As more and more businesses strive to streamline production, and, as the pressure on manufacturers builds due to the ongoing financial crisis, data management becomes increasingly important. Companies today rely on a multitude of supply chain associates to design, make and market their products, and the timely delivery of raw materials is a fundamental piece of the puzzle.

Today's manufacturers rely on many types of information technology, software and procedures to maintain the free flow of raw materials and products. Many software systems like ERP (Enterprise Resource Planning), and PLM (Product Lifecycle Management) can play a role in tracking and analyzing your resources. SCMS, or Supply Chain Management Software, allows a company to interface with their suppliers and other associates to assure the free exchange of goods and materials. Supply Chain Management (SCM) is especially complex since it relies on the data input and participation of companies other than your own, and it often involves companies from many different sectors.

As with many manufacturing issues, SCM is a topic that means different things to different people. So, in order to take some of the confusion and mystery out of SCM, we compiled a brief exploration of the topic from various sources on the web.

Let's define the terms.

According to Wikipedia, SCMS is "a business term which refers to a whole range of software tools or modules used in executing supply chain transactions, managing supplier relationships and controlling associated business processes."

This commonly includes:

1. Customer requirement processing

2. Purchase order processing

3. Inventory management

4. Goods receipt and warehouse management

5. Supplier Management/Sourcing

The same article states: "Such tools often attempt to balance the disparity between supply and demand by improving business processes and using algorithms and consumption analysis to better plan future needs. SCMS

also often includes integration technology that allows organizations to trade electronically with supply chain partners."

Elsewhere online we found this description: "Supply chain management software is possibly the most fractured group of software applications on the planet. Each of the five major supply chain steps is comprised of dozens of specific tasks, many of which have their own specific software. Some vendors have assembled many of these different chunks of software together under a single roof, but no one has a complete package that is right for every company. For example, most companies need to track demand, supply, manufacturing status, logistics (i.e. where things are in the supply chain), and distribution. They also need to share data with supply chain partners at an ever increasing rate."

The nonprofit group Supply Chain Council (SCS) identifies these main SCM priorities:

1. Customer service

2. Cost control

3. Planning and Risk Management

4. Supplier/partner relationship management

5. Talent

Supply Chain Management is coming into its own as a science, and, as a growing number of technologies and processes come together, manufacturers will be able to more effectively ride the seemingly chaotic waves of supply and demand.

There has been a lot of discussion in the data management industry concerning the nature of Supply Chain Management, and the role that Product Lifecycle Management software should play. Whether or not PLM systems can be integrated into a SCM protocol seems to be a topic of considerable interest among manufacturers, software providers, and the prognosticators who hope to predict the future of the global supply chain.
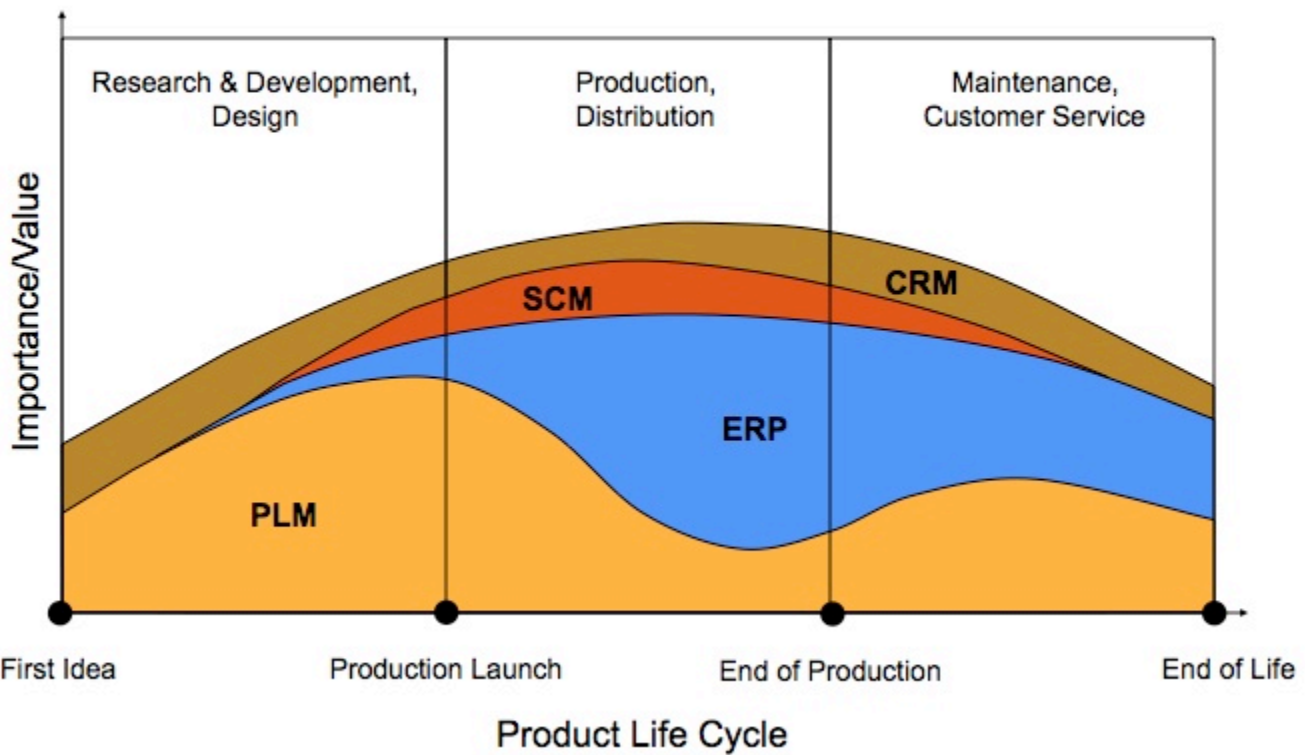
For the most part, the consensus seems to be that, for PLM systems to continue to thrive, they must adapt to fill the Supply Chain Management needs of major manufacturers. Not only does PLM play a vital role in the development of supply chain transparency, but it is also a vital link in the data chain that keeps production moving.

In a recent blog post on SearchmanufacturingERP.com, writer Alan R. Earls says "There is a natural overlap between product lifecycle management (PLM) and supply chain management (SCM)."

He goes on to quote Noha Tohany, an analyst at AMR Research who says, "Increasingly, you must understand what your supply chain looks like when you are managing the design and development decisions."

Elsewhere online, Mr. Earls quotes Joe Barkai, an analyst at Manufacturing Insights: "In point of fact, most of the information in a PLM system applies to design considerations, while most of the information in SCM applies to manufacturing. The PLM information becomes less important when you move into volume production -- it is only relevant to the SCM side in development, or as you ramp up to production."

PLM systems help manufacturers understand their needs at various points in the design, development and production of their products. Supply Chain Management requires a consistent flow of accurate, timely and usable information about raw materials, processes, partnerships, and contractors. PLM can play a vital role in managing that complex web of data.

Take a look at the flow chart above and you will see how PLM, along with other data management programs, can play a vital role in the overarching SCM project. From design, through distribution, PLM applications have a varying degree of importance to SCM.

The future success of any PLM vendor may soon depend on their ability to provide a PLM product which can be easily integrated with existing SCM software, ERP systems and other data management tools.

At some point, it may be possible for a single software solution to attend to all the data needs of manufacturers, but, until then, the various functions of oversight are compartmentalized into these various applications. For a company to truly attain that elusive "one version of the truth," they will have to find ways to interface their SCM software and their PLM system. For PLM vendors the vital task now is to create products that make this integration as seamless, as invisible and as painless as possible.

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