

The Effective Supply Chain: Maximizing Performance of the Entire Manufacturing Enterprise

Plex Online
White Paper

At a Glance:

- Today's manufacturing supply chain is challenged with quality mandates, cost reductions, and delivery improvements.
- Technology plays a key role in a company's ability to build and manage an effective supply chain.
- This paper describes the next wave of supply chain solutions, including supplier Kanban Loops which automatically create an electronic pull loop that generates pull signals when parts are needed and supplier Web portals for real-time communications.
- Included are two examples of effective supply-chain management in action, demonstrating how the enterprise reduces costs, lead times, and inventories throughout the entire supply chain.



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Challenges to the Supply Chain

Increasingly complex products drive greater dependency on supplier quality management, especially for automotive, food processing, aerospace and defense, and medical device manufacturers.

In addition, large OEMs drive warranty costs downward through the supply chain, which increases the necessity for documenting quality and processes through every step of the chain.

Cross-organizational traceability— where products/parts can be traced backward through the manufacturing process across multiple suppliers— is an absolute requirement for manufacturers with complex supply chains. This requires a high degree of integration among systems within the manufacturer and with multiple suppliers.

The manufacturing enterprise driven by tight profit margins; a tough economy; escalating energy, material, labor, and operations costs; and increasing competition demands higher levels of performance and greater accountability from their suppliers.

Next-Wave Supply Chain-Solutions

Improved communications between customer and supplier let manufacturers address these challenges. Traditionally, this approach has relied on EDI and stand-alone systems to facilitate supplier communications.

However, the next wave of supply chain innovation is the addition of a Kanban Loop, a real-time, electronic pull loop that generates pull signals when parts or materials are needed.

This model depends on 24/7 visibility and connectivity as part of a Web-hosted, on-demand service, along with real-time pull signals for the customer and supplier.

“This new approach depends on 24/7 visibility and connectivity as part of a Web-hosted, on-demand service, along with real-time pull signals for the customer and supplier.”

How Plex Online Delivers Next-Wave Solutions

Traceability is a strength of Plex Online and— coupled with the corrective action/preventive action reporting in our Supplier Quality Management module— it provides the functionality required to deal with traceability of complex products.

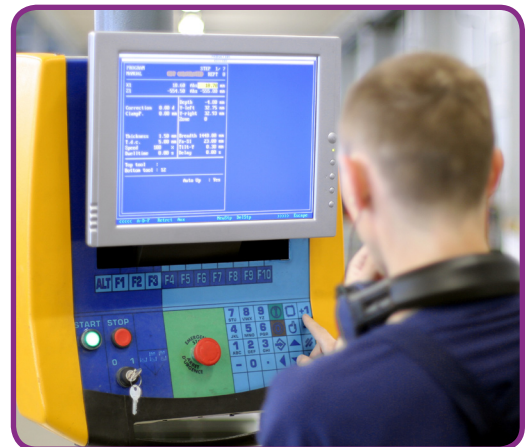
Plex Online's supplier Kanban Loops visually display the status of the loops in real time using an electronic Kanban Rack. The loops are already helping customers reduce costs, lead times and inventories. Shape Corporation is one such customer.

A Supply-Chain Success Story

Faced with ever-increasing pressures to cut costs and improve quality and efficiency, Shape Corporation contracted with Plex Systems to provide a fully integrated system to manage all of its manufacturing operations across multiple facilities.

Shape Corporation is a leader in automotive and industrial component manufacturing and the world's foremost expert in roll forming. Established in 1974, this privately owned corporation has grown to become a major player in the component field. It employs over 1,000 associates and has offices on three continents, encompassing four manufacturing plants, a dedicated research and development center, a coating facility, and six associated sister companies.

The Web-native technology used to deliver Plex Online makes it easy for Shape Corporation employees to log on and resolve issues quickly, from anywhere, at anytime. Plex Online's Kanban Loops are taking Shape Corporation's manufacturing effectiveness to the next level.



Plex Online's systems are being utilized in Shape Corporation's metalforming, welding, and injection-molding production facilities across the globe. Shape Corporation is utilizing Plex Online primarily for quality, program management, shop scheduling, reporting, and shipping processes. The company's goal is to drive performance of the organization and the bottom line, and Plex Online is delivering.

Bob Currier, vice president of Operations at Shape Corporation stated: "After looking at many software solutions to manage manufacturing facilities such as ours, Plex Online was the clear winner. We needed a solution that provides complete visibility of the entire enterprise from the shop floor to the top floor. Plex Online offers that complete system, and it allows us to eliminate many stand-alone databases. It is intuitive to use, and more importantly, we are seeing a significant return on our investment."

"Managing an effective supply chain means reliance on a complete system that allowed us to eliminate many stand-alone databases."

The Challenge of Improving Communication

Trust between manufacturers and suppliers is critical. In many manufacturing industries, a confrontational relationship exists between supplier and manufacturer, where the purchaser holds the upper hand.

The collaborative management required by increasingly complex products will require a fundamental change in the nature of these relationships— to a relationship built on trust. That is the primary challenge.

Improved Supply-Chain Communications Success Story

As an example of optimized supplier communications, global automotive supplier Inteva Products, LLC, implemented Plex Online's Web-based Supplier Quality Management (SQM) system to address the growing complexity of managing its supplier base.

The SQM portal notifies Inteva's suppliers of plant-specific requirements and provides them with the latest versions of the company's standards, policies, and procedures. The system also enables Inteva to communicate the details behind any non-conformances and to document the associated sorting, scrap, freight, and downtime costs.

In place of the time-consuming manual processing once used by the company, Plex Online now automates the problem case log. Inteva and suppliers communicate in one central location regarding part and process non-conformances. The company eliminated the need for e-mails to



track issues with the plants and suppliers. Now, with just a click, all portal users see the documentation related to part and process non-conformances.

All parties quickly view in real time any issues by plant, by supplier, repeat non-conformances, and summary data. This helps them all work together to reduce and better manage non-conformances.

Supplier Scorecard Improvements

Inteva also benefits from a supplier scorecard feature used to grade suppliers based on the number of complaints they've received, the quantities of products rejected, major production disruptions, repeat non-conformances, and controlled shipping statuses.

Supplier scorecards were once an administrative challenge. Now the company can see in an instant the problem cases in any given month, based on the non-conformance report, which flows directly to the scorecard. The system automatically adds or deducts points based on supplier performance.

Scorecard data is generated with no manual intervention and is useful for supplier audits for conformance with mandates such as ISO/TS 16949.

Visibility

In tandem with improved supply-chain communications, the SQM system also brings Inteva extensive visibility into its suppliers' operations.

This allows the company to pinpoint and isolate problems and minimize their impact on overall product cost and quality.

Supply-Chain Effectiveness

In all, Inteva better manages their supply chain since they measure and track performance real time with a single system.

A significant benefit is the ability to directly communicate information with the supply base. In the past Inteva relied on different solutions outside of their ERP system or came up with homegrown solutions. Now, since suppliers have access to the SQM system through an Internet browser, Inteva can more easily and effectively share data with suppliers using a single solution.

“This manufacturer serves as an excellent example of improved supply-chain communications.”

About Plex Online

Plex Online, built on a “Software as a Service” (SaaS) model, offers more than 350 functional modules, providing manufacturers instant access to vital information and management functions using a simple Web browser. The on-demand solution features product lifecycle management (PLM) functions such as program and change management, enterprise resource planning (ERP) functions such as accounting and finance modules, customer relationship management (CRM) features such as order entry and tracking, manufacturing execution systems (MES) functions such as production scheduling and machine integration and supply chain management (SCM) functions such as supplier quality and traceability.

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