



End-to-End Supply Chain Visibility and Alignment

“The implementation of RapidResponse® as our single demand planning tool has given us the cross-functional visibility that we never had before and has opened up the opportunity for us to replace our siloed goals with common goals and objectives across planning functions.”

- **Shellie Molina**

VP, Global Supply Chain, First Solar

The Business Environment & Challenge

First Solar, maker of solar panels, as well as builder and manager of solar power plants, has a complex product that's part of an intricate supply chain. The Tempe-based business manages over 3500 suppliers and globally has over 33,000 people in their supply chain network.

At one time, First Solar was capacity constrained, and as a result, the company did not emphasize demand planning in their operations. As their constraint moved from supply to demand, First Solar found it extremely difficult to slow down or speed up production. The team had implemented tools to support their supply chain, but they were unable to streamline the data to provide intelligent information to manage inventory levels. They could not answer simple questions with their ERP system, such as 'what do we have to sell?' and 'when is it available?' The team manually worked from spreadsheets to capture sales orders and to forecast demand, as well as to match it with projected supply from their three manufacturing locations. This tedious process could take upwards of a week to get the desired information.

First Solar made the decision to deploy RapidResponse, a cloud based supply chain management and sales and operations solution, and moved to a more demand-driven supply chain rather than their historical approach of building to capacity. Within eight weeks of signing the purchase order, First Solar was able to implement RapidResponse and the team immediately began seeing results.

The RapidResponse Solution

One of the first key performance indicators (KPIs) the team decided to measure was inventory levels and balancing inventory to meet targets. The team can now monitor inventory and understand inventory positions in minutes, not days. But, that's not all: they are also modeling sales orders, forecasts and shipments in RapidResponse along with finished goods inventory and projected supply.

RapidResponse enabled First Solar to provide their Sales team with exact figures of what is available to sell, and within three months, they saw a ten percent reduction in overall inventory. During this period, the sales and operations planning (S&OP) team experienced a fifty percent reduction in workforce, but because many of their operations were now automated, the team was able to support the S&OP process exactly the same.

Key operational challenges addressed with RapidResponse

- ▶ Improved visibility amid supply chain function/organization
- ▶ Achieved alignment across supply chain functions
- ▶ Reduced supply chain operating costs
- ▶ Improved the efficiency (speed) of business processes
- ▶ Maximized revenue opportunities
- ▶ Improved the effectiveness (outcome) of business processes

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RapidResponse allowed the company to put triggers in place to indicate how much supply it should be producing, based on demand. “These triggers, and understanding how to allocate product are two of the biggest improvements that RapidResponse has enabled for the supply chain team,” said Shellie Molina, VP, Global Supply Chain, First Solar.

First Solar runs a comprehensive sales and operations planning (S&OP) process. They can have up to 50 people on an S&OP call. The company understood no single function can be successful independently; they cannot hit inventory targets just by the planning team doing their job. The real goal has become striving for visibility across functions and across the entire value network of suppliers, partners and customers. With RapidResponse, they now have one source of truth, where everyone agrees and can work from the data. First Solar is transforming their supply chain and moving from functional excellence to end-to-end supply chain alignment. Their S&OP is now run continuously and is based on direct and deep supply chain visibility, supported by agile and collaborative decision making capabilities.

Results

First Solar used RapidResponse to improve planning cycles for their relevant supply chain function(s) with significant results, including:

- Improved response rates for relevant supply chain function(s) by 76-90% with RapidResponse
- Helped improve on time delivery performance with significant results with RapidResponse
- Eliminated six tools saving one million dollars, and with subsequent implementation expansions, they plan to do away with another six products
- Inventory Reductions:
“Our overall inventory was reduced by 8% and our aged finished goods inventory was reduced by 84%.”
 - Shellie Molina
VP, Global Supply Chain, First Solar

Supporting Their Evolution

In 2010, First Solar only sold individual solar panels; in 2011, they expanded their focus to include building utility scale power plants; and subsequently are shifting to include selling energy. With such a significant change in strategy, having the support of RapidResponse has allowed the supply chain team to be flexible to go from just planning a module to now planning all of the different components that go into a full energy solution.

Supply chain management will become a market differentiator and competitive advantage for First Solar as they establish themselves as a full end-to-end value chain supplier of energy to countries, municipalities and individual energy consumers.

Next Steps

First Solar decided to approach the RapidResponse deployment in strategic increments. Global Supply Chain Vice President, Shellie Molina, views RapidResponse as a fully functional integrated tool with multiple possible applications across the organization. Given the priorities and organization dynamics, Molina decided that the first step had to be to start with forecasting and connecting to the Sales organization. Following demand planning, the focus has been on supply management and project management within their power plant division. First Solar was using Excel, Microsoft

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Purchasing Rationale

First Solar chose RapidResponse over the following alternatives:

- SAP supply chain modules
- JDA/i2 planning solutions
- In-house custom solution

First Solar purchased RapidResponse over alternatives for the following reasons:

- The completeness of features
- All capabilities are offered within one system
- The flexibility of the solution to adapt to business requirements
- The speed of deployment
- The expected time to value
- Cloud delivery
- The ease of doing business with Kinaxis®
- A previous experience with RapidResponse

First Solar rated the following RapidResponse capabilities in terms of how differentiated they are compared to the competition:

What-if scenario analysis

★★★★★★ 5/5

Supply chain analytics

★★★★★★ 5/5

Impact evaluation/alerting

★★★★★ 4/5

Role-based collaboration

★★★★★ 4/5

Multi-tier visibility

★★★★★ 4/5

Project, SAP and other home grown tools to manage their projects, but were still unable to answer questions such as, 'if the weather forecast says it is going to rain for a week, how will we make this time up?' and 'how will the schedule shift?'

With any type of construction project, you have weather delays, permitting issues – much different challenges than inside factory walls. With RapidResponse, First Solar will achieve the visibility and modeling capability needed to understand how a project is impacted by supply chain disruptions, or conversely, how a project change alters supply chain requirements. They also expect that the simulation capability will be incredibly helpful to model different potential scenarios to understand the implications and impact of project possibilities (e.g., 'what happens if permitting takes longer than we think, what ht to go faster?')

With this capability, just from an inventory management and supply chain visibility perspective, First Solar expects to see significant inventory reductions.

RapidResponse supports, or will support, the following supply chain functions:

- ▶ S&OP
- ▶ Inventory Management
- ▶ Supply Management
- ▶ Capacity and Constraint Management
- ▶ Demand Planning/Demand Management
- ▶ Order Commitment Analysis/Order Promising
- ▶ Master Production Scheduling
- ▶ Supplier Collaboration
- ▶ Integrated Project Management

