



Forecasting/Demand Planning

Global

RESPOND

Capital

Supply

Manag

MPS

S&OP

Supply Chain Simulation

Inventory Management

Supply Chain

SALES AND OPERATIONS PLANNING

Visibility

Supply Allocation

Scorecarding

LINE OF BALANCE

New Product Introduction

LINE OF BALANCE

COLLABORATION

COST MANAGEMENT

Respond To Order Change



KINAXIS BRIEF

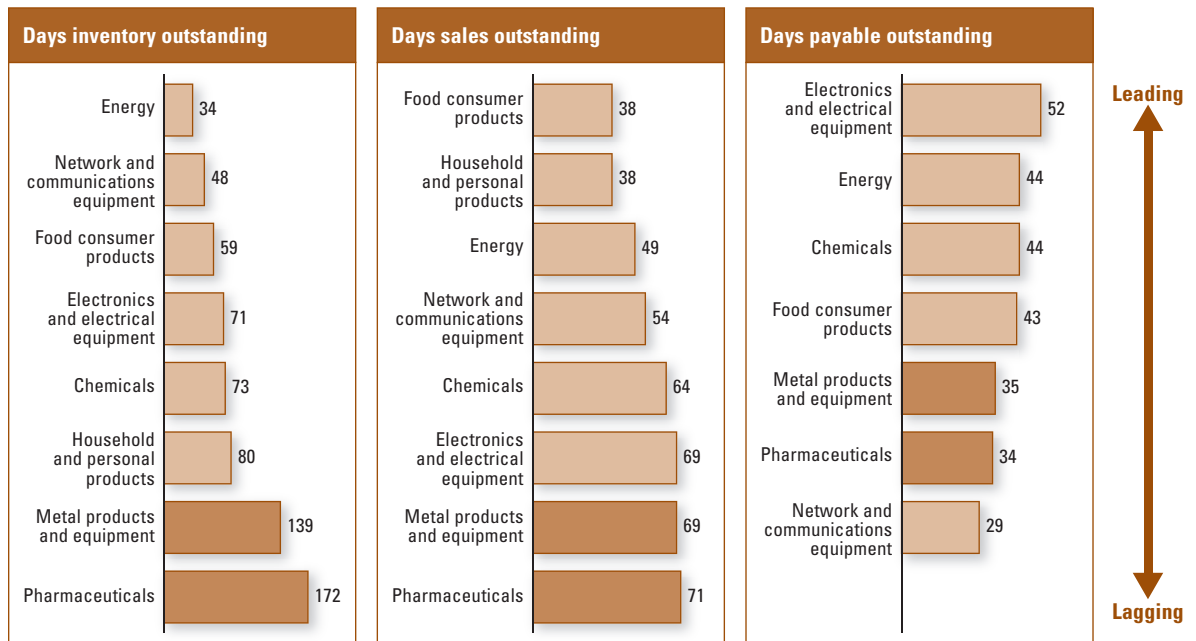
# Transforming the Pharma Supply Chain

## Making the transition to better demand planning and end to end supply chain management

There is no question that the Pharma industry must deal with a unique combination of supply chain and regulatory issues to meet its obligations to consumers, supply chain partners and shareholders. For some biotech companies, availability of their products are literally a life saving necessity and disruptions in the supply chain can result in a form of supply triage that is uncomfortable to even consider. Unlike other industries, the Pharma industry has traditionally treated supply availability as a prime factor, even to the extent that several months of safety stock was not considered excessive. While in the other industries, best in class performance inventory turnover performance is double digit, the Pharma companies seem satisfied with low single digits despite the impact on cash and working capital. In an April 2010 article in *Pharma Pro*, entitled, "[How to Unlock \\$43 Billion in Value by Improving Working Capital Management](#)," A.T. Kearney reported that an analysis of Pharmaceutical companies revealed an average inventory level of 170 days. A comparison of the working capital performance between Pharma and other industries further highlights the opportunity.

**Figure 1**  
Pharmaceutical companies lag other industries in key working capital measures

Q3, 2009



Notes: Days inventory outstanding (DIO) is defined as average inventory/(cost of goods sold/365). Days sales outstanding (DSO) is defined as average receivables/(sales/365). Days payables outstanding (DPO) is defined as average trade payables/(operating cost/365). Operating cost is COGS + SG&A.  
Sources: Bloomberg; Factset data, A.T. Kearney analysis

Despite the unique aspects of the Pharma industry, including the long range planning horizon dictated by the development cycles, the bulk of the supply chain management issues are largely common to many other industries.

Supply availability though is just one key difference. In a number of the Bio-tech companies, they've had to invent equipment and manufacturing processes to produce the new wonder drugs. Early manufacturing is just targeted on producing enough to satisfy trials and is less focused on cost and efficiency. Unlike engineering changes in the high tech industry that change the content of a product, changes in the Pharma space usually target the cost and yield of the manufacturing process. To add to the complexity, these changes must satisfy the quality control requirements of regulatory agencies. The approval process can take months and uncertainty in the timing creates a variety of risk management issues. In addition to the regulatory control over manufacturing, there are different regulatory issues to face in each of the market regions that govern a wide variety of factors including packaging, labelling and shelf life requirements. Combine these factors with the extremely high margins on non generic drugs, and it's no wonder that the Pharma industry has historically put little emphasis on minimizing the non-production aspects of the supply chain costs.

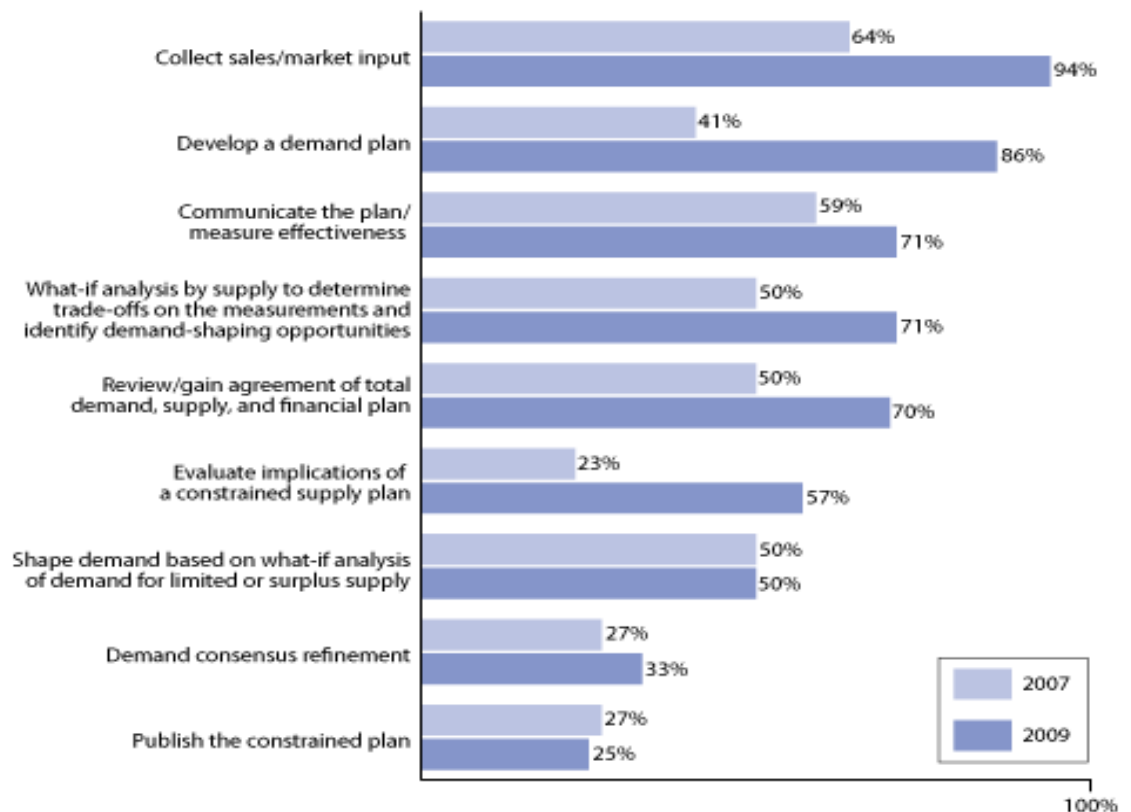
Despite the unique aspects of the Pharma industry, including the long range planning horizon dictated by the development cycles, the bulk of the supply chain management issues are largely common to many other industries. Planning for raw materials, dealing with manufacturing constraints, establishing and monitoring distribution inventory levels, and dealing with significant market demand volatility, are just a few. It is important to note that the dynamics that have introduced unparalleled volatility in the high tech industry (short life cycles, internet purchasing behaviours, and intense price competition), have had less of an impact on Pharma, but other factors have achieved much the same result. Increased global competition, economic conditions, and changes in both regulatory factors and insurance coverage have collectively produced higher levels of demand volatility. Without the same degree of supply chain focus that is present in the high tech space, the net result generates a degree of waste almost unfathomable by those outside the industry. The chief question is, "can you achieve an acceptable level of supply availability without the waste?" It's understood that the definition of "acceptable" ranges from 100% availability for some life sustaining medications to more conservative fill rates for OTC generics. There are enough examples of supply chain mastery in the high tech and automotive industries to suggest the answer is an absolute yes.

## Taking note of best practices across industries

The high tech and automotive industries have for years been focused on adopting the precepts of Lean that deal with the elimination of waste and the rapid reaction to change. That is not to say that Pharma industries haven't leveraged lean principles, but the key difference has been the high tech focus on the *entire* value change rather than individual sub-processes. An operational sub process focus can yield what appears to be cost improvements, but without addressing the broader connection to customer demand patterns and other supply chain steps, they often fail to significantly affect the overall cost. It is the consideration of the cost trade-offs of the entire supply chains ability to meet demand that seems to be missing.

It is in the area of demand planning where the difference is most evident. In high tech, with the economic pressures to minimize the inventory investment, the ability to rapidly and economically adjust to demand shifts is a major factor in business performance. Saddled to that is a focus on improving forecasts accuracy through investments in collecting and analyzing more meaningful data, while also more broadly collaborating on a consensus plan. As part of this effort, many leading high tech companies have embarked on collaborative forecasting and planning with distributors and sub-contractors. In Pharma, the inventory buffers make similar investments seem less important. A February 2010 article by Wayne McDonnell of Gartner Research, "Just how long do we have to wait for True S&OP in Life Sciences," proffered that the two most important areas where life sciences companies need to invest is on improving forecast accuracy and end to end supply chain management. Recognition of the need is at least evident in the results of the survey published by AMR Research (now Gartner) which compared the relative importance of the demand planning activities between 2007 and 2009.

**Figure 1:** Importance of S&OP capabilities: 2007 vs 2009



Q. Please rate how important each of the following sales and operations planning capabilities are to the success of your company's business strategies, using a scale from 1 to 10, where 10 means extremely important and 1 means not at all important?

Source: AMR Research, 2010

As Pharma companies make the transition to better forecasting methods and end to end supply chain management, a new era of cost competitiveness will ensue.

Pharma companies have also followed many of the outsourcing trends as high tech with essentially the same consequences. Limited visibility and collaboration challenges in synchronizing the supply chain when volatility strikes. As the pressure to control costs and optimize inventory increase, these challenges take on increased importance. Global supply chain visibility and synchronization has been on the strategic initiative list for high tech companies for several years, while it has gained importance in the Pharma space much more recently.

In recent years, Pharma companies have begun to recognize the potential of adopting a high tech approach to both demand planning and supply chain management. Given the pre-existing emphasis on fulfillment, the improvements being sought are more in the areas of end to end cost and working capital turnover. The key to achieving those are through better demand management and an end to end supply chain management focus. Experiencing escalating costs and working capital strain, companies are rethinking their supply chain model, changing their approach and increasing their capabilities in order to drive better alignment and performance. Evidence of the change is seen in recent hiring trends with executives and middle managers from the high tech and other industries being lured into the Pharma space. As one example, a [January article](#) in the Wall Street Journal discussed how Mr. Jimenez, the new CEO at Novartis, one of the largest drug companies, had spent most of his career at consumer packaged goods companies, and thus, one would believe that a primary benefit of the appointment would be that Mr. Jimenez could bring a cost and efficiency focus to the role.

As Pharma companies make the transition to better forecasting methods and end to end supply chain management, a new era of cost competitiveness will ensue. With lower inventories, cash will be freed up to address growth and investment opportunities, but it will also introduce the need for competencies in Lean and Response Management to ensure that fulfillment objectives are not compromised. Analysts have for years heralded what the transformation can deliver —\$43 billion in working capital alone according to the A. T. Kearney analysis. With the recent influx of supply chain expertise from outside the industry it could be that the transformation will finally take a leap forward.



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## ABOUT KINAXIS

If you are trying to manage supply chain volatility and complexity — the new normal in supply chains —and are thinking ‘there’s got to be a better way,’ there is. With a single on-demand service, you can tackle the multitude of supply chain management and S&OP challenges that threaten your performance on a daily basis. Companies use Kinaxis™ **RapidResponse** to make decisions quickly, collaboratively, and directly in line with their financial and operational objectives. You too can join over 30,000 users across a broad range of industries, including aerospace & defense, consumer products, high tech electronics, industrial, and life sciences, that are already realizing a competitive advantage by leveraging **RapidResponse** for collaborative planning, continuous performance management, and coordinated response to plan variances. 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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