

# Balancing Priorities in the Supply Chain

---

How Data Discovery Reveals Unseen  
Associations and Opportunities

April, 2015





## Table of Contents

---

<b>Executive Summary</b> .....	<b>3</b>
<b>Introduction</b> .....	<b>4</b>
<b>Balancing Priorities</b> .....	<b>5</b>
<b>Data Discovery</b> .....	<b>6</b>
<b>Conclusion</b> .....	<b>7</b>

## Executive Summary

---

Leading companies are constantly managing competing supply chain priorities. With finite resources, increasingly demanding customers and fierce competition, they must balance operational efficiency, perfect order delivery and supply chain flexibility. The cross functional and multi-dimensional nature of the supply chain makes it very difficult to manage and measure end-to-end processes and metrics to know where rapid intervention and improvement is needed to reduce costs and meet customer demand. The supply chain is characterized as having multiple suppliers, multiple systems generating multiple data and having multiple stakeholders. To make sense of it all, there needs to be a sharing of information with customers, business partners and other internal and external audiences.

This paper explores the challenges businesses face quantifying the overall effects of their decisions on often competing priorities. It then demonstrates how Data Discovery software helps generate insight and provides decision-makers with increased visibility to help identify risks and opportunities.

“Companies that beat the competition on supply chain performance also achieve significantly better financial results. Supply chain Leaders deliver on time in full (OTIF) on 95.7% of occasions and have an impressive 15.3 inventory turns, while the Laggards achieve only 3.8 turns. That means greater efficiency and customer satisfaction without driving up working capital.”

**PwC Global Supply Chain Survey  
2013**

“Only 12% of the organizations responding to a recent Gartner survey stated that they have been able to fully utilize the analytics capabilities offered by current supply chain solutions. Additionally, 71% of organizations state that they need more analytics capabilities.”

**Gartner: Supply Chain Analytics  
Technology Solutions Fall Short  
of Meeting Users' Needs, December  
2014**

## Introduction

---

Inventory, distribution, production, procurement and transportation are some of the key costs that exist in the supply chain. Being able to minimize them is a recognized competitive advantage, and one that best-in-class companies regularly use to generate a competitive edge. Take the case of Ikea – its ‘Bang’ mug has been redesigned many times to realize shipping cost savings. Originally, 864 mugs would fit into a pallet; after redesign a pallet held 1,280 mugs. With a further redesign 2,024 mugs could be held. This act of packaging ingenuity and attention to detail reduced its shipping costs by 60%.<sup>1</sup>

Increasingly businesses need to be able to measure the true cost to serve for each and every order. This capability will allow better negotiation and value creation across the supply chain. Supply chain professionals need to master the deeply interdependent networks to be able to say “yes” to profitable orders and “no” to the impossible.<sup>2</sup>

Supply Chains are becoming more extended and complex with a consequent increase in risk and the need for resilience. Ensuring continuity and quality of supply over extended periods with increasing market volatility and competition for resources is essential. Often, the markets with the highest growth potential are also the most risky in which to operate. Globalization and emerging markets have led to increased competition in many industries and raised questions on optimal organizational and supply chain network design. These competitive dynamics drive further pressure on costs and profitability.

New technologies lead to new frontiers in supply chain transparency and process automation. These enable multiple supply chain partners along the value chain to seamlessly interact in the joint design, manufacture, delivery and service of complex customer orders. 3D printing could have a huge impact on supply chain as it cuts out warehousing, transportation, and production. The Internet of Things (IoT) has the potential to increase operational efficiency and better integrate the organization. IoT is important as a way to know what’s happening in the physical supply chain, from smart shelves in store self-provisioning capital equipment.

A recent IDC survey of 355 U.S. based manufacturers identified the importance of cost reduction as the number one supply chain priority. Against a backdrop of economic contraction, declining margins and rising energy costs, it is no great surprise that it came out on top. However, what was revealing was that other priorities such as improving product/safety and overall customer service also scored highly as well. These goals would stand to be potential casualties in the wake of cost cutting initiatives; so there exists a likely conflict of priorities.

“Supply chain executives are coping with a wide range of challenges, with profitability and cost management topping the list, followed by supply chain flexibility and the need to meet customer requirements. But those represent just the tip of the iceberg — adapting to competitive pressures, volatility, skills gaps, sustainability — because the range of increasingly important trends that affect supply chain success is wide.”

PwC Global Supply Chain Survey  
2013

---

<sup>1</sup> QFinance, Reducing costs through production and supply chain management

<sup>2</sup> SCM World: The Chief Supply Chain Officer Report 2014

## Balancing Priorities

---

Manufacturers must make a lot of difficult decisions throughout the source, make, deliver and return processes. Should efficiency be compromised to guarantee product quality and brand reputation? Or should availability be the number one concern? How do these decisions affect sustainable initiatives? What is the best way to accurately quantify abstract concepts like brand value? Furthermore, how can the impact of such decisions be effectively measured over a global supply chain with multiple stakeholders and different IT systems?

Outsourcing is an area where the cost and efficiency benefits can be potentially offset by risks over product quality. In theory, outsourcing saves money through lower real estate and plant costs, and fewer regulations to comply with while increasing efficiency through access to specialist knowledge and markets. However, problems can emerge, as was the case when aircraft manufacturer Boeing outsourced the design and manufacture of key systems for its 787 Dreamliner. Financial savings were short-lived as complications with parts and assemblies began to arise. A recent setback involving the failure of a Rolls-Royce engine has caused further delays to a project already years behind schedule. There were then further disruptions derived from complications and specification changes that weren't quickly and accurately communicated between Boeing and its suppliers and partners.<sup>3</sup>

Outsourcing can also cause significant brand damage. The clothing store Topshop allegedly used workers in Mauritius who were being paid between 22p and 40p an hour (half the average Mauritian wage) and having to work 13-hour shifts. As a consequence, Topshop was on the receiving end of extremely negative newspaper publicity that marred the promotion of its Kate Moss range.<sup>4</sup>

Along with increased cost savings and greater efficiency, regulations and consumer pressures are helping to drive manufacturers and retailers towards sustainable initiatives. For example, Wal-Mart bought diesel-electric and refrigerated trucks with a power unit that could keep cargo cold without the engine running, saving nearly \$75 million in fuel costs and eliminating an estimated 400,000 tons of CO<sub>2</sub> of pollution in one year alone. However, the fixed costs of going green are sizable. In total, Wal-Mart will need to spend upwards of \$500 million per year in order to achieve all of its sustainability goals.<sup>5</sup> The reality is that many companies are not in the financial position to change their fleets. In a time of economic uncertainty, they are more likely to prioritize cost savings in the short-term over the long-term. Furthermore, they will only have an accurate idea of the potential green savings if they have access to detailed information.

Another potential cost-saving area is transportation. Tactics include leveraging fuel purchase strategy and timing, improving driver retention, improving distribution networks and using cheaper modes of transportation such as sea instead of air.<sup>6</sup>

Yet there is discourse to suggest that austerity measures within supply chain do not actually generate savings. Rather, to save money, you have to spend it. In the article "Reducing Supply Chain Costs: Spend More to Save More," Roger Urban argues that inventory is the key driver in supply chain costs.

---

<sup>3</sup> Arena, When good outsourcing goes bad

<sup>4</sup> Daily Mail, Topshop accused of using "slave labour" to produce Kate Moss range

<sup>5</sup> Heying and Sanzero, A case study of Wal-Mart's "Green" supply chain management

<sup>6</sup> Robert Murray, CSCMP, Leveraging transportation costs: A vital key to improving supply chain management

“For most manufactured products, transportation is only 2% to 5% of total cost. In contrast, raw materials, components, and subassemblies typically constitute 55% to 75% of total cost. This reality helps explain why large cost savings result from complete supply chain solutions that reduce raw material and finished goods inventories.”

So reducing transport costs by shipping less often or using slower modes can actually increase inventory costs and totally offset transportation savings.

However, companies continue to focus on transportation savings as they are more easily measured, whereas calculating changes in inventory carrying costs is much more difficult. So it is not just about choosing what to prioritize, but how. On lowering supply chain costs, Roger Urban stated, “First, they must stop treating transportation as a management ‘silo’ that is separate from inventory management. Second, companies should install technologies that provide detailed inventory visibility throughout their supply chain.”

## Data Discovery

---

Understanding the full implications of selecting one priority over another can be a complex task. Its effects reverberate across the supply chain with sometimes unpredictable consequences. What seems like a money saving initiative in the short term could end up costing the supplier more in the long term. So how can companies be confident that they are making the best possible decisions? With vast amounts of variables and inputs across different geographies and partners to consider, decision-makers are swamped with information and data from disparate data sources.

Data Discovery software can help shed light and deliver intelligence on these matters. It empowers decision-makers, enabling them to easily explore data, giving them the ability to extract previously unseen insights and information. This increased visibility can help identify new relationships, associations and opportunities.

With so many permutations from the impact of balancing priorities, Data Discovery software must possess flexibility and mobility. Some analytical tools are query-based and cube-based, which is effective for static and limited interaction reporting. However this approach has three disadvantages; it divorces data from its context, any new queries must be resubmitted for a new report to be generated and it does not maintain relationships among queries.

Flexible Data Discovery provides an experience that is similar to Google’s Instant Search – providing instant results as the user types. This is known as an associative experience. By managing association among data sets, for example transport and inventory at the engine level and not the application level, it provides a far more intuitive experience. It also doesn’t need to be reconfigured to answer new cost questions, enabling ad hoc cost analysis and reporting, vastly speeding up the querying process independent from IT.

“Functionally siloed analytics from traditional supply chain technology vendors fail to offer users insights on end-to-end supply chain trade-offs. General analytics vendors must consider the growth opportunity in the market as supply chain analytics becomes a must-have capability with the Internet of Things and the digital business.”

**Gartner: Supply Chain Analytics Technology Solutions Fall Short of Meeting Users' Needs, December 2014**

Mobile technology is another key factor in supply chain visibility that brings two distinct advantages. Firstly, the user can make decisions on-the-go with any tablet or smartphone device and share it immediately. Secondly, it puts information in the hands of workers in a simple and consumable form.

## Conclusion

---

Manufacturers and retailers face difficult decisions in a supply chain that is demanding and ultra-competitive. It is imperative that they have the best visibility possible to leverage any competitive advantage they can, maximizing the potential of their decisions. Poor intelligence will inevitably result in adverse results, to the point where attempts to prioritize cost reduction and enhanced customer service can actually end up generating the opposite outcome. Data Discovery software helps create visibility across the supply chain, enabling decision-makers to conduct analyses in an easy and usable fashion, generating insight to ensure decisions on balancing priorities will be accurate and financially beneficial. Data insight that drives efficiencies and revenue, and provide a competitive advantage.

The consumer will always be at the center of the manufacturing and retail supply chain and gathering, analyzing and interpreting the data they generate is key. However, the real value is in using the insights across the organization and developing better pricing, promotion and assortment decisions. This will be impaired if teams are not able to effectively communicate ideas over data or share intelligence.

Data Discovery is the platform with which this can be achieved, facilitating collaboration, unlocking previously unseen associations, and revealing new consumer insights.

With the increased intelligence that Data Discovery software yields, both manufacturer and retailer will enjoy a larger, clearer portrait of the consumer with the associated benefits felt across the entire supply chain.

---

“We increasingly need people who can handle the technical duties of supply chain across silos, who can apply business judgement continually in action and with any luck, who are able to master emerging tools for data collection and analysis.”

**SCM World: The Chief Supply Chain Officer Report 2014**

---

“Businesses should

- Offer cross-functional supply chain analytics capabilities, including reporting and dashboards, as well as predictive and prescriptive analytics.
- Offer cross-enterprise supply chain analytics capabilities that extend to external trading partners.”

**Gartner: Supply Chain Analytics Technology Solutions Fall Short of Meeting Users' Needs, December 2014**