

i2 Technologies

Empowering new efficiencies



Industry leaders attract the lion's share of complex business problems. Corporate acquisitions create a need for integration and economies of scale among operating units. Margin pressures impact high-volume sellers the most. And paradigm shifts — in manufacturing, distribution, pricing, and product lifecycle trends — weigh more heavily on the fortunes of businesses in the vanguard of today's economy.



Business results:

- > Integration among operating units of common processes
- > Standardization of common parts
- > Smaller supplier base
- > Improved quality of management information
- > Enhanced communication and cross-division visibility
- > Increased capacity utilization
- > Streamlined inventory channel
- > Decreased work in progress
- > Increased transportation efficiency
- > Reduced product obsolescence
- > More informed business decision-making and product planning

For Compaq Computer Corporation, these business challenges demanded innovative solutions that could power the company's next generation of success. With an eye toward delivering new value to Compaq, i2 Technologies delivered a series of products designed to maximize efficiencies throughout Compaq's value chain.

The result? A blend of i2 Technologies products running on Compaq systems to generate new efficiencies across the organization. Reaching from product design to buying and sourcing, from scheduling and fulfillment to sales and service, Compaq's new internal systems are delivering bottom-line impact and enhanced customer satisfaction.

That's what leadership is all about.

“The combined strengths of Compaq and i2 are helping us excise inefficiencies and expand our e-business operations.”

Randy Burdick, title, Compaq

Powering change

Compaq takes pride in its long history of applying only the best technology to solve business problems, internally and for its customers. So when a confluence of business challenges illuminated the need for improved integration among business units, faster response to a rapidly changing price and margin landscape, and migration to a build-to-order manufacturing environment, Compaq knew where to turn: i2 Technologies.

“Compaq and i2 have a long history of working together to develop technology-driven solutions that create synchrony among customers, vendors and business partners,” says Randy Burdick, (title) of Compaq. “The combined strengths of Compaq and i2 are helping us excise inefficiencies and expand our e-business operations.”

i2's suite of value chain solutions is designed to optimize operations across the enterprise, enabling collaborative commerce among businesses in each phase of the supply chain. Knowing i2's reputation for providing bottom-line benefit, Compaq chose i2's e-Design, Factory Planner, Transportation Manager and Transportation Optimizer, and Life Cycle Planner modules. For maximal power and reliability, the i2 technology runs on Compaq AlphaServer™ systems running the Compaq Tru64™ UNIX OS.

Designing efficiency

Healthy corporate growth presented Compaq with classic system integration problems. Thanks to the acquisition of two companies and the soaring sales of Compaq products, some legacy applications remained unconnected with e-business applications across divisions. Compaq executives spotted an opportunity to increase efficiencies in product design and procurement.

Compaq purchases between \$15 and \$20 billion worth of goods annually. (Can we specify the number of vendors or parts here?) In selecting i2's e-Design module, Compaq was determined to reduce the number of vendors in its supplier list, decrease the number of parts used and better manage required duplicate parts. At a higher level, Compaq wanted to use cross-enterprise information to better understand the true demand for various parts so that inventory costs could be more closely tied to product revenue.

Compaq's 1998 implementation of the i2 e-Design module delivered four key benefits. Design activities were merged with the former Tandem and Digital Equipment Corporation operating units, providing an opportunity to integrate common design processes across the enterprise. Parts numbers were standardized, allowing ready identification of common parts, enhanced flexibility in managing product life and obsolescence issues, and a reduction in the overall supplier base. Compaq reduced its approved vendor list to 111 suppliers and 18,000 components and items.

Accurate and timely information generated by the e-Design reports enabled Compaq executives to make more informed business decisions on such issues as productivity, manufacturing activity and product cycle times. Further, communication and cross-division visibility enhanced information exchange across facilities worldwide, enabling increased optimization of corporate resources.

“Having more detailed product and sourcing information helps our engineers to better understand which parts to use in our solutions and when to buy. The e-Design module empowers us to make better business decisions,” says Burdick.

The intelligence of factory planning

To handle manufacturing planning and scheduling, Compaq also implemented i2's Factory Planning module. With manufacturing facilities across five continents, Compaq needed a uniform solution that could be implemented across the enterprise, but with the technology installed in each plant.

“Factory Planner helps Compaq put our manufacturing scheduling in perspective,” says Burdick. “The technology supports enterprise and plant-level views for better intelligence, but it also supports cell-level scheduling so that we can build maximal efficiency into each production line.”

The i2 solution, which was implemented beginning in 1997, has delivered a variety of benefits to Compaq. Capacity utilization has increased by 20 percent, and work in progress has been reduced by 25 percent. The inventory channel was decreased by 40 percent. Overall, manufactured product volume has increased by 50 percent without any corresponding increase in the number of factory planners. “These are measurable improvements that are hard to beat,” Burdick says.



Compaq's implementation of the i2 solutions electronically connects supply chain partners around the world through the company's design, buy/source, planning, fulfillment, sales and service activities.

“i2 takes pride in delivering value to our customers,” says name, title of i2. “Compaq has realized a cumulative savings of more than \$128 million through the implementation of Factory Planner.”

Managing transportation effectively

Once the design and manufacturing was optimized, Compaq took on product distribution and logistics. In 1999, Compaq implemented i2's Transportation Manager and Transportation Optimizer solutions to bring new efficiencies to its North American logistics operations.

Concentrating on product shipment from its Houston facilities, Compaq faced the challenge posed by increasing product volumes being shipped in smaller quantities. Although sales volumes were up, many purchases were made — and therefore shipped — in smaller quantities. Without a new logistics solution, this market change threatened to increase Compaq's distribution costs, which already stood at \$175 million per year.

i2's Transportation Manager and Transportation Optimizer modules helped Compaq more effectively schedule and plan its distribution

What makes it work:

Compaq's customer service orientation is built on an intimate knowledge of the challenges of building state-of-the-art solutions. Like its customers, Compaq must select the best server platforms for deploying solutions that are critical to business objectives. Here is a representative sampling of selected servers deployed for the Compaq/i2 solution:

i2 Factory Planner:

AlphaServer GS systems running the Tru64 UNIX operating system, deployed in local factories

i2 Life Cycle Manager:

Compaq ProLiant™ servers running the Microsoft Windows NT operating system, centrally deployed in the corporate data center

considering rates, costs and services. The technology also spotlighted inefficiencies. For example, shipments of multiple products to some areas of the country were less costly if they were sent via truck to UPS distribution centers, where they were then delivered within a single shipping zone. The i2 modules helped Compaq transportation managers group shipments and plan their logistics accordingly.

As a result, all logistics metrics — including shipping volume, weight and distance — have increased, while costs have stayed constant. “Understanding detailed logistics measures such as the number of trucks shipped full or the number of pallets shipped per truckload helps us to control costs,” says Burdick. “We couldn’t do this without Transportation Manager.”

Insight into Life Cycle Planner

The final component implemented in the Compaq/i2 solution was i2’s Life Cycle Planner module. As with most high-tech manufacturers, Compaq faced the challenge of eliminating non-profitable or non-saleable SKUs from its product line. Without a sophisticated modeling tool, Compaq had been previously unable to use its sales and manufacturing data to reconcile historic sales and profitability patterns.

Using i2’s Life Cycle Planner module, which was implemented in 2001, Compaq can now view product life cycle information down to specific geographies. Which products sell well in the United States? How does this data differ from that collected in Europe? “Being able to isolate product life cycle information by criteria such as sales region and SKU helps us to reduce product obsolescence and increase profitability,” says Burdick.

Compaq planners can even enter “what-if” data into the model to predict outcomes of production or demand changes. By creating forecasts based on each product’s plan of record, Compaq can base business decisions on historical trends as well as comprehensive data-fed projections.

“Using the i2 technology helps us to price products correctly and keep inventory low,” Burdick says. “As a complete solution, the i2 modules deliver valuable insight into our production and distribution processes that empowers us to be more efficient.”

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