



Enabling a sense and respond supply chain



Faced with increasingly complex manufacturing in its make-to-order environment, TrinityRail implemented RapidResponse to enable a sense and respond supply chain and eliminate reliance on operational forecasting.

One of the world's largest providers of railcar services and products, TrinityRail, part of Trinity Industries, Inc., provides a single source for comprehensive rail transportation solutions. It offers extensive manufacturing resources and a complete product line of new railcars, including covered hoppers, flat cars, gondolas, open hoppers, box cars and tank cars. It also offers one of the fastest growing railcar lease fleets in North America.

TrinityRail's wide-ranging railcar services provides customers with enhanced transportation efficiencies and optimized fleet utilization.

Challenges of a build-to-order environment

"We started our supply chain transformation thinking optimization was the goal," recalls Mark Ramirez, Chief Technology and Services Officer, TrinityRail. "I remember hearing business leaders say 'just give me an easy button.' After mapping and documenting our processes, we realized simulation would work much better for us."

Critical to winning orders, TrinityRail needed to have the available capacity to meet lead time demands on products with a 30 to 50 year lifecycle and a two to three year backlog at any given time. Faced with an increasingly complex manufacturing environment—every freight railcar is configured to unique customer specifications—made actually doing so much easier said than done.

Accurately forecasting demand was a near impossible feat, and each car type having its own relatively independent business cycle compounded the problem. Add to that extensive material impacts and lost capacity courtesy of constant line change overs, elastic planning horizons where scheduling can change week to week, managing the \$50M worth of materials received weekly, and a business built around independent work groups, and the challenges to overcome were immense.

// Dealing with uncertainty is the most difficult thing a supply chain practitioner has to do. Deciding how to manage that uncertainty is one of the most important decisions you have to make. For us, that meant adopting a sense and respond strategy.”

Mike Hegedus
Vice President Supply Chain
Management, Trinity Industries

RAPIDRESPONSE IMPLEMENTED TO:

- Reduce the need for forecasting
- Improve demand lead times
- Increase collaboration internally, and with key suppliers
- Decrease reliance on Excel and manual data inputs
- Provide better exception management
- Strengthen flexibility and visibility
- Advance overall supply chain responsiveness

Planning was a manual, dispersed and time-consuming process, with a high exposure to error due to a heavy reliance on Excel. More than 15 manual data transfers were required to produce each planning report, and every department was using its own version of the data.

It took days to create a sales projection sheet (SPS), and weeks for any changes to be processed through the various departments. It was an ad-hoc model with a lot of inherent risk.

RapidResponse – Right tool, right results

Rather than trying to get better at forecasting, we decided just to figure out how to live without one [a forecast],” explains Mike Hegedus, Vice President Supply Chain Management, Trinity Industries.

Foregoing operational forecasting required a tool that allowed increased flexibility and enhanced responsiveness. Supply chain management solution Kinaxis® RapidResponse® fit the bill. RapidResponse became the central hub to enable fast, accurate and coordinated planning, while allowing for easy collaboration across all business functions.

TrinityRail was able to realize significant improvements in the management of its supply chain, including virtually eliminating the reliance on Excel. The risk of error has also been greatly reduced as everyone is now working from a single, harmonized data set, and the need for manual data transfers has been substantially reduced. That SPS, which used to take days to create and weeks to execute, is now completed in hours—including implementing any required changes across all departments.

Since implementing RapidResponse, TrinityRail has been able to reduce its days of inventory on-hand (DIOH) by an average of 12 days. Utilizing an implementation framework established by Barkawi Management Consultants, the company has been able to stage, plan, and phase-in the necessary changes to allow for continued growth and business value.

Together TrinityRail and Barkawi have developed a robust and comprehensive extension of RapidResponse’s standard supplier collaboration capabilities, developing nine different planning models. This has enabled support for a shipment portal and purchase order (PO) management system for TrinityRail’s more than 800 suppliers. To strengthen key supplier relationships, TrinityRail is leveraging this platform to transition inventory liability via a vendor managed inventory program (VMI). Through this further collaboration and downstream visibility, TrinityRail aims to further reduce DIOH by another 10 days. Critical suppliers have been so impressed with TrinityRail’s use of RapidResponse, several are now evaluating the solution for their own internal usage.

Incorporating engineering in pre-release bill of materials (BOMs) planning, configuration pricing/cost estimations and steel stoichiometry evaluations (accounting for steel chemistry, testing requirements and size) has helped TrinityRail reduce material purchases. To enhance the user adoption and drive tangible business improvements, TrinityRail and Barkawi have partnered in the refinement of an iterative transformation methodology, utilizing supply chain experts to define strategy and process opportunities.

“Everyone who works in supply chain says their supply chain is unique,” says Hegedus. “And they’re right. You have to understand what’s different about your supply chain and your business strategy and tailor your solutions around that. RapidResponse helped us do that.”

RESULTS THAT MATTER



**Reduced days of inventory
on-hand (DIOH) by 12**



**Developed nine different planning
models to support supplier
collaboration**



less than **three
minutes**

**Less than three minutes for finance
to understand the impact of a
production order shift or facility
change**



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Enabling lasting change

RapidResponse was a key technology enabler to allowing TrinityRail to develop its sense and response supply chain strategy.

"We allow our people, with their knowledge, their imagination and their ability to think 'what-if?' to work with the foundation of RapidResponse in collaborating and helping us collect our data, analyze it and make decisions," says Ramirez. "We've transformed the way we work. People are now focused on the business strategy, working together with the end goal in mind."

Through Barkawi's Value Assurance Program, TrinityRail continues to work with a dedicated business architect, who collaborates closely with nearly 50 of its RapidResponse power users to create and maintain a backlog of enhancements. To date, the program has driven in excess of two full-time equivalencies (FTEs) worth of productivity gains in the production scheduling process. RapidResponse has enabled TrinityRail to respond to an industry recession and support a reduction of its buyer team by more than 25%, while still improving the on-time delivery (OTD) of inbound materials.

It has also allowed the company to move from 'could-we' type analysis to 'should-we' with financial analytics. Expanding those capabilities with the help of Kinaxis and Barkawi, TrinityRail can evaluate its entire book of business and calculate contribution margins for new orders and production changes (change-over time, labor and material cost differences, transportation costs, PPE fixed cost allocation and machine down-time). Finance can now understand impacts from a production order shift or facility change in under three minutes.

TrinityRail is seeking to further improve the financial integration with RapidResponse and is continuing to work with Barkawi in evaluating financial optimization within production planning and scheduling.

Taking advantage of rapid scenario simulations, robust exception management, enhanced visibility and collaborative planning, TrinityRail was able to successfully change the very culture of how its employees work, and develop a successful supply chain strategy in a very intricate planning environment. Now TrinityRail operates with no operational forecast, while still successfully handling complex order promising and frequent schedule changes. Its weekly sales and operations planning (S&OP) discussions are decision-oriented and focused on action, not anticipation. TrinityRail is truly operating successfully on the edge of control—and seeing some very positive changes as a result.

About Kinaxis Inc.

Offering the industry's only concurrent planning solution, Kinaxis helps organizations around the world revolutionize their supply chain planning. Kinaxis RapidResponse, our cloud-based supply chain management software, connects your data, processes and people into a single harmonious environment. With a consolidated view of the entire supply chain, you can plan expected performance, monitor progress and respond to disconnects when reality hits. RapidResponse lets you know sooner and act faster, leading to reduced decision latency, and improved operational and financial performance. We can prove it. From implementation to expansion, we're here to help our customers with every step of their supply chain journey.

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