

The Sustainable Organization: The Chief Supply Chain Officer's Perspective

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# 4

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*Maurice Daw, executive director: operations and supply chain logistics, Virgin Media*



# Foreword

Leading practitioners aside, the extended supply chain has long been a blind spot for many organizations when it comes to sustainability. It is all too easy to outsource such issues, while focusing on making sure that performance goals are being achieved within corporate headquarters. But as many chief supply chain officers are discovering, failing to pay attention to wider sustainability issues is increasingly risky. Beyond the obvious compliance risks, it does not sufficiently defend the company from social, economic or environmental risks that may be lingering out of the view of the executive management team. In particular, for businesses trying to navigate a tough business environment, with volatile input prices and increasingly constrained resources, failing to pay closer attention to sustainability within the supply chain will increasingly be seen as poor management and high risk.

At a more fundamental level, an organizational blind spot on supply chain sustainability misses the significant potential for commercial benefit. Indeed, leading companies are now shifting their focus away from simply assuring compliance, and are moving towards a tighter focus on performance. In this transition, they are finding sustainability to be a key vehicle for change. One clear example is the wide-ranging potential for both waste reduction, and ultimately the reuse of waste within a closed supply chain loop. This can be a useful means of

gaining competitive advantage, not least by securing crucial resource inputs. At a different level, such efforts can also help firms use their supply chains to capture market share, improve overall customer satisfaction, and bolster the organization's brand appeal. From the perspective of the chief supply chain officer in particular, it can also be a means of gaining a more powerful position within the executive management team by securing operations.

Nevertheless, there is still far more to be done. Our internal research highlights a core paradox for many businesses: growing consumer demand for sustainable products, despite worries to the contrary; but often with lower margins on such products and services.<sup>1</sup> From a supply chain perspective, this underlines the difficulties that exist in trying to adapt historical supply chain approaches to suit new demands, instead of wholly rethinking the approach. Examples of this are rare today, but those who get this right will be well placed to capture their markets. Although an imperfect example, one analogy might be taken from the transition from paper books to e-books: no matter how efficiently a paper-based book supply chain is run, it cannot hope to compete on cost and performance with an approach that gets rid of distribution altogether, by delivering wirelessly. Working out such transitions is thus one of the major challenges for supply chain leaders in the decade ahead, across all sectors.

To explore some of these issues, this report draws on the diverse supply chain research that Accenture has conducted. In 2012, we released the Supply Chain Report along with the Carbon Disclosure Project, while also producing new research for Sustainability 24—Accenture's day of driving global debate and discussion around business sustainability issues. In 2011, our Connected Agriculture report, produced in collaboration with Vodafone, explored the links between the supply chain and agriculture.<sup>2</sup> In the same year, other research has explored specific aspects of the supply chain, such as sustainable packaging issues within our Simultaneous Sustainability and Savings report. Much of this is closely linked to our Supply Chain Academy, an online learning environment aimed at skills development within the supply chain, and its related Sustainability Academy. It also ties into the supply chain initiatives we've established as part of our own corporate citizenship efforts, as laid out in our 2010-11 report.<sup>3</sup>

As these varying inputs suggest, this report explores several distinct aspects of how sustainability is affecting the role of the chief supply chain officer. One part looks at how sustainability is helping shift the focus of supply chain leaders, while also boosting their prominence within the organization. A second part reviews the wide-ranging scope for innovation and efficiency that it presents, from product design and manufacturing through to

finding the value within end-of-life products. These are all crucial steps on a journey towards wholly rethinking the supply chain, to exploit new opportunities within the market. A final section explores the push towards greater supply chain transparency and how supply chain leaders can proactively choose to adopt this—or else will perhaps soon be forced to do so.

At its core, this report aims to help start a dialogue about the role of sustainability in the supply chain and where this is heading. As such, we welcome feedback from all stakeholders, including supply chain executives, researchers, non-governmental organizations, and any others that can help us collectively deepen the debate.

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## About this report

Working closely with the chief procurement officer and many others, the chief supply-chain officer is fundamentally responsible for the entire product life cycle. This can range from the original design of goods, through to sourcing, manufacturing and moving goods from their points of origin around the globe to the end-consumer's point of use. It can also run in reverse: dealing with issues such as product returns and end-of-life recycling. Although rarely in the spotlight, supply chain leaders are often ultimately responsible for the biggest overall economic, environmental and social impact of any given organization.

As might be expected, their focus is predominantly on issues such as availability, just-in-time delivery, cost and quality. But leading chief supply chain officers are increasingly finding that sustainability gives them a new lens to introduce innovation and find new efficiencies, as well as defending and enhancing the brand. As they embrace this, it is in turn transforming the importance of the supply chain within the wider organization. But it also challenges them to develop new skills and expertise.

Some of the specific supply chain issues addressed within this report include:

- What business case exists for implementing sustainability considerations within the supply chain and how are these changing?
- What new collaborations, both internally and externally, are emerging as supply chain leaders pursue greater efficiencies?

- What implications do these changes have for the current set of skills and expertise within the supply chain?
- What are the drivers for greater supply chain transparency and what new opportunities and challenges does this introduce?

This report builds on an earlier paper in this series that focuses on the role of the chief procurement officer, which looks more closely at the implications of sustainable procurement on that function. This paper picks up where that leaves off, looking further along the supply chain at some of the issues that the function is currently focusing its attention on. It also considers what is now emerging on the radar.

**"The supply chain tends to affect the most people in the wider corporation, so there's a huge people and community aspect. It is also typically responsible for consuming the most resources, in terms of energy, water and waste."**

Mike Wittman, vice president for supply, Mars Chocolate North America

## Research methodology and aim

This report is part of a yearlong program of research on the sustainable organization, which seeks to open up a debate about the role of each major C-suite or executive function and what contribution they need to make to the implementation of sustainability. To do so, each report draws on wide-ranging Accenture data and research, including those done in collaboration with partner organizations, such as the United Nations Global Compact, World Economic Forum and Carbon Disclosure Project. In consultation with Accenture's overall leadership, as well as its sustainability practice, the reports profile the specific trends and insights that are affecting each role in turn. To provide specific examples and current context, this report also draws on interviews with a number of supply chain executives and experts.

**"As product lifecycle analysis becomes more common, you need deeper long-term collaboration with suppliers to help them understand and invest in sustainability issues."**

Nigel Topping, chief innovation officer,  
Carbon Disclosure Project

## From compliance to performance

The past five years has seen a significant transition in the corporate view of supply chain sustainability. In 2008, the Economist Intelligence Unit identified the supply chain as "the weakest link" from a sustainability perspective, with few companies giving it much attention in comparison to other parts of the business.<sup>4</sup> This gap was still evident in 2010, when a major Accenture and United Nations Global Compact research initiative found that while 88% of chief executives felt they should be integrating sustainability within their supply chains, just 54% believed that anything like this had been achieved.<sup>5</sup> Since then, recognition has continued to grow about the need for supply chain sustainability as a business imperative.

What is driving this? One facet is a change in perception. Historically, supply chain sustainability was feared as a new cost and management burden, driven by vague social responsibility aims. Now there is a growing understanding that sustainability can bring wide-ranging benefits, such as innovation, efficiencies, better risk management, improved brand value, and even new revenue generation initiatives. "When we first started out with sustainability five years ago, it definitely came with the negative press of additional cost," says Warren Kozera, head of supply chain at United Utilities, a regional water company for northwest England. "We did have a real challenge around perceptions, but it has moved as people recognize the efficiencies to be gained by being sustainable."

This change in perspective is now slowly spreading. Inevitably, as Accenture research highlights, the best supply chain leaders have been the first to realize such potential.<sup>6</sup> This is not to suggest that other companies are simply ignoring this. Rather, it reflects the fact that supply chains are often large, complex and difficult to change. As a recent Carbon Disclosure Project report highlights, the opportunities for initiatives such as carbon reduction may be clear, but the precise means of capturing these gains are not. Indeed, Accenture's 2010 study of chief executives highlighted that concerns relating to the difficulty of implementation was the number one barrier to the further integration of sustainability into supply chains.

Furthermore, although views about sustainability's costs versus the potential returns have shifted, not all sustainability-related efforts result in savings. Many of the necessary technologies are often still maturing, or are not yet cost effective, for example. As a recent Accenture survey showcased, although there is recognition that in the long-run it will become more costly to run an unsustainable supply chain, more than half (56%) believe it is more expensive to do so today.<sup>8</sup> Related to this, nearly half (49%) of firms polled argue that margins are lower on sustainable products and services. In part, this represents the fact that most businesses today have tried to adapt their existing supply chains to become more sustainable, ahead of trying to develop wholly new approaches. Delivering on this will be a huge challenge for leading chief supply chain officers in the decade ahead.

**"When we first started out with sustainability five years ago, it definitely came with the negative press of additional cost. We did have a real challenge around perceptions, but it has moved as people recognize the efficiencies to be gained by being sustainable."**

Warren Kozera, head of supply chain,  
United Utilities



## The first wins

Even before more fundamental transitions can take place, though, there are plenty of improvements to be made today. As one example, the Carbon Disclosure Project report details that 39% of companies have realized cost savings from their efforts to reduce carbon emissions. Similarly, over one-third have benefitted from new revenues or savings as a result of their suppliers' efforts on this. An Accenture study for GS1 Portugal, a national forum for consumer goods manufacturers and retailers, identified cost savings of 8-27%, along with emissions reductions of up to 48%, primarily through better collaboration across the supply chain.<sup>9</sup> João de Castro Guimarães, the chief executive officer of GS1 Portugal, says there is wide-ranging scope for efficiency gains in all this. "Analyzed data allow us to reach one main conclusion: collaboration and adoption of sustainable management principles introduces a level of efficiency never reached before."

At United Utilities, wide-ranging benefits have been found: landfill costs have been cut as waste has been reduced and reused; operational processes have been improved to reduce the amount of waste in the first place; and methane from sludge is being used to fuel combined heat and power plants, which in turn is used to power the company's data center. These efforts have landed the company a swathe of awards. Behind the scenes, it has also challenged the supply chain function to develop new skills and expertise, little of which is available for hire today. "You don't find recruitment agencies that specialize in providing sustainable supply chain experts, so we've had to grow our own skills and be creative about this," remarks Mr Kozera.

Different industries face starkly different supply chain issues, but common themes can be found. Within Huawei, the Chinese telecommunications company, the business runs a highly efficient supply chain, but a growing focus on sustainability is giving its supply chain

leaders a different lens to explore new gains: from reduced packaging through to improved risk management of key inputs.

At Virgin Media, a television, telephone and internet services provider, its supply chain team is working increasingly closely with the rest of the business to influence how products are designed, packaged and shipped. Maurice Daw, a supply chain leader at the company, says this has helped make products smaller, lighter and cheaper, while new forecasting systems have helped it manage inventory better and find more optimal logistics routes. For the launch of its Tivo product, a digital television recorder, it worked closely with key suppliers to improve everything from the device's shape and power needs, right through to the box design, packing of the pallets, and container sizes. These tweaks helped cut logistics costs, while improving reliability (for example by redesigning the unit to reduce overheating and to use less power) and ultimately customer satisfaction.



## The rise of the sustainable supply chain leader

Across many businesses, including all of those interviewed for this report, these gains are in turn giving greater prominence to the role of the chief supply chain officer. At United Utilities, for example, the supply chain function has gone from simply reporting into the finance team four years ago, to being directly represented on the board today. This comes in parallel with a wider underlying paradigm shift in supply chain sustainability—a move away from compliance assurance, and towards one more explicitly focused on performance. “The historical problem that supply chain wasn’t taken very seriously is now a thing of the past. The supply chain is now a significant contributor to the overall operational efficiency of the firm,” notes Virgin Media’s Mr Daw.

This shift is now filtering into a range of roles that link to the supply chain. Many of the companies that participate in Accenture’s C-Suite network report a similar change, from sustainability being a compliance-led responsibility at a low level in the organization, to one that is directly reporting to operations, finance or even the chief operating officer. This

is also adding more strategic aspects to the role, as GS1 Portugal’s Mr Guimarães argues, bringing it into strategic planning, while requiring a greater understanding of consumer needs and expectations, a vision about the economic outlook, and the introduction of sustainability into all aspects of the function’s role.

Underlining much of this is also a growing acceptance that the company’s overall impact – whether environmental, economic or social – cannot simply be deferred to external suppliers. Instead of using this as a defense, leading companies are seeing improved supply chain management as a chance to make a far larger positive impact. “The supply chain tends to affect the most people in the wider corporation, so there’s a huge people and community aspect,” explains Mike Wittman, a vice president for supply at Mars Chocolate in North America. “It is also typically responsible for consuming the most resources, in terms of energy, water and waste.”

At Mars, the supply chain now plays a significant role in delivering on its overarching goal of becoming “sustainable

in a generation”—with wide-ranging goals, such as shrinking its net carbon footprint to zero within 30 years. This gives the Mars Commercial and Supply Leaders a huge scope of responsibility, running from “bean to bar” as they call it—from helping increase cocoa bean crop yields, to rethinking how it manufactures its products, to optimizing the manufacturing and delivery of chocolate bars to the store shelf. Few other executives have such wide-ranging remit to deliver change.

For those who do grasp the implications of what a truly sustainable supply chain could ultimately mean for the business, this is a major opportunity. Indeed, when applied to its full logical extent, it can represent a wholesale rethink of a company’s underlying business model. So far, most companies have tried to adapt their existing supply chains to accommodate sustainability; ultimately, though, the companies that entirely recreate their supply chains will be the ones best placed to conquer new markets, and avoid future risks. This transition is still very much work in progress, but some of the first steps are now unfolding.

The supply chain executives and other experts interviewed for this report were all asked to provide their recommendations on various aspects of sustainability to guide other supply chain leaders. Their insights and advice are captured throughout the report.

## Lessons for chief supply chain officers

- Integrate sustainability issues into both supply chain planning and operations. This is destined to become a part of the reality and urgency of running the supply chain sooner or later.
- Set a champion for supply chain sustainability at a board level, to ensure that these issues can be raised and discussed within top management, to ensure leadership buy-in.
- Look to create an appropriate governance framework that can help guide implementation across the business, including decentralized branches of the supply chain.
- Set out a supply chain charter stating the principles that you’re aiming to achieve, and which your team can be passionate about and proud to be associated with and actively share it with your partners and vendors. This will generate the greatest buy-in from the group you’re trying to lead.
- Setting meaningful, public goals that you’re not willing to compromise on can be a useful way to change mindsets within the supply chain. These need to be backed up with targets that are relevant for specific parts of the business and supply chain.

## Sustainable by design—and necessity

As more supply chain leaders move their thinking away from simply ensuring compliance and towards better performance, other considerations come into focus. One broad issue relates to a far wider view of product stewardship—ensuring a lower environmental and social impact of products, considering how to turn obsolete and discarded products into a valuable raw material and ultimately turning a typically one-way flow of products into a circular loop. The overall aim here is to unpick, rethink and transform the entire product lifecycle, in the pursuit of simplicity and efficiency.

Done properly, this can enhance brand equity and market position. On the flip side, a failure to do so may one day threaten the company, given rising pressures on resource scarcity. For the role of the chief supply chain officer, there is little that is more fundamental to their purpose than ensuring the supply of necessary inputs.

The scale of the potential risk is eye widening. As recent research from Accenture and the World Economic Forum outlines, a “peak metals” scenario could put as much as US\$2 trillion of economic output at risk in 2030, if global economies fail to respond to shortages in the supply of steel and iron.<sup>10</sup> Under such a scenario, more resource-efficient approaches to manufacturing and increased recycling would deliver savings of up to US\$46.9 billion in 2020—equivalent to a 50% reduction in steel costs. But achieving this will require a paradigm shift in business models: greater resource efficiency, closed product lifecycle loops, and a decoupling of growth from resource usage. Much of the burden of this falls on the shoulders of the chief supply chain officer.



## Ensuring supply

Getting this wrong can undermine the viability of a company. Nigel Topping, the chief innovation officer of the Carbon Disclosure Project, gives the example of a manufacturing company that used to source steel to make brake pads for vehicles. At the time, its supply chain team was barely aware of another metal that was used within the steel inputs being purchased, until prices of this subsidiary metal spiked 600% due to a lack of supply. This shifted the relative weighting of the overall cost of materials from less than 2% to about 12%, posing a direct threat to the product. "The supply chain team was completely unaware of the other uses of this material, so switching to an alternative was hugely expensive. If they'd identified the risk, they could have adapted quicker and cheaper," says Mr Topping.

Given the diverse nature of supply chains, none of this is easy. Issues may range from dealing with crop yields, through to the properties of specific metals and materials, as well as the headline issues of water, energy and waste management, to name just a few. At Mars Chocolate, the supply chain team is grappling with the threat of a declining cocoa crop. Without change, supply will simply not match future demand. "Sustainability here is both about making a positive impact and ensuring we've got a sustainable supply of cocoa for our business for the future," he says.

To address this, Mars has embarked on a major program, which involves educating farmers, helping them invest in fertilizers and improving crop harvesting techniques.<sup>11</sup> "We've got examples of farmers who've tripled their crop yields over the past three to five years. This helps create a more sustainable supply of cocoa, but also helps people improve their standard of living, it creates multiple generations of farmers, and it helps the land and environment being used," says Mr Wittman.

Such examples also illustrate the growing cross-sector convergence that is being seen on the ground. Research from Accenture Development Partners suggests a growing number of multinational businesses are getting directly involved in international development activities, from supporting small-scale farmers through to the development of informal supply chain partners.<sup>12</sup> In doing so, supply chain leaders are finding opportunities that not only benefit their internal goals, but also wider society—a trend dubbed the "inclusive supply chain". This can help secure the supply of raw materials, and may also hold positive brand implications, especially in new markets.

Steve Howard, the chief sustainability officer of IKEA, argues that sustainability provides a specific lens for supply chain teams to help secure long-term competitive advantage, by helping secure supply into the future. "These include special sourcing strategies for alternative materials or low carbon ones, or ways to recycle materials for reuse, as well as delivering on the implementation," he says. All this becomes especially crucial in an era of resource scarcity: "It wasn't so common three years ago, but people are now talking a lot more about this," notes Mr Howard. "It's something we've been working with for a while and it is now becoming well understood as a shaper of the business environment. It also kicks off a list of questions for the supply chain. This isn't a passing phase, so businesses are really going to have to rethink their supply chains."

This challenge of scarcity can be illustrated with a simple, seemingly endless crop: cotton. There are currently about five million hectares of cotton in production – roughly the size of Germany – while demand is rising rapidly. "If we double the number of consumers in the next 15 years, we can increase productivity, but we can't keep doubling the area needed to grow cotton. So you have to look at how you close the loop and dramatically increase recycling efforts, all of which becomes strategic issues for the supply chain," explains Mr Howard.

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Steve Howard, chief sustainability officer, IKEA



## Rethinking waste to close the loop

While the dumping of waste into landfill was simply part of doing business in the 20th Century business, one of the hallmarks of success in the 21st Century will likely be a company's ability to avoid waste altogether.

One common starting point can be packaging waste reduction. While packaging has multiple uses – brand appeal; product protection and transportation; merchandising and retail impact; and basic information – the reality is that most is immediately discarded. This prompts supply chain leaders to consider how much is actually necessary, and in what form. Accenture research highlights that retailers in particular can achieve savings of 3-5% through green packaging initiatives.<sup>13</sup> Walmart plans to cut packaging by just 5% by 2013, which it expects will bring savings of US\$3.4 billion—and extending this across its whole supply chain could yield savings of US\$11 billion.<sup>14</sup>

"We're seeing a growing number of examples where waste is coming out of the process, not just in reducing the waste to landfill, but also converting that into cash by reusing and salvaging the inherent value from old products and components," says Dr James Aitken, a supply chain expert at the Surrey Business School within the UK's University of Surrey.

The simple mobile phone provides a compelling example of this in action. Recycling one ton of obsolete mobile phones can produce as much as 400 grams of gold, compared with just 5 grams from a ton of gold ore.<sup>15</sup> On top of this, mobile phones typically contain about 20 rare earth metals, which, as their name suggests, are scarce. But potential gains span a range of materials. One practical example comes from IKEA, where an internal analysis of the environmental impact of product design has led it to design a range of furniture from wood with knots, which had previously been considered waste.<sup>16</sup> This is part of a wider aim within the business to use no more material than what is needed.

Overall, more attention is being paid to collecting and reusing old, obsolete or faulty products from customers, to bring them back into the supply chain for recycling and reuse. This is typically part of a reverse logistics operation within the business. Research from Aberdeen Group shows this rising steadily, expanding by 10% in 2011.<sup>17</sup> This is especially prevalent among best-in-class companies, which are 30% more likely to implement this, but in many companies this is starting to become more common.

Inevitably, this brings new challenges: closer ties with customer service, for example, and a greater need to integrate internal processes. But there can be strong payoffs too. Cisco, the networking company, gives a compelling example. Between 2005 and 2009, it retooled its reverse logistics function, shifting it from running at an US\$8 million loss to a US\$147 million profit, in part thanks to a sharp rise in product reuse from 5% to 44%.<sup>18</sup>

For many others, this journey is at a far earlier stage, but recognition is growing. Carlsberg Breweries, the beer company, has already set up a reverse logistics operation to collect returnable bottles across its operations, although it has not yet fully closed the loop within its supply chain. Zeljko Urosevic, the company's vice president for logistics operations says this will become a part of its strategy in the future, while Carlsberg focuses on implementing all local environmental guidelines in the countries it operates within. The company is, however, focused on other areas of waste reuse, making use of the spent grain and yeast generated from its brewing process.

Such examples highlight that most businesses today are only taking their first steps towards a broader, long-term goal of fully closing the loop: continuously recycling and reusing materials throughout the lifecycle of a product. This kind of regenerative thinking is now emerging in a growing number of industries. Desso, a carpet manufacturer, released its first cradle-to-cradle product in 2009, with

a view of developing a full portfolio of products by 2020.<sup>19</sup> Apparel firm Nike has developed a line of shoes, branded "Considered" that can be more easily and effectively recycled within its "Reuse-A-Shoe" scheme; it aims to make a number of its product lines meet such guidelines by 2020.<sup>20</sup> Retailer Walmart has a range of pilot initiatives, such as a scheme for converting packaging waste into new pet products, such as dog baskets, or turning polyethylene terephthalate products into store hangers, for example.<sup>21</sup>

Examples like these continue to spread as awareness grows. And as supply constraints continue to mount, along with related price volatility, more supply chain leaders will be challenged to consider how they can evolve their business to more effectively turn today's waste into tomorrow's gain. The question is whether they proactively learn to do this, before they become forced to do so.

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Dr James Aitken, a supply chain expert, University of Surrey

## Case study: Adapting Chevron's supply chain to new environments

Globalization has taken many supply chain leaders into new emerging markets, but few have to operate with the unique constraints of Chevron's US\$43 billion natural gas Gorgon Project in Western Australia.<sup>22</sup> The project, Australia's largest, is operated out of Barrow Island, a pristine nature reserve 50km off the coast. To ensure that its environment is protected, the project has to operate under strict regulations, especially relating to quarantine. For example, every person and every item, from food to equipment to construction materials, has to be inspected before arrival.

To achieve this, Chevron's supply chain team goes to considerable lengths. Every piece of food is pre-prepared and washed, so that zero food waste is shipped in for the island's 5,000 workers; every scaffold pole is sealed off and fumigated; even the tires of vehicles are checked, as are all ships, planes or other vessels coming to the island. In preparing for this, the team has set up what is now recognized as a world-leading quarantine management system, developed and refined over the past decade. Preparing for this challenge has required a wide-ranging supply chain approach, encompassing:

- **Systems:** A robust quarantine management system has been created, able to track every item throughout the supply chain.

- **Processes:** Detailed management plans and directions have been set up for every aspect of the project. Specific requirements have been incorporated into related supply chain contracts.
- **Compliance monitoring:** Compliance monitoring is a major part of the initiative now, with specific triggers set up for anything potentially in breach.
- **Skills:** New expertise has been developed within the supply chain, from quarantine issues through to environmental assessments.
- **Collaborations:** Relationships have been set up with specialist partners, from world biodiversity experts through to Australia's national quarantine service.
- **Organizational behavior:** From induction courses on safety and environmental concerns through to posters reminding workers of specific requirements, this is now a fundamental part of the working process.

Although onerous and costly, Chevron is finding a range of benefits emerge from its efforts to develop a world-class quarantine system. One is efficiency. With a far tighter scrutiny of what goes in and out of the island, there is far less wastage, while a range of opportunities to reuse parts and materials have been uncovered. Fewer goods being shipped to the island

are forgotten, as part of a "just-in-time" supply chain system, while building sites are more carefully prepared, helping cut commissioning times when a new phase of development starts. "We take a cradle to grave approach, which leads us to think about when we abandon things, and what that might cost, all of which feeds into the overall value equation," explains Colin Beckett, the general manager of the Greater Gorgon Area for Chevron.

Inevitably, some stakeholders still protest against the presence of business in such environments. However, such in-depth efforts not only ensure that sites are indeed cared for, but they actively bolster the skills, expertise, and regional resources needed to do this (Chevron's leading-edge quarantine expertise is now filtering through into local Australian practices, as one example). Over time, such practices will hopefully become common to all such projects. "I like to think that as industries go into more remote locations, such as the Arctic, we can more confidently say that we're able to go there and extract the wealth, while leaving it in all other respects as it was. People don't have this confidence right now," says Mr Beckett. "No one today disputes the argument that good safety equals good business, but it's not there on the environmental side as yet. But I do feel that over time, this will become the mainstream."

## Lessons for chief supply chain officers

- The supply chain alone cannot solve all the issues that sustainability raises—from product updates, through to consumer communication. This will require collaboration with the rest of the business, as well as suppliers, peer companies and other stakeholders—even rivals, in some instances.
- Detail all the changes required within your plans and operational guidance. If it's not in your pre-qualification guides, how you verify and assess suppliers, write contracts, and measure contract performance, then it's not going to stick.
- Put clear numbers on your key raw materials and other critical inputs. If you can see the total bill for raw materials, you can understand your exposure to these. This information needs to be visible and understandable so that the team feels accountable for these.
- Look for opportunities to encourage suppliers to innovate, rather than simply penalizing them for failing to hit certain metrics. Many of these actions can be inspiring to those involved—from transforming farmers' livelihoods, through to reducing reliance on limited supplies of water.
- Push the supply chain team to answer fundamental questions, such as: are there supply pressures on our materials? If so, what alternatives are available? This will be needed to help prioritize alternative supply strategies.
- Explore new opportunities for cradle-to-cradle or closed loop supply chain systems.

## The transparent supply chain

A different pressure that many supply chain leaders are starting to face is the demand for greater transparency within their supply chains. At its core, this is to answer a simple question: "where does this come from?" as an article within the Harvard Business Review argues.<sup>23</sup> This is driven by two main drivers: one, greater consumer interest in where and how their goods are sourced; and two, the desire within companies to get a greater visibility of their supply chain, not least in order to identify future risks.

For the first trend, many consumers want to know where and how their groceries and consumer goods were created or sourced, not least when problems erupt, such as the 2008 tainted milk scandal within China. Providing greater transparency here is a key part of improving the trust of consumers and other stakeholders. It can often be a chance to bolster demand, by tapping into consumer interest around locally grown foods perhaps, or sustainably sourced materials, such as organic cotton for jeans.

Equally, transparency may be part of what's required to reassure consumers of the products they're buying. One high-profile example is in diamonds, to ensure that these are sourced from conflict-free zones. Others might simply be furniture, certifying that these come from sustainably managed forests rather than at-risk rainforests or otherwise. Often, such demands might be stipulated by regulation, such as the inclusion of specific chemicals or substances, as required by firms operating within the European Union. It may also be for consumer safety, such as eliminating counterfeits within the pharmaceutical supply chain.

At a different level, United Utilities uses greater transparency about its supply chain sustainability to prepare for the potential prospect of operating in a competitive water market. This will be

an increasingly large focus in the years ahead, as the marketplace for water becomes increasingly competitive. "From our perspective, we would like to link our efforts in the supply chain to our customers, so that they see the sustainable things we do as a differentiator against our competitors," notes the company's Mr Kozera. For his team, this involves a deeper focus on sustainability, for two reasons—to attract the best talent to the company, and to build up a greater brand capital. "Our retail brand doesn't have a significant impact right now, but it absolutely will do five years from now," says Mr Kozera.

The second driver of transparency is the desire for greater internal visibility, to better understand where risks might lie within the supply chain. Beyond the natural disasters that all are attuned to today, there are many other worries: avoiding the introduction of harmful or forbidden materials, such as the use of leaded paint in children's toys; labor concerns, such as the risk of child labor within suppliers; or even climate change itself.

This can delve into more strategy supply issues, such as the medium term threat to cocoa production identified by Mars Chocolate, or identifying regions that are potentially at risk of water stress, which in turn might impact future manufacturing or storage operations or inputs. Greater transparency on such issues is of great importance to the overall strategy function too. "Greater visibility helps companies respond to potential problems," explains Dr Aitken, who gives an example of how improved visibility can help supply chain leaders be more aware of risks further up their supply chain and thus start to consider alternative suppliers or approaches. "Some of this falls into the procurement camp, but it's the supply chain people who make it happen."

**"Demand for transparency with our customers is becoming greater and greater. We have to devote far more time than we did before to gain this transparency, and we also have to be more open."**

Anders Karlborg, vice president, supply chain, Huawei

## Technology-led awareness

But while transparency is clearly a worthwhile goal, delivering on this is a huge challenge, not least given the complexity and depth of many global supply chains. For some, transparency among tier one suppliers may be achievable, but going beyond that quickly gets difficult. All this makes technology a typically crucial element of achieving greater transparency. Accordingly, supply chain leaders are investing into information management platforms that help enable better collaboration and information exchange.

At the most basic level, it involves many companies switching from what is often an Excel-based tracking system to cloud-based tools that can be far more powerful. It also involves technologies such as radio frequency identity tags, which have continued to fall in cost and can help to automate the tracking of goods. "Information Technology has always been the backbone of successful supply chains," notes Dr Aitken. And once an appropriate platform is in place, many are finding that analytics tools can further boost performance, from better forecasting of customer demand through to speedier decision-making.<sup>24</sup>

Many companies are now in the process of transitioning towards more sophisticated software systems for supply chain sustainability. "We're still working with Excel to track and trace sustainability issues. But since the start of this year, we've been trying to build a system to track and trace all these elements," says Anders Karlborg, the vice president of supply chain at Huawei, the Chinese telecommunications company. A key driver at Huawei has been the company's Western customers and their own push to improve sustainability standards. "Demand for transparency with our customers is becoming greater and greater. We have to devote far more time than we did before to gain this transparency, and we also have to continue to be more open," says Mr Karlborg.

Along with the rollout of other supply chain sustainability efforts, this has also required new skills and both internal and external training in order to roll this out. "We've done training in all parts of the company, from staff in headquarters, through to staff and suppliers in markets across Africa or in India. We do have to raise the awareness and skills of our people to drive this process."

But other stakeholders are getting in on the act too: regulators, industry associations and independent vendors, many of whom are creating standalone clearing centers for industry information, such as Clearing Fair Factories and BOMcheck. This is doing much to help boost visibility, while also cutting redundancy and costs (such as having multiple stakeholders request the same information), while boosting risk management. Overall, the silver lining of such investments and developments is that it is helping to foster greater standardization within sectors, while streamlining information request processes.

Of course, there remain questions of just how far companies ought to go, in the pursuit of visibility: "Do you put webcams in factories," asks IKEA chief sustainability officer Mr Howard. He adds that implementing transparency can quickly become hugely resource intensive to maintain. "There's a cost to maintaining transparency, not least as it's got to be accurate and have up to date information behind it. This is doable, but you've got to recognize this," he says.





## From insight to action

Such demands for increased visibility and disclosure are becoming increasingly widespread. For example, recent research from the Carbon Disclosure Project highlights that almost half of its members' suppliers now report on their emissions.<sup>25</sup> This suggests promising change, although clearly focused on a group that has already bought into the promise of sustainability. Even in this group, though, reporting alone does not yet always translate into actual change. Just 28% of suppliers polled had achieved any reduction in their greenhouse gas emissions. "Western customers often tell us that they are not concerned about what the status is, as long as there is transparency about it. As long as they see progress and improvement in that regard, they're happy," notes Huawei's Mr Karlborg.

All this makes the transparency imperative an intrinsic part in the maturing of the supply chain and sustainability solution. As management guru Peter Drucker espouses: what gets measured, gets managed. Accordingly, implementing the systems today to gain better visibility on what is going on within the supply chain will doubtless lead to greater action tomorrow on improving performance.

What is clear right now is that a shift towards greater transparency is well underway. Top supply chain leaders are engaging in this proactively, putting the necessary systems, scorecards and processes in place. Others will likely find themselves forced to: by regulation, by customer demand, or by keeping up with shifting market norms. For those that don't respond proactively, they may find themselves acting reactively, such as when a supply chain failure becomes suddenly public. The power of social media is such that not much information of significance can remain hidden for very long. As IKEA's Mr Howard notes: "Either you make yourself transparent, or people will do it for you."

## Lessons for chief supply chain officers

- Educate yourself and your team about what sustainability issues are most pertinent within your sector's supply chain. For example, gaining a closer understanding of the specific metals required for assembling a product and what possible substitutes might exist.
- Ensure that the goals of your company's internal sustainability strategy and external supply chain strategy are well aligned.
- Acknowledge that different types of suppliers will have different risk profiles. It's all very well having some performing highly on sustainability, but these need to be the ones that matter.
- Closely review the resources needed to effectively manage a sustainable supply chain, from new skills, technologies and other resources. There is often a need for greater investment in all these areas in order to deliver on the potential benefits identified.

## Conclusion

It is an exciting and a challenging time for chief supply chain officers. Recognition of their function's importance has increased markedly in recent years. The supply chain is playing a more central role in coping with ongoing volatility and looming scarcity risks, while pushing harder to operationalize competitiveness. For leading practitioners, sustainability has helped to give the function a new dimension and depth: eliminating inefficiencies, improving competitiveness, and differentiating the company's image. And as the focus on sustainability shifts away from compliance assurance and towards a focus on performance, the supply chain team is becoming more cross-functional in nature. All this is difficult, but it is helping cement the position of the chief supply chain officer within the leadership team.

Of course, this greater prominence is also accompanied with greater responsibility. In particular, the chief supply chain officer has to implement appropriate systems and processes, build new relationships and partnerships, and accept broader accountability. Furthermore, many are realizing that the journey towards a more sustainable supply chain is only at its earliest stages today. Over time, there will be a shift away from trying to make existing supply chains more sustainable, towards developing wholly new ones that demand alternative business models. Little of this can be done in isolation: at one extreme, marketing is needed for crucial customer insights, while at the other extreme, key decisions need to be closely coordinated with procurement, Information Technology, suppliers and other stakeholders. Naturally, one close collaborator will be the chief financial officer, who will demand a closer understanding of the link between supply chain sustainability and the wider health of the business. This will be the focus of the next report in this series.

Please visit our website for previous and future reports and podcasts in the series: [www.accenture.com/sustainabilitylessonsfromleaders](http://www.accenture.com/sustainabilitylessonsfromleaders)



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Our holistic approach encompasses strategy, design and execution to increase revenue, reduce cost, manage risk and enhance brand, reputation and intangible assets. We also help clients develop deep insights on sustainability issues based on our ongoing investments in research, including recent studies on consumer expectations and global executive opinion on corporate sustainability and climate change. Find out more at [www.accenture.com/sustainability](http://www.accenture.com/sustainability).

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