



# *Celestica integrates key customers using Extricity B2B and MQSeries*

Celestica has benefited from the rush to contract manufacturing. In less than a decade, Celestica has grown to become the world's third largest electronics manufacturing services company. With 34 manufacturing and design facilities in North America, South America, Europe, and Asia, Celestica provides over 50 leading high tech customers such as IBM®, Sun Microsystems®, HP, Cisco™, Dell™, and Lucent™ with comprehensive make-to-order manufacturing services on a global scale. Their manufacturing and assembly output runs the gamut from hearing aids, pagers, and cellular phones to PCs, workstations and supercomputers.

Yet Celestica's success created a new set of internal and external challenges. Internally, how was the company to coordinate and integrate business processes and systems among its growing number of global facilities? Externally, how could Celestica extend the benefits of internal process automation to key customers, creating a seamless link with

*“IBM offers a complete B2B integration solution that includes MQSeries® and Extricity B2B™.”*

*Bernie Uhlich, Director of Global SCM E-Business, Celestica*

each customer's supply chain management (SCM) functions?

In an industry with accelerated product life cycles, and near instant production ramps, the biggest risk with the outsourced manufacturing model is a potential information gap between the company that designs and markets the product and the company that manufactures the product. Celestica's customers need to be able to exchange information with them as if they were an internal manufacturing facility.

Fax, e-mail, phone calls and other largely manual methods like browser based

Application	B2B Integration: Automated response to customer requests
Business Benefits	Superior customer responsiveness Significantly reduced processing costs Reduced inventory requirements
Software	IBM MQSeries IBM MQSeries Integrator V2.0 Extricity B2B* software platform
Services	IBM Global Services



*MQSeries and MQSeries Integrator provides assured messaging for Celestica worldwide.*

applications are wholly inadequate when customers need near-instant response to typical SCM requests. Information exchange via manual methods can take days. What is needed is the ability to integrate and automate at the systems level, without human intervention, so customers can receive answers to crucial questions in just minutes.

Yet successful, end-to-end, internal and external integration is difficult. Platform and application incompatibilities must be overcome. Firewalls must be crossed, different languages and time zones accommodated, and differing IT skill levels at various companies must be addressed. Also, when communicating with multiple partners with dissimilar integration requirements, an integration solution must be able to handle simple data exchange such as EDI, XML, and FTP as well as more sophisticated process collaboration.

#### Business Process Integration

“We had 34 locations worldwide that needed to work together as if they were one,” says Bernie Uhlich, Director of Global SCM E-Business, Celestica, “and we needed to provide a single point of contact with our customers. When a customer asks if we can build a product, they’re not concerned with the internal processes we go through in order to respond. What they want, right away, is a yes or no answer, and a hard delivery date. It was clear that what we needed was a global business process automation and integration solution.”

Business process integration is far more than simple data exchange. It’s about companies working together as if they were one entity, extending internal process to include a back and forth exchange of information with suppliers and customers. This requires a total internal and external integration and automation solution.

#### Integrating Diverse Systems and Processes

Celestica found the solution at IBM by combining IBM MQSeries and MQSeries Integrator, to facilitate internal process integration, and the Extricity B2B

*“Celestica will  
experience  
significant  
efficiencies per  
customer, annually”*

*Elyas Achkar,  
Staff Methods/Business Analyst,  
Celestica.*

software platform, to facilitate integration with their customers over the Internet.

“We did a significant amount of research,” Uhlich says. “We already had an investment in MQSeries message oriented middleware. We found that by adding MQSeries Integrator and Extricity B2B we had a complete solution. We could automate systems and processes among all our divisions, using MQSeries and Extricity B2B. Then we could extend that to the B2B space with Extricity.”

The combination of MQSeries and Extricity B2B offer a complete internal and external integration solution:

1. MQSeries Messaging is used to help integrate over 50 internal applications across Celestica’s 34 locations.
2. MQSeries Integrator V2 is used to route messages between applications and transform internal application formats to XML.
3. Extricity B2B is used to define internal and external business process and manage the back and forth automated exchange of information between internal systems and various customer systems and protocols.

“We needed multiple mechanisms for collaborating with customers,” says Uhlich, “such as EDI, XML, and FTP. Extricity B2B handles the whole spectrum, from simple data exchange through sophisticated process management.”

Even with the use of XML based messages, there is often a need to transform data. Use of MQSI V2 has simplified Celestica's integration efforts. MQSI V2's native support of XML has been leveraged to convert between different XML standard messages. It has allowed them to integrate a business process with their customers and suppliers while each party continues to use their chosen message standards.

"We also wanted a tool that would bridge any compatibility gaps with whatever B2B systems and software our customers are running. And we wanted to manage the information exchange process using the RosettaNet standard. As we add more customers to our automated system, the use of a standard like RosettaNet makes implementation much faster and easier. Extricity B2B provides seamless integration with our customers' business systems, using RosettaNet standards."

#### 5 Minute Customer Response

The initial scope of work for this solution encompassed three basic projects, which would automate Celestica's response to common time-critical customer inquiries.

1. Standard Order - Available to Promise:  
"Can you build X quantity of this specific part number by a specific date Yes or no?"
2. Configure-to-Order - Available to Promise: "Can you verify this custom configuration, and build and deliver X quantity at a specific date at a specific price? Yes or no?"
3. Product and Vendor Data Exchange:  
For example, "Can you verify approved component vendors and manufacturing list?" Or, "Can you provide product specification and assembly drawings?"

#### Immediate Return On Investment

Automated response to customer requests gives Celestica a strategic competitive advantage.

Says Uhlich, "The ability to respond rapidly to customer inquiries is critical in our business. We are now able to integrate our order management and available to



promise capabilities with our customers' order entry systems. We can instantly respond to a configure-to-order request with a commitment on that configuration. We have been able to obtain more business because many of our competitors are not able to do that!"

Automated response to customer orders significantly improves customer satisfaction. The responsiveness from Celestica as a supplier gets passed directly through the supply chain to help customers be more responsive with their own customers. By integrating and automating response to customer requests, Celestica can more effectively provide a whole range of services to their customers that has a ripple effect through the supply chain.

In addition to improved customer satisfaction, this solution will reduce costs at Celestica. By reducing the time, effort, and errors of what were previously manual processes, Celestica will experience significant efficiencies per customer annually. Celestica is now rolling out integration to additional customers and more diverse applications beyond the initial project to further increase their initial return on investment.

Faster access to customer requests also allows Celestica to reduce inventory. Celestica is able to reduce the safety stock margins on commonly used components now that they have automated access to customer demand information.

## Rapid Implementation

Over a five month implementation working with a small team of IBM Global Services, Extricity, and internal IT and business analyst resources, Celestica was able to utilize Extricity's Deployment Excellence Methodology to implement this solution and integrate internally and with a group of key customers.

"It was impressive," says Uhlich, "to acquire the software, create the internal integration points, develop designs, work with our customer's IT people, put all the business pieces together, do all the programming, integration, testing, and get it all up and running in that timeframe."

The speed at which this solution was implemented is a critical factor in both time to benefit for Celestica and their customers, as well as overall return on investment. As Celestica now moves to integrate even more customers and to implement collaborative applications- the speed at which additional customers can be integrated further increases the overall Return on Investment of their solution.

\*In December 2000, IBM announced that Extricity B2B is now sold by IBM as WebSphere Partner Agreement Manager. IBM has also integrated Extricity B2B technology in the full WebSphere Business-to-Business Integrator product.

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For more information  
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