jda.
Plan to deliver™

FAIRCHILD
SEMICONDUCTOR®

CASE STUDY

Bouncing Back

Fairchild Semiconductor Leverages JDA Solutions to Quickly Recover From the Economic Downturn

OBJECTIVE

Recover from the economic downturn by implementing supply chain optimization solutions to help the company manage volatile demand, a global shortage of manufacturing capacity, growing lead times and scarce supply.

SOLUTIONS

- JDA® Demand Planner
- JDA® Inventory Optimization
- JDA® Order Promiser
- JDA® Scenario Analyzer
- JDA® Supply Chain Planner

SERVICES

- JDA Cloud Services

REAL RESULTS

- Improved alignment of day-to-day inventory plans with top-level goals
- Ability to govern products by a set of highly customized inventory strategies
- Provide guidance on over- and under-utilized resources and long-term capacity requirements
- Supports the company's S&OP processes
- Ability to re-plan the business in an economic upturn or downturn
- Improved decision-making abilities

The semiconductor industry sprang into existence in the early 1960s and built the foundation for modern electronics such as radios, computers and telephones. Today, the design and fabrication of semiconductor devices is a $249 billion business[1]. Fairchild Semiconductor is among the major players in the industry, designing and delivering high-performance semiconductors that enable mobile connectivity and optimize energy consumption. With a $1.5 billion runrate based on first quarter 2010 results, the company's diversified product line includes power management and signal-path integrated circuits, logic and optoelectronic devices for power supply, portable, lighting, motor, computing, consumer and automotive applications.

Upswing in Consumer Demand Creates Supply Chain Challenges

Following an unprecedented downturn related to the global financial crisis in 2008 and 2009, the high-tech semiconductor industry is now seeing a dramatic upturn in customer demand. Computing and mobile technologies in particular are driving an ever-increasing share of semiconductor consumptions, pressuring semiconductor supply chains to keep pace with rapid new product introductions and shrinking product lifecycles. Today, companies like Fairchild Semiconductor are dealing with extremely volatile demand, a global shortage of manufacturing capacity, growing lead times and scarce supply.

"Unit volumes have significantly increased from where they were before we went through the recession," said Kevin Chynoweth, Fairchild Semiconductor's vice president of supply chain. In fact, the company reported first quarter 2010 sales of $378 million, up 7 percent from the prior quarter and 69 percent higher than the first quarter of 2009.

"With volume back up to pre-recession levels, revenue is catching up. But the pressure on margin performance remains very high," Chynoweth said.

To offset this increase in demand, Fairchild Semiconductor is increasing manufacturing capacity and capabilities with minimal capital investment.

"In less than 100 days after licensing JDA Inventory Optimization and JDA Scenario Analyzer solutions, we were leveraging them. It's one of the best experiences we've ever had. If we had chosen to go through a more traditional, on-premise and licensed deployment, we'd be tied up in a phased plan to install the applications, which could take a year or more."

Kevin Chynoweth
Vice President of Supply Chain
Fairchild Semiconductor

"We don't want to sacrifice profitability going forward," Chynoweth added. "We're very focused on making the best use of capacity to improve our overall margin performance and support top-line growth."

Selecting Hosted Supply Chain Solutions for Fast ROI

JDA Inventory Optimization and JDA Scenario Analyzer are helping Fairchild Semiconductor navigate today's new business normal. Ninety days after Fairchild Semiconductor hit its lowest point in terms of revenue level, the company made the decision to bring on new supply chain management technology. Fairchild Semiconductor selected JDA's Inventory Optimization and Scenario Analyzer solutions for more sophisticated inventory modeling capabilities and better scenario management techniques.

"We reacted to the downturn fairly well, and the JDA solutions gave us visibility into how fast demand can turn," said John Houser, Fairchild Semiconductor's supply chain program manager. "We need to re-plan the business very quickly when economic upturns or downturns occur."

The company took a speed-to-value approach to install JDA's solutions, opting to have JDA host the solutions. This ensured that Fairchild Semiconductor achieved a quick return on its technology investment.

"In less than 100 days after licensing the solutions, we were leveraging them," Chynoweth said. "It's one of the best experiences we've ever had. If we had chosen to go through a more traditional, on-premise and licensed deployment, we'd be tied up in a phased plan to install the applications, which could take a year or more."

Enhancing Inventory, Scenario Modeling Capabilities

JDA Inventory Optimization supports Fairchild Semiconductor's monthly planning cycle by aligning day-to-day inventory plans with top-level goals. Based on consumption patterns, criticality, velocity and other key attributes, the solution enables Fairchild Semiconductor to govern products by a set of highly customized inventory strategies.

"We let JDA Inventory Optimization propose the strategy for every single one of our products – and we have approximately 10,000 individual SKUs," Chynoweth said.

Prior to Fairchild Semiconductor's selection of JDA Inventory Optimization, offline tools and human judgment were used to determine how much buffer stock to keep on hand for each individual product.

"JDA Inventory Optimization will continue to enable us to have the right volume of product at the right staging point at all times," Chynoweth added. "The solution looks out over the planning horizon and provides the information we need to determine where to increase inventory levels and where to apply the brakes in terms of production."

The data obtained from JDA Inventory Optimization is integrated with JDA Scenario Analyzer, which allows Fairchild Semiconductor to run different scenarios using criteria such as priority schemes and bill of materials. The solutions provide the company's users with guidance on over- and under-utilized resources and long-term capacity requirements.

"Prior to using JDA Scenario Analyzer, our process of running what-if scenarios was essentially just a top-down estimation," said Jeff Moore, Fairchild Semiconductor's senior director of supply chain

management systems analytics. “With the tool in place, we can determine what will happen if capacity changes by a certain degree and how that would affect our production schedules, as well as our options for responding to an unplanned event.”

Supporting S&OP With Weekly and Monthly Planning Updates

The data that Fairchild Semiconductor obtains from these applications is rolled into its sales and operations planning (S&OP) process. JDA’s Manufacturing Planning solution, which includes JDA Demand Planner, JDA Order Promiser and JDA Supply Chain Planner, is an integral part of the company’s day-to-day planning cycle and form the backbone of its S&OP process.

Several years ago, Fairchild Semiconductor consolidated three separate, divisional planning systems to one engine with the support of JDA. This helps the company better balance demand and supply, providing accurate demand forecasts and visibility into global inventory levels.

“JDA Supply Chain Planner is the heart and soul of our S&OP process,” Chynoweth said. “We run all of the information gathered using the other JDA solutions through Supply Chain Planner. The output serves as the first-cut capacity rationalization plan.”

Weekly and monthly updates to the company’s centralized planning system are fed into Fairchild Semiconductor’s S&OP process, providing all stakeholders with a one-number forecast.

“We are able to make better business decisions now that there’s a single plan, which includes every division’s demand and production requirements,” said Gerry Wagner, senior director of planning and customer service at Fairchild Semiconductor. “We are enjoying the benefit of being able to have a very efficient dialogue with our financial community and other functional areas of the business because they’re using the same data that we are.”

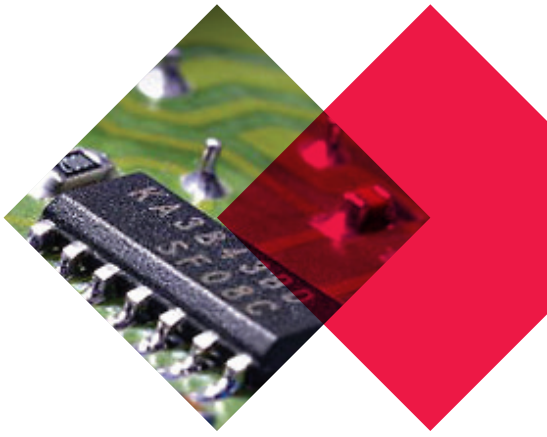
Optimizing Inventory Levels, Sensing Demand Fluctuations Faster

Today, Fairchild Semiconductor’s inventory is leaner than ever. Fairchild Semiconductor attributes this success in part to the addition of a new inventory manager, who leverages JDA Inventory Optimization regularly to deploy company-wide inventory strategies.

“Fairchild Semiconductor’s supply chain is more constrained now than ever,” Houser said. “But every week we’ve gained ground in building up inventory for our fastest-moving products while draining inventory on the slower-moving products. While the solutions are essential, there’s also some good human judgment coming into play to make sure we’re scheduling and loading the right product.”

With an integrated business planning process supported by industry-leading supply chain technology, Fairchild Semiconductor can identify and respond to changing market conditions faster and more efficiently. Using data from the JDA solutions, Fairchild Semiconductor runs statistical models that allow it to view trends and detect changes in demand four to six weeks sooner than if relying solely on traditional forecasting methods.

“Through the economic downturn, we achieved better-than-expected inventory performance and were able to minimize the impact on the manufacturing loading level,” Chynoweth concluded. “As such, we experienced a very controlled slowdown and a relatively controlled speed up in terms of inventory levels. It’s the combination of people, processes and solutions that are helping us deploy the right inventory strategies, which is a huge win given today’s challenges in the semiconductor space.”



jda.com info@jda.com

Copyright © 2014, JDA Software Group, Inc. All rights reserved. JDA is a Registered Trademark of JDA Software Group, Inc. All other company and product names may be Trademarks, Registered Trademarks or Service Marks of the companies with which they are associated. JDA reserves the right at any time and without notice to change these materials or any of the functions, features or specifications of any of the software described herein. JDA shall have no warranty obligation with respect to these materials or the software described herein, except as approved in JDA’s Software License Agreement with an authorized licensee. 11.01.14

jda. Plan to deliver™