



Pharmaceutical manufacturers are faced with a fragmented demand chain with varying regulatory requirements across markets (and several channels within each market), as well as an aging product portfolio leading to reduced margins. Increasingly, pharmaceutical manufacturers are turning to third party operators at all levels of the supply chain, to reduce costs, satisfy local demand, and enhance capacity flexibility. Delivering to customer expectations while coordinating the extended supply chain in an environment of constant change is the core reason our pharmaceutical industry customers have adopted Kinaxis™ **RapidResponse™**.

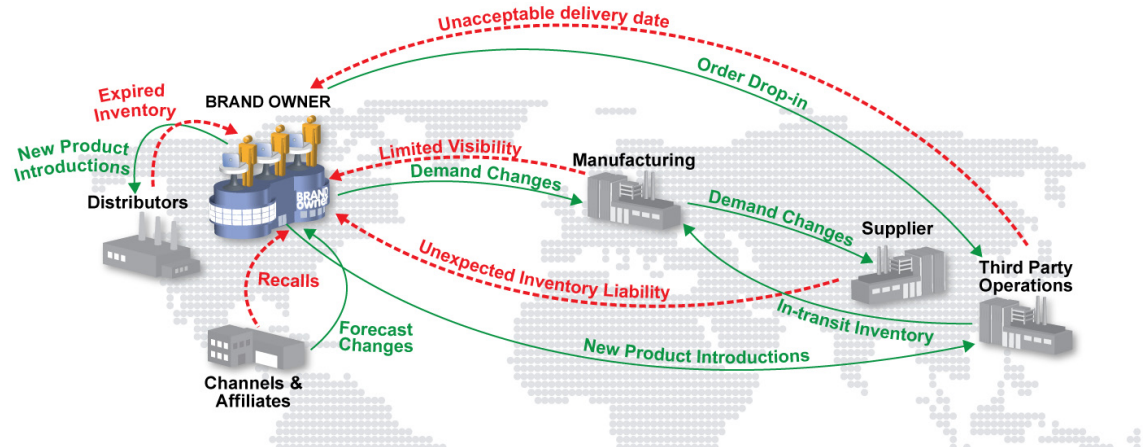


### Industry Dynamics

The drug market is segmented by geography and demography. Disease profiles in both the developed and developing world are different today because of different diseases and varying availability of treatment options. The afflictions of affluence — cardiovascular disease, diabetes, respiratory disease, obesity — create a very different market compared to the afflictions of want — malnutrition, malaria and HIV/AIDS. In addition, increasing affluence in populous countries like India will lead to greater challenges as healthcare provision gets stretched further to meet new demands as well as the disease burden of a developing country.

With tremendous opportunities for growth in emerging markets, many manufacturers have executed aggressive globalization and outsourcing strategies. With this, has come increasing business complexity as they face varying regulations across global supply chains and longer and riskier supply chains.

Pharmaceutical manufacturers must also deal with increasingly complex demand patterns. They have to simultaneously deal with predictable patterns for mid-life cycle products and highly unpredictable patterns for new introductions. They typically have to deal with both low volume, high mix products that require quick response for clinical trials and high volume products that require ramped production and global delivery capabilities.



*RapidResponse* is a proven solution to today's pressing supply chain management challenges for leading pharmaceutical manufacturers.

Many manufacturers lack the required process standardization in manufacturing, inventory and expiry management, and other core business disciplines to cope. And collaboration across the players in the supply chain is often inefficient and insufficient.

The streamlining of manufacturing and distribution processes in order to satisfy demand while reducing unit cost is therefore becoming increasingly important in maintaining profitability, reducing inventories and enhancing competitiveness within the industry.

To meet the many challenges that have emerged as a result of these new industry dynamics, pharmaceutical companies are adopting process improvements, such as Lean Manufacturing, and technologies targeted at removing business “silos,” improving collaboration, and increasing productivity. Above all else, pharmaceutical companies have turned to technology to keep a finger on the pulse of the supply chain in order to detect changes, understand consequences, and provide a collaborative environment in which all the partners in the extended supply chain can create and evaluate alternative responses to the change.

### ***A new paradigm, for a new world***

Solutions must embrace the reality that today's supply chains are multi-enterprise in nature and, thus, must provide clear visibility into the extended supply chain, along with tools that understand this virtual enterprise and its nuances. Today's solutions must:

- ▶ embrace and leverage human judgment, since the number of unplanned events with high risk to the business is on the rise
- ▶ arm front-line staff with tools for risk trade-off and response, to deal with these situations quickly and appropriately to ensure a profitable response is put into action
- ▶ foster team-based decisions that tap the collective insight of the right people in the organization — those that understand the potential impact of any unplanned event and proposed action alternative
- ▶ enable people to leverage a single system with one set of data, no matter what the problem — whether it is a demand, supply or product issue that needs to be addressed

Many of these requirements are extremely difficult, if not impossible, to capture in a mathematical model — the foundation of an optimization system. And if they can be modeled, the speed at which they change and the time it takes to formulate the mathematical model make it infeasible.

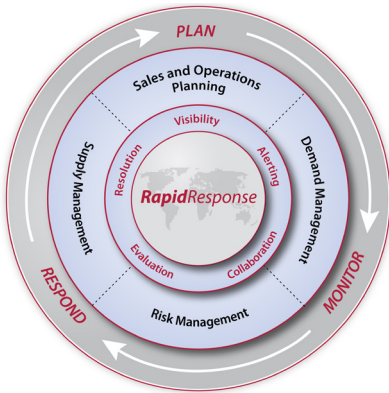
To deal with today's increasingly complex supply chains, you need an integrated solution that empowers your staff with planning, monitoring and response capabilities. Legacy demand planning and supply chain planning systems were not designed for today's complexities.

### ***Meeting the challenges of constant change***

Kinaxis ***RapidResponse*** starts by delivering supply chain visibility across your multi-tier, multi-enterprise supply chain. By delivering this visibility to all the appropriate staff within your supply chain organization, you regain an understanding of the manufacturing commitments and inventory positions throughout the supply network.

This is an essential pre-requisite to being able to develop supply chain plans and coordinate the right compromise when things don't go according to plan.

***RapidResponse*** proactively brings these situations to light, identifying not only unplanned events, but also identifying and quantifying the consequences to customer



- ▶ Multi-Enterprise Visibility & Reporting
- ▶ Inventory Analysis and Positioning
  - Expiry and product transition
  - Batch size excess
- ▶ Sales and Operations Planning (S&OP) Support and Enablement
  - Optimistic and Pessimistic Forecast
  - Analysis
- ▶ Order Promising/Global Available to Promise (ATP)/Capable to Promise (CTP)
- ▶ Capacity and Constraint Planning
- ▶ MPS Planning (Demand/Supply Balancing)
- ▶ New Product Transition
- ▶ Supplier Collaboration
- ▶ Data Integrity Management
- ▶ Performance Monitoring and Alerting
  - Months of coverage alerts
- ▶ Regulatory Adherence
  - Batch sizes, sourcing, effectivity dates

service, revenue, margin, and a number of other financial and operations metrics, and thereby flagging those that could do harm to your business so immediate action can be taken by front-line responders.

**RapidResponse** then delivers your team the tools to evaluate the effects of alternate courses of action on your customers, your inventory and all of your key performance indicators (KPI) so you can detail and select the appropriate course that maximizes your performance to these metrics.

**RapidResponse** includes specific functionality required by pharmaceutical companies. From expiry reporting, to days of forward cover, to stop-sell that provide a summary risk perspective on the ability of the manufacturer to satisfy demand, allowing management to focus resources and make critical manufacturing and distribution decisions.

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For example, one of our customers needed a responsive planning and simulation tool that would provide immediate and comprehensive feedback on inventory balances against target, while considering network capacity.

The challenges they faced included a monthly planning process that was labor intensive and took 20 days to complete. This was brought down to 7 days with huge gains in personnel productivity, but equally important was the ability to monitor execution of the plan and respond very quickly and effectively to any changes. During the implementation several off-line tools — used to plan and analyze expiry, demand simulation, bulk planning, and shortage notification and response — were replaced.

In summary, this customer determined that **RapidResponse** was the best one-stop solution for demand, supply, and capacity planning, simulation, and reporting.

### **Reaping the benefits**

Deploying **RapidResponse** will improve operations agility and efficiency because of greater responsiveness to change by being able to plan, monitor, and respond in a collaborative environment that promotes human judgment to reach compromise.

The benefits range from improved customer service, to improved capacity utilization, reduced inventory, and reduced material past expiration. These types of benefits have been proven over and over again in successful deployments across many industries and from large multi-national organizations to small, single-site companies.



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## ABOUT KINAXIS

Kinaxis™ helps manufacturers manage increasing business complexity and achieve operations performance breakthroughs with its proven solution for demand and supply chain planning, monitoring and response. Kinaxis **RapidResponse** is an on-demand service that enables collective risk tradeoff and response to change by empowering front-line decision makers with integrated tools for supply chain visibility, demand management, supply management, sales and operations planning (S&OP) and supply chain risk management. Global leaders such as Casio, Jabil, Qualcomm, and Raytheon are realizing superior customer satisfaction and a competitive advantage with **RapidResponse**. For more information, visit [www.kinaxis.com](http://www.kinaxis.com) or the Kinaxis blog at [www.21stcenturysupplychain.com](http://www.21stcenturysupplychain.com).

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