i2 The Supply Chain Company®

Enabling Closed-Loop Supply Chain Management at ADTRAN

ADTRAN prides itself on having crafted a proven strategy for success in the telecommunications industry. The company focuses on creating well-engineered products, on controlling its costs, and on satisfying worldwide client base. To meet those objectives, ADTRAN relies on a tight, responsive supply chain. As part of a broad effort to further strengthen its supply chain, the company deployed i2 solutions to better understand and manage customers' requirements.

Today's telecom industry is marked by intense competition, challenging customer demands, and important new regulatory requirements. Suppliers must respond quickly and effectively to deliver the hardware, software, and services needed by network operators. That means keeping a close watch on the needs of telecom customers.

ADTRAN is a leading supplier of network access equipment for telecommunications applications. The company's products are deployed to support voice, data, video, and internet communications across traditional copper wire networks, as well as fiber optic and wireless network infrastructures.

ADTRAN remained profitable, even during the dot-com bust and the tough years for telecommunications firms—an achievement its managers attribute to cost reductions, engineering changes, and a relentless pursuit of perfection. In the process, ADTRAN built a broad and complex supply chain.

"Our ambition is to own the last mile of the local loop," said Mark Carvalho, Program Manager for ADTRAN's supply chain operations. "Customers are our first priority, so we want a demand-driven supply network that allows us to continually improve our sales and operating planning process."

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Challenges
- Deploy a customer-focused, demand-driven supply network
- Reduce silos among suppliers, contract manufacturers, and internal production
- Closely integrate engineering, operations, finance, sales, and marketing

Solutions
- Implement comprehensive supply and order collaboration solution
- Adopt measured "walk first, run later" approach to supply chain evolution
- Deploy demand planning solution that fits seamlessly in existing supply chain footprint

Results
- Saved millions in inventory
- Cut supplier turnaround time to less than 24 hours
- Improved SKU-based forecasting accuracy by up to 8%

Company Description
ADTRAN, Inc. supplies network access equipment designed to enable today's widespread digital telecommunications applications, including internet access, telecommuting, corporate connectivity, distance learning, videoconferencing, and teleradiology. The company's products enable voice, data, video, and internet communications across copper, fiber, and wireless network infrastructures. ADTRAN generated revenues of $454.5 million in 2004.

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—*Mark Carvalho*
Program Manager, Supply Chain Operations

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ADTRAN sought to build and refine a proactive, customer-oriented supply network. The company launched a multi-year effort designed to develop a more customer-oriented supply chain.

"We looked at our entire supply chain and saw the typical stovepipes among various domains, including our suppliers and contract manufacturers and our internal manufacturing unit," Carvalho said. "Those groups supply our carrier network and enterprise divisions, and we distribute through both the retail channel and a carrier network channel. So it is a very complex supply chain, from our suppliers' suppliers to our customers' customers."

Why i2?

To help it manage this complexity, ADTRAN reviewed a number of potential demand management solutions. The company found that i2 was best positioned to meet its needs.

"ADTRAN's senior management visited key i2 customers in the US who were very impressed with the operations and the way i2 was being used there, in terms of velocity and in terms of the visibility into material that was used for their manufacturing operations," Carvalho said. "The next step was to bring the other executives of ADTRAN up to speed, get them to see the benefits installed at other companies, and ensure that they were all on board. A 90-day strategic opportunity assessment was conducted before the selection of i2, in order to determine the expected benefits."

"With Demand Planner, we now have a closed-loop sales and operating planning process. We are in a position to shape demand, to look at the probability of sales, and the investment we need on the inventory side."*

i2's Contribution

To refine its sales and operations management process, ADTRAN leveraged solutions for demand planning to understand, predict, and manage customer demand across products, stores, and the entire end-to-end supply chain.

Prior to implementing i2 Demand Planner™ and i2 Factory Planner,™ ADTRAN could not effectively track demand-related information and activities. nor could it easily evaluate and set demand priorities as a part of the overall sales and operations management process.

ADTRAN now conducts demand planning on a monthly basis, and has accelerated other supply chain activities that use information from the sales and operating planning process.

"Sales and operation planning lies at the center of this suite of applications and it drives the value of our other applications," Carvalho said. "Demand Planner fits into our plan of evolving our supply chain."

Using i2 solutions, the company collected input from key participants in the demand environment, used historical activity to create a baseline, then employed sophisticated modeling and forecasting capabilities to streamline and strengthen the process of demand planning.

Through its implementation, ADTRAN can now accomplish its key goals — enabling consensus planning from sales, marketing, engineering, new product design, promotional planning, and supply chain operations, while tying all of this back to the financial group.

"From an architectural perspective, i2 solutions fit well into our supply chain footprint," Carvalho said. "All forecasts are entered into Demand Planner, then the data flows into Factory Planner where plans are built and allocated and where material shortages are examined. The information then flows to our suppliers with the i2 supply and order collaboration. We then flow it all through our ERP system to generate the purchase orders. So with Demand Planner, the entire cycle time is reduced."

ADTRAN's Results

ADTRAN has received bottom-line benefits through its deployment of i2 solutions.

"Now we're in a very good position because we're getting the same revenue with considerably less inventory," Carvalho said. "Real cash has been given back to the business by freeing up millions in working capital from inventories."

ADTRAN has also achieved efficiencies throughout the supply chain.

"We've cut supplier turnaround time to less than 24 hours while streamlining our own demand cycle," Carvalho said. "We have improved SKU-oriented forecasting by 7 to 8 percent."

One important benefit of the i2 deployment has been the ability to close the loop in exception management and other key supply chain processes.

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In addition, ADTRAN can now seamlessly view, track, and manage customer product needs. It has more closely integrated the key activities of engineering, operations, finance, sales, and marketing. This tight integration has led to greater visibility into the business.

"We looked closely at dollarized errors," Carvalho said. "We took a snapshot of the ROI we created through inventory management. As we went through this evolution of deploying i2 solutions we realized the biggest payback was in recognizing the errors, working those errors, and being more proactive."

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