

The Sweeping Transformation Of Manufacturing

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Whether we like it or not, globalization has been a major factor in the staying power of many manufacturers. The practice of scattering production, jobs and plants across the globe has delivered great benefits to the consumer and the manufacturer. Companies have been able to squeeze as much efficiency as possible from the products they make so that what we desire is affordable and readily available.

Yet with the growing costs and challenges associated with the global market, these organizations are looking for new sources of competitive advantage.

The global manufacturing industry is in the midst of a fundamental transformation – having to rethink everything from how products are conceived, designed and sourced to how they are produced, sold and serviced. In fact, according to a recent study done by [Oxford Economics](#) [1], a global forecasting and quantitative analysis firm, 68 percent of 300 manufacturers surveyed expect to undergo major business transformation in the next three years, with 43% rating strategy and planning for products as a top factor for driving business success – rating this more important than operational execution.

What is this force driving change? To be certain, it's not just one, but a confluence of factors changing the manufacturing landscape. Digitization, personalization, "smart" products, connectivity, and servitization are some key drivers, and globalization and regulation continue to drive manufacturing businesses, but in new ways. Anyone using PLM needs to understand these forces driving manufacturing and take them into consideration when implementing a PLM strategy.

- **Smart Products & Connectivity.** By 2020 more than 50 billion devices are expected to be connected to a global network. In this new era of connectivity, every day physical objects will be able to identify themselves and communicate directly with other devices. This one single ability leads directly to a new level of customer service, termed "servitization".
- **Servitization.** Again from Oxford Economics, more than two-thirds of manufacturers expect to use service as a differentiator by 2015, with more than half of them planning to establish a service profit center, and 77 percent indicating that improving services is a key factor for competitiveness. In this new era, manufacturers need to look beyond the single product sale transaction into a new relationship between themselves and the consumer—characterized by an ongoing delivery of value—exchanged over a platform in the form of a smart, connected product.

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- Digitization. To better meet fragmenting customer demand, manufacturers are harnessing digital technologies that help them improve global collaboration and expand regional manufacturing processes into globalized design-build-service anywhere strategies. Digital technologies also enable manufacturers to simulate and validate many product configurations before they are built.
- Personalization. As consumer demand continues to evolve, manufacturers are being pressured to respond with increasing customer choice. But product diversity can increase cost, and potential decrease quality. According to the Oxford Economics report, over two-thirds of manufacturing executives will apply Voice of Customer to better understand their customers, and to make certain quality does not suffer.
- Globalization. The global market continues to expand, and it's not just about where we manufacture and source materials anymore. Manufactures must be able to design, build, service, and sell to and from anywhere.
- Regulation. With globalization comes responsibility. Manufacturers must stay ahead of the always changing regulatory requirements and of local customs related to health, safety, trade and the environment. Sixty-three percent of C-level executives say global product compliance will be the most developed to coordinate strategy and planning.

The goal for every manufacturer should not only be to “make better things” — creating products and services that meet customer needs, but also to “make things better,” facilitating the engineering, service planning and execution, management and production processes through which innovation can evolve from conception to retirement, and creating a closed feedback loop to ensure continual improvement and alignment across the business.

For many manufacturers this is a succeed or fail moment, they can choose to get ahead of the change by seizing the opportunities presented by tomorrow's world or get run over by newcomers trying to disrupt the market by adapting their strategies accordingly.

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