



Bob Ferrari, program director for Manufacturing Insights, says a status-quo supply chain can negatively affect your bottom line.

It's time to get smart

An intelligent supply chain gives businesses a competitive advantage. *by Sharon Short*

Intelligent supply chains are beginning to offer competitive advantages for retailers and manufacturers alike. Teradata Magazine recently spoke with Bob Ferrari, program director for Manufacturing Insights, to discuss the concept and the direction of the intelligent supply chain—which he considers the up-and-coming competitive advantage for both retailers and manufacturers.

Q First, let's frame our discussion—how do you define an intelligent supply chain?

A I believe that an intelligent supply chain is one that is predictive to customer needs, meaning it can intelligently respond to supply disruptions and balance all aspects of supply-chain economics, as well as support what we call network-wide decision

making and resource synchronization in a much timelier manner than is done today.

Q *What are the benefits of an intelligent supply chain? Why should enterprises be interested in focusing on this issue?*

A There are many benefits. Just a few examples include:

- > Responding to changes in the business more quickly than competitors
- > Making smarter, more informed decisions, whether to mitigate risk, plan for contingencies or respond to unanticipated changes in demand or supply
- > Becoming more productive and limiting waste, especially in external value-chain processes either in product life cycle, demand or supply chain
- > Moving beyond best practices that are captured in standard transactional applications such as ERP [enterprise resource planning] and supply-chain executions, which can be easily replicated by others.

out, how you respond to supply-chain disruptions. Status quo also implies that the key information needed to make the most timely decisions is embedded somewhere in a transactional system, in a spreadsheet or, candidly, in someone's head. What's more, aggregating or synthesizing that information to the proper decision-making mechanisms takes time. And as we all know, time is money—and money is what flows to the bottom line.

Q *What kinds of investments do enterprises need to make in order to implement this application?*

A We strongly recommend to our clients that they establish what we call an intelligent platform strategy, which will integrate with the existing business processes as well as the supporting IT applications. Further, we advise that a program office specifically be focused on setting the architectural standards as well as proposing the investments that need to be made in business intelligence [BI] or closed-loop applications.

for moving toward more intelligent supply chains and also streamlining the administration and architectural flow of the collection of information and intelligence.

Q *Do cultural shifts—for example, management practices—need to occur across an enterprise for it to benefit from an intelligent supply chain?*

A Absolutely. That's another fundamental piece of achieving an intelligent supply chain. The leading adopters of intelligence decision models didn't acquire this ability overnight. In fact, many invested years of dedicated effort to developing smarter information aggregation processes that are necessary to getting to an intelligent supply chain. Common cultural themes I've observed are a focus on simplifying and improving all facets of supply-chain decision making, as well as establishing a framework that ties together the strategic, tactical and operational decisions that need to be made across the external supply chain. We've developed a framework to assist our clients, based on collecting day-to-

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In other words, an intelligent supply chain includes valuable applications that are aligned more responsively with the enterprise's entire supply-chain network.

Q *What are the risks of keeping a status-quo supply chain?*

A The risks are many. A status-quo supply chain implies that your enterprise is no better than the competition in terms of speed to market, how you differentiate your products and services, how you respond to overall market demand or, as I just pointed

Also, it's a good idea, in our opinion, for enterprises to especially focus on their external economic networks—processes of product life-cycle development and supply and demand chain—because they're becoming a much more fundamental aspect of business. Enterprises need to conduct an inventory of business intelligence applications that they currently have, including analytic applications, data marts and data warehouses. One of the things that enterprises can do is scout out the largest spreadsheets because, more than likely, they're supporting sophisticated or complex decision models. Therein are the opportunities

day operational data and then smartly aggregating it and tying it to strategic and tactical levels of decision making.

Also, we recommend that business and IT groups allocate as much as 50% of their new-project spending on developing these intelligence platforms and related services.

Q *What are the competitive advantages of having an intelligent supply chain?*

A We believe manufacturing enterprises will continue to compete not only on capabilities of providing quality goods and

services but also on their overall supply- or value-chain capabilities. Those capabilities need to be supported by timely and more intelligent decision-making processes at all levels of the supply chain. The enterprises that can do that are blessed with a differentiator that makes them more competitive.

Q *What role do IT and enterprise data warehousing play in enabling an intelligent supply chain?*

A IT plays a key role, but my experience leads me to believe that IT needs to play an even more involved role in helping business and operational groups align their models and streamline their information flow, because many such groups need help with this. Also, IT needs to be involved in helping create the overall architectural constructs of an intelligent supply chain.

What's more, IT and data warehousing need to supplement the formal recording of transactions. If we look back at some of our ERP or supply-chain execution systems, they were really put in place to support double-entry or financial reporting needs. What are coming now are sensory networks that inform these intelligence-driven applications on the status or conditions of real-time events in the supply chain.

Q *How do you foresee supply-chain management evolving in the next five to 10 years?*

A We talk about the notion of how we connect the world of physical events to applications-driven decision making. I think in the next five to 10 years, many companies will get closer to the ability to actually be able to make that connection of physical and digital. Also, I think business and supply

chain will come together in the sense that customer-buying needs will drive the overall actions of the supply chain. Enterprises will need to be much more flexible to proactively respond to these needs—and the key to that proactive ability will rest in large part on having an intelligent supply chain supported by comprehensive, near real-time data. **T**

Bob Ferrari is the program director for Manufacturing Insights Supply Chain Strategies, Low Cost Manufacturing and High Tech/Electronics Manufacturing Research program. Ferrari has more than 25 years of experience in diverse areas and he served as an industry analyst at AMR Research, where he provided research and insights for the supply-chain and enterprise management applications practices.

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