



Exploring the Green Supply Chain





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Introduction

Whether or not you're personally feeling the effects of global warming in your daily life, it's clear that our planet is facing some grave issues. Resources are becoming scarce, areas that were once wooded now have fallen victim to deforestation, animal species are disappearing at an alarming rate as their native habitats are destroyed, air and water quality is questionable and the overall temperature of our planet is soaring at an astounding rate -- negatively impacting people, places and things. We are in the midst of a climate crisis.

Individuals are increasingly becoming not only aware of environmental concerns, but they are also becoming active participants in saving the planet. Individuals are taking large and small steps to minimize their carbon footprint, like driving more efficient cars, using earth-friendly products or shutting off lights when they are not needed. And increasingly, consumers are identifying and choosing to do business with companies of all types that are ecologically aware and environmentally friendly.

Going green is no longer simply a buzzword. It's a strategy that can lead to considerable gains in efficiencies, competitive advantage and in your bottom line – as well as the obvious savings in resources and energy. Technology is an enabler of green supply chain management.

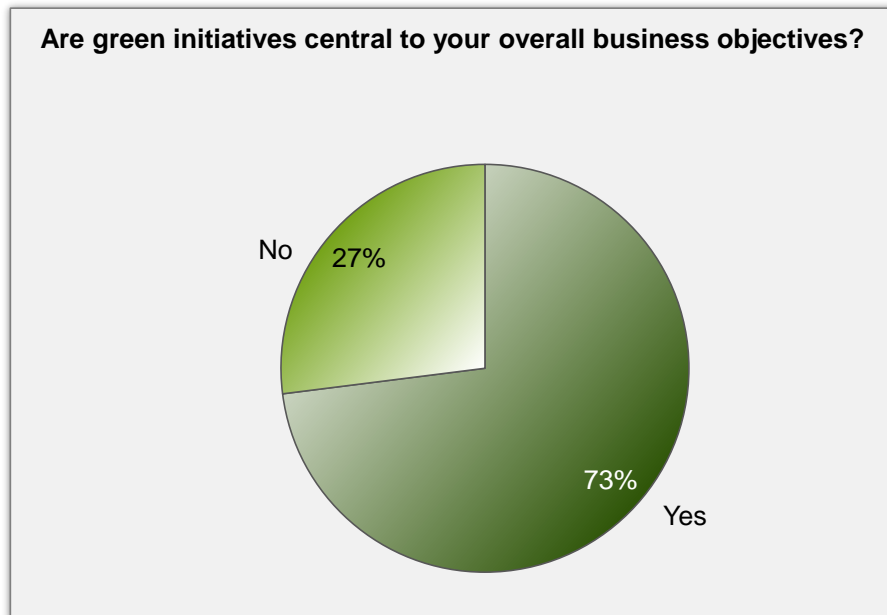
It's not enough to simply reduce the energy you use. Organizations must reduce carbon emissions across the supply chain. All organizational activities have some direct or indirect impact on the firm's carbon efficiency. And that's where green supply chain management comes into play.

A green supply chain is one with minimal environmental impact. It is a supply chain that encompasses best practices in reducing carbon emissions across the supply chain, from materials sourcing through product design, manufacturing, distribution, delivery and finally, end-of-life recycling. Typical supply chain management requires organizations to optimize various metrics ranging from costs, levels of service, inventory levels and more. A green supply chain includes the additional carbon emissions metric, which significantly changes the mix. Organizations that pursue a green model of business must be mindful of CO2 emissions in their operations.

Outsourcing Center and Wipro performed a survey that examined the attitudes and approaches to green supply chain management of organizations across various industry segments. Although the survey results do not represent a complete view of how all organizations view green supply chain management, they do successfully point to some general trends and views on this important and relevant topic. Survey respondents were from retail, financial services, transportation/logistics, manufacturing, healthcare, telecommunications and other industries.

How is your organization approaching green supply chain management?

Green initiatives are central to organizations' overall business objectives.



In the post-recession economy, businesses must run lean, do more with less and hold costs down. A green strategy can go a long way in helping firms meet today's goals and objectives. Green initiatives can reach into every area of an organization, from marketing to manufacturing to distribution. Green initiatives can help firms cut costs since they lead to more efficient use of resources and operating efficiencies as well. It's no wonder that 73.2 percent of those responding to the Wipro-Outsourcing Center survey indicated that green initiatives are central to their overall business objectives.

"At Wipro, we believe that sustainability presents one of the biggest opportunities of the 21st century and will be the next avenue for organizations seeking to build competitive advantage," said Rajeshwar Dayal Mitra, Wipro's Practice Head of Supply Chain & Sustainability Practice, EAS.

Organizations that have already made green initiatives part of their overall business strategy are getting the message: being environmentally conscious is a win-win for business and the environment. Although implementing a "green" program generally requires some initial investment, the payoffs can be substantial. Going green – adopting principles and practices that reduce your overall impact on the environment – is good for business in several ways.

Cut costs. First, adopting green principles and practices like reducing energy consumption, recycling and utilizing sustainable resources when possible can result in dramatic cost savings and operational efficiencies. Simply cutting energy usage can save money, but getting creative with green strategies can transform your business into one that's not only kinder to the firm's budget but to our planet as well.

Examples from different industries include:

- UPS now uses rail transport extensively to gain significant carbon reductions. In 2008 alone, ground-to-rail shifts prevented absolute emissions of 1 million metric tons of CO₂ in the firm's U.S. package operations.
- TD Bank invests heavily in going green, buying wind, solar and other renewable energy sources worth 31,000 tons in carbon offsets. Its prototype "green" branch, the first of 10 scheduled or under construction, strives to reduce energy consumption by 50 percent over traditional bank branches and will generate up to 20 percent of their own electricity through solar panels on the buildings' roofs.
- BMW of North America LLC's two regional distribution centers in suburban Chicago and Eastern Pennsylvania received Leadership in Energy and Environment Design (LEED) certifications from the U.S. Green Building Council. The firm reduced its facilities' energy and water usage by more than 20 percent from standard buildings, and the company recycles or otherwise diverts from landfills more than 80 percent of all construction waste.

Meet regulations. Secondly, going green can help firms comply with various regulatory requirements. The Environmental Protection Agency keeps close tabs on organizations' activities that have the potential of harming land, water or air. Around the world, nations are enacting laws that require businesses to adopt environmentally responsible manufacturing processes and procedures intended to cut both carbon emissions and reduce greenhouse gases. As with other regulations, failure to comply with these can be costly for an organization, in dollars as well as in terms of reputational damage.

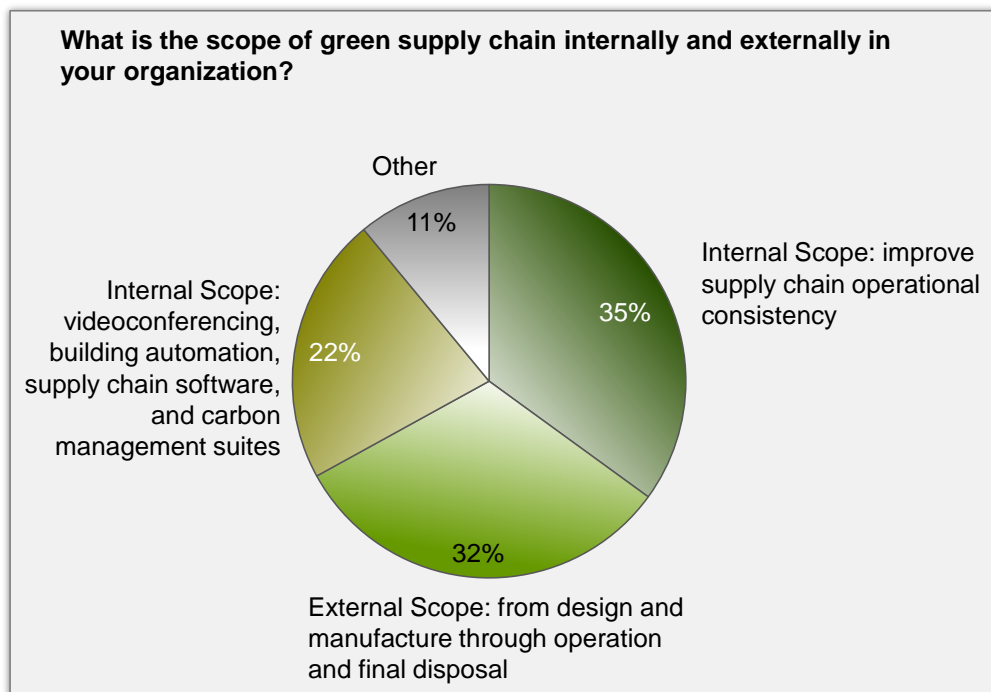
"Leading U.S. Investors recently announced that they have filed a record 95 climate change-related shareholder resolutions with 82 U.S. and Canadian companies that face far-reaching business challenges from climate change," says Ceres, a leading coalition of investors, environmental groups and other public interest groups working with companies to address sustainability challenges such as global climate change. According to Ceres, the 40 percent increase in these resolutions filed over this past year is a first sign of the growing pressure on companies to disclose climate risks and opportunities in the wake of the recent Securities and Exchange Commission's climate disclosure guidance and other recent policy developments.

Added Anand Chatterjee, Wipro's Head of Center of Excellence for Sustainability, SCM & SRM, "The first wave of sustainability software is driven by reporting and regulatory requirements."

Use resources effectively. Third, innovative models can drive organizational efficiencies of all kinds. Enterprises can implement software models like Software-as-a-Service (SaaS) that reduces energy usage while also requiring less onsite equipment.

Demonstrate good corporate citizenship. Fourth, companies that implement green policies and procedures in their organizations establish themselves as energy-conscious and environmentally-aware. Individuals are becoming increasingly aware of and savvy about environmental concerns. This ever-expanding group is much more likely to opt to do business with organizations that embrace sustainability and employ green principles in all facets of their business. And the companies that get it right can have a significant competitive advantage over those that don't.

Organizations have implemented the green supply chain both internally and externally for myriad uses.



According to an article in *The Coastal Business Journal*, Spring 2009: Volume 8, Number 1, "Opportunities in Green Supply Chain Management," the traditional supply chain comprises five parts: raw material, industry, distribution, consumer and waste. Each of the links in the supply chain can be a reason for pollution, waste and other hazards to the environment. A company may use environmentally harmful raw materials such as lead. However, organizations can put pressures on suppliers to use more environmentally-friendly materials and processes.

An integral part of sustainability initiatives at global organizations is the close examination of their supply chain environmental footprints.

"Some companies have embarked on fragmented initiatives to minimize their transportation carbon footprint or make their manufacturing plants more eco-friendly," said Noha Tohamy, Vice President, Supply Chain Research, AMR Research. "But greening the supply chain must be founded on coherent strategies that examine the tradeoffs between environmental initiatives, profitability and efficiency across the integrated supply chain."

According to the Wipro-Outsourcing Center survey, holding down costs is not the most common focus for organizations' green supply chain initiatives for 2010. More than a third of companies reported that their green supply chain initiatives were focused most on the environmental concerns. In contrast, only 14.7 percent of participants said that the cost advantage of their green supply chain initiatives was their

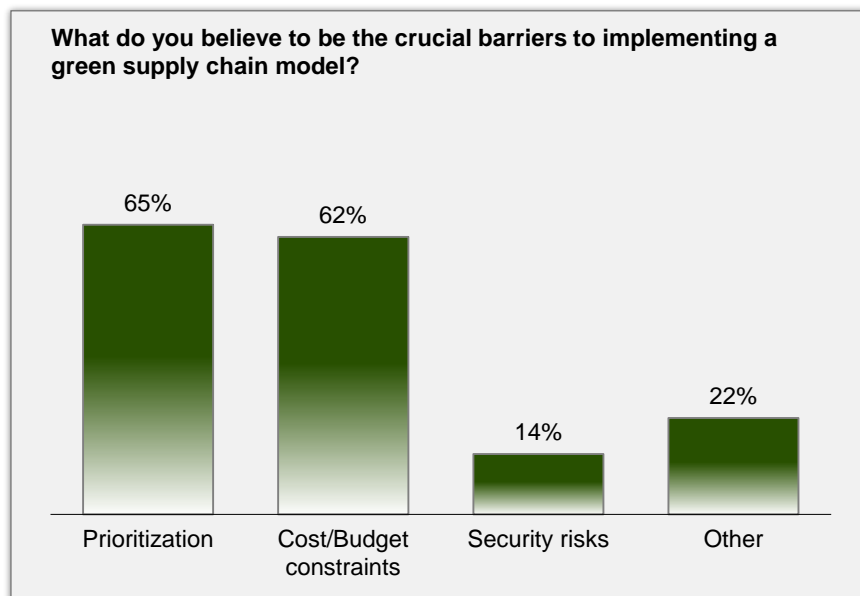
key focus. However, 29.4 percent of respondents said that lowering IT operating expenses and capital costs is their focus for a green supply chain initiative this year.

When asked about the scope of their organization's green supply chain initiative, survey respondents were somewhat divided in terms of their focus.

- More than a third (35.1%) of respondents said that their internal scope was to improve supply chain operational consistency.
- Just less than a third of participants (32.4%) said that the external scope of their green supply chain reaches from design and manufacture through operation and final disposal.
- Just less than a quarter (21.6%) of survey respondents said that their internal green supply chain scope included videoconferencing, building automation chain software, and carbon management suites.

“Going forward, sustainability will become the key driving theme for supply chain cost optimization, which today is primarily driven by profit maximization objectives,” said Samir Shukla, Wipro's Senior Portfolio Manager for Supply Chain Practice, EAS.

Prioritization and cost/budget constraints are daunting barriers to implementing a green supply chain model.



Although reasons for employing a green supply chain initiative can range from chiefly altruistic to a pressing need to hold down costs, the barriers to employing such a model can be daunting. A green supply chain can touch virtually every activity and every process and every person in an organization.

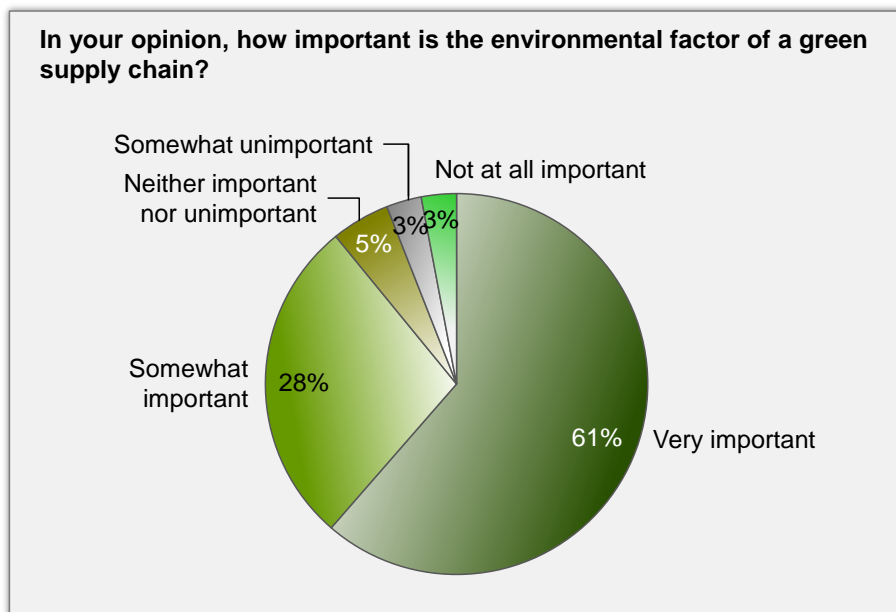
Its reach is far and wide and so are its potential benefits. Unfortunately, the greater the benefit and wider the scope of a green supply chain, the more challenging it can be to implement.

Nearly two-thirds (64.9%) of survey respondents indicated that prioritization was a crucial barrier to implement a green supply chain model, and 62.2 percent cited cost/budget constraints as an intimidating barrier. Only 13.5 percent felt security risks were substantial enough to be considered a crucial barrier to implementing a green supply chain model.

Prioritizing projects is one of the greatest barriers to implementing a green supply chain, according to the survey respondents. It's difficult to decide which potential opportunities and activities to consider, and in what order. To prioritize potential opportunities, companies must evaluate and re-evaluate the ROI for each initiative. Organizations should consider all potential green initiatives together as a whole, since each initiative may not have a positive ROI, but the net result of all initiatives together might be well worth the effort, both in terms of investment and in other and often less-tangible benefits.

Implementing a green supply chain model can be a Herculean effort, one that many enterprises may find too difficult to approach on their own. These companies might be well-advised to tap the expertise of outside consultants and vendors that have helped other firms successfully transform their supply chain, creating green/sustainable practices and processes across the organization with proven best practices.

The environmental factor of a green supply chain is very important to organizations.



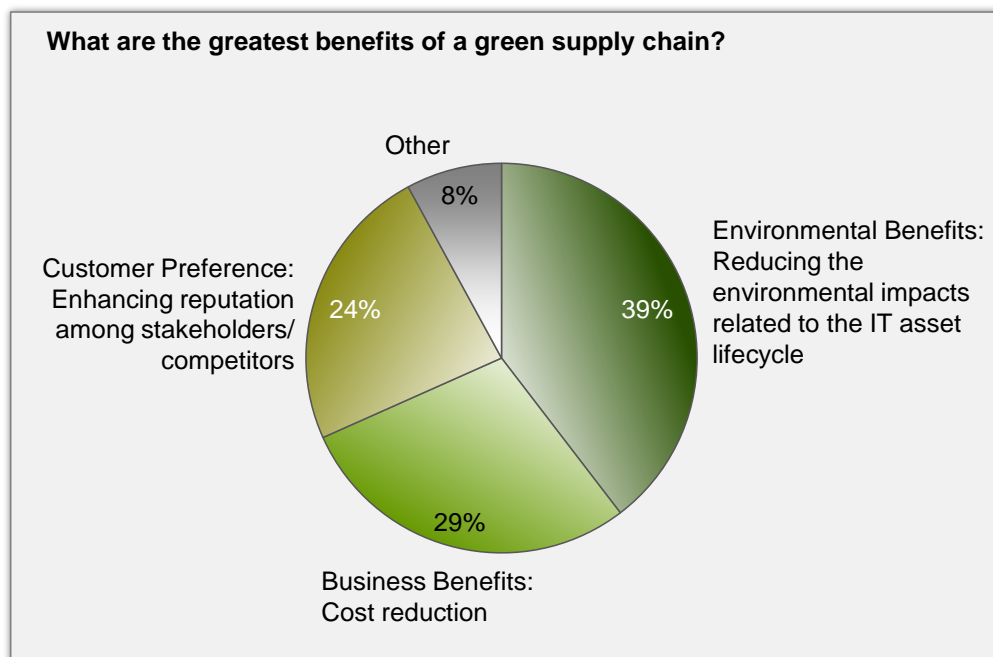
Sustainability and environmental considerations are both key to a green supply chain, but there are many other reasons for and benefits of implementing such a model. Gaining efficiencies of all kinds,

meeting regulatory compliance, reducing costs and boosting shareholder value are all considerations. However, a large majority (89.7%) of survey respondents said that the environmental factor of a green supply chain is either somewhat important or very important. Only 5.2 percent believe the environmental earth-saving benefits are either somewhat unimportant or not at all important.

While it's admirable that companies choose to implement green/sustainability initiatives within their firm, it's important that these organizations take extensive measures throughout their organization and in every link in their supply chain. Simply labeling your organization as energy conscious by taking minimal action to become more earth-friendly is not effectively going green. Businesses can't strive to become more energy efficient by merely buying new light bulbs or cutting energy usage. Instead, for an organization to be truly "green" requires a consistent effort from every area of the firm. The most energy-efficient companies are those in which the energy-saving message is part of the corporate culture. Transforming a supply chain into one that is environmentally friendly or "green" requires buy-in from everyone within an organization and must include engaging with all stakeholders, including investors, clients, suppliers and employees.

By and large, the voluntary introduction of industry standards seems to be the most common model of enforcing suppliers' commitment to sustainable practices. As businesses globalize and supply chains grow, however, it remains to be seen whether such arrangements will be able to cope with the increased levels of complexity and diversity.

Organizations believe that reducing the environmental impacts related to the IT asset lifecycle is the single most important benefit of a green supply chain.



While the environmental factor proved to be important to a great majority of survey respondents, the participants differed in their choice of the greatest benefits of a green supply chain.

- The largest percentage of respondents (39.5%) believed that the greatest benefit of a green supply chain is the “Environmental Benefits: Reducing the environmental impacts related to the IT asset lifecycle.”
- Another 28.9 percent identified “Business Benefits: Cost reduction” as the greatest benefit of such a model.
- Nearly a quarter (23.7%) said that the greatest benefit of a green supply chain is “Customer Preference: Enhancing reputation among stakeholders/competitors.”

While going green benefits the environment, it doesn’t automatically translate into good business. However, a green supply chain can certainly lead to cost reductions and ultimately to meeting customers’ increasing preference for ecologically-friendly goods and services. While an environmentally-friendly supply chain can be initially more expensive, there are cost savings to be had by cutting back on energy and other resources used and in reducing the firm’s carbon footprint. And there’s mounting evidence that customers look favorably on companies that are concerned about their carbon footprint.

Companies shouldn’t underestimate the power of environmentally-conscious consumers. In June 2009, marketing firm BBMG performed a survey and discovered that more than three-fourths of consumers (77%) revealed that they can “make a positive difference by purchasing products from socially or environmentally responsible companies.” And 72 percent of those responding said that they’ve “avoided purchasing products from companies whose practices they disagree with.” Additionally, a majority of customers are willing to pay more for environmentally-friendly or sustainable goods and services.

“Now investments in the green supply chain are no more a branding activity,” said Rajesh Acharya, Wipro’s Practice Manager for Sustainability Solutions (America). “They are investments that have a positive net present value (NPV).”

Conclusion:

The benefits of going green are substantial. A green supply chain can not only reduce an organization’s carbon footprint but also lead to reduced costs, improved reputation with customers, investors and other stakeholders – and a competitive edge in your market. And that’s good business.

To be sure, there are some daunting roadblocks for organizations looking to implement green initiatives in their firms. A solid business case is essential, as are a detailed implementation roadmap and a strategy for resolving governance and compliance issues and assessing security risks. Prioritization is an issue for many companies, as are budget constraints. While these can be daunting barriers to implementing a green supply chain model, they do not have to prevent organizations from adopting this clearly beneficial model.

Wipro can help organizations with every phase of green supply chain management.

About the Survey Respondents:

A full 42.6 percent of survey participants are employed at firms with more than 20,000 employees. Approximately a third (33.8%) work for relatively small firms with fewer than 500 employees. The remaining 23.6 percent said their firms employed more than 1,000 individuals but fewer than 20,000 people. Half of respondents said their company's annual revenue is greater than \$500 million, while nearly a third (31.4%) of participants said their firm's annual revenue is less than \$20 million. More than half (52.9%) of survey participants responded that their IT budget for 2010 is more than \$10 million, and the remaining 47.1 reporting their budgets at below the \$9 billion mark for the year.

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