

The Sustainable Supply Chain

Realizing Cost Savings and Increased Efficiencies
through Data Discovery

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Executive Summary

The sustainable supply chain is the future supply chain. Rising populations and resource scarcity mean doing more with less. However, sustainable supply chains are not solely about regulatory compliance and meeting customer or consumer expectations; they are also about increasing efficiency and saving money. Collaboration is critical to realizing these benefits; not only within the supply chain, but at times also with external agents such as non-governmental organizations (NGOs).

Sustainability and supply chain integrity initiatives require manufacturers and their supply chain partners to identify and eliminate processes and activities that are environmentally or socially unproductive. Corporate social responsibility (CSR) initiatives are becoming drivers of supply chain decisions, with increased pressure and visibility on organizations that don't operate responsibly.

Successful collaboration needs tools to facilitate it. Data Discovery software bridges information gaps between stakeholders through a simple and easy interface, helping to open up new analytical paths and data visualizations. Only then can the full benefits of a sustainable supply chain be reaped, both for the environment and for the bottom line.

Supply Chain Survey

“More than two-thirds of all respondents also say sustainability will play a more important role in the supply chains of the future.

A number of companies have already started investing in technologies to reduce their carbon dioxide emissions and excluding any supply chain partners that don't adhere to the highest ethical standards.”

PwC Global Supply Chain Survey 2013

Sustainable Profits

With declining crop yields, mass floods, tens of millions displaced and up to 40% of species facing extinction, the ethical and environmental reasons for going green are seemingly abundant and clear.¹ Unfortunately many businesses believe the misconception that implementing sustainable initiatives mean adding complexity and costs. In reality, becoming sustainable is about the exact opposite. It is about reducing costs, increasing efficiencies and improving goodwill.

Consumer pressures have played a significant role in promoting sustainable initiatives. Corporations must actively display a responsible operation which includes taking steps towards minimizing their environmental footprint, providing a fair deal to everyone in the supply chain and actively improving conditions in areas where they operate. Failure to do so can result in brand damage, leading to a loss in market share. For example, Apple has suffered highly negative publicity over the working conditions of its Chinese workers in its partner, Foxconn's, manufacturing plant. And in the case of Shell and Halliburton, brand damage was combined with multimillion-dollar fines when allegations surfaced of bribery of Nigerian government officials.²

Yet regulations are arguably the real muscle behind sustainable initiatives. Many organizations are required to comply with legislation in different market jurisdictions e.g. RoHS, REACH and WEEE. Violations can result in expensive penalties and other legal risks. These activities are underpinned by data and collaboration and involve measuring performance, benchmarking and communicating performance to multiple stakeholders. Traceability and location data helps create smarter supply chains. Companies now have to comply with new, stricter standards of CO2 emissions set by bodies such as California Air Resources Board, whose goal is to improve air quality.

"It's not philanthropy," was the blunt statement from Tyler Elm in 2008, Wal-Mart's then Senior Director of Corporate Strategy and Business Sustainability; the efforts made stem from self-interest. By the end of the first year of Wal-Mart's sustainability strategy the network teams had generated savings that were roughly equal to the profits generated by several Wal-Mart Supercenters.³

¹ Stern Review: The economics of climate change

² Brammer, Hojmosse, Millington, Managing Sustainable Global Supply Chains

³ Stanford Social Innovation Review, The Greening of Wal-Mart

Supply Chain

Sustainability Definition:

"The management of environmental, social and economic impacts, and the encouragement of good governance practices, throughout the lifecycles of goods and services. The objective of supply chain sustainability is to create protect, and grow long-term environmental, social and economic value for all stakeholders involved in bringing products and services to market."

Dr. Pieter Nagel, Executive Director of the Alliance for Supply Chain Innovation, from The Good Chain, Fast Thinking Magazine, Spring 2011 Edition

Marks and Spencer's Plan

A drive of 180 commitments to tackle climate change, reduce waste and use sustainable raw materials saw a net benefit of £105m – a 50% increase on the £70m delivered in 2010/11.

The Guardian, M&S becomes "carbon neutral"

As Strong as the Weakest Link

There are now clear guidelines such as the GreenSCOR framework to help inform companies on becoming sustainable. However, the implementation of sustainable supply chain management by one company does not make the entire supply chain sustainable. Each stakeholder involved in the supply chain must do the same. “You are only as strong as your weakest link and if your suppliers are failing to change, the likelihood is that it will affect you,” said Donna Young, then Head of Environment and Climate Change for BT in a 2008 article for the Financial Times.

This point is conveyed in the case of Nike, who in order to meet their targets on logistics sustainability, had to track and report inbound logistical emissions. This meant that all of their partners had to consistently provide the necessary information to assess whether its green targets were being achieved.⁴ The example of Nike is indicative of how sustainability practises trickle down through the supply chain. Rather than everyone going green together, it is more often the case that a major stakeholder instigates sustainable initiatives that impact the rest of the supply chain, forcing other parties to go green too.

Collaboration has become a major theme for supply chain sustainability, with businesses sharing increasing amounts of data and intelligence. The report ‘Supply Chain Sustainability’ commented, “Industry collaboration and multi-stakeholder partnerships are important tools for advancing your company’s supply chain sustainability objectives, particularly for issues that are too challenging and complex to tackle alone. In addition, collaboration can increase the impact and overall efficiency of your company’s supply chain sustainability efforts by extending your reach, pooling resources, reducing duplication and avoiding conflicting messages.”

But collaboration stretches beyond traditional stakeholders within the supply chain. Corporations are engaging more and more with NGOs for a plethora of reasons. Firstly, they provide credibility: a stamp of approval from an NGO goes a long way in showing consumers that a company is taking sustainability seriously. Secondly, NGOs bring unrivalled expertise to the table. For example, Coca-Cola sought to cut the amount of water used in the production of one-litre bottles from 3 to 2.5 litres. However, Coca-Cola had overlooked the 200-plus litres it took to grow the sugar that went into that Coke. It was only by partnering with the World Wildlife Fund that the knowledge gap was exposed, due to the NGO’s extensive experience in analyzing the water footprint of the value chain. As a result, Coca-Cola now knows the difference between drip-irrigated sugarcane and flood-irrigated sugarcane.⁵

10 reasons why a company should adopt a sustainable supply chain

1. Target marketing
2. Sustainability of resources
3. Lowered costs / increased efficiency
4. Product differentiation and competitive advantage
5. Competitive and supply chain pressures
6. Adapting to regulation and reducing risk
7. Brand reputation
8. Return on investment
9. Employee morale
10. The ethical imperative
11. Darrin C. Duber-Smith, *Sustainability: The Green Imperative 2005*

⁴ Forbes, The Sustainability Supply Chain Marathon

⁵ Harvard Business Review, The Sustainable Supply Chain

Data and metrics to assess performance and track goals are a key element of supply chain sustainability, and formed a major component in Wal-Mart's sustainable supply chain success. "Creating metrics for analysis is paramount to Wal-Mart's ability to monitor corporate operations and global suppliers to be able to support their real efforts for improvement with substantial data."⁶

However, the creation of KPIs can lead to the creation of massive and isolated stores of data, from which businesses can face difficulties in trying to extract intelligence. The UN report 'Supply Chain Sustainability' stated: "Transparency of supplier information across functional and organizational boundaries is often limited, and companies often struggle with a lack of effective communication and understanding between companies and their suppliers on the information they need to exchange."

Data Discovery

A key priority for developing a sustainable supply chain is the ability to collect and analyze insights from data. However, deriving and sharing these across stakeholders can be impeded by the huge volume and complexity of the data.

Data itself may come in different sizes, formats and varieties that cannot be easily collated or compared and can also be time sensitive. This is what is known as 'big data'. Furthermore, the likelihood is that participants in the supply chain will have different IT infrastructures whose operating systems are incompatible, potentially creating information silos.

The solution to these problems is agile and intuitive Data Discovery software that enables true collaboration and puts intelligence rather than data in the hands of decision-makers. Powerful Data Discovery software can create communities where information can be easily dispersed, where users can interact in real-time with dashboards and make comments within a threaded discussion, whether it be informal or formal.

With so many permutations from the impact of balancing priorities, Data Discovery software must be flexible and mobile. 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 which eliminates 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, it provides a far more intuitive experience. It also doesn't need to be reconfigured to answer new questions, enabling ad hoc cost analysis and reporting, vastly speeding up the querying process independent from IT.

There are two reasons why mobile technology capability is critical for greater visibility. 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.

⁶ Heying and Sanzero, A Case Study of Wal-Mart's "Green" Supply Chain Management

Save the Children has been benefitting from the increased intelligence brought about by Data Discovery software. “When there is a disaster somewhere in the world, there is a logical order to what and when you ship out. Our Vice President of Logistics and Inventory Management relies on the Qlik commodity tracking dashboard to manage all of this quickly and efficiently,” said Cody Schilike, Vice President of Information Systems.

Conclusion

Saying you are sustainable or “green” is not enough. Neither is saying all your partners along the supply chain are sustainable. Corporations must be able prove to shareholders, regulators and consumers through metrics and KPIs that their sustainable goals are being achieved. However, many challenges impede this, notably the provision, sharing and extraction of value from data.

Data Discovery software helps overcome these issues, creating increased visibility through collaboration over the entire supply chain. Only then can companies enjoy the full benefits of a sustainable supply chain from superior consumer perception to lower costs and increased efficiencies, not to mention a cleaner, fairer world.

“Being a good steward of the environment and being profitable are not mutually exclusive. They are one and the same.”

Lee Scott, former Wal-Mart CEO