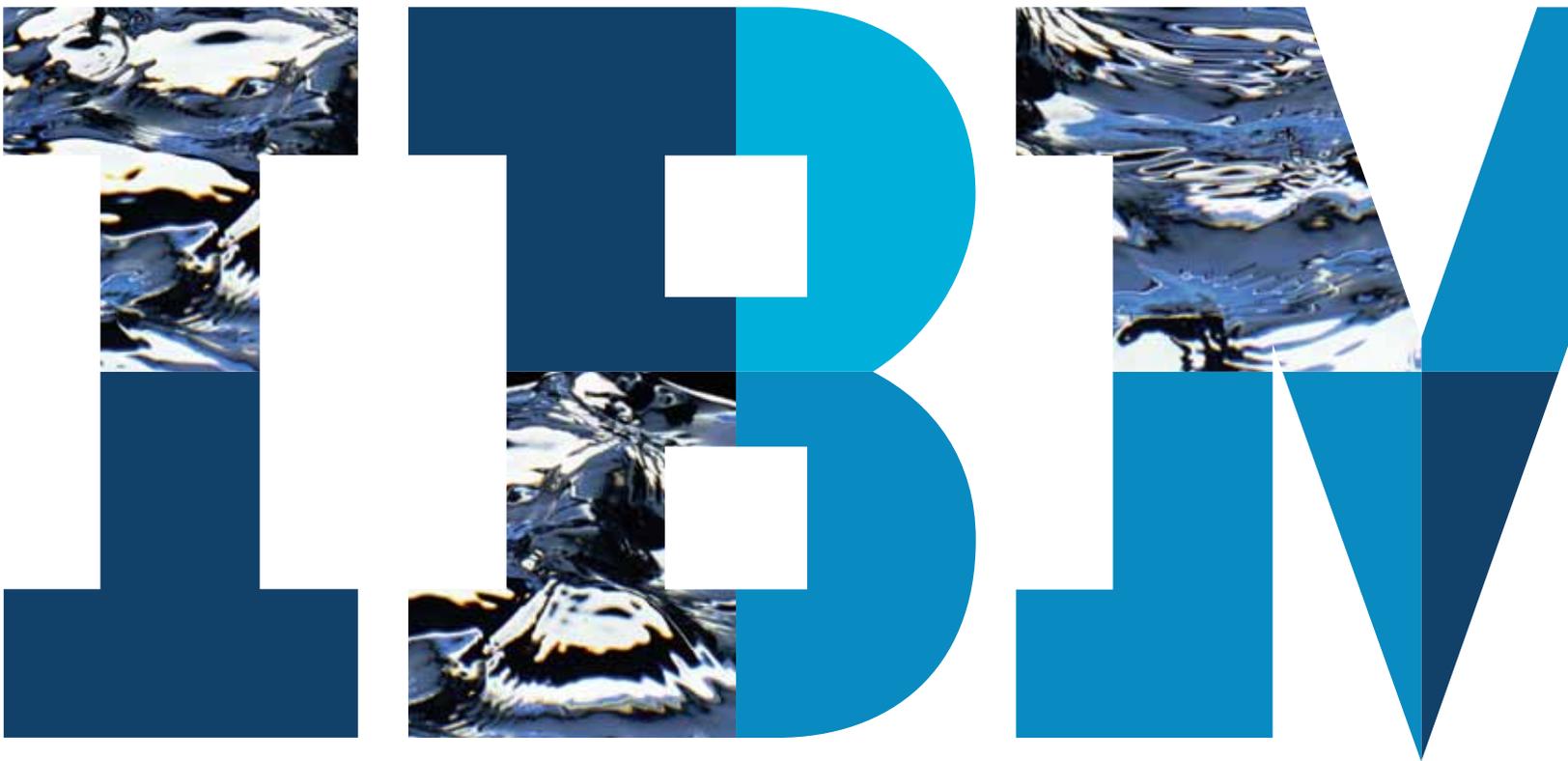


# Integrated Supply Chain

*Increasing efficiency, mastering complexity,  
and exceeding our clients' expectations.*



## IBM Transformation

About twenty years ago, IBM embarked upon a transformation process that would ultimately reenergize our brand and our business. That transformation began when the company made the critical decision to refocus the entire organization – every function, every product, every investment – around a single design point: our clients.

Although we could not see all of its implications at the time, this profound change in corporate strategy was the beginning of a new system of doing business; a system that would, over time, reorient our entire value chain – from how we source materials to the competitive positioning of our company to how we sell and service our solutions – around the needs of our clients. This system would eventually drive the integration of our global supply chain. It would foster IBM's emergence as a globally integrated enterprise, where work is performed whenever, and wherever, is best for the client. And it would lay the foundations for the client-oriented system of business that we now call Smarter Commerce.

During this transformation, many strategic decisions have been made, and there are many stories to tell about the changes that took place, some of which are still being written. But the IBM Transformation Series of case studies are the specific stories of how we reoriented our operations around our clients. They are pieces of the whole, but they are instructive to any organization that believes there is a better way to do business, and that it all starts with the customer.

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## Smarter Commerce

Smarter Commerce is a strategic approach to building high performing businesses by serving customer needs in three ways:

### 1. Customer Value

Rethinking operations in order to profitably deliver value to the customer.

### 2. Customer Insight

Gaining a deeper understanding of customer needs and behaviors through data gathering and real-time analytics.

### 3. Customer Engagement

Connecting with customers in a regular cadence, using a variety of means, and offering a valuable customer experience.

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## The Globally Integrated Supply Chain

In the early 1990s, the supply chain organization, much like the rest of IBM, was not global. Instead, it reflected IBM's "multinational" structure that evolved after World War II, a system of many country-specific -IBMs, replicated in each country in which the company did business. There were local procurement, cash collection, and logistics operations scattered and unconnected across 150 different countries. There were different business units for sourcing, collecting, and delivering orders. It was an effective system for a multinational company. But as international trade barriers came down in the late 1980s, the World Wide Web reinvented global commerce in the early 1990s, and IBM shifted its business mix more toward software and services, IBM could no longer afford a multinational structure. IBM needed to become globally integrated.

As IBM as a whole explored the concept of global integration, the company's vast and complex supply chain became a key area of focus. Besides the duplication and inefficiency, the disparate systems offered no single source of data from which to forecast. It did not take advantage of IBM's global purchasing power with vendors. And it didn't treat global customers as if they were one single client, working with one single supplier. Thus we embarked on an effort to design an Integrated Supply Chain.

For a company the size of IBM, this was no small undertaking. We divided the project into three concurrent and interrelated areas: 1.) Process Adaptation; 2.) Technology Adoption; and 3.) Talent Management.

The Process Adaptation began in 1993 with the consolidation and centralization of Procurement and Customer Fulfillment. To do this we established operating principles and standards across the entire supply chain operation. The next year we created knowledge centers called Sourcing Councils, where procurement leaders with deep expertise in particular spend categories could share knowledge with counterparts around the world. In 1998 we launched Global Process Services and we began partnering with our clients to operate their procurement and supply chain processes so they could leverage IBM's deep capabilities and investments. And in 2000 we launched our digital business collaboration capability (See Smarter Commerce Series: Online Commerce).

The Technology Adoption aspect was relatively easy compared to the operational and cultural changes described above. But it was every bit as ambitious. We brought the entire operation onto a single, global enterprise platform, moving away from technology that addressed tactical or functional needs. We centralized our data, making it available anywhere, in real time. And we slashed the number of metrics the organization tracked by 60 percent, reducing executive review time by 17 hours a week. This paved the way for more robust and focused business analytics that would allow our systems to interpret complex data and alert our operational teams when their attention was required.

And finally, the Talent Management aspects of this transformation required us to think differently about the skills, education, and leadership needed to run an integrated organization this diverse. We brought on leaders with multidisciplinary experiences and skills, capable of seeing and understanding across the entire supply chain, and across all of IBM (see Evolution of an Integrated Supply Chain).

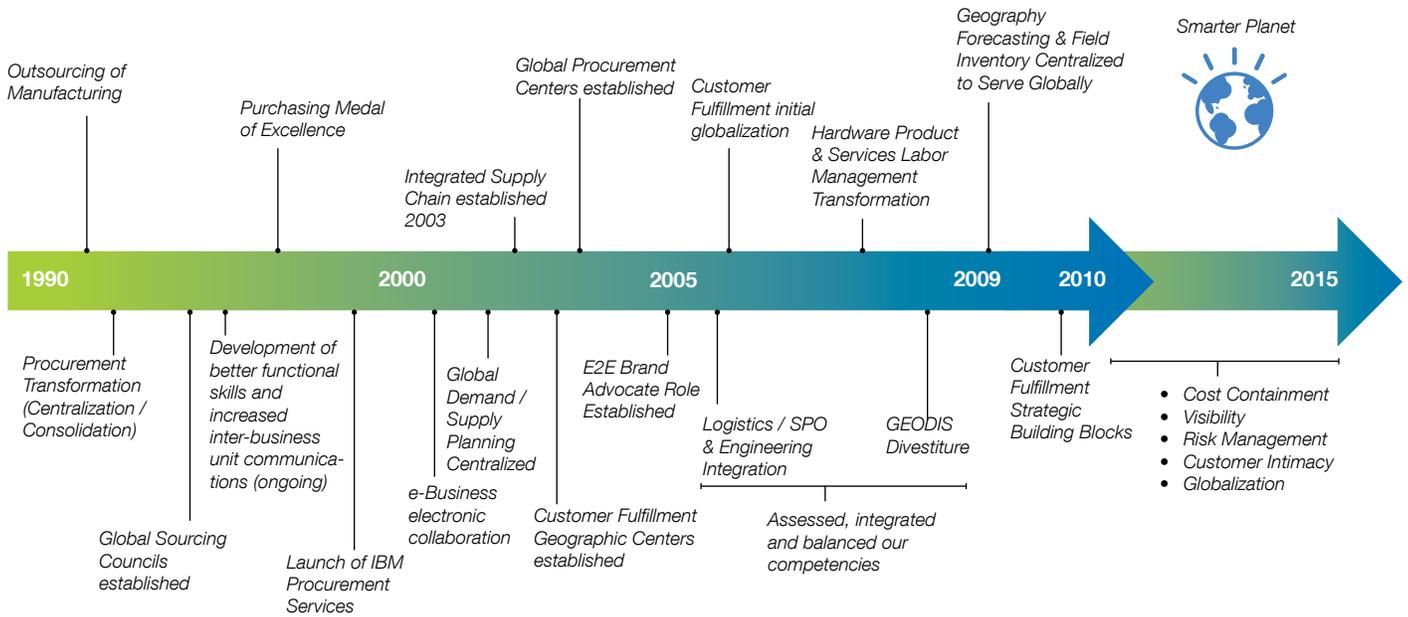


Figure 1: Evolution of an Integrated Supply Chain.

### Evolution of an Integrated Supply Chain

After all of this, in 2003 we began calling ourselves the Integrated Supply Chain organization, which meant that we had the infrastructure, processes, and people in place to create global customer fulfillment teams that work directly with clients, handling everything from contract administration to cash collection, across all IBM lines of business. Today, that organization works with more than 100,000 partner companies, providing end-to-end processes that are 90 percent hands-free.

In addition to our own supply chain, we operate procurement and supply chain processes for clients in diverse industries around the world. We speak more than 80 different languages; work in 360 locations, in 64 countries. We track more than 1.5 million assets for both IBM and our clients. We received 67 U.S. patents in 2010 and 91 patents in 2011. And we saved more than \$6.5 billion in 2010 alone for ourselves and our clients. Put simply, the Integrated Supply Chain has become a smarter commerce engine for IBM.

## The Voice of the Client

While it may seem to some that supply chain efficiency is a purely internal concern – an effort to drive costs out of the business – we at IBM disagree. We believe that an effective supply chain is all about the client. The client, after all, is the ultimate destination of every product or service that winds its way through the supply chain. In fact, our entire supply chain is in service of our clients. This is why we went to extraordinary lengths to include our clients in the design of our integrated supply chain. And why we continue to solicit a constant stream of feedback from them today (see IBM’s Supply Chain Client Feedback Loop).

If fact, our clients were the impetus for the Integrated Supply Chain transformation in the first place. “Clients were telling us that they didn’t like having to do business with more than one IBM,” says Fran O’Sullivan, GM, IBM Integrated Supply Chain. “They wanted a standardized, seamless approach. They wanted us to mask the complexity of doing business with one of the world’s largest companies.”

To understand more deeply exactly what clients wanted from IBM’s supply chain, we launched a barrage of “listening posts,” or different ways to hear the client’s voice, and incorporate feedback into the function. As part of the Client Care Community – an enterprise-wide group focused on client experience – these listening posts take a variety of forms. For example, they may include various surveys from third-party research groups or IBM, such as the Client Value Analysis Transaction Survey or the Client Value Analysis Relationship Survey. Or they may include information gathered from the ISC Global Client Advisory Councils, a set of three annual forums that allow clients to provide strategic input directly to IBM supply chain executives. Or they may come from the more than 3,000 annual SetMet interviews, where IBM fulfillment representatives personally interview clients, allow the clients to set specific expectations of IBM, and follow up at a later date to see if the expectations have been met.

In all there are more than 30 different sources of client input IBM uses to inform its Integrated Supply Chain operations. “The comprehensiveness of these client feedback programs enables us to constantly improve our service to the client,” says Dave Swiggum, VP, Customer Fulfillment, IBM Integrated Supply Chain. “But it also allows us to deepen the relationship, and create a partnership, rather than a simple business relationship.”



Figure 2: IBM's Supply Chain Feedback Loop.

## The Next Level

The Integrated Supply Chain organization in IBM is already a much broader and more comprehensive business service than supply chains in most other companies. Normally functions like cash collection, asset management and managing contracts are done by sales or finance functions. But the benefit of folding these end-to-end processes under a single, integrated organization creates a seamless, standardized experience for the client. And we're not going to stop there.

Increasingly, IBM is using analytics to measure, manage, and fine tune its supply chain operations. To do this, we rely heavily on many of our own technologies, including Cognos business intelligence software, SPSS predictive analytics, WebSphere ILOG Operational Decision Management, prescriptive ILOG supply chain applications, and on the procurement side, IBM has used Emptoris software since 2007. "We've had a lot of success in using business analytics and optimization to reshape the Integrated Supply Chain and make it more competitive," says Donnie Haye, VP, Smarter Supply Chain Analytics, IBM Integrated Supply Chain. "And we're going to increase our use of analytics going forward."

"We are delighted that Emptoris is now part of the IBM family, and we look forward to maximizing the use of the entire Emptoris application suite to accelerate IBM leadership in the eProcurement market space. The benefits will flow in both directions because ISC procurement has a great deal of functionality that could eventually find its way to the market place through Emptoris," says Pat Knight, VP ISC Global Procurement.

The goal is to continue to increase the use of analytics in the five major areas of supply chain concern, as defined by the more than 400 supply chain executives that responded to IBM's Global Chief Supply Chain Officer Study (another listening post.) Those five areas include: 1.) Supply Chain Visibility; 2.) Risk Management; 3.) Customer Insight; 4.) Cost Containment; and 5.) Global Supply Chain & Sustainability.

"Everything we do with analytics is designed to serve the customer better and faster," says Haye. "We only do it if it benefits the end-to-end supply chain."

## Conclusion

IBM's supply chain is one of the largest and most far-reaching in the world. But in a world of Smarter Commerce, the size and scope is not only hidden from our clients, it is actually used as a competitive advantage for IBM and our clients who leverage IBM's supply chain services. By constantly soliciting client feedback, and analyzing the ongoing operations of the Integrated Supply Chain, IBM reduces risk, increases visibility, contains costs and increases customer intimacy. The improvements are ongoing and never ending. And that's the nature of business in the 21st Century.

Adopting Smarter Commerce as a strategic goal is not a process that is undertaken all at once. Rather it happens in stages, with each step yielding results that enable the next steps. The Integrated Supply Chain was just one stage of IBM's transformation. We encourage you to read about the other stages of our journey toward Smarter Commerce.

To find out more about the IBM solutions referenced in this paper, please visit [ibm.com/smarterplanet/commerce](http://ibm.com/smarterplanet/commerce).

This paper was developed with support and guidance of Fran O'Sullivan, General Manager, IBM Integrated Supply Chain.



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May 2012  
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