



WHITE PAPER

WHY SUPPLY CHAIN INTEGRATION IS THE FUTURE FOR MANUFACTURERS

AT A GLANCE

Cloud computing is delivering the future of supply chain management in three key areas.

- Greater clarity and consistency of strategic supply chain objectives
- More effective and collaborative strategic sourcing for direct and indirect procurement
- Design supply chain processes so they can readily scale globally first

Bottom Line: As manufacturers continue to experience market growth, spending is contracting and consolidating. These market dynamics force suppliers to meet and exceed cost and delivery targets while collaborating more closely than ever before.

Making Supply Chain Integration Pay

Greater integration and visibility in the supply chain means fewer delays in time-to-market and greater production quality. Even supplier collaboration becomes more effective.

Unfortunately, a majority of manufacturing supply networks are known to have:

- Limited to no information technologies (IT) integration within and between suppliers on such fundamental areas as forecasting and demand management
- Limited if any shared quality data and process-based collaboration between suppliers
- Lack of consistency in core process including integrated business planning and reverse logistics
- A one-sided view of supply chain performance due to siloed functional groups and overly detailed functional metrics.
- An inordinate amount of product, service, and supply chain network complexity
- Advanced manufacturing strategies that are often manual and in highly siloed workflows where supply chain visibility

is non-existent. This leads to manual work-around programs and gross margin leakage quickly over time.

- Advanced supply chain workflows including integrated business planning, that are often manual and only partially effective when based on portals or static applications that don't align with how subcontractors and suppliers work.

These are just a few of the many challenges that suppliers face in streamlining operations to gain greater efficiencies. These many challenges also underscore why it is so critical for manufacturers and suppliers both to attain greater levels of integration. Driving down the cost of quality, reducing time-to-market and accelerating process improvements are the three areas that are the most measurable and that deliver the greatest value from integrating supply chain networks.

Cloud Computing Delivers the Future Today for the Supply Chain

The Plex Smart Manufacturing Platform provides greater agility and independence as supply chain operations become less constrained by manually-based approaches.

Based on customer interviews and the many discussions on our customer community, suppliers want to use cloud-based supply

chain management systems as the catalyst to achieve the following objectives. These are rank ordered in terms of importance to suppliers in industries worldwide:

- **Greater clarity of strategic supply chain objectives corporate wide.** Suppliers most often see this area as having the greatest room for improvement in both their own operations and in the operations of their customers. Closing the gap in supply chain objectives begins with a common system of record. Customers tell us cloud-based platforms are delivering on this need, making it possible for all departments to share a single version of the truth across all supply chain operations.
- **More effective strategic sourcing for direct and indirect procurement.** The focus within some suppliers today is how to create a consortium-based buying strategy that combines their efforts for greater purchasing power. What's missing is the ability to create more effective sourcing, and to combine this with better project tracking and performance management across buying consulting. As direct procurement saves the most in terms of costs, the focus on project management as part of consortium-based purchasing is also critical. Only cloud-based platforms are delivering this today.

- **Supply chain processes designed to scale globally.**

All suppliers should think globally first. It is important to align specific processes and programs to compensate for variations in supplier quality management, time-to-market and continual process improvement on a global basis. Suppliers can scale, retain customers, and compete to win new business.

Supply Chain Integration Accelerates Supplier Bidding and Estimating

The immediate impact of bidding and estimating on gross margins, profitability, and project-based manufacturing work breakdown structures aren't easily measured in manually-driven systems. When a system of record is in place, bidding and estimating workflows are integrated and visibility throughout the entire process improves both quality and time-to-market.

The following five lessons were learned from working with manufacturers to streamline their bidding and estimating strategies:

- Creating a unified system of engagement across an entire manufacturing operation has shown to improve bidding and estimating by over 50 percent in Plex customers and across the industry. CFOs are better able to see how different approaches to creating, managing, and optimizing bidding and estimating make a direct contribution to revenue growth.
- To increase bidding and estimating close rates, it's critical to move beyond tacit knowledge management using a taxonomy that supports explicit knowledge sharing instead. This is related to initiating and maintaining a strong change management program to support automating bidding and estimating. Plex customers attest that the greater the knowledge sharing, the greater the trust between departments. And the greater the trust, the faster things get done.
- Having a bidding and estimating system leads project teams, product divisions and business units to standardize budget practices and WBS. Solving conflicts to make daily operations more efficient starts with budget practices and WBS definitions propagated through production and consistency. Once ingrained, a siloed bidding or estimating system will eventually drive disparate structures if requirements are materially different from the company. Having enterprise-wide bidding and estimating systems integrated to a corporate-wide WBS structure reduces cross functional conflict.
- When bidding and estimating moves beyond silos to an enterprise-wide system, target cost analysis, competitive bid response accuracy and timing, and life-cycle costing improve. Integrating interdependent systems for greater performance only happens with trust for permanent change. To make that happen,

manufacturers need to provide a level of accuracy and transparency not possible with siloed systems.

Seeing the Financial Value of Supply Chain Visibility

Using the Hierarchy of Supply Chain Metrics shown in Figure 1, manufacturers will be able to quickly determine how improving ground-level or operational metrics drive cash-to-cash and eventually top-tier financial results.

The Plex Smart Manufacturing Platform enables greater root cause analysis and precise intervention to the supplier quality, supplier on time, raw material, and order cycle time, enabling suppliers to better manage perfect order performance.

A unified system of record can align specific metrics of operational performance with cash-to-cash measures including inventory management and the aggregation of Days Sales Outstanding (DSO) performance over time. Combining these elements will lead to an accurate demand forecast and make supply chain management trade-offs clear.



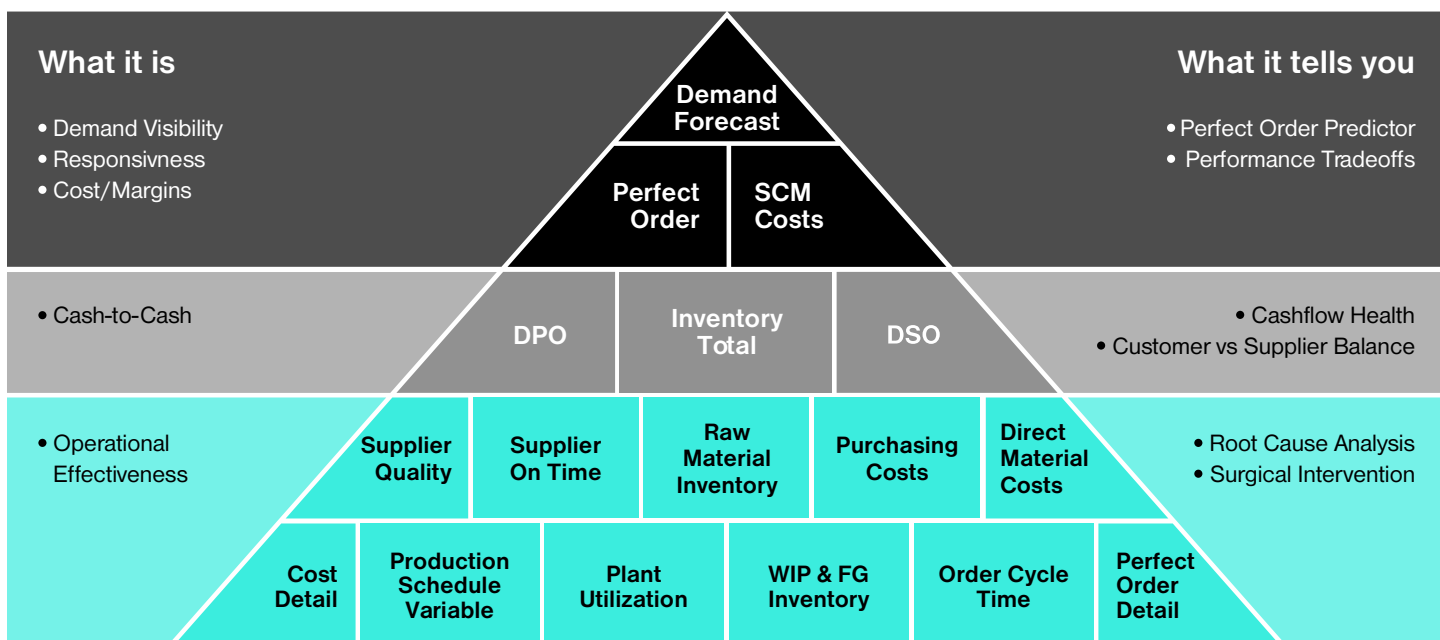


Figure 1: Hierarchy of Supply Chain Metrics

Conclusion

Using myriad manual processes, combined with best-of-breed software will not deliver an acceptable level of orchestrated supply chain performance. Having each one of these process areas integrated into a comprehensive supply chain management strategy, all unified in the cloud, accelerates supply chain performance. It enables businesses to use supply chain metrics as a roadmap for continual improvement.

ABOUT PLEX

Plex Systems, Inc.® delivers the first smart manufacturing platform that empowers the world's leading innovators to make awesome products. Plex gives process and discrete manufacturers the ability to connect, automate, track and analyze every aspect of their business – from the shop floor to the top floor – to drive business transformation. Built in the

cloud, the Plex Smart Manufacturing Platform includes MES, ERP, supply chain management Industrial IoT, and analytics to connect people, systems, machines, and supply chains, enabling them to lead with precision, efficiency and agility in an ever-changing market. Learn more at www.plex.com