



Configuring a 500 Percent ROI for Dell

As the number one computer systems company in the world and an innovator in Web-based sales operations, Dell Computer Corporation was already setting the standards for customer service, sales, and distribution in its industry. But, recognizing that it would need a scalable value chain management initiative to keep up with its enormous growth, Dell implemented i2 solutions, and has lowered costs, increased employee productivity, and reduced product time to market.

In the mid-1990s, a small PC manufacturer called Dell Computer Corporation made the strategic decision to use the emerging Internet as a sales channel. The company was always looking to get closer to its customers to determine exactly what options they wanted in a computer.

Using its direct-to-consumer model, Dell has revolutionized the way that computers are configured, priced, and sold. But, more important, the company has proven that value chain management is key to long-term business growth.

Today, more than half of the company's \$50 million in daily revenue comes from the World Wide Web. At the same time, more than 85 percent of Dell's suppliers are electronically integrated, resulting in shortened lead times and greater service.

Simply put, Dell is the poster child for value chain management. But even being best in class was not good enough for this bleeding-edge company. Dell wanted to wring every possible dollar and minute out of its supply chain through global supply planning and demand fulfillment. And at the same time, the company had to prepare for the future growth brought about by a fully optimized value chain.



Challenges

- Prepare for future growth by fully optimizing the value chain
- Minimize inventory while quickly fulfilling customer orders
- Eliminate extraneous time and money from value chain operations

Solutions

- Create a bill of material for each order
- Replace factory warehouses with additional assembly lines
- Communicate planning data to supplier in real time

Results

- Projected 500% return on investment within 3 years
- Decreased inventory from 13 hours to 7 hours
- Reduced paperwork by 90%

Company Description

Headquartered in Austin, Texas, **Dell Computer Corporation** is the world's number one computer systems company with revenues totaling \$31.8 billion. Through its direct business model, Dell designs, manufactures, and customizes products and services to customer requirements, and offers an extensive selection of software and peripherals. The company offers a full range of computer systems, including desktop computer systems, notebook computers, workstations, network servers, and storage products. Dell, a FORTUNE 500 company, employs 34,400 people.

“The supply chain solution from i2 — and the processes we put around i2 — is allowing us to move materials so fast around our supply chain that we’re able to take advantage of lower-cost materials quicker and pass those lower-cost materials on to our suppliers. And that’s allowing us to fuel our growth.”

— Dick Hunter
Vice President of Manufacturing Operations



“We really realized a couple of years ago that our current supply chain tools and processes were not going to allow us to scale to where we wanted to go over the next four years,” said Dick Hunter, Dell’s Vice President of Manufacturing Operations. “We’re a \$30 billion company now. We expect to be a \$75 billion company in three or four years. We knew we weren’t going to be able to scale our supply chain tools and processes in order to meet that level of volume.”

Why i2?

Several Dell executives had considerable experience with supply chain optimization suppliers. They all agreed that i2 Supply Chain Management™ (SCM) was the only solution that could enable Dell to meet its aggressive growth goals.

i2 SCM integrates forecasting, planning, and execution capabilities with complete visibility across the supply chain.

“i2 is clearly the leading software for supply chain management,” Hunter said. “We knew that the i2 solution was clearly the software of choice for us.”

i2 is the undisputed leader in high-tech value chain solutions, serving more than 70 percent of the industry. i2 is the only solution provider that can deliver a value chain management solution that helps high-tech companies and their partners become more responsive to market demands while simultaneously lowering their costs to serve the market.

“By partnering with i2, we’re implementing a common global process for communicating and planning real time with our suppliers and extending the benefits of the direct model to them. These tools provide for end-to-end visibility for both demand needs and supply availability. Instead of forecasting the daily supply needed, we can receive the exact material every two hours to fulfill actual customer orders.”

i2’s Contribution

Every 20 seconds, Dell aggregates its orders, analyzing the material requirements. i2 SCM compares Dell’s on-hand inventory with its suppliers’ inventory, then creates a supplier bill of material to meet its order needs.

Dell’s suppliers have 90 minutes to pull the needed materials and drive them to Dell’s factory. Dell then takes 30 minutes to unload the truck and place the materials—in the precise order in which they will be manufactured—onto the assembly line.

Since the company pulls only the materials it needs for its on-hand orders, Dell operates with an extremely small seven hours’ worth of inventory.

“By partnering with i2, we’re implementing a common global process for communicating and planning real time with our suppliers and extending the benefits of the direct model to them,” Hunter said. “One of our operational objectives is to minimize inventory while quickly delivering orders to our customers. These tools provide for end-to-end visibility for both demand needs and supply availability. Instead of forecasting the daily supply needed, we can receive the exact material every two hours to fulfill actual customer orders.”

Dell’s Results

By taking its supply chain operations to the next level with i2 SCM, Dell is targeting an incredible 500 percent return on investment (ROI) within three years.

By pulling only the materials it immediately needs, Dell has been able to remove stock rooms from its factories, enabling the company to add production lines. So, while increasing factory utilization, i2 SCM has also enabled Dell to decrease inventory from 13 hours to seven hours.

“In our business, material costs decline at about 1 percent per week. So our competition, like IBM, Compaq, and HP—who operate through a sales channel—typically have three or four weeks of inventory in that sales channel,” Hunter said. “Automatically, we have a 4 to 5 percent advantage. And that’s critical in the pretty razor-thin margins that exist in the PC industry today.”

In addition to the extreme supply chain flexibility that i2 solutions are providing to Dell, i2 SCM is adding maximum velocity to Dell’s enterprise—enabling the company to continue to grow by offering some of the lowest-cost customized computers available on the market.

That velocity is even more critical because of the constant stream of new functions being added to computers. With about 2,000 product transitions a year, the ability to reduce product time to market is critical.

"A key metric as to how effective anyone is as to their abilities to introduce new products efficiently is how much excess and obsolete inventory we typically have," Hunter said. "At Dell, between .05 and .1 percent of material purchases end up as excess and obsolete inventory."

In addition to hard-number metrics and value, i2 SCM is enabling Dell to fully utilize the company's most important asset—its people.

"We continue to make the entire supply chain more efficient and reduce inventory at all stages, which ultimately lowers our costs," Hunter said. "This process has produced a single global system of record and has already reduced the number of daily printed purchase orders for our Nashville and Austin operations by more than 90 percent. This enables employees to be more productive. As a result, they spend less time on faxes, e-mails, phone calls, and spreadsheets."

Ultimately, i2 SCM is enabling Dell to grow at a phenomenal pace, while still making a fair margin for the company and its suppliers.

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