



The Secret of **Lean PLM** implementation

I. What are companies looking for with global economic recession?

The global economic recession has left product design and manufacturing companies with less sales volume, less demand, less supply chain flow, and the worst, site closure and bankruptcy.

Still, companies who applied effective risk mitigation strategies, and who are flexible and who are able to make decision early enough do survive the storm.

Surviving instinct with sound information generates turn key decisions.

Whereas, sound information relies on sound management approaches and efficient management processes supported by efficient tools and systems.

In order to stay current with critical product information, companies are searching for new methodologies, strategies, tools and implementations that could generate true business value with limited budget and resources .

II. Current Implementation trend and issues

A quick skim in the market, we have already seen that Computer Aided Design (CAD), Product data management (PDM), Enterprise Resource Planning (ERP), Material requirement planning (MRP), Supply Chain management (SCM), Customer Relationship Management(CRM), Collaborative Product Commerce (CPC), Business process management (BPM), Business Intelligence (BI) provides management methodologies, strategies, tools and processes to address management needs at different stages in a product life cycle.

In reality, large enterprises are able to afford to implement each of them or most of them. Medium size companies afford to implement one or two of them or settle themselves on variations of one or two of these components. Small companies cannot afford big implementation, and they'd rather believe they are efficient enough to skip those big words and only take on steps, approaches and tools that fit in their immediate requirements.

The issues associated with this reality are:

- that implementation of any of the components above are costly;
- that every implementation only covers one perspective out of the whole product life cycle, reflecting a uncompleted form of the truth. Without knowing the truth itself, the form could be far from the actual value pole.
- PLM implementation, if companies happen to know what it is, often goes sour with large scope but limited budget.

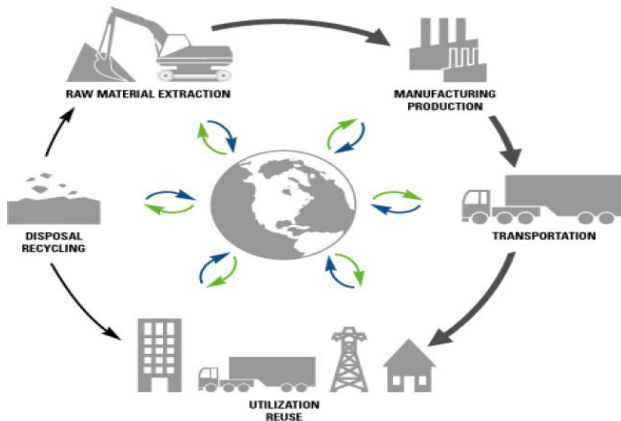


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III. PLM Defined

Product Lifecycle Management (aka PLM), a concept that came to exist for a long while but has not been as well accepted as ERP or SCM or other listed components yet. We believe that Product Lifecycle Management is the leading thread, the soul of all the remaining components instead of just an appending step only to help in process streamlining, user collaboration and issue fixing after other discrete components are implemented. According to Wikipedia, "**Product lifecycle management (PLM)** is the process of managing the entire life cycle of a **product** from its conception, through design and manufacture, to service and disposal. PLM integrates people, data, processes and business systems and provides a product information backbone for companies and their extended enterprise."

Wikipedia positioned PLM as the product information backbone shown in the diagram below:



Another diagram from site www.areschina.com depicts PLM in relation to other components as follows:



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In this case, PLM is the platform which all other components are based upon and extended from.

IV. PLM implementation in relation to other implementations like PDM, ERP, SCM, BPM, BI, etc.

In practice, depending what software applications they started investing first, companies may not even know the concept of PLM before they start their ERP implementation, for example, SAP was strong in ERP package and only brought PLM in a later stage. Due to different reasons as such, companies often think that PLM is something nice to have, and/or that PLM essentials are essentials covered by each ERP package, SCM package or PDM package, etc, so there is not a need to consider it with higher priority nor independently.

However, we believe that there is a fine line here which is easy to be ignored but could make critical difference in the success of your company innovation. We believe that companies choose to implement their innovation strategies without first taking PLM into consideration would be far less successful than those who start from PLM. The reasons are straightforward:

- PLM provides you a vision;
- PLM provides you a blue print;
- PLM provides you a road map;
- PLM provides a backbone, a platform where other components could be based on.
- PLM provides you a bird-eye view, an overall picture on what you are doing or going to do with your products.

Starting with a need assessment from PLM point of view, companies would have a thorough grasps of



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their goal and clear understanding of where they are going before they actually start driving.

V. Defining "Lean"

Lean is a very sexy word in now-a-day enterprise business solutions. But what is really "Lean"?

According to LEI (Lean Enterprise Institute), "the core idea is to maximize customer value while minimizing waste. Simply, lean means creating more value for customers with less resources.

A lean organization understands customer value and focuses its key processes to continuously increase it. The ultimate goal is to provide perfect value to the customer through a perfect value creation process that has zero waste.

To accomplish this, lean thinking changes the focus of management from optimizing separate technologies, assets, and vertical departments to optimizing the flow of products and services through entire value streams that flow horizontally across technologies, assets, and departments to customers.

Eliminating waste along entire value streams, instead of at isolated points, creates processes that need less human effort, less space, less capital, and less time to make products and services at far less costs and with much fewer defects, compared with traditional business systems. Companies are able to respond to changing customer desires with high variety, high quality, low cost, and with very fast throughput times. Also, information management becomes much simpler and more accurate."

VI. Lean PLM

The essence of lean PLM, we believe, is to provide companies with opportunities for a PLM implementation whose scope does not have to be big, which is not at all window dresser and definitely the backbone of all other elements.

The focus of lean PLM is to address the need of the right amount of product data in different stages of product life cycle to serve the requirement of business intelligence, based on which sound business decisions can be made in a timely fashion.

PLM is often global, and/or across multiple business entities, therefore, lean PLM would also address the needs for intelligent, secure and efficient communication across board.

For small and medium local businesses, lean PLM would address PLM needs in the form of on-demand



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requirements for on-demand services. How would on-demand PLM be effective is a separate discussion itself. Our consultant specialized in on-demand PLM would be able to address your on-demand PLM implementation needs. For example, will PLM Software-as-a-Service really fit into my PLM requirements? Being an enterprise backbone, will it make sense for PLM to be "on-demand"? If so, how would I fit my "on-demand" PLM requirements into the "on-demand" PLM application without worrying about having massive changes later?

In general, "Lean PLM", we believe, is what companies are looking for regardless of the seasons.

VII. Lean PLM Implementation

Lean PLM implementation is to apply the lean principles to a PLM implementation to ensure that all ingredients in the implementation is well justified and of value and there is no waste and there is minimum change needs.

According to LEI (Lean Enterprise Institute), there are 5 steps in the lean practice:



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- 1 Specify value from the standpoint of the end customer by product family.
- 2 Identify all the steps in the value stream for each product family, eliminating whenever possible those steps that do not create value.
- 3 Make the value-creating steps occur in tight sequence so the product will flow smoothly toward the customer.
- 4 As flow is introduced, let customers pull value from the next upstream activity.
- 5 As value is specified, value streams are identified, wasted steps are removed, and flow and pull are introduced, begin the process again and continue it until a state of perfection is reached in which perfect value is created with no waste.

The steps sound very tedious. But we believe that a master of lean PLM implementation would be able to apply these principles in a way that is spontaneous and effective with least effort. It is just a born habit to do so for the customer. That has been how we distinguished our services with record keeping success on the PLM implementations we were involved in the past.

For more details and further discussions, please send a request to service@bmtechnology.net.