Climate change and sustainability

Five areas of highly charged risk for supply chain operations
An evolving strategic role for supply chain operations (SCO)

Climate change and sustainability impacts the entire value chain – from the supplier through to the customer. In many sectors, the biggest part of a company’s environmental footprint falls outside of its direct control, such as supply chain emissions from activities that include processing, packaging and transportation. This is causing supply chain managers to assess how their organization makes decisions around purchasing, storage handling and asset recovery activities in order to drive both cost and emissions reductions.

Because many of these activities are supplier-based, there are challenges to implementing change, and to monitoring and measuring progress. However, there are significant opportunities to incorporate the supply chain into your sustainability program. This can create new opportunities for organizations to unlock hidden value, including enhancing revenue, reducing costs and minimizing risk.

Fueled by a growing list of companies that are implementing green supplier programs, the focus on the value chain is creating a trend toward cradle-to-grave lifecycle analyses. In other words, companies are examining the carbon footprint and the use of resources at every step of the product and service lifecycle, from the sourcing of raw materials to waste disposal by their customers.

For SCO professionals, identifying and understanding the climate change implications of the entire value chain is critical. In responding to constantly evolving technology and stakeholder expectations, SCO is now much more than an organization's tactical operation in reducing costs and helping the environment – it now has a strategic role to play in an increasingly competitive landscape.

Accuracy in monitoring, measuring and reporting the results of climate change actions is becoming increasingly important to a wide range of internal and external stakeholders, including employees, customers and investors. As a result, the evaluation of SCO’s climate change and environmental agenda and disclosures is becoming a topic of wide-ranging discussion for corporate disclosure committees, audit committees and boards of directors.
Why now?

A number of forces are causing companies to expand their sustainability programs to the supply chain, including:

- Changing consumer preferences, which are creating demand for differentiated green products
- A call for better public access to information across the entire value chain
- Major supply chain risks, including human rights, national security, environment and climate change, that could negatively impact sourcing activities and ultimately reputation and brand value
- A business environment that is focused on opportunities to reduce costs – many of which come from the supply chain

Mitigated SCO risk = cost reduction = brand recognition opportunity

5 categories of risk

SCO can clearly understand the risks associated with climate change and sustainability by dividing them into five general categories:

1. Strategic
2. Compliance
3. Financial
4. Reputational
5. Operational
Traditionally, the role of supply chain professionals is to provide the appropriate quality inputs on schedule at the lowest possible price. However, as stakeholders (including consumers, investors and business customers) become more interested in social and environmental costs, supply chain is quickly becoming a focal point for strategic differentiation. This can include SCO acting as the catalyst for process and production innovations that can help cut costs as well as reduce carbon emissions. Supply chain, for many companies, provides an excellent opportunity to leverage environmental impact and sustainability to improve their competitive advantage and reduce cost/waste. Leading companies understand this link, particularly as it applies to supply chain management, and are finding ways to turn climate change risks into opportunities.

What this means for SCO

SCO leaders need to have a seat at the table when climate change and sustainability strategies are established and refreshed. This will ensure that key risks and opportunities are identified and embedded into the strategic planning process.

Questions SCO should ask

- Is SCO integrated into climate change and sustainability strategic planning?
- Does the organization fully grasp the strategic implications of climate change risk to the supply chain? Are these risks incorporated into the company’s risk register and internal audit plan?
- Does the SCO team have the necessary skills and people to evaluate these risks?
- What risks from SCO can be turned into new business opportunities?
- Is SCO a team member when researching, developing and designing new products?
- Does SCO collaborate with stakeholders across the product and service lifecycle to capture opportunities outside the company’s own “four walls”?

Compliance is no longer simply about adhering to government regulations. One of the newer risk areas, and a growing opportunity area, is the “sustainable supplier program.” Many organizations are instituting these programs, setting expectations that the suppliers will provide customers with sustainability performance information, including their carbon footprint, water and waste information and sustainable labor policies. For suppliers that do not comply, there is the threat that other suppliers will be selected and sales will be lost. Some companies are now required to complete a greenhouse gas and environmental impact lifecycle assessment of their products and to provide this information to their business customers or retail customers through product labeling.

Some companies are also being asked to disclose their plans for reductions in carbon content and related costs. This is becoming a new “compliance” requirement for companies that want to continue to do business with the organization at issue. These supplier programs are having a resulting effect on reporting. Companies that are required to comply with these green supplier programs now need to track data on energy use and make the information available for audits.

On the other side, if your company has instituted a green supplier program, this requires new processes to track and monitor the compliance of your suppliers, and to use the data to drive enhanced decision-making.

New international guidelines

Given the trend in tracking end-to-end or lifecycle emissions and impacts, we are also seeing the creation of new international guidelines to assist companies in this process. In 2009, the World Resources Institute (WRI) and World Business Council for Sustainable Development (WBCSD) collaborated in the development of two new accounting and reporting standards:

- Product lifecycle accounting and reporting standard
- Scope 3 accounting and reporting standard

These new guidelines will provide a consistent method to inventory the emissions associated with individual products across their full lifecycles and of corporate value chains, taking into account the impacts both upstream and downstream of the company’s operations. These new guidelines have been piloted by more than 60 companies across multiple sectors. The final standards will be available after the feedback process is completed.
Senior management and the board should be asking: “Where do climate change and sustainability risks provide opportunities for competitive advantage and cost reduction?”
Green supplier programs: a growing trend and a new compliance requirement
**SCO and “greenwashing”**

Another related reporting risk area that is relevant to SCO is that the US Federal Trade Commission has indicated its intention to crack down on “greenwashing” in marketing claims (i.e., misleading consumers and stakeholders about environmental claims). This not only opens up new regulatory compliance risks for companies, but also reputational ones, given that specific facilities will be under the microscope.

**SEC guidance affecting SCO**

In the US, the SEC recently provided public companies with interpretive guidance on existing SEC disclosure requirements. The SEC’s interpretive guidance highlights the following areas as examples of where climate change may trigger disclosure requirements:

- **Effects of legislation and regulation.** When assessing potential disclosure obligations, a company should consider whether the effect of certain existing laws and regulations regarding climate change is material. In certain circumstances, a company should also evaluate the potential effects of pending legislation and regulation.

- **Effect of international accords.** A company should consider, and disclose when material, the risks or effects on its business of international accords and treaties relating to climate change.

- **Indirect consequences of regulation or business trends.** Legal, technological, political and scientific developments regarding climate change may create new opportunities or risks for companies. SCO can also be influenced by government incentives that can influence sourcing decisions, competitor actions and technology advances.

- **Physical effects of climate change.** Companies also should evaluate, for disclosure purposes, the actual and potential material effects of environmental matters on their business. Companies may also have to evaluate their tactical agenda – with items procured, production processes, and the transportation associated with moving things around, it is quite possible that SCO will be at the center of performance improvement efforts.\(^1\)

This guidance is just one indicator of a broader trend for more visibility and transparency of information as companies make decisions that impact climate change and sustainability.

**What this means for SCO**

SCO needs to:

- Consider implementing a process to track product lifecycle carbon emissions, environmental impacts and overall footprint
- Participate in any corporate greenhouse gas footprinting/inventorying initiatives
- Collaborate in sustainability report content development
- Maintain awareness of compliance activity and legislative trends so that flexibility for future compliance requirements (including support for internal and external audits of sustainability information) is designed into supply chain performance and reporting tools as they develop and mature
- Monitor and measure the potential risks associated with climate change, such as interrupting access to clean water and other vital raw materials

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\(^1\) Action amid uncertainty: the business response to climate change, Ernst & Young, 2010.

**Compliance**

**Questions SCO should ask**

- How is SCO managing risk where policy and regulations are not clearly defined?
- Is SCO a part of the organization’s climate change and sustainability external reporting and disclosures?
- Is SCO confident that management and the board have a clear understanding of the regulatory initiatives that are underway and could affect the supply chain?
- Are the performance measures and reporting aligned with industry standards for compliance and transparency with stakeholders?
- What regulatory and customer requirements might be established that affect SCO, and how prepared is SCO to respond?
- Is your company subject to any green supplier program requirements, and if so, are you complying? How robust, timely and efficient is the data collection?
- Does your organization have a green supplier program in place, and if so, how are you tracking compliance by your suppliers?
Unlocking the value of the supply chain: finding new ways to cut costs

SCO provides multiple entry points to reduce costs and mitigate risk from an effective climate change and sustainability strategy, such as:

- Green product design and packaging specifications that minimize waste, extend life, utilize recycled content and increase recyclability
- Logistics and distribution redesign that optimizes routing, backhauling and fill percentages and that incorporates low carbon emissions transportation modes, such as alternative fuel vehicles
- Efficient manufacturing, including process improvements for lower energy consumption, machinery utilization, waste management and alternative energy sources
- IT that incorporates green principles, such as energy-efficient servers and data centers, telecommuting technology, videoconferencing and remote servicing
- Disposal strategies, including reuse, recycling and recovery
- Longer-term scenario planning in areas that are especially susceptible to the effects of adverse climate change, such as site selection with long-term commitments, construction materials and design, local natural resource availability and geopolitical risk potential

Companies that have implemented a value-chain or lifecycle approach to sustainability have unlocked hidden value – from lower costs to new and better products. Increasingly, SCO has an important seat at the table in terms of creating and driving climate change and sustainability strategy. In many cases SCO is the principal source for significant energy and waste reduction that leads directly to lower costs. Outside a company’s own operations, supplier selection practices that favor more sustainable businesses will also complement practices that favor more cost-effective suppliers. But supply chain cost is not the only issue that involves SCO. Other issues are directly and indirectly affecting shareholder value through areas such as new compliance costs, corporate rankings by analysts based on sustainability performance, and new marketplace risks and opportunities. These include potential loss of customers and market share if a company does not adequately respond to climate change risks and opportunities.

Supply chain issues have numerous ripples in an organization’s financial strategy. As a price for carbon is established in different jurisdictions, emerging compliance obligations to reduce emissions will have cash management and liquidity implications. In addition, carbon-intensive sectors may face an increase in the cost of capital as financial institutions begin to factor carbon into their lending procedures. New regulations, rapidly evolving technologies and changing customer preferences are all contributing to changes in shareholder value. Combined, these issues are affecting how companies are valued. They are even becoming increasingly important in the due diligence of proposed merger and acquisition deals.

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Another critical issue for SCO revolves around external reporting. Investor groups are putting more pressure on companies to report transparently on climate change and sustainability performance. Shareholder actions on this subject were up 40% in 2009. Furthermore, the recent deluge of green supplier programs is creating a real demand for robust product lifecycle data.

A new initiative is pushing even more organizations to measure and report in this new area – the Carbon Disclosure Project (CDP) Supply Chain program. The CDP Supply Chain program is a collaboration of approximately 50 global companies that have agreed to extend their climate change and carbon management strategies beyond their direct corporate boundaries to engage with their suppliers, using the CDP’s annual Information Request. This project underscores the fact that supply chain emissions represent a significant part of a company’s total emissions and thus require focus.

As companies expand upon the external non-financial reporting that they issue – including in annual reports – CFOs and audit committees are becoming more involved in terms of exercising oversight.

The objectives of the CDP Supply Chain project are to reduce global emissions by:

- Driving action in purchasing companies by providing primary data from key suppliers
- Motivating supplier companies by educating and supporting the collection and reporting of high-quality climate change information
- Influencing international standards by establishing a global process for supply chain disclosure – leveraging the expertise and experience of members and their suppliers

Questions SCO should ask

- Are the SCO functions up to date on the fiscal controls that this growing spend will require?
- What effect will emerging compliance obligations to reduce emissions have on the organization’s SCO strategy and performance improvement agenda?
- How can SCO help to prioritize projects and create and realize business cases?
- Has the organization decided on what is material for non-financial supply chain reporting purposes?
- Does the company report its Scope 1, 2 and 3 and/or lifecycle emissions? If so, how robust is the data, and how consistent is it across all reporting channels?
- Are key performance indicators (KPIs) and the assignment of risk responsibility clearly defined?
- To what extent has a possible price on carbon been contemplated in supply chain decision-making?

What this means for SCO

A substantial majority (70%) of the global executives surveyed in Action amid uncertainty plan to increase their climate change spend between 2010 and 2012. Nearly 50% say that they will spend 0.5% of their revenue, with some planning to spend more than 5% of their revenue on climate change initiatives. With revenues of US$1b or more, at a minimum, this represents anticipated spend of US$5m to US$50m annually.

For SCO, this means that there will be an increasing focus on the supply chain to realize benefits. There will be a need for robust controls as organizations focus on reducing costs and demonstrating success to stakeholders, generating new revenue streams and reducing risk. The study further reveals that priorities reflect a mix of short- and medium-term business goals, including:

- 82% of executives plan to spend on energy efficiency
- 65% have plans to invest in the development of new products and services
- 64% now report greenhouse gas emissions data in annual reports

All of this means that companies will also need to consider the tax implications of various investments – and be aware of all available incentives, rebates and credits in the sourcing process. Also, the wrong SCO strategy or agenda could make return on investment thresholds more difficult to attain by not investing in the right projects at the right time. SCO needs to come together strategically – uniting procurement, operations and logistics – to understand the impact SCO has on the company’s operations and how to prioritize performance improvement efforts.

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Momentum is building for more integrated reporting of financial and non-financial information related to climate change and sustainability ... Managing stakeholder expectations is an area where risk can become an opportunity to increase brand and shareholder value.
Suppliers are seen by many stakeholders as an extension of a company that is conducting business. As such, any supplier – large or small – can tarnish a company’s reputation and diminish brand value. This is becoming increasingly problematic in an era where many products and services come from abroad, and where supply chains can be extremely large and complex. In order to manage this ongoing brand and reputational risk, companies are implementing supplier qualification programs that ensure that they only do business with suppliers that share their own values. Once the supplier is selected, companies often conduct regular audits that look at supplier issues ranging from compliance to emissions and waste, safety, child labor, working conditions and more. Other companies have set up detailed supplier scorecards to track packaging, energy use and carbon footprints.

Suppliers do not pose the only reputational risk from SCO. Companies that lag their peers with any supply chain inefficiencies have a competitive disadvantage in terms of both cost and customer perception. Moreover, companies that lead their peers with SCO that are more sustainable can be in a position to respond to adverse events more effectively and recover from them more quickly.

**What this means for SCO**

SCO needs to integrate with other business functions (e.g., sales and marketing, product development) to help identify the full range of value and risk-mitigation opportunities to protect and enhance the brand and reputation. SCO also needs to ensure the integrity, consistency and timeliness of externally reported information in relation to the organization’s supply chain performance. Executives and boards are acutely aware of the growing demand for more transparent reporting of climate change and sustainability business strategies, initiatives and performance.

Companies are now using many voluntary reporting channels, including external sustainability reports, annual reports, external websites, the CDP and The Climate Registry. SCO can assist in evaluating the accuracy and credibility of the sustainability reporting in advance of the increasing scrutiny this information is getting from external stakeholders.

In the Ernst & Young survey previously cited, 64% of respondents currently communicate data on greenhouse gas emissions in an annual corporate social responsibility report or a sustainability report. Nearly one-third say that their organization has not yet communicated this data publicly. The risk for those not communicating their climate change data is that stakeholders will seek SCO information from potentially less reliable third-party sources, or assume inferior performance in the absence of reliable information.

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**Reputational**

**Questions SCO should ask**

- To what extent does the company engage in ongoing dialogue with its suppliers around climate change and sustainability to ensure that suppliers understand the expectations?
- Does the organization conduct supplier audits and/or maintain supplier scorecards?
- What opportunities can be captured from SCO collaborating with other business functions, such as sales and marketing or product development?
- Is reputational risk at the forefront when climate change strategy is developed and implemented within the supply chain?
- Is the organization’s reported data and performance information from SCO assured by an independent third party?
- Is SCO working with the organization’s internal and external auditors to enable transparent reporting of its data?
- Does SCO currently have adequate controls and processes in place in the event that sustainable supply chain risks become part of the annual financial statement disclosures in the future?

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Proactive corporations are taking a careful look at their operations in a holistic way to understand where performance and efficiency can be improved most dramatically. Operations that consume large amounts of energy and raw materials, such as manufacturing facilities and processes, are a growing area of focus for companies that pursue greener operations. Spare parts inventory management, manufacturing equipment utilization and planned maintenance are just a few areas of scrutiny that are leading to more efficient operations. Unplanned downtime is not only costly in terms of business performance, but also in terms of environmental impact. Reduction and innovative uses for manufacturing waste are also focus areas. Some companies are linking brand recognition to improvements, such as “zero landfill” contribution manufacturing plants.

Transportation and logistics operations are also a clear target area for improvement. Route optimization is one area that has been enabled over the past decade with GPS navigation and route-mapping software that can plan delivery routes with multiple stops. Many corporations are incorporating hybrid and alternative energy vehicles into their fleets in order to reduce environmental impact and lower greenhouse gas emissions.

Other areas of operational risk that may or may not be immediately evident are making their way into climate change and sustainability strategy development. For example, global companies are just beginning to understand and respond to the risks around prolonged drought, sea level changes, seasonal shifts and adverse weather patterns.

Facilities have been a target for such improvements as better lighting and improved heating, ventilation and air conditioning equipment, along with practices that include more effective utilization of building management systems. In fact, facility design, renovation and new construction are more often taking advantage of leading practices such as Leadership in Energy and Environmental Design certification (LEED) requirements to ensure that certain standards for environmental sustainability are met and maintained. LEED-certified facilities are often given visibility in corporate sustainability reports and press releases, which shows the interdependency of operational risk with reputational risk mitigation.

What this means for SCO
Some of the most significant climate change-related risks and opportunities for companies exist within their supply chains. Many companies are already driving their climate change and sustainability strategies and greenhouse gas reduction goals through the supply chain. In our survey, approximately 66% of respondents are discussing climate change programs with their suppliers, and 36% of respondents are already working directly with these stakeholders to decrease the carbon in their supply chains.

Identifying supply chain risks and opportunities that arise from climate change can help:
• Mitigate risks to supply chain-related continuity
• Get products and services to market more efficiently
• Align brand value with changing customer demand

Questions SCO should ask
• Has the company assessed the supply chain for key cost-saving (and carbon-reducing and/or waste-reducing) opportunities?
• Has SCO estimated how a long-term change in weather patterns, a new price for carbon emissions, or higher energy costs would affect the entire supply chain and margins?
• Has the company calculated the greenhouse gas emissions from its supply chain (Scope 3) and/or from its products (lifecycle assessment), and is that data being used effectively to make better decisions?
• Does SCO understand its contribution to climate change and sustainability measures and where to focus efforts to improve them?
• What management systems and internal controls are in place to identify, monitor and quantify the risks and opportunities of climate change and sustainability-related issues in SCO?

Operational risk and the related opportunities around climate change and sustainability are multidimensional, and different approaches are being taken to achieve greener operations.
Five actions SCO should take now

As a part of SCO developing a strategic role within the organization, it needs to bring awareness of the risks and opportunities that climate change and sustainability pose for the organization. SCO’s main role is twofold:

- Improve and sustain performance and efficiency
- Provide objective assurance to the board and executive management that key supply chain-related risks are being managed effectively and in accordance with internal and external obligations

SCO can accomplish this mandate through the following five actions:

1. Collaborate with other business functions and take a holistic, lifecycle approach to identifying and implementing value creation opportunities, risk-mitigation actions and efficiency-related initiatives in SCO

2. Embed climate change and sustainability as part of the supply chain risk assessment
   - Understand and assess key climate change and sustainability risks to the supply chain, including compliance, financial, reputational, strategic and physical/operational
   - Validate that key climate change and sustainability risks are appropriately identified, prioritized and controlled within each component of the supply chain
   - Coordinate climate change and sustainability risk assessment with other key risk functions

3. Review processes for climate change and sustainability reporting needs, including evaluation of the integrity and alignment of data across the supply chain

4. Monitor and assess the impact of existing or potential government regulations on the entirety of the supply chain
   - Share insights with management and the board so they have a clear understanding of the regulatory environment complexities

5. Review the corporate risk register and risk management policies for appropriate inclusion of climate change and sustainability risks
Our point of view

Download these thought leadership pieces and more at ey.com/climatechange

Action amid uncertainty:
the business response to climate change

This global survey of 300 corporate executives from 16 countries with at least US$1b in annual revenue found that corporate executives expect to make significant investments to deliver both cost savings and revenue generation opportunities relating to climate change. Find out why – despite challenging economic conditions and regulatory uncertainty – they believe that the climate change agenda will significantly impact business performance and strategy over the next few years.

Seven questions CEOs and boards should ask about ‘triple bottom line’ reporting

Although sustainability reporting is voluntary, the broad trend is towards greater disclosure. In this article are seven things that CEOs and boards should ask in order to prepare for the possibility of reporting on sustainability for the first time, or to improve their existing reports by enhancing data collection processes.

Five highly charged risk areas for Internal Audit

Climate change and sustainability efforts open avenues for making and saving money, but also make organizations vulnerable to a wide variety of risks. For the Internal Audit function, identifying and understanding these risks and how they affect the organization is critical.
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EYG no. FQ0019

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