influence for information generation and consumption. The spheres can be categorized as internal and external.
The internal sphere covers the strategy, time-to-market, resource utilization and cost implications, while the external sphere relates to market performance, revenue generation and customer feedback.

As such, product mobility should be defined as “an ability to innovate a product by inculcating internal and external spheres of influence while having a mobile product lifecycle.” This may require integrating with other systems.

PLM is an enabler for product development. PLM mobility, on the other hand, should be defined as “an ability to generate and provide product information internally and externally, and to bring it in a mobile state.”

In sum, product mobility is a consumer of product information and PLM mobility is a provider of such information.

Understanding Business Case vs. Use Case

In our experience, we have seen that when it comes to mobility, enterprises have not been able to differentiate clearly between business case and use case. For example, thinking it was a critical need, a washing machine manufacturer enabled service manuals to be read on a mobile device to help field engineers. During our discussions with this manufacturer we found out that it was an ad hoc need that typically arose when wrong documentation was used by the service organization. As a result, the service organization sponsored an IT initiative to have the entire service manual available to its field engineers via their mobile devices. What happened? The problem of incorrect documentation with service engineers has persisted, leading to longer repair times. This has created additional complexities:

- Service engineers had to wash their hands before accessing a manual over a mobile device to prevent the screen from getting dirty. This added time to the repair process.
- Not every service engineer was well trained on accessing the document over a mobile device, which caused service delays.
- Connectivity and battery issues undermined access to the content; moreover, the documents were not available offline. This again added to repair delays.

In the end, the whole initiative resulted in more customer and service technician complaints rather than less. The right approach would have been to understand the problem in a more holistic manner rather than take an approach of merely addressing the symptoms. The manufacturer should have started by establishing a business view, as shown in Figure 2.

A case based on such findings would have strengthened the organization’s resolve to address customer complaints rather than trying
A Case-Based Approach

Realizing Product Mobility
Let’s reexamine Figure 1. Three components are clearly shown:
• Product.
• PLM.
• Mobility.

The Ecosystem Continuum

Product and PLM software solutions have been working hand in hand for the better part of four decades. Over this time, PLM has been used to manage multiple aspects of product information and help organizations make informed decisions on product development and delivery. Mobility around these two components is creating a new dimension of product information generation, consumption and availability. However, to enable mobility around product development, we must acknowledge that mobility works in an ecosystem.
And as previously noted, organizations need to define a product mobility strategy that keeps spheres of influence in mind. Enabling product mobility internally requires different ecosystem capabilities; enabling it for an external ecosystem adds additional complexity. Figure 3 shows a simple representation of an ecosystem for both internal as well as external spheres of influence.

As shown in Figure 3, internally focused product mobility initiatives tend to have specific and less numerous challenges compared with external ecosystem capabilities. Nevertheless, enablement is still a challenge given the wide exposure and access to data on a mobile device. With product data managed mostly in PLM systems, it may seem like an easy job to enable the data on a mobile device. However as we learned from the service organization scenario, organizations cannot rely on one system to make things work. The whole ecosystem has to come into play.

Starting from a product mobility perspective, irrespective of internal or external views, allows organizations to think holistically and define a roadmap leveraging multiple systems, not just PLM. As noted in Figure 2, product level thinking could have made the initiative stronger and more appealing, eventually resulting in fixing the root cause of the customer complaint. That approach fell short because it was use-case focused; service documentation and drawings were published from the PLM system and made available on the mobile device. In contrast, a successful product mobility journey starts by asking questions. For example:

- **Who are my consumers of information?**
  This includes both internal and external stakeholders. Depending on the nature of the initiative, however, the prospective consumers could be restricted due to security issues.

- **What ease of information accessibility do they truly need?**
  It may come as a surprise that what users actually need is not multiple e-mails, alerts or notifications coming on their mobile devices. Rather, they require an integrated view from which to make informed decisions.

- **Do I have a business problem here to solve?**
  We have seen that IT issues can be understood as business problems. A business problem will always have a direct impact on cost, quality, price, productivity, customer feedback or revenue. And it is important to highlight that defining a business problem can help to solve the root cause.

- **What systems are impacted as a result of defining a business problem?**
  PLM is not the only system that could be impacting product mobility. In the entire product development lifecycle journey, multiple systems interact and hence product information moves from one system to another. Handshakes and handoffs between systems and the resulting transformation of information defines the product mobility roadmap and helps indicate which is the right ecosystem to develop.

Looking Ahead

Product mobility is a developing concept and should be explored by keeping an extensive ecosystem in place. It is the ecosystem around the product that brings the true experience of mobility, not the enablement of a portion of data using systems such as PLM.

Organizations must understand that it is the product that is generating revenues and customers for them. Hence, the focus should be around creating a product ecosystem when starting a mobility initiative. We believe that as the concept of product mobility matures, organizations will be able to reduce the gap between internal and external ecosystem needs for product mobility.

Moreover, decision-makers should view product mobility as a way to solve business problems holistically rather than as point solutions. While considering the enablement of product mobility, organizations should conduct end-to-end business assessments and also consider the challenges for both the internal and external ecosystems.
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