IBM®

The power of performance management: Success building the smarter supply chain

Volatile. That's perhaps the best word to describe today's global marketplace.

Like economies and financial markets, as supply chains have grown more global and interconnected, they've also increased their exposure to shocks and disruptions. Supply chain speed only exacerbates the problem. Even minor missteps and miscalculations can have major consequences as their impacts spread like viruses throughout complex supply chain networks.

Companies are challenged to find new answers to serious issues including:

- Cost containment – Rapid, constant change is rocking this traditional area of strength and outstripping supply chain executives' ability to adapt.

- Visibility – Flooded with more information than ever, supply chain executives still struggle to "see" and act on the right information.

- Risk – CFOs are not the only senior executives urgently concerned about risk; risk management ranks remarkably high on the supply chain agenda as well.

Supply chain performance management solutions from IBM encompass the complete range of

business intelligence and planning software, scorecards and dashboards, and event management.

Planning and business intelligence are an integral part of supply chain performance management. These capabilities help you see what's going on in terms of operations and supplier processes. Your organization gains the capability, visibility and intelligence to build an efficient and customer-focused supply chain.

They provide the insight your organization needs to optimize the chain—so you can anticipate problems before they happen, understand the reasons behind results and improve performance.

Read on to discover how three companies are doing just that with IBM Cognos software. Learn how:

- **The HallStar Company** has increased revenues, reduced inventory by 25% and now has tighter integration with suppliers thanks to IBM Cognos software.

- **Ryobi** has experienced significant savings in time & money, increased product quality and decreased returns, while improving communication and credibility of information across global offices.

- **Vicor Corporation** has improved business outcomes, staff efficiency and processes with deeper insight from IBM Cognos software.

Information Management

Cognos® **software**

The HallStar Company

The HallStar Company, formerly known as The C. P. Hall Company, is a leading supplier of performance additives to the polymer and personal care industries worldwide. HallStar manufactures and supplies materials that are used extensively in the production of rubber, plastics, adhesives and coatings, selected personal care and specialized industrial applications. The manufacturer is a lean and agile midsized company focused on innovation and efficiency.

To streamline the management of its business, HallStar implemented a Lawson ERP system. The implementation went well, however, the abundance of data overwhelmed employees, who described it as "drinking water from a fire hose." Dedicated to providing employees with the right tools, HallStar decided to deploy an IBM Cognos business intelligence (BI) solution to provide employees with quick and easy access to information and reports in their ERP solution.

Challenges faced

For the first three years of its ERP implementation, HallStar tried to leverage IBM® Lotus Notes®, a technology that the company already had in-house, with its ERP system. "It was like using a shoe for a hammer. It was just the wrong platform to really deliver the reports and data that we needed," explains Chuck Redpath, Director of IT, The HallStar Company. "Employees really wanted to make the ERP sing. The only way to do that was to look at the data that the system was capturing and find solutions to access it more effectively and seamlessly."

Equally important for HallStar was finding a solution that offered user self-service to help take the reporting and analysis burden off IT. "Prior to Cognos IT had become the query department, with employees wanting access to numbers, data, and statistics from every facet of the business. We were getting nothing else done and it became a real hindrance," stresses Redpath.

Strategy followed

HallStar evaluated several reporting solutions, including Business Objects' Crystal Reports. The company was attracted to IBM Cognos BI due to its usability, Web-based functionality, and self-service capabilities. "The way the data was put together and presented to end users, made a lot of sense," comments Redpath. "The Web front-end was key. That really was an important aspect of the system because everybody knows how to use a Web browser. Due to this ease of use, we knew that we could get users up and running with only about half an hour of training."

The first project that HallStar tackled with IBM was its inventory. Considered the company's 'killer app,' the solution enabled HallStar to reduce inventory by 25 percent within a year. "Employees were amazed at their new visibility the system offered with just a few mouse clicks. That was a huge eye opener," states Redpath. Based on this success, executive management

and employees eagerly embraced IBM Cognos solutions. The IT department quickly rolled out the solution to the company's order fulfillment, sales and marketing, manufacturing, quality and finance departments, and other business units across the company.

Since going live with IBM Cognos products in 2003, HallStar has deployed the solution throughout the entire enterprise. It has also standardized on IBM Cognos solutions for all its reporting and business intelligence needs.

Recently HallStar completed its migration to IBM Cognos 8 BI. The company completed much of the upgrade on its own; however, it did benefit from the expertise of IBM Cognos platinum partner, JCB Partners. JCB helped the company develop best practices and create the initial set of reports and dashboards for the CEO and the sales team.

Moving forward, HallStar plans to develop a dashboard that enables employees to access information that is relevant to them, such as key performance indicators affecting their yearly bonus.

Benefits realized

In addition to freeing up the IT department at HallStar, IBM Cognos products have enabled its employees to meet their business objectives. It is now considered integral to the success of the company. "Cognos is how we track everything that we're doing," emphasizes Redpath. "It allows us to see something going in the wrong direction and correct it immediately."

Leveraged extensively throughout the organization, IBM has positively impacted the company's revenue. "We use Cognos business intelligence to determine price increases, what customers we need to notify, and the overall business impact," explains Redpath. "Given the thousands of customers we have and the vast product mix, Cognos affects our bottom line tremendously."

Using IBM Cognos software, HallStar is now able to easily track thousands of individual stock keeping units (SKUs) worldwide. The company has a network of 20 distributors in more than 30 countries. Furthermore, its products can be packaged in five different ways. "Our product line grows exponentially every time we roll out a new material because of the different packaging options. It can be a nightmare to track if you don't have the right tools," says Redpath. "Cognos allows us to view that kind of information very easily. Now it's literally a click of the mouse away."

HallStar also serves as a distributor for large chemical companies. Previously, HallStar would provide these companies with a monthly report to let them know how much product had been sold. With the help of IBM Cognos software, HallStar has created an extranet for suppliers so they can conveniently log in and check the status of their products. This frees up HallStar's internal resources and creates stronger ties with its suppliers.

HallStar is already realizing strong benefits from its recent IBM Cognos 8 BI implementation with the delivery of key reports and metrics through its dashboards. CEO John Paro is often on the road. Previously, in order to get the reports he needed, Paro would have had to call the controller and have several reports emailed. Thanks to IBM Cognos software, on a recent trip to India he was able to use the executive dashboard to access all his information in real-time in a central location. "John definitely sees the value," states Redpath.

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> *Chuck Redpath, Director of IT, The HallStar Company*

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Ryobi

Ryobi Technologies, Inc. and Homelite Consumer Products, which are owned by Techtronic Industries (TTI) Co. Ltd. of Hong Kong, is one of the world's largest and most innovative power tool manufacturers. Specializing in making pro-featured power tools truly affordable, Ryobi sells power tools and outdoor power equipment, and has won supplier awards in multiple categories at The Home Depot in North America, for six consecutive years. The company was also recognized by BusinessWeek as one of the top five emerging giants of the global manufacturing industry in June 2006.

Ryobi is a global company, with headquarters in Hong Kong, manufacturing in China, and engineers in both China and the United States. With its strong commitment to innovation and quality, the company wanted to produce better products by enhancing collaboration between manufacturing and engineering. Ryobi chose to implement IBM Cognos 8 BI to work towards these goals.

Challenges faced

Ryobi faced challenges identifying trends and communicating quality issues overseas in a timely manner. When a Ryobi product was returned, U.S. technicians would take apart the tool and determine if there was a problem. This information was then entered into a Microsoft® Access® database manually, which raised concerns about the integrity of the data. This information was then mailed to China.

"Our best turn around time was four or five days to look at the same data," explains Tom Adams, Data Quality Engineer at Ryobi Technologies, Inc.

Equally important, Ryobi needed a solution to track and report on returned products and warranty expenditures to drive product improvement. "We didn't have an effective way to document the process," says Adams. "We were not able to quickly drill down and get the information that was necessary."

Before Ryobi could move forward with this initiative, it needed to secure executive management buy-in. Once

Ryobi was able to quantify in dollars how much money would be saved, management agreed to support the initiative.

Strategy followed

Ryobi evaluated reporting solutions from IBM, Business Objects, and Hyperion. It also considered SAP, Ryobi IT department's legacy system. Ryobi was attracted to IBM Cognos products because of the flexibility, ease of use, performance, and seamless integration across multiple data sources including Microsoft Access, mySAP, and SAP BW, its data warehouse. Another important consideration was the ability to deploy IBM Cognos content quickly and produce high-quality detailed reports in real-time.

"We felt that we could make more professional reports with Cognos, rather than investing in more products from SAP," explains Adams.

With the help of a third party consultant, Ryobi quickly implemented its BI solution in October 2004 and had the system up and running by the end of

the year. "We only took 10 days for implementation and had a working application that ran 10 reports," stresses Adams.

Most recently, Ryobi partnered with Data Clarity on its migration to IBM Cognos 8 BI. It was attracted to IBM Cognos 8 BI's low-maintenance, web-enabled platform and its scorecarding and dashboarding capabilities.

Moving forward, Ryobi plans to expand the benefits it has achieved with IBM Cognos solutions to other departments.

Ryobi also anticipates quadrupling the number of users from this year. TTI is currently benchmarking Ryobi's approach to determine applications throughout some of its different divisions and companies, driving product improvement and extending the savings to other areas of the business.

Benefits realized
"We're a better company after implementing IBM Cognos 8 BI. In addition to saving money, we're delivering a better and more cost-efficient product for our customers," says Adams.

Leveraging IBM Cognos products, Ryobi has been able to increase visibility and collaboration across its engineering and quality departments and drive product improvement. "Cognos is the tie that binds us all together," states Grady Hughes, Director of Quality Assurance North America Hardware Group. "Whether we're in China or the U.S., we can now all see the same information, issues, and causality. We can then come together with a common goal towards resolution of any problem."

With its IBM Cognos solution, Ryobi has been able to improve accuracy, save time, and improve quality by standardizing its reporting. Reports are now generated in seconds. "Ryobi is saving at least a week of one of our engineer's time every month," says Adams. In addition, reports are also more professional and easier to read with information conveyed in graphs and charts.

"Previously, reports were generated in several different formats, which were difficult to understand, and as a result, gain executive buy-in," explains Grady.

Ryobi has been able to pinpoint issues with product quality using its BI solution. "Using the Cognos drill-down

analysis, we can see what's wrong with a product, how many times it has been returned, and if there was a common timeframe for the returns," explains Jo Ann Hayes, Quality Engineer, Homelite Consumer Products. "Before all of this information was contained in different reports and made this analysis difficult."

Ryobi has also been able to significantly improve quality. "Cognos helps us get the information quicker so we can turn out an improved product," states David Young, Quality Engineer, Ryobi. "We now get a report on the first 100 returned units of new products, which allows us to conduct instant analysis to determine where the defect lies, and we can apply that to our production."

As a result of these processes, Ryobi Tools has gained a competitive edge. Its return rate for factory defects is less than 0.5 percent. "As far as we know, Ryobi scores better than other brands when it comes to return rates," adds Joseph Serrano, Quality Engineer, Ryobi.

Ryobi has experienced a positive impact on the company's bottom line with its IBM Cognos solution. "With Cognos our ROI was first quarter," explains Adams. "Within six months,

it was paid for and in the black." Grady adds, "Leveraging Cognos as an ongoing performance continuous improvement tool has driven millions of dollars to the bottom line."

Ryobi also saved money due to a significant reduction in customer returns. After sales skyrocketed in 2005, Ryobi forecasted a 49 percent increase in warranty costs. The actual number came in 23 percent under projections, resulting in a savings of around 26 percent, based on returns analysis. In 2006, Ryobi experienced another 17 percent reduction. "We attribute these savings to Cognos and the hard work of the Marketing,

Engineering and Quality department members of the Continuous Improvement Team," says Adams.

Ryobi is already reaping rewards from its IBM Cognos 8 BI implementation. With the quality and flexibility of reporting from IBM Cognos 8 BI, meetings at Ryobi are smoother and more efficient, as employees are able to come to the conclusion they are looking for at that meeting. Engineers are now able to do analysis on-the fly during meetings and present answers. Adams sums up his company's IBM Cognos experience, "The bottom line is that the Cognos solution has worked better than we ever imagined."

"We're a better company after implementing IBM Cognos 8 Business Intelligence. In addition to saving money, we're delivering a better and more cost-efficient product for our customers. With Cognos, our ROI was first quarter. Within six months, it was paid for and in the black."

Tom Adams, Data Quality Engineer, Ryobi Technologies, Inc.

Vicor Corporation

Vicor Corporation designs, manufactures, and markets modular power components and power systems used in the communications, data processing, industrial controls, test equipment, medical, and defense electronic markets. Headquartered in Andover, Massachusetts, the company also maintains offices in North America as well as across Europe and Asia. Vicor has annual revenues approaching $200 million and employs more than 1,000 people worldwide.

Vicor decided to implement a business intelligence (BI) solution to track and analyze production processes and issues more effectively. Cognos provides Vicor with a framework for performance management and accountability, allowing the organization to tie together strategic goals, major initiatives, and improvement efforts.

Challenges faced

For Vicor, the goal was simple: focus on breakthrough improvement in measures designated within the strategic objectives for each year's operating plan. Many different techniques and technologies were used to achieve the objectives, including Hoshin Breakthrough Planning, Kaizen, 5S, and statistical process control.

Ultimately, the company adopted annual improvement themes to stimulate the full involvement of all employees. These included the "4 x 50s" (50 percent improvement across four strategic objectives in one year), "10 bucks a brick" (pull $10 of cost out of each product), and "faster, better, cheaper" (build the product more efficiently). These initiatives helped to bring Vicor's gross margins from percentages in the mid-20 range to current levels in excess of 40 percent.

The next challenge was to find a business intelligence solution that would help Vicor track, measure, and report on their progress. In addition, access to real-time information was a critical requirement.

"We needed to correlate a set of objectives with the initiatives that would accomplish these objectives and apply them through successive levels of planning," states Joe Jeffery, director of manufacturing systems at Vicor.

Strategy followed

Vicor's operating environment is complex. Their business model is one of mass customization, which involves high-volume production and a complex mix of individual models. The company routinely ships more than 8,000 different products to 8,000 customers each year. This is accomplished using onshore manufacturing, based in Andover.

Bills of materials are highly complicated (indented up to eleven levels), and manufacturing routings include up to twenty tracked operations, as well as many information tasks. Vicor's manufacturing systems include integrated robotic assembly, as well as supply chain applications, engineering systems, and operational systems for storage and shipping. All planning, costing, inventory management, and master recipe generation data is managed through a PeopleSoft ERP system.

The organization initially deployed Cognos PowerPlay in 2002 to provide metrics and analytics capability on top of the ERP environment. This activity has led to the creation of 75 production data cubes that act as a robust

content store for the new deployment of the Cognos 8 reporting suite. The integration of these new tools has led to 36 production dashboards that are used on a daily basis by the various functional arms of the business.

Jeffery notes that the benefits of Cognos 8 BI were immediately apparent. "With Cognos PowerPlay, we were able to take a single metric and analyze it in depth, which was great. Now, with Cognos 8 BI, we are able to integrate several data models behind a single dashboard. Basically, we can take a business entity, like a family platform or a business unit, and build a dashboard for several metrics that relate to that specific entity. This results in a very intuitive process for managers because they are assessing the health of a business entity."

Benefits realized

Cognos is now used across the organization on a worldwide basis to align strategy with tactics in areas such as labor productivity, inventory management, purchasing, and manufacturing. One of the company's goals is to improve in-time delivery for customers. With Cognos, users can track activities and do root-cause analysis of delinquent backlogs or other issues that affect deliveries.

Jeffery points out that this timely, indepth insight has brought efficiency gains across the business. "Let's say the user sees an anomaly in the metrics data that he or she would like to investigate," he explains. "The user can simply drill into the information and continue chasing the anomaly down to the individual work order, sales order, or event that caused the problem. This has been a great productivity gain compared to our old method of compiling static metrics with tools like Excel. With our Cognos investment, we can now use our resources to solve the problem, not just to understand that it exists."

In addition to process improvements, metrics and analytics reach across different functional areas, which increases cross-communication and decreases silo-based thinking. More importantly, in-house analysts are now able to view data in real time and develop new metrics and models to further support strategic and tactical initiatives as needs and ideas arise.

"As an output from our nightly MRP process, engineers and analysts can view upcoming factory production requirements and examine historical yield trends in a single, comprehensive dashboard. This facilitates proactive problem solving in the prevention potentially low yielding, work order dispatch. This increases factory

productivity and avoids disappointing customers with respect to delayed deliveries", remarks Jeffery.

Vicor has future plans to use Cognos 8 BI to help manage its CRM initiatives and develop forecasting of worldwide activities further. In addition, Vicor would also like to take its newfound data wealth to create a predictive business model to help forecast financial values and the cost of backend measures.

Jeffery concludes, "Cognos has really become a way of life. We wouldn't think of launching any initiative if we did not agree from the outset on what we wanted to measure, how we were going to assess it, and how we would improve it over time. Cognos is our key to staying on track and ahead of the competition."

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> *Joe Jeffery,*
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**About IBM Cognos BI
and Performance Management**

IBM Cognos business intelligence
(BI) and performance management
solutions deliver world-leading enterprise
planning, consolidation and BI software,
support and services to help companies
plan, understand and manage financial
and operational performance. IBM
Cognos solutions bring together
technology, analytical applications,
best practices, and a broad network
of partners to give customers an open,
adaptive and complete performance
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