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Driving CO₂ out of the supply chain and off retailers' shelves

June 2012



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About PwC’s Sustainable Business Solutions practice

Widely recognized as a leader in sustainability consulting and thought leadership, PwC’s global network of firms offers more than 400 dedicated partners and client service professionals with sustainability expertise, serving more than 60 countries.

We have a strong track record for helping clients in the retail and consumer packaged goods industry drive financial, social and environmental value through:

- **Strategy development:** Finding the right sustainability drivers to create business value through revenue growth, risk management and cost reduction
- **Performance management:** Integrating sustainability across the organization to achieve operational efficiency and transformational results
- **Sustainable finance and tax:** Capitalizing on green tax credits and incentives
- **Reporting and assurance:** Delivering actionable, investment-grade sustainability reporting and communications
- **To learn more, visit:** www.pwc.com/us/sustainability

Sustainable business practices are good for the planet, good for consumers, and—yes—good for business

A business truism from the middle of the last century went like this: what was good for General Motors was good for America.

A contemporary version of that assertion would not only be more international in scope, but might even encompass our entire natural environment: what is good for planet earth is good for global business.



Is that motto too broad? To my mind, not at all. The challenges we face related to issues such as climate change, water usage, waste reduction, and natural resource preservation have as much meaning for business as any other facet of life. In fact, the private sector is currently brimming with ideas and energy focused on producing solutions to many of the vexing, complex obstacles to achieving sustainable societies.

I'm proud to say that some of these leading-edge ideas are coming from our very own PwC professionals. In the past year, I've met and talked with our people throughout the firm who are busy conceptualizing, planning, implementing and managing a range of sustainability projects for our clients. Rarely a week passes that sustainability issues—in one form or another—don't come up in my conversations with members of the C-suite. When those discussions occur, one of the topics that inevitably arises is how companies can reduce their carbon emissions.

This paper, *Driving CO₂ out of the Supply Chain and off Retailers' Shelves*, goes one step further and tackles head on how companies—large retailers specifically—can reduce these emissions throughout their supply chain. For global retailers that don't manufacture most of the products they sell, this perspective has sparked a whole new sustainability agenda. After all, any retailer who is selling and realizing profit on a product is tacitly endorsing the energy expended during its production and lifecycle.

But it's also good business for retailers to work with suppliers to achieve these emissions reductions. Simply put, it costs less to be sustainable. Less packaging, fewer petroleum-based plastics, less diesel and gasoline used, means an ultimately less-expensive product on the shelves.

The companies featured in this report provide everyday proof of that. Walmart is working with hundreds of their suppliers to reduce carbon emissions and is anticipating cost reductions. IKEA has successfully launched an energy conservation program with its suppliers. Canadian Tire measures waste avoidance and in 2010 saved approximately \$6 million in avoided costs.

Earlier this year, I was with a client who was enthusiastically expounding on his company's sustainability efforts. For him, sustainability wasn't just another business issue. It's a fundamental mindset that the best companies are now adopting, one that will allow them to make cleaner products, factor important environmental and social concerns into their strategic decisions, and make smarter long-term judgments about the kind of products and services they want to offer. Sounds to me like a good way of doing business.

I hope you enjoy this paper.

Best regards,

A handwritten signature in black ink that reads "John Maxwell". The signature is fluid and cursive, with a long horizontal line extending from the end.

John Maxwell
Global R&C Leader

A “perfect storm” for retailers looking to reduce carbon emissions

Driving CO₂ out of the Supply Chain and off Retailers’ Shelves takes an in-depth look at the recent trend of big retailers attempting to reduce carbon emissions throughout their supply chains and achieve critical cost savings. Our interviews with global sustainability and supply chain leaders at various retailers in different stages of this endeavor reveal many different paths to success.

The past several years have seen a number of major global retailers announce goals to eliminate millions of tons of carbon from their global and local supply chains, giving them a direct stake in how their suppliers source, design, manufacture, and deliver products.

Report context

It’s no secret that energy is a major business cost, either directly or via the supply chain. But until recently, those indirect supply chain costs and associated carbon emissions were seen as an issue primarily for suppliers. Today, global retailers are beginning to work more collaboratively with suppliers, and even opting for less intensive supply models in order to reduce energy use—and the resulting carbon emissions—in the supply chain. This report from PwC begins to explore the impact this trend is having on the retailers themselves, their many different suppliers, and consumers.

Since 2010, a number of major global retailers have announced goals to eliminate millions of tons of carbon emissions from their global and local supply chains, giving them a direct stake in how their suppliers source, design, manufacture, and deliver products. Other retailers have taken a slightly more deliberate approach, initially asking for energy use and carbon emission data from top suppliers to better understand their supply chain footprint.

But regardless of an individual retailer’s strategy toward reducing supply chain carbon emissions, these ambitious initiatives beg a host of questions:

- Why are retailers focusing on carbon in the supply chain?
- How do retailers prioritize which areas of the supply chain to focus on?
- How do suppliers calculate and account for their carbon footprint?

- Who pays for measuring and managing carbon?
- Who benefits from the carbon and cost savings?
- Is there a consumer message behind this activity?
- Is this a universal industry approach?
- What unintended consequences are companies facing, and what can be learned?

This series of interviews with global retailers is PwC’s attempt to understand these questions and highlight the impact their answers will have on the industry.

Key recent carbon-related supply chain developments in the retail and consumer industry

PwC has observed many different sustainability initiatives gaining momentum within the retail sector, with particular focus on analyzing and reducing the amount of carbon in the supply chain. A selection of the most influential follow.

The first-ever environmental profit and loss account

The sports lifestyle company PUMA announced last year the results from its environmental profit and loss account (EP&L). The results disclosed the raw material production statistics for carbon and water consumption, as well as for other activities that affect the environment. As the first company to provide such details, PUMA has published an economic valuation of the environmental impacts caused by business-related resource consumption.

As part of PUMA’s long-term sustainability plan, the analysis was commissioned in recognition that producing and selling PUMA products has a wide impact along the entire supply chain. By identifying the most significant environmental impacts, PUMA will develop solutions to address these issues, consequently minimizing both business risks and environmental effects.



Both retailers and their suppliers are using product lifecycle analysis to begin to, first, understand where carbon emissions are concentrated in the supply chain and, second, to reduce them and save costs.

Sustainability scorecards

Sustainability scorecards are becoming increasingly prevalent within the retail sector, allowing companies to rate and compare suppliers on key metrics such as energy, water, waste, and carbon emissions, as well as more qualitative information. The wealth of data in scorecards is also increasingly being used in contract negotiations with vendors and suppliers. Perhaps most important, this information serves as a starting point for companies' attempts to innovate around carbon emissions.

A growing awareness of product lifecycle analysis

Product lifecycle analysis—the total environmental impact of a product from its manufacture to consumer use to final disposal—is increasingly being used to highlight and reduce carbon in the supply chain. Retailers are using the technique to pinpoint carbon emissions hotspots in product lifecycles and re-engineer them to reduce their impact and save costs.

Collaboration along the value chain

The Sustainability Consortium is an example of collaboration in the retail supply chain, and is aimed at improving informed decision-making for product sustainability. Made up of scientists and

engineers from major retailers (including Walmart, Tesco and Best Buy), universities (including the University of Arkansas and Arizona State University), governments and non-government organizations (such as the World Wildlife Fund), the Sustainability Consortium drives scientific research and the development of standards and IT tools to help retailers understand and address the environmental, social, and economic implications of products. Developing and maintaining global standards for the measurement and reporting product sustainability across the life cycle, as well as exploring the use of product sustainability information for buyers and consumers, is key to their work.

GHG Protocol corporate value chain (Scope 3) and product lifecycle accounting and reporting standards released

In October 2011, following years of development and piloting, the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) published two new greenhouse gas (GHG) Protocol standards. The Scope 3 and product life cycle standards provide methods to account for emissions associated with individual products across their lifecycles, and for companies across their value chains.

The primary goal of these standards is to provide a standardized step-by-step approach to help companies understand their full value chain emissions impact, leading to more sustainable decisions about companies' activities and the products they buy, sell, and produce.

The Carbon Disclosure Project (CDP) Global 500 Report 2011, written by PwC in conjunction with the CDP, gives the most insight to date on corporations' reporting about carbon in their supply chain. Of the 404 respondents to the survey, 72% reported on some form of Scope 3 GHG emissions. It is expected that with the release of these standards, the depth and consistency of reporting will only increase.

PwC Sustainable Business Solutions

PwC's Sustainable Business Solutions practice is working with companies to tackle the questions posed above. Our work with PUMA shows true leadership in the market and is evidence of companies in the sector continuing to mature along the risk/opportunity axis. As retailers gain a better understanding of their own operations, they are realizing, first, the impact they have on the environment, and second, the huge potential upside by focusing on efficiency in the supply chain.

Jim Stanway of Walmart



“It’s important to point out that it’s not necessarily the big companies we are talking to, those that are particularly disciplined at making these changes and innovations. The nimbleness, the creative thought required—sometimes it’s the mid-size company that’s best prepared to seize on such a great opportunity.”

Walmart’s ambitious plan to make the supply chain greener

When Walmart announced in 2010 its ambitious goal of eliminating 20 million metric tons of carbon emissions from its global supply chain by the end of 2015, the news sent ripples through the retailing industry. As details unfold, it’s becoming clear that the program affords Walmart and its suppliers the opportunity not only to have an impact on carbon emissions, but also to increase profitability.

Walmart is working with its suppliers in product categories in which the company sees high potential to reduce embedded carbon, such as clothing, dairy, and meat. Embedded carbon is defined as the volume of lifecycle GHG emissions per unit multiplied by the number of units Walmart sells. A product lifecycle includes:

- Sourcing of raw materials
- Manufacturing
- Transportation
- Customer use
- End-of-life disposal

For a GHG reduction measure to count toward the 20 million metric ton goal, its implementation must have been influenced directly by the Walmart initiative, and would not have occurred without Walmart’s participation. In other words, the measure can’t have already been in development before the beginning of Walmart’s reduction program.

PwC, an external adviser to Walmart on the carbon emissions program, spoke with Jim Stanway, who, as the company's senior director of global supplier initiatives, has direct responsibility for the GHG initiative.

When Walmart announced its new emissions requirements, what reaction did you receive?

JIM STANWAY: The suppliers' initial reaction has been to tell us about what they have already done to reduce their greenhouse gas emissions, to tell us their story on corporate social responsibility. The first thing we have to communicate is that what we want to talk about is creating a plan going forward: What ideas do you have? What is it that we can do together to help increase financial as well as environmental value? The challenge for us is getting to the right people, finding those who make the decisions.

Who is the ideal person or group within a supplier's organization to walk into your office and discuss this? Is it the CFO? The product development team? The supply chain or sustainability folks?

JS: It depends on the organization—it's a matter of who has the ability to make a decision. Companies have different ways to do this and different job titles for the people they empower to make such decisions. In some cases, I have seen a number of non-C-level people who have been given the authority to try something new.

Are you finding that companies have thoroughly considered the potential payback from the work that Walmart is asking them to do?

JS: Yes, many companies have considered the payback, but traditionally they've limited capital spending to things like acquisitions. So you have companies that are potentially quite sustainability-minded, but they haven't standardized their environmental efficiency yet. This program provides them the impetus to act.

Also, it's important to point out that it's not necessarily the big companies we are talking to, those that are particularly disciplined at making these changes and innovations. The nimbleness, the creative thought required—sometimes it's the midsize company that's best prepared to seize on such a great opportunity.

Have your emissions standards changed the way companies think about the supply chain?

JS: Yes, I believe they have. A lot of CPG companies have always thought of themselves as being at the head of the supply chain, without considering the consumer use and the disposal of the goods they produce. Then we came along and issued our standards and elicited these almost shocked expressions. The carbon footprint of supply chains has never received this amount of attention, so it hasn't been at the heart of companies' business strategies.

How do suppliers coordinate their internal teams to identify sustainability initiatives that are good for their business?

JS: The CFO is the ultimate authority on capital questions and the one person who can empower teams within the organization to pursue innovative projects. But if those teams must always assure a certain rate of return, it creates a sense of defeat whenever the issue of capital spending comes up. Yet these kinds of energy-efficient projects often have short paybacks. We believe the hurdle rates for investment can and should be the same as those for non-sustainability investments.

Have you seen a big impact from government incentives for sustainability projects? Are your suppliers knowledgeable about available incentives, or are they missing opportunities?

JS: The goal of our projects is to deliver good IRR's without the need for public funds. That way we can scale the product, idea or process globally and not restrict it to one state or country. Replicable, scalable, and profitable projects make not only financial sense but, in my opinion, are how major environmental and consumer benefit will be achieved.



“Many companies are quite sustainability-minded, but traditionally they’ve limited capital spending to things like acquisitions. This program provides them the impetus to act.”

One of the things we’ve been talking about with CFOs is where their companies are on the road to sustainability assurance—to creating definitions and reporting metrics. Is this something you have discussed?

JS: We haven’t got into that discussion, because we are focused primarily on just the assurance of the results from our project. If you are talking about Walmart’s environmental reporting, this project has more assessment procedures than any other sustainability project right now within our company.

Generally speaking, whenever a company has good discipline and project design, it includes having a system for ensuring

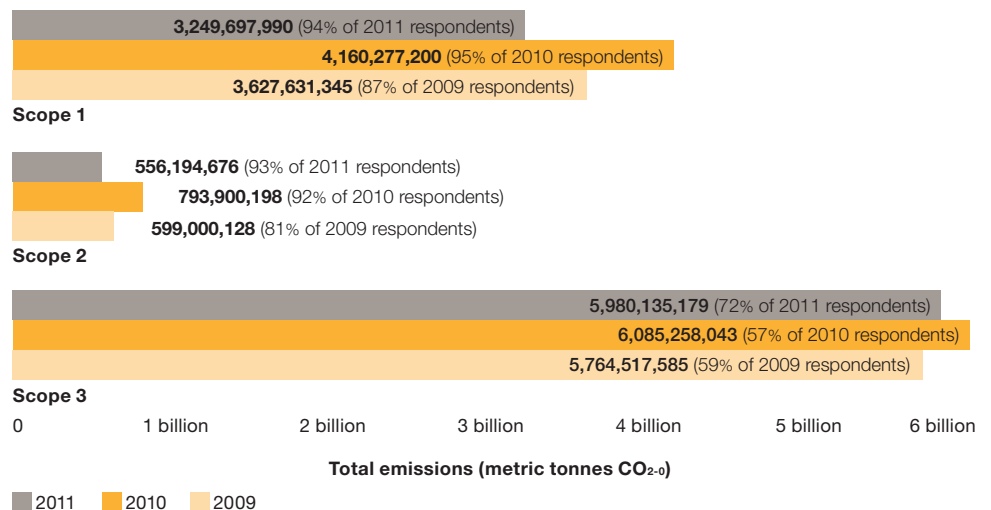
quality and an effective feedback loop with real data. That way they can prove to the CFO that the project is a good investment.

I don’t believe this requires any different skill sets from those needed to create and oversee financial metrics and assurance. The systems might need only mild tweaking to address the environmental as well as financial attributes. This is probably why the Big Four accounting firms are expanding into this area. The core competencies are very similar.

Do you see assurance as an essential part of any sustainability initiative?

JS: Yes, I do. You have headaches later on, in my opinion, when you want to say something and people are wondering if what you’re saying is real. Having quality metrics and assurance is fundamental.

Global 500 total emissions disclosure year on year



The level of Scope 3 (supply chain) emissions compared with Scope 1 (direct) emissions highlights the challenge ahead for retailers.

Source: Carbon Disclosure Project 2011 S&P 500 Report

Ron Jarvis of Home Depot



“I am surprised on a consistent basis by the advances that many of our suppliers are making on the sustainability front.”

Good business in disguise

Home Depot’s Ron Jarvis, head of sustainability at Home Depot, views working with retailers on CO₂ reduction as good business, plain and simple.

Are suppliers actually able to react to retailers’ goals for measuring and reducing the carbon footprint of specific products? Can they actually afford it? Is there technological capability for them to actually measure that carbon footprint?

RON JARVIS: They definitely are capable of these things. If anyone’s cracked the code for an industry on measuring their carbon footprint, then everyone else can crack it, too. When you’re dealing with corporations and manufacturing facilities, they execute the annual plan and budget. So, if it’s budgeted, yes, they can do it. If it’s not budgeted, at first they push back and say “no, we can’t.”

For example, in 1999 we sat down with the plywood industry and said, “We want to move our hardwood plywood to FSC-certified hardwood plywood.” We met with the industry as a group. And as a group they pushed back and said, “No, we can’t do it, it’s too expensive and there’s not enough inventory.”

The next morning, my phone was ringing off the hook with individual suppliers saying, “Hey, we can do it. We’ll make it happen.” Companies look at things and push back and say, “It’s not built into the budget. We can’t make it happen.” But, when it comes down to them getting a purchase order or losing the business, then they do make it happen.

“Retailers are the connection between consumers and manufacturers.”

That’s quite reactive on the part of the suppliers. Are there companies coming to you proactively with ideas for making their products more sustainable?

RJ: There are. Nearly all companies have a group dedicated to making their products more sustainable. It pretty much has become the expectation for all companies. We do see some of the newer, smaller companies being very aggressive in their sustainability message—those that are trying to create a niche, some type of competitive advantage to get their foot in the door.

Generally, retailers seem slightly further ahead than their suppliers in terms of thinking about sustainability in a number of instances. How do you see that playing out in the next five years?

RJ: Over the next decade or so I think we will see much more transparency. And that’s what we need. I don’t need a scorecard, and I don’t need someone determining subjectively what the single environmental attribute that’s important to them or their company is. I need transparency into their entire manufacturing process.

Technology has given us the tools; we just need to align those tools with our inquiries. I want to be able to review a product that uses natural resources and, with a quick scan, learn where the product originated and whether there were negative environmental impacts for that region. I expect the same detailed data for products on chemicals contained, transportation impact, energy used, and so on. Within 5–10 years, that level of detailed information on products will be available.

And this information will need to be on the label at the point-of-sale, so the consumer can see the environmental impact of a purchase.

In other words, some kind of label that incorporates lifecycle analysis?

RJ: Yes, something along those lines, but with more detail that lets one quickly check the environmental attributes that are of most concern. Not all consumers have the same “eco” agenda. A young mother may only be concerned with chemical content, while others may be more concerned about rainforest depletion. All of that information should be available from scanning the label.

There would need to be an education piece of this for the customer as to what all that information means.

And whose responsibility will that be, to educate the consumer so that they can actually understand what that information is about, just as they would on a nutritional label?

RJ: I do think the retail industry and manufacturing industry will have to lead the consumer on this one. Retailers are the connection between consumers and manufacturing. Retailers get feedback first from consumers and environmental non-governmental organizations about products. As the manufacturers develop their messaging, they will work with the retailers on the best way to educate the consumers on how to read and compare the data.

Is there something that Home Depot does to actually work with suppliers to support them in their energy reduction or similar initiatives?

RJ: We have established a supplier sustainability council, and this group works with any supplier that is seeking guidance on their initiatives. The whole process can be a steep learning process for suppliers. Many companies look at a single environmental attribute and set their sights on altering or eliminating that attribute without considering the trade-offs.

For example, a supplier will say, “We want to be a more sustainable company, so we’ve switched from wood to plastic paint brushes, because wood is bad.” They may not have researched the alternative, but only reacted to a negative campaign about wood. We may have a different viewpoint on which product is the best alternative. So, talking with the suppliers and making sure they are considering lifecycle assessment is critical.

How do suppliers react to that kind of pushback?

RJ: It depends on where they are in the transition process. If the transition is complete, it is met with concern. We have had a couple of instances where suppliers have spent time and money on something that they thought was going to be the best ever “eco” idea. After reviewing their changes and their product, we did not endorse their environmental claim. That’s usually a pretty tough road.

So we really try to reward them when they take steps that are effective. I am surprised on a consistent basis by the advances that many of our suppliers are making on the sustainability front. We ask about 35 suppliers to attend meetings of our supplier sustainability council. We also

run our suppliers’ inquiries and successes by our merchants and, in many cases, our merchants have been the sounding board for the suppliers.

We also have an environmental supplier of the year, which we’ve had since 1999. Each year, we look at everything that our suppliers achieve in sustainability, and from there we pick one supplier to be the Environmental Supplier of the Year.

Are there any companies around the world that you think have done a really good job in connecting with their supply chain on sustainability?

RJ: Not that I would say is the beacon that everyone else should follow. I will say that, in the sustainability movement, we have evolved in our terminology, and that’s important for several reasons.

When “sustainability” became a part of the environmental vernacular, it was welcome on the agenda for most boardroom meetings. The focus moved from who is protesting to how companies get ahead of the issue, lower environmental impact, and save money.

So, all of a sudden, every major company in the world was saying, “Hey, here are the positive environmental impacts of what we are doing.” So, as for the longevity of sustainability, I think it’s going to be around forever, because it’s basically good business decisions coupled with their environmental impact—good business in disguise. When you reduce your packaging, you reduce your operating costs and your transportation costs. Companies are seeing the positive social and economic impact, as a sustainability program often creates cost-outs that allow companies to fund work on environmental issues.



Any thoughts on how a sustainability program or department should be structured within a retailing company?

RJ: Well, we used to have our environmental department inside of community affairs, which reported up to marketing. But the result was a disconnect between policy makers and the implementors, the merchants.

So, in 2000 we changed that by taking a merchant with cross departmental experience, and giving this person responsibility over the environmental/sustainability department, reporting directly to the EVP of merchandising. This created a new sense of importance and awareness among our merchants and in our supply chain.

Regardless of structure, however, the bottom line for retailers is that to make an impact in product sustainability, they need to approach the challenge from three angles: monitoring their products for environmental concerns, creating sustainable operations, and developing a sustainable distribution network. There must be “champions” embedded in each of these initiatives, with annual goals and reporting.

Jeanette Skjelmose and Thomas Schaefer of IKEA



“With IKEA, there is a synergy between the commercial strategy and the sustainability strategy... It’s actually helping us to become more profitable.”

IKEA’s strategy to integrate sustainability pays off

Each year IKEA stores attract more than 600 million visitors worldwide. With such broad reach, IKEA is aware that it can make an impact with sustainably-produced products.

Compared with other retailers, IKEA has the advantage that it owns all three phases in the value chain. IKEA designs the product and its packaging, sources the supply, and owns the communication and sales of its products. In October 2008, IKEA started the Supplier Energy Efficiency Program (SEEP), in which its largest and most energy-intensive suppliers are engaged to discover potential energy-conserving improvements. Together with IKEA, the suppliers have been able to save millions of dollars. PwC spoke with IKEA’s Jeanette Skjelmose, sustainability manager, and Thomas Schaefer, sustainability project leader, about how sustainability is one of four strategic cornerstones for the iconic furniture retailer.

IKEA is the largest furniture retailer worldwide. Where does sustainability come in?

JEANETTE SKJELMOSE: We are conscious of our impact on people and the environment, so we feel a strong will to act responsibly in all that we do every day. The need to economize on resources conforms well to the IKEA corporate culture and our constant quest to reduce costs. This is why we focus on making all IKEA products more sustainable. That is how we achieve the largest impact—by providing these low-cost, responsibly-managed choices to a large group of consumers. By multiplying the improvements we do with the volume, we are making a significant difference.

We're equipping 150 of our stores and warehouses with solar panels—3,790 panels to be exact. Over the coming year, we will implement various energy-saving alternatives to conventional light bulbs, which will be phased out in all our stores. Our kitchen range, too, will offer lots of smart solutions, such as water-saving taps, appliances that consume less energy, and a brand new system for sorting household waste. We are also working hard to develop new, more sustainable home furnishing products and solutions, using less and better materials without jeopardizing quality and function.

Those examples sound nice, but IKEA is a commercial company which probably wants to maximize its sales. What are the strategic and commercial drivers for sustainability within your business?

JS: It's actually helping us to become more profitable. With IKEA, there is a synergy between the commercial strategy and the sustainability strategy. The business drivers are to reduce cost to secure availability; stay competitive; be productive and efficient; and provide quality through product development. In this way the sustainability agenda contributes to the lowest price. Our current overall business strategy is based on four cornerstones: growth, low-cost, people and sustainability.

What are some of the supply chain risks and opportunities associated with this business strategy? How has it affected your supply chain strategy?

THOMAS SCHÄEFER: Some of our larger business risks related to sustainability are within the supply chain. For example, we need to ensure that a supplier can deliver its products. If there is a reduced availability or quality of resources, this may become a risk. This is also why water availability and water quality in China and India is high on our agenda. We work with our suppliers to ensure resources are not wasted. In fact, one of our Indian textile suppliers purifies more water than it actually needs to provide more clean water for the people living around the mill.

With regard to energy, we have made a big step forward with SEEP. We first estimated the largest energy consumers within our supplier base. These included suppliers of textiles, glass, stone ceramics, plastics, board materials and aluminium production facilities. We started with around 100 suppliers, and then worked with them—using energy experts and our own IKEA specialists—to determine the actual energy use, as well as potential for improvement. We mapped the energy and carbon intensity and the total carbon footprint, also considering the different types of energy (fossil and renewable).

And how do you support your suppliers in reducing their energy use?

TS: Well, first of all, by visiting them and helping them find potential improvements. We want them to be more competitive and productive, so that both IKEA and the supplier benefit.

In a few cases, the management of a supplier did not directly agree that investing in energy efficiency might be beneficial. This situation is more likely to occur in the Asia-Pacific region, since the awareness levels in these countries can be low. It sometimes requires a certain stubbornness from our business teams to convince suppliers that once they get active, the benefits are obvious.



“Social and environmental responsibility do not have to come with a higher price tag.”

After that realization, suppliers take full ownership. Return on investment can be sky-high; we have examples of 750%. Generally, savings between 20%-40% are possible and have been achieved in many cases.

What tools do you use to find these potentials for improvements?

TS: Obviously you need skilled people to identify areas for improvements. We have developed a simple measurement tool that can be used by suppliers and our business teams to monitor the energy efficiency performance and the carbon footprint.

To get started with improvements, we have developed guidelines that specifically address certain industries or production processes, as well as common technologies like compressed air or heat distribution systems. These guidelines provide basic information and orientation to detect potential improvements. The tool allows us to—working together with suppliers—calculate potential energy savings. Variables such as energy price and volume can then be properly accounted for.

At IKEA of Sweden, we are now developing a sustainability product scorecard, which will measure the sustainability aspects of all our products. It will follow 11 criteria, among them energy consumption, social

compliance, packaging, and so on. The scorecard will be used internally to measure our progress and further improve.

So what does this all mean for the IKEA consumer?

JS: By engaging with our suppliers and by improving the design of our products, we have saved energy, materials and costs on various products. IKEA customers do not have to choose sustainability over style, function or price. We will not put an ECO-label on our products or provide information about the amount of energy or CO₂ that has been used in production for every specific product.

But we are happy to share with our stakeholders on an overall level what we have done and where we still have more steps to take. We have nothing to hide, but we want our customers to be able to choose freely out of style, price and function, knowing that we are doing everything we can to constantly make all products more sustainable. We don't want customers to feel torn between their style preference and a good conscience, or feel that they need to pay more for a more sustainable product. Social and environmental responsibility do not have to come with a higher price tag. If they do, buying with a good conscience becomes a privilege for rich people. That is not what IKEA stands for.

Mary Capozzi and Hamlin Metzger of Best Buy



“In the past, we had a collection of wonderful initiatives; today we are focusing on where we can take a leadership role.”

Plugging into Best Buy’s sustainability program

With 4,000 storefronts in 15 countries and 180,000 employees spanning the globe, Best Buy’s philosophy is that, ultimately, sustainable business practices aren’t something that a company achieves on its own, but rather through positive collaboration with industry groups and coalitions. In fact, some of Best Buy’s biggest suppliers have established programs to reduce GHG emissions related to the products they make, which positions the consumer electronics giant well down the road to being a more environmentally sustainable company. We spoke with Best Buy’s head of corporate social responsibility, Mary Capozzi, and her colleague, Hamlin Metzger.

Could you describe Best Buy’s sustainability approach?

MARY CAPOZZI: For Best Buy, the scope of sustainability encompasses the social, the environmental and the economic. It’s really taking the long-term view. The best way to remain economically viable is to be both socially and environmentally sustainable. I would also say that we are very much maturing in how we think about sustainability. In the past, we had a collection of wonderful initiatives; today we are focusing on where we can take a leadership role. In fact, we have heard loud and clear from our stakeholders that they expect us to be the sustainability leader in the consumer electronics industry.

Sustainability is being pushed down into the supply chain by a number of factors, and retailers are picking up on this. Then there's the resulting effect on suppliers. How does Best Buy view this dynamic?

MC: It's interesting because other large retailers have a much larger private label business than Best Buy. We do have our exclusive brands business, and for these products we can have an impact on our direct manufacturers. But the majority of items on our shelves come from the likes of Sony and Panasonic and Samsung, who have started their own GHG reduction programs. I would say that, in certain ways, some of our suppliers may be ahead of Best Buy in terms of their thinking in this space.

HAMLIN METZGER: And the reason for that, partly, is that our major suppliers serve some of the retailers that are publicly trying to achieve carbon reduction in their supply chains—so that push from big retailers starts suppliers down the path. To Mary's point, our focus in this area has been more on our own private label business.

Does that mean that you find a lot of those suppliers are actually approaching you around sustainability initiatives?

MC: They approach us about sustainability if they think they have a product that will reach an audience because of its sustainable attributes.

So bringing in the consumer side of sustainability?

MC: Absolutely. Appealing to consumers based on being produced in an environmentally-friendly manner.

HM: We also partner with some of our vendors with our recycling program. We have everyday take-back in all of our US stores. So regardless of the brand or where it was purchased, we'll collect it.

To touch on the private brand aspect of Best Buy's supply chain, what kinds of discussions have you had with those suppliers?

HM: Working through retail and consumer electronics industry groups, we're helping our vendors find consistent ways to be more energy-efficient. We've also focused on the social aspects of sustainability with these companies, under the auspices of the Electronics Industry Citizenship Coalition (EICC) and the Global Social Compliance Program. In both those programs the focus is on human rights and expanding into environmental impacts.

What about transportation and packaging?

HM: In terms of transportation, we have partnered with the EPA in their SmartWay Program, and now 100% of our transportation partners are SmartWay-certified. With packaging, our primary focus again has been with our exclusive brands, and we have taken several steps to reduce plastics and packaging size in general. A great

example is the home theater cords that run from the television to the speakers. Previously these cords were sealed in strong plastic packaging. Today, the product has been repackaged in essentially just a little cardboard loop, which is actually a dramatic change in its packaging and carbon footprint.

MC: Hamlin worked to create a set of questions so we can start talking with our various vendors about things they may be doing that we don't know about—so we can apply those techniques to our private label.

Does Best Buy have conversations about product life cycle analysis with its vendors?

MC: We've been thinking about this from the perspective of what I would call a "middle way." On one hand you have the consumption world that all of us have created and live in, and on the other hand you have sustainable consumption, where consumers feel as if they must wear the same coat for 20 years. So how do you design products so that consumers can still have a new coat or favorite electronic device every few years, but it doesn't have a detrimental environmental impact? Lifecycle assessment, however, is really tough to do. You can get bogged down in the data, and if you don't have a valid data set, how do you share it in a useful way? But overall, we're very interested in the issue and have had discussions with our private label suppliers about everything from product design to end-of-life and recycling solutions.

In the US, with us just being who we are—tending to be more brash—perhaps we are more willing to set a goal, take the hill, and shout about it.

Right now there are upwards of 300 or so different eco-labels throughout the world that companies can obtain for their products. Do you see confusion in the marketplace around these labels and green indexes?

MC: We've talked a lot about an index specifically in the Consumer Electronics Working Group of The Sustainability Consortium. Some of our biggest vendors really want to have a consistent index. But we know that customers are weary of indexes that may or may not be validated through good science. In a perfect world, everybody would have good underlying science so that claims were backed up but, in the world we live in today, there's just no functional way to do that. Not to mention the fact that different countries apply these labels in their own ways.

HM: We are definitely looking for coalitions, and even some sort of government involvement, in terms of establishing eco-standards and validating them.

Are there unintended consequences in the quest to remove CO₂ from the supply chain?

MC: Hamlin and I were in China earlier this year and we were touring factories. One of the things that was pointed out to us was the introduction of air conditioning into the factory dormitories. Now, if you go

to your supply chain and say, "Lower your carbon emissions," maybe they turn off the air conditioning. It's an easy thing to do. It doesn't affect the product and suppliers can produce a carbon reduction savings. But it's not the right thing to do.

Are consumers in any way driving this sustainability agenda with their product choices or their concerns around products?

MC: Every other week a different study comes out, and one week they say consumers want green but aren't willing to pay more, and the next week they say consumers don't care, and the week after that they say the consumer segment for green and sustainable products is growing strong. So I don't really know. Occasionally someone will come in and say, "What's your greenest laptop?" But there's no stampede at the door. However, we continue to see customers purchasing Energy Star Appliances, which tells us that there is a demand to save energy, and that's something we can work with.

Overall, do you think suppliers are actually capable of responding to the retailer push for lower greenhouse emissions for products?

MC: I would say in our sector they can do this, because many of the factories—in China and elsewhere—were set up within the last 20 years. You know, Shenzhen is a new phenomenon, Guangdong and that whole region. So they are more technologically advanced than in the rest of Southeast Asia and some other regions.



"We know that customers are weary of indexes that may or may not be validated through good science."

Tyler Elm of Canadian Tire



“Like I say to my colleagues, ‘culture eats strategy for breakfast.’ You really have to tailor the strategy to the culture, and understand where you can push the envelope and where you have to move a little more deliberately due to the culture.”

For Canadian Tire’s Tyler Elm, vice president of corporate strategy and business sustainability at the company, sustainability isn’t just an environmental initiative, but a solid business strategy and an opportunity for the entire organization to perform better, deriving economic benefits from environmental performance.

How was the idea that there is much more to sustainability than corporate social responsibility sold within the organization? Was there immediate acceptance or did you have to really push the idea?

TYLER ELM: We engaged senior leadership around their business objectives and identified links between day-to-day business operations and sustainability. From there, we developed a pro-forma business case to demonstrate the value of what could be achieved by pursuing business sustainability as an innovation strategy.

The general approach I take is to focus on the key economic levers and concentrate initial efforts on the natural overlap between the core business operations and sustainability. So, for example, we initially focused on eco-efficiency and greenhouse gas reductions from pursuing increased energy productivity in transportation and in the heating, lighting and cooling of our stores. You make the connection between efficiency and the environmental benefits, and then develop operational metrics that are relevant to the business. Once you have achieved results, you can then start to branch off into more complex issues, such as the application of lifecycle approaches to the value chain and sustainable design.

It’s important to build a concept that embraces the whole system. What most retailers do is manage within silos and departments, so they’re not looking at things from a system-wide perspective. But if someone in merchandising makes a decision, it has implications throughout the value chain in terms

of costs and the environment. With a more global perspective, you can start looking at those implications. We use Sustainable Innovation Networks to bridge operational silos and facilitate systems-thinking and collaborative value chains. The networks are composed of key stakeholders from multiple functions throughout the value chain.

What about your merchants? How do you go about making a cultural change in the way they are incentivized to consider sustainability in their decision making?

TE: Initially, it was through engaging the most senior leaders about how sustainability is relevant to the business and the value that could be derived from systems thinking and switching from a CSR responsibility-mindset to a strategy and performance mindset. We obtained the buy-in to develop a few key sustainability innovation networks around some core areas—such as products and packaging, transporting products to stores, and the operation of our stores and distribution centers—and then started to measure results.

By letting those measurements see the light of day with the senior executives, opportunities start to build. It's the old adage: What gets measured gets managed. If you can't measure it, you can't achieve it. Within a year, business sustainability metrics began to appear in operating plans because they were relevant to the business.

Packaging initiatives are a good example. We measure waste avoidance, GHG avoidance, and cost avoidance. The ongoing integration of sustainable practices into Canadian Tire's business operations resulted in the completion of 438 initiatives in 2011. Combined, these initiatives are forecasted to avoid more than \$5.6 million in costs, 2,451 tons of waste and more than 6,900 tons of greenhouse gas emissions annually. These results are the equivalent to the energy use and emissions

from powering more than 1,080 Canadian homes. Additionally, Canadian Tire's business sustainability strategy began reporting incremental revenue in 2011, as in-store events across the country drove \$2 million in retail sales of energy-saving products.

Merchants at Canadian Tire have a target for merchandising income. And now the cost avoidance that's generated by business sustainability projects goes towards their annual merchandising income targets, helping them meet their bonus plan.

You mentioned packaging as an example. What kind of success have you had in making packaging lighter or just using less?

TE: We've had some very significant results when we do both package right-sizing and product light-weighting, because in combination you can yield some tremendous savings.

We have a product, a folding table that measures about 30 by 72 centimeters, of which we sell more than 175,000 each year. Both the table and its packaging were altered so that the material use and weight was reduced by 11.5 percent and the volume by 15 percent. With the reduction in freight and material costs we're saving about \$375,000 annually. And that's just with one product.

Are you thinking about reducing water in the supply chain, reducing waste at the source even beyond the right-sizing and material efficiency? Is there a more holistic approach?

TE: Definitely. We're looking at sustainable design but, due to our size and the fact that not all of our products are private brands, we're focusing first and foremost on products that we can influence. And those, of course, are our private brand products, like Blue Planet.

We're implementing more specifications and guidelines with respect to packaging and products all the time. We're looking primarily at the supply chain and innovation, both in terms of efficiency in the actual assets themselves, and also the systems efficiency. There are a number of things that we're doing to make our supply chain more efficient.

It's really a holistic approach to get energy out of the value chain and pursue lifecycle approaches for products and services. We are looking at water, but right now the business case is not there. We're also looking at carbon price risk, which I define as the probability of an economic loss associated with the price of carbon.

From a practical perspective, how does Canadian Tire go about managing those 400 or so vendor relationships, in terms of educating them about your view of sustainability and what you're trying to achieve?

TE: You know, we're relatively small compared to global retailers, so for sustainable design, it's often very focused on a strategic category. But with packaging we can approach them with general guidelines and principles to allow them to know what we're doing internally, how they fit into that, and what they can do to influence the outcomes. Nonetheless, I am very excited about some of the products we are bringing to market in 2012.

What's the reaction been from senior management and others in the business to the success you're demonstrating at the moment?

TE: Initially the reaction was surprise, but now senior management is a key and vested stakeholder in scaling the strategy.



We talked a bit before about the value chain. So, how far back would you say you are interacting with the supply chain? Is it all the way back to the raw material growth, or are you still more focused on the manufacturing plants?

TE: We've scoped out the carbon footprint embedded in the products we sell through EIO-LCA (environmental input-output lifecycle analysis). But in terms of engagement down the chain, we're just starting to get into sustainable design. Again, we are mostly working with our strategic vendors, including those that manufacture the products that we sell a lot of and where we have influence—primarily our private brands.

Tyler, you're one of the few people in the world who's done this at more than one retailer. How has your experience been different at the different companies?

TE: The three retailers I've worked with have been very different from each other, in terms of culture, breadth of products, volume, and scope of operations. So yes, I've had to adjust. Like I say to my colleagues, "culture eats strategy for breakfast." You really have to tailor the strategy to the culture, and understand where you can push the envelope and where you have to move a little more deliberately due to the culture.

At Canadian Tire we really took the lead from our customers, who were telling us: "We'll buy environmentally-preferable products, but tell me what you're doing first." So we focused on packaging, transportation, buildings and the movement of product through our supply chain. Canadian

consumers tell us that the most important thing we can do for sustainability, as far as they're concerned, is reduce packaging. So that's one of the areas where we started.

I think that Canadian Tire has been most successful in terms of formally getting sustainability into the business, having it reflected in the core financial documents and business operating plans, and getting it linked to variable pay. It's very much becoming a part of the DNA.

Even with all the examples that are out there, there are a lot of CEOs who still don't get the link between sustainability and the success of the business.

TE: I think the problem is that many still approach sustainability from a corporate social responsibility perspective. But I see CSR as an evolutionary dead-end if you do not break out of the "responsibility" mindset and complement that with a performance mindset. CSR is a nice platform, but not an actual driver of material outcomes. If you have a CSR initiative and that's where it ends, you're not going to see the material economic and environmental benefits that can only be achieved by integrating sustainability with business operations. There's a maturation process that needs to take place, and companies go through stages.

Stage one is a sort of combative stage where companies fight regulations. I call stage two a compliant defense. You're really managing the liabilities—the compliance and risk management. Stage three is selective offense, in which isolated pockets of sustainability are viewed as value-creating. This is where you have that overlapping mandate to ship products cheaply and more efficiently while meeting greenhouse gas reduction goals.

I refer to stage four as strategic value. That's where companies looking at sustainability in terms of competitive strategy, leveraging off the eco-efficiency, and looking at new revenue sources. Lastly, stage five is where organizations have an embedded strategy that is intrinsically connected with the busi-

ness value and mission. That's when management is using sustainability as a filter when evaluating what business to enter and why.

Stage five has management asking: Given our assets, core competencies, skill sets, and what we've developed by applying sustainability in a competitive strategy, how can we use all that to get into new businesses and drive new revenue opportunities?

Right now, at Canadian Tire, we're really focused on stage four, strategic value, but we're also looking at what businesses to enter and how we can create new revenue streams.

So I'd say we're solidly in that strategic value stage and looking to continually improve. Again, my goal is to scale what we have developed, while exploring new business opportunities.

Everything you just said makes a lot of sense. And there are very, very few companies, if any, that have graduated to stage four or five.

TE: That's right—and we still have a long way to go ourselves. I mean, the only entry we've had into strategic growth right now is that in the next few months we're putting about four megawatts of solar on some stores in the Greater Toronto area.

That takes about \$1.5 million of capital per store. After looking at the value chain and where the costs and benefits were, we decided that our best value could be derived from leveraging the project management skills of our real estate professionals and by leasing the roofs of the stores. We're not building as many stores as we used to. Today we're more focused on increasing return on invested capital per store and making the most out of our portfolio.

We're working with third-party financing to fund the solar installations, and earning project management fees associated with the installation of the systems—it's going to add about \$1.2 million to our net earnings this year. That's not a lot, but it's only from the first 16 stores, and we're going to expand to another portfolio of stores next year. That's a start and a step in the right direction.

Hugo Byrnes and Angelica Parra Cuadros of Ahold



“We have committed to **reducing our carbon footprint** per square meter of sales area by 20 percent by 2015.”



Ahold focuses on getting it right

Ahold is an international food retailing group based in the Netherlands. The company operates leading supermarket companies in Europe and the United States. With such broad reach, Ahold is aware of the fact that it can make an impact through its operations and its products by acting responsibly.

Ahold's position in the global food chain enables the company to focus on providing customers with a diverse product offering. At the same time, Ahold focuses on helping its suppliers to meet the high standards that are required to minimize negative impact on the environment and society. In line with this, Ahold CEO Dick Boer has communicated an ambitious strategic target to engage all suppliers in focusing on sustainability by the 1st of January 2015. PwC spoke with Ahold's Hugo Byrnes, director of product integrity, and Angelica Parra Cuadros, sustainability coordinator, about how this ambitious plan is shaping Ahold's sourcing strategy.

“The next step down our value chain is looking at the impact of our suppliers.”

Consumer spending in developed markets is still weak. How do you plan to thrive and at the same time invest in sustainability?

HUGO BYRNES: The food retail sector is highly competitive and it is directly linked to consumer loyalty and confidence to spend. To help our customers, we have made it a priority to continue to improve value and offer a wide range of affordable products and healthy choices. We have also provided information in our stores and on our customer websites about stretching food budgets further and eating well for less. In addition, we focused on helping those most in need in our communities, including supporting food banks in both Europe and the United States. At the same time, we successfully completed a €500 million cost reduction program at the end of 2009 and then announced a new three-year €350 million program to be delivered by the end of 2012. It is essential that we continue to reduce costs and improve efficiency so that we can invest in price, service and quality for our customers. In this line of thinking, investing in sustainability has been part of our growth strategy.

What have you done so far?

ANGELICA PARRA CUADROS: Along with over 500 of the world's largest companies, we signed the Copenhagen Communiqué and supported the Consumer Goods Forum initiative on climate change. We have committed to reducing our carbon footprint per square meter of sales area by 20 percent by 2015. To help us achieve this, we are building more energy-efficient stores, introducing environmentally-friendly new technologies, and beginning to use energy from renewable sources.

In the United States, we are installing solar panels and skylights in a number of our stores. Stop & Shop and Giant-Landover introduced 845 energy efficiency measures to reduce the electricity consumption in their stores, resulting in energy savings of 51 million kilowatt-hours. Reducing the amount of electricity we use is an economic as well as an environmental opportunity.

How about your impact further down the value chain, with your distributors or suppliers?

APC: Ahold takes a methodological approach to minimize its impact. For the first time, in 2008, we measured our carbon footprint based on internationally-recognized standards. As such, we look beyond the scope of our own energy consumption and have taken some significant steps towards measuring the “scope 3 emissions” in our supply chain. Various programs have been initiated in this area, and we have started to reap the benefits. In the United States, in 2009, we saved a total of 3,490 truckloads and 816,000 km by streamlining routing techniques and improving distribution loading practices. In Europe we converted 90% of our fleet to more efficient vehicles. The next step down our value chain is looking at the impact of our suppliers. For certain critical commodities, we are engaged in initiatives targeted at the whole supply chain where social or environmental problems arise. These commodities include coffee, tea, cocoa, some types of seafood, palm oil and soy. The climate impact of these commodities is not yet directly measured.

So how does this ambition to reduce your carbon footprint affect the way you engage with your suppliers?

HB: We seek to find a balance in the mix of various requirements. Sustainability criteria is a consideration, not the leading factor. All Ahold companies impose high demands on the products that are sold in their stores. This, of course, means that they also impose high demands on those who supply these products. We co-operate with suppliers to systematically improve the social, environmental and ethical quality of products and services, particularly those sold under Ahold brand names. In the long run, Ahold will favor those suppliers whose values and principles are aligned with our own.

Do you support your suppliers in reducing their energy use?

HB: In 2010, Ahold joined the Sustainability Consortium, an international organization consisting of retailers, consumer goods producers, universities, research institutes, government bodies and NGOs. The consortium is working to improve the science of analysis and developing strategies and tools to assess the sustainability impact of products. It focuses on business-to-business reporting rather than on communication to the consumer. We have joined this and other similar groups to collaborate and achieve results more quickly.

To be honest, we do not meddle in our suppliers' processes. That wouldn't fit our role as a retailer and would be very difficult to achieve. We expect them to improve on various requirements, but we do not police this. In our engagement with our suppliers we follow our standard process of procurement. This includes procurement criteria on safety and social compliance audits.

For our corporate brands we have additional requirements related to the sustainability features of the product. These are subsequently audited against the required standards to ensure the claims related to the label are certified. On all our organic corporate brands we use external certification.

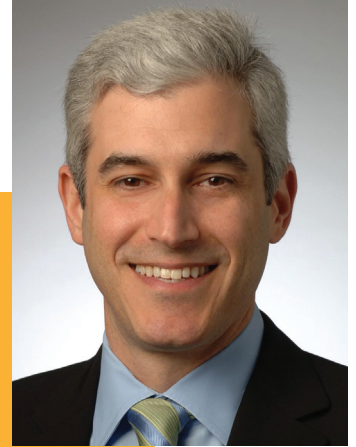
What are the lessons learned that you would like to share with other retailers?

HB: There are various areas where a retailer should be prudent in its approach. First of all, in the procurement phase the criteria need to be clear and easily interpretable for the supplier to understand the requirements related to safety, social compliance or the environment. As we are now involved in the Sustainability Consortium, we do see the need for reliable data exchange. Our experience is that it is important to have accurate data.

In terms of communicating to our consumers, we prefer to make it as easy as possible for them. For example, we don't print every aspect of a product on our product labels; we also provide a lot of information online. Therefore we prefer to communicate about specific issues in different ways.



Andrew Winston, founder of Winston Eco-Strategies and sustainability advisor to PwC



“I’m not exactly sure what large companies are waiting for. They can often tell suppliers what they want directly—they often have real leverage.”

Goals may not change behaviors—but incentives will

Andrew Winston, founder of Winston Eco-Strategies and advisor to PwC, is the author of *Green Recovery*, a strategic plan for using environmental thinking to survive hard economic times. He is also the co-author of *Green to Gold*, the best-selling guide to what works—and what doesn’t—when companies go green. We interviewed Andrew about why companies, including savvy retailers, are looking to the supply chain to reduce both cost and greenhouse gas.

Andrew, what is currently driving companies’ intense focus on the supply chain?

ANDREW WINSTON: There are a couple of answers to that. First, organizations have come to realize that the majority of their environmental and social footprint is not within their direct control.

Now, many companies no doubt knew this intuitively. But today, as more and more of them perform life-cycle analyses and gather data from their suppliers, they see hard data illustrating that the vast majority of their environmental impact does not lie within their own four walls. So, if companies want to address their carbon footprint, that means both moving back into the value chain to work with their suppliers and moving forward to design products that use less energy, as well as consider the footprint of product end-of-life.

The other big factor I'd characterize as cultural—but driven by technology. The transparency that technology enables allows anyone anywhere in the world to demand information about what's in every product and where it was made. More than that, people can tweet, blog, or post a video about a company (or its suppliers) wasting water in India, employing children, or not safely and properly recycling products. It enables an openness that can destroy a reputation quickly – so smart companies are getting ahead of this pressure.

Companies are asking suppliers for sustainability data to reduce the carbon generated during the product lifecycle. But are these companies actually using that information to make purchasing decisions?

AW: That's the critical question, isn't it? Let's be honest. Most retailers don't have a lot of extra time, effort and money to closely check every supplier. So they're pressuring suppliers to change their practices on their own, in part by making the compelling case that it's in their own interest to save money and create value.

But are most retailers really changing procurement decisions? Not quite yet. It's still very rare to hear that a company's procurement department is explicitly choosing suppliers based on some environmental scorecard. I think it is happening, without formal metrics or incentives for buyers, in companies where sustainability is deeply ingrained, like Patagonia or IKEA.

But I'm not exactly sure what large companies are waiting for. They can often tell suppliers what they want directly—they often have real leverage.

So what you're saying is that the execution comes down to the buyers and how they are incentivized. If one of the stated incentive goals for buyers is to reduce waste, packaging, and carbon in the products on their shelves, you might see them holding suppliers to account more often.

AW: Right; change what they're paid on and change what they're rewarded on. Don't just give someone an award as a buyer or a merchandiser for the great deal they cut or marketing program they established. Give them a bonus for bringing in the product with the least packaging or with the lowest carbon footprint. Of course it saves money to reduce packaging or cut energy use, so where they see a big cost savings, retailers may already be rewarding the "greenest" product without saying it directly. But we could be accelerating the trend even faster if we really had the buyers change their behavior.

What about pressure from the consumer?

AW: I barely talk about consumers in my work. I don't think that they're the drivers in almost any case, to be honest.

"As far as people around the world in general, I think there's every indication that, if given the chance, they will consume as much as Americans. I mean, people are people."

Are you talking about US consumers?

AW: Yes, to be fair, that's probably my mostly US perspective. In the EU there may be more of a groundswell from consumers about sustainability. But it's funny, even though we Americans are perceived as big, ugly consumers, our standard of living allows the wealthy to be hugely demanding about things like organic and locally-grown food, for example. So there is actually a very big market in the US for many "green" products.

Also, as far as people around the world in general, I think there's every indication that, if given the chance, they will consume as much as Americans. I mean, people are people.

From a practical perspective, these giant retailers have hundreds of thousands of suppliers. How can they get these suppliers to calculate a carbon footprint and start reducing their energy emissions?

AW: It's an interesting question: are there even enough people with technical knowledge to help these suppliers get into a position to comply? To do a detailed life cycle analysis? No. But there are plenty of people within an organization who can measure energy and water use, for example, to get some basic metrics, if not a perfect analysis. I'm a big believer in directionally-correct data. And information collection at that level is already happening at most large companies.

I am what I like to call "data optimistic," meaning that with all of this life cycle analysis going on and all the data being collected, we're going to hit a tipping point at some point where it's going to be expected that companies can do cost accounting for carbon and say, "This is

how much energy was used in making the product, this is what it costs, and this is the part of our total impact that applies to this specific customer." It's really an extension of cost allocation and cost accounting tools we've had for many years.

Some retailers we have spoken to have even said that kind of information could wind up on the package.

AW: I don't know if it will end up on the package, but we will eventually have data that's good enough for retailers to make decisions about what products they put on their shelves, regardless of whether the consumer ever sees the information.

It's interesting to think about it from a reporting perspective and how that information would get communicated. Today's financial statements took hundreds of years to evolve into a standardized approach, so we're very much in early days in terms of sustainability reporting.

AW: Right. And even with financial statements, things aren't set in stone. Even the word "cash" is not perfectly defined. So why can't we evolve and modify our regular financial statements to include sustainability aspects?

From your interaction with senior management executives, what are you hearing about current attitudes in the C-suite toward carbon reduction?

AW: It certainly seems to be a big priority. It comes back to the cost of the whole carbon footprint of the company and the potential for innovations that will cut those costs.



Companies are starting to wake up to the reality that there is potential for really innovating around the total footprint by engaging everybody in the supply chain.

In the conversations you're having with executives, how do they treat sustainability from an organizational perspective? Where does it reside in the organization?

AW: Most big companies now assign somebody, and they put it somewhere distinct from other departments. They've got a chief sustainability officer, or at least something like it. The challenge, though, is not just thinking, "Okay, we've got that checked off." They've got a VP of HR. They've got someone working at R&D. They've got counsel. They feel like they've got that sustainability thing checked off.

That's why it's rare to find a CEO like Coca-Cola's Muhtar Kent, who has said that he's the chief sustainability officer. He's saying, "This is my job." I think very few top-level executives get to that point: that sustainability is critical to profitability and, frankly, the survival of the business.

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Special thanks to:

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Ron Jarvis of Home Depot

**Jeanette Skjelmose and
Thomas Schaefer of IKEA**

**Hugo Byrnes and
Angelica Parra Cuadros of Ahold**

Tyler Elm of Canadian Tire

**Mary Capozzi and
Hamlin Metzger of Best Buy**

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