

Midwest Complex Manufacturers Experience Globalization Mobility is crucial to competitiveness among complex manufacturers

and cost containment is critical for lean manufacturing

By Thomas R. Cutler

he Complex Manufacturing Research Survey was conducted in early 2006 by Florida-based TR Cutler, Inc. The 1,563 respondents were senior management level executives (CEO, COO, CFO, VP Operations). Four hundred sixty-two of the respondents were based in Ohio, Kentucky, Indiana, Michigan, and Illinois. This strong Midwest manufacturing representation is central to the coverage provided by Manufacturing & Technology. Complex manufacturers were defined as "other than exclusively repetitive manufacturing processes" including engineer-to-order, made-to-order, assemble-to-order. The data includes a wide range of industry cross-section, geography, public and private, employee size, and annual revenues.

The statistically significant distinction from the identical 2000 survey to the current 2006 survey revealed the complex manufacturers face increasing business and global requirements. There is an increasing international diversity of customers, suppliers, and partners.

Complex Manufacturers

	2000	2006
Global Customers	29%	47%
Global Suppliers	21%	49%
Global Partners	20%	46%

Similarly, additional remote locations, and the need for improved 24 per day, seven days a week, responsiveness have changed the communication requirements for complex project-based manufacturers.

Complex Manufacturers

	2000	2006
Remote Locations	24%	49%

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Other demands including compliance requires internal and external collaboration and are driving the need for data accessibility. According to Stephen Carson, executive vice-president of Visibility Corporation, "Data accessibility must include a common set of numbers, historical views and improved analysis. Internal and external employees all require access to the same data. Flexibility in access and speed to communicate easily is critical with multiple locations. Multiple locations, time zones, currencies, languages are the norm for many complex manufacturers placing additional communication challenges on the organization."

Mobility is crucial to competitiveness among complex manufacturers and cost containment is critical for lean manufacturing. Responsiveness drives higher customer satisfaction and workflow improves organization efficiency; data accessibility drives decision making speed and consolidation has become increasingly important for mergers and acquisition integration as well as financial compliance. Technology remains critical for the business infrastructure and its supportability; audit ability will continue to grow in importance.

Carson noted that these trends in globalization in the complex manufacturing world drove the net technology of Visibility. According to Carson, "Technology is the basis on which an ERP (Enterprise Resource Planning) system stands. Having a strong foundation upon which the ERP application is supported allows organizations to operate with confidence in their system infrastructure. It facilitates supportability and growth."

Engineering and Product Lifecycle Management (EPLM) manages the lifecycle of a product from its conception as a quote, to production, and into field installation. Through the use EPLM, companies can more effectively and efficiently innovate and manage products and services throughout the entire life cycle. Complex product manufacturers require robust product data management, continuous engineering and support for cradle to grave and cross-domain elements. Carson asserts, "Common data access and efficient transaction handling allows complex manufacturing companies to develop, describe, manage and communication information about their products in a global environment."

Ultimately, the ability of ERP solutions, like VISIBILITY .net, offer improved communication with suppliers, partners, customers and employees through easy-to-use electronic interaction, optimized business processes, and increased responsiveness that enables new levels of achievement throughout the global enterprise.