



Case Study

S&OP and S&OE in a unified environment

With more than 66,000 employees and sales of US \$27.2 billion, Samsung Electronics operates 25 separate production bases and 59 sales subsidiaries in 46 countries. Around the world, Samsung Electronics is renowned and acclaimed for its broad lines of innovative products that range from semiconductor components, hard-disk drives, notebook computers, consumer electronics, and mobile phones, to televisions and home appliances such as microwave ovens, vacuum cleaners, and refrigerators.

Samsung Electronics' Network Division provides a variety of high-quality infrastructure solutions for ATM, IP, DSL, 3G mobile telecommunications networks. This division employs more than 2,300 people and generated revenues of US \$1.3 billion and a profit of US \$122 million.

Despite its success and profitability, Samsung's Network Division — operating in a rapidly changing, highly volatile sector of the technology industry — nonetheless faced a continuous series of internal manufacturing challenges. From a strategic perspective, the company needed to increase asset utilization, decrease COGS, and increase market share.

Tactically, customers for its sophisticated components and solutions were seeking real-time responses to their purchase requests and order inquiries. Late changes to orders were creating unacceptable production delays and hampered visibility into orders and statuses.



Just as important, higher inventory levels (including obsolete materials), some supply shortages, delays in identifying bottlenecks, lengthy forecasting cycles, and too many rush orders were also combining to prevent Samsung from achieving even greater levels of efficiency, customer service, and business success.

Seeking manufacturing intelligence

Recognizing that it faced multiple opportunities for improvement, Samsung initiated a strategic campaign to revamp its supply chain management efforts. Company managers undertook a thorough and careful analysis of Samsung's needs and thoroughly evaluated commercial SCM software offerings.

Samsung's Network Division selected Adexa's Enterprise Global Planning System (eGPS) platform for supply chain planning, enterprise performance management, and intelligent collaboration.



eGPS helps companies maximize asset utilization within and beyond the walls of their factories by providing a local and global view of supply and demand requirements and constraints and the insight needed to optimize them for greater speed and profitability. With the help of Adexa consultants, Samsung chose and implemented Adexa's Supply Chain Planning, Factory Planning and Scheduling, Order Fulfillment, and Collaborative Demand Planning solutions over the course of 11 months, creating a unified planning environment.

Success Story Samsung Electronics

- **Supply Chain Planning** –This solution provides a unified planning environment that considers capacity and materials, and provides realistic planning solutions. This system represents the entire Samsung Electronics Networking Division supply chain and enables planners to quickly respond to various planning requests.
- **Factory Planning and Scheduling** –There are separate installations of Adexa's FPS solution at Samsung Electronics Networking plants. Each product division (Mobile, Inter/Intra, Data, and Access) has a separate Plant Planner module to enable each to separately develop detailed schedules and respond to "within-week" planning events.
- **Collaborative Demand Planning** – Adexa's CDP solution provides planning and sales with new forecasting tools that utilize historical and statistical analysis on forecasts and sales in order to develop a collaborative forecast. This solution, combined with revised business practices helps reduce excess inventory by providing decision makers with more reliable data.

CDP also includes a Collaborative Planning solution with an alert system that monitors the results of an SCP plan and provides exception-based, online reporting to enable planners to quickly respond to late demands and scheduling issues. It also provides Available to promise dates for all demands and forecasts through a regularly scheduled planning cycle.

- **Order Fulfillment** – Adexa's Order Fulfillment solution provides real-time available to promise and capable to promise information for all FERT and previously forecasted products. ATP utilizes SCP to perform these functions. ATP will also enable KMAT inquiries utilizing a standard BOM.



Samsung implemented the Adexa S&OP and S&OE solution over the course of 11 months, creating a unified and seamless E2E planning environment.



With Adexa eGPS, the Samsung Electronic Network Division has already begun to see measurable improvements in many areas.

Adexa helps Samsung:

- Increase forecasting accuracy through consensus-based forecasting, greater plan visibility, and flexible views of products organizations, and time
- Increase the quality of plans generated through constrained and unconstrained scenarios, establishing a structure that responds quickly to changes, and using rule-based problem solving and optimization
- Shorten the order to delivery time by responding quickly to demand changes, minimizing stock-out by properly allocating materials, and focusing on key customers through strategic buffering

From a benefits standpoint, Samsung has enjoyed higher customer satisfaction and lower costs in the following ways:

- Increasing on-time deliveries
- Providing accurate and “best-available” ATP dates to sales reps in real time
- Providing customers with fast and accurate order status information
- Faster communication of forecasted delays
- Reducing planning and production lead times
- Responding faster to order modification requests
- Prioritizing orders based on future sales potential
- Reducing on-hand inventory
- Generating capacity-constrained and accurate plans that reduce costly rush orders, expedited material purchases, and overtime
- Optimizing use of sub-contract capacity
- Accelerating sales forecasts that proactively reflect changing market conditions



Adexa helped to shorten the order to delivery time by responding quickly to demand changes, minimizing stock-outs by properly allocating materials.