

The carbon management strategic priority

Leading firms reap cost savings, risk mitigation and revenue rewards



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VERDANTIX

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Carbon Disclosure Project

www.cdproject.net
+44 (0)20 7970 5660
info@cdproject.net

“The benefits of strong, early action on climate change outweigh the costs”

Stern Review on the economics of climate change

With the growing scientific evidence and media awareness that climate change associated with carbon emissions is a serious global risk, there is a clear imperative for a worldwide response to tackle the problem.

Significantly, even the few remaining sceptics can no longer ignore the issue. Those who accept the evidence are increasingly requiring their suppliers and other business associates to take positive action in limiting their environmental impact, and government programmes such as the UK’s CRC Energy Efficiency Scheme make certain actions mandatory. Carbon management is now a very real matter for most companies.

The challenge for business has been to identify the full range of impacts that carbon emissions and climate change may have on their activities. Interserve’s focus on carbon management internally has yielded positive results including a 20 per cent reduction in electricity use at our head office and improved efficiencies in the use of our vehicle fleet, while the advice we have given and have put into practice on behalf of our clients has achieved even more.

This report helps evidence the case that carbon management is a strategic issue to business providing both risks and opportunities across a wide range of areas beyond the immediate direct financial impact.

Steven Dance
Executive Director, Interserve

Executive Summary

Carbon management is moving up the corporate agenda and many companies now understand the need to handle their emissions. But what makes the management of carbon strategically important for business and will it grow as a priority?

The outcome of this qualitative report shows us that carbon management is an issue on which to act; it is a matter of key strategic importance and one that will grow over the next ten years. As leading firms force broad action on carbon management in their markets and value chains, those companies that ignore the issue risk being left behind.

Multiple market drivers are increasing the importance of carbon management:

Carbon management: These include energy costs, the growing cost of carbon, brand reputation and energy supply risks. In addition, the need for effective management of carbon is increasingly driven by issues such as employee expectations and talent management, the financial risk from the physical impacts of climate change, competitive positioning, investor requests and customer expectations. The cumulative impact of costs and social and market expectations make carbon a strategic issue for companies today.

Carbon's strategic importance is expected to grow over the next ten years:

Firms expect the impact of factors driving carbon management, and the value at stake, to continue to increase, making the issue a long-term priority. As the importance of these drivers increases across sectors, there are various tipping points that could impact their acceleration over the coming five to ten years. These could be triggered by phenomena such as climate-related natural disasters, energy supply crises and new national regulation created in response to global agreements on climate change regulation.

Carbon management must be embedded through the business:

The impacts of the different market drivers are not solely the responsibility of the sustainability department but are felt right across a company: energy costs impact finance, employee expectations demand communication between sustainability and human resource teams, and the inclusion of carbon management in customers' procurement criteria affects sales, marketing and supply chain departments. Individually the different factors related to carbon management are set to grow, but they are also interrelated and interact in many ways, bringing growing challenges for decision makers and existing governance structures.

Significant cost savings and potential new revenue streams dispel the carbon cost myth:

Firms leading on carbon reductions are already experiencing benefits in the form of cost savings through areas such as energy reduction, waste minimisation, travel substitution and a lowering of fuel use. In addition, revenue-fuelling innovation and marketing benefits open up new revenue streams.

Action on carbon reduction reduces business risk:

Risk mitigation benefits span regulation, brand trust and resource scarcity.

Individually the different factors related to carbon management are set to grow, but they are also interrelated and interact in many ways, bringing growing challenges for decision makers and existing governance structures.

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Part 1: The rise of carbon as a strategic priority

Recent legislation, government debate, international summits, questions about scientific practice and media attention have ensured that climate change remains firmly on the mainstream agenda. Does any of this, however, make carbon a significant issue for business? Clearly firms are faced with a multitude of competing pressures. Nonetheless, increasing costs, risks, regulatory developments and stakeholder expectations combine to keep carbon on the agenda. But should climate change and carbon management be considered a strategic priority? That is the central question with which this report, aimed at senior managers and executives, is concerned. In order to explore firms' current perception of carbon management Verdantix spoke with 10 Heads of Sustainability, Carbon, and Climate Change from global firms with revenues over \$1 billion. The firms were selected from the industrial goods and services, chemicals, food and beverage, banking, health care, insurance, technology, telecoms and media sectors. The analysis presented also draws extensively on previous Verdantix research and the bank of data reported to CDP.

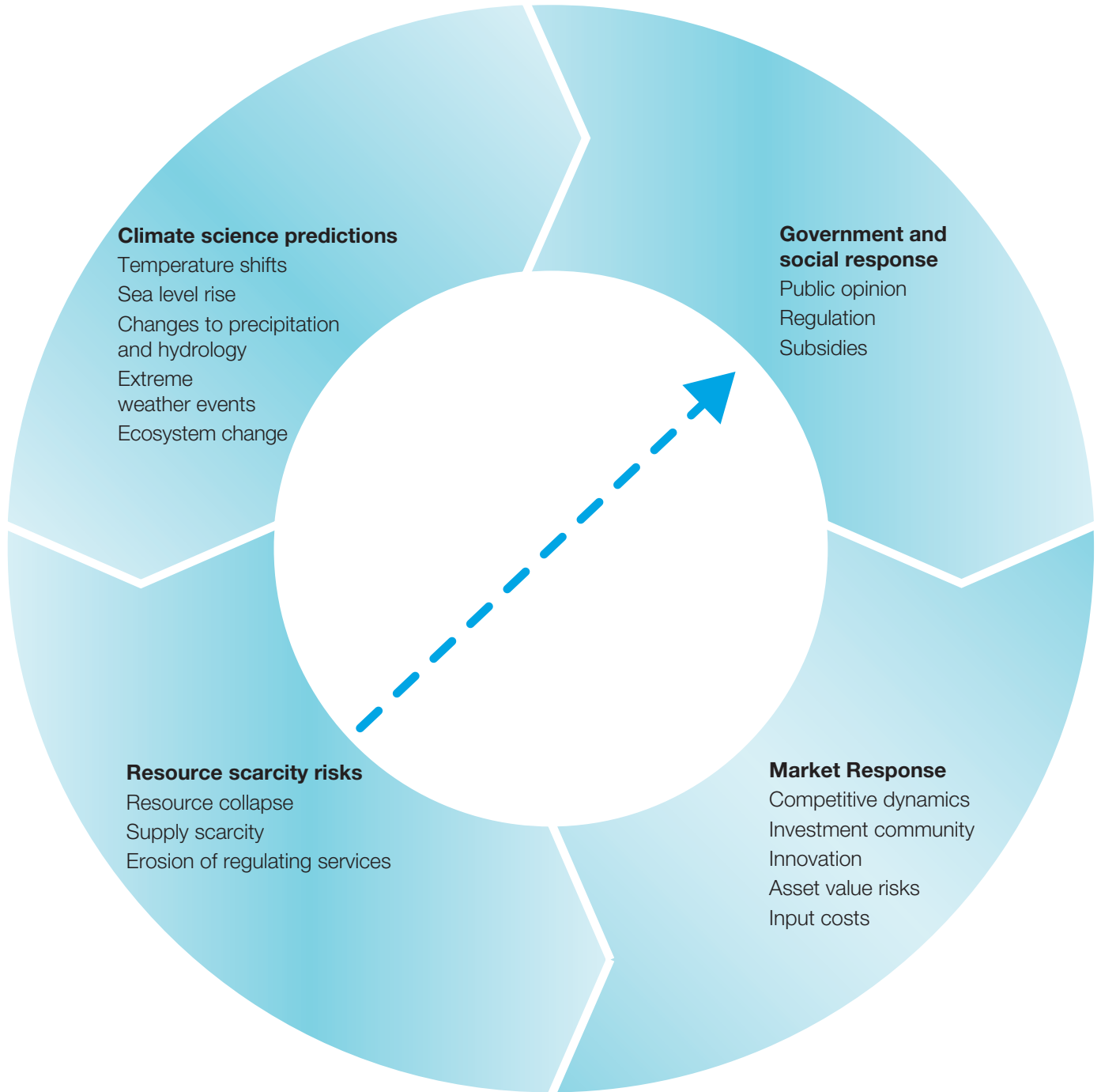
What makes management of carbon a strategic priority?

Costs and risk factors alone make carbon management an imperative for many firms

Historically firms have treated carbon management as an issue for corporate social responsibility, or in some cases actively lobbied against regulation seeking to constrain carbon emissions. Has anything changed? Verdantix research finds that carbon management is a priority for many firms today because:

- **Preparing for energy supply risks can reduce carbon emissions.** Decreasing energy consumption through energy efficiency measures is a good starting point for tackling energy supply risks. However many firms are going further and implementing low-carbon onsite energy generation. Firms like Google, Wal-Mart, and Fed-Ex expect cost savings and security of supply from the Bloom Energy Servers they have installed.
- **Carbon regulations present a financial and reputational risk.** Regulatory schemes like the EU ETS make carbon financially material for energy-intensive firms today. Additional risks are posed by increasing coverage in phase III of the EU ETS, discussion of minimum carbon prices and the reputational issues posed by the UK CRC for brand-conscious firms.
- **There is a strong correlation between reducing carbon emissions and energy costs.** Improving energy efficiency is the most immediate and effective action firms can take to reduce their carbon emissions. Often new opportunities for energy saving are found when looking through a carbon management lens. Verdantix interviews with heads of sustainability and carbon management programs has found that in some cases senior executives were unaware of the full scale of energy costs until a carbon management program was initiated.

Figure. 1: The multiple and interrelated impacts of climate change on firms



Evolving social change and market expectations reinforce carbon as a priority

Energy and carbon costs and risk factors have increased the importance of carbon management for many firms. In addition, firms' understanding of the multiple impacts of climate change on both themselves and the markets in which they operate (see Figure 1) has evolved rapidly in recent years. The need for effective carbon management is now increasingly driven by:

- **Generational and social change impacting expectations on employers.** Many firms recognize the growing importance of their action on climate change to employee engagement and attracting new talent. Communicating carbon management performance is particularly important to firms with an ageing workforce and those looking to recruit new graduates.
- **Forecasts of negative climate change impacts.** Sectors obviously impacted by the physical and ecological impacts of climate change are compelled to make carbon reductions and encourage wider action. The insurance and coffee growing industries understand well the enormous financial risks that unmitigated climate change will create. Credible carbon management efforts increasingly form part of firms' social responsibilities. Firms operating in regions of the world experiencing negative climate impacts appreciate the importance of this issue to local stakeholders.
- **Competitors investing in carbon management.** Verdantix interviews indicated that executive awareness and engagement increased dramatically when peers announced carbon management plans. Many stakeholders measure company performance relative to industry peers, creating clear benchmarks and underperformance risks. In sectors such as retail and technology carbon performance clearly contributes to competitive positioning.
- **Challenges from the investment community.** Investors increasingly expect disclosure of carbon management performance and climate risks. Witness the US Securities Exchange Commission's (SEC) recent recommendation that climate change risks be included as standard practice for company reporting. 2,500 organizations worldwide disclose their actions on climate change through The Carbon Disclosure Project (CDP), which acts on behalf of 534 institutional investors managing \$64 trillion of assets. Inclusion in sustainable investment indices like the FTSE4Good and Dow Jones Sustainability Indexes has become a key objective for some firms.
- **Growing customer expectations.** Consumers may not yet demand detailed carbon data, but carbon management performance is rapidly becoming an issue of brand trust. Consumer goods firms and retailers in particular recognize the importance of action on climate change to their brand image. Business customers increasingly ask for carbon footprint data and challenge carbon management policies. In 2009 Wal-Mart requested CO₂ emissions data from 100,000 suppliers.
- **Procurement criteria demanding carbon management performance.** Increasingly procurement criteria include a significant weighting for carbon management. In particular, firms supplying public sector organizations like the NHS and large retail customers are experiencing increasing pressure from carbon-linked or sustainability procurement criteria which can stand as high as 15% (up from a more typical 5% a few years ago).

Executive awareness and engagement increased dramatically when peers announced carbon management plans. Many stakeholders measure company performance relative to industry peers, creating clear benchmarks and underperformance risks.

Carbon management will grow as a strategic priority

Carbon is a strategic issue for many firms today due to the cumulative impact of costs and social and market expectations. However, questions in the media over the practice of climate scientists and regulatory inertia at the international level may lead some executives to believe that carbon management is unlikely to last as a priority. Studying the raft of regional, national and state-level legislation on climate change should leave no doubt that policymakers are committed to carbon regulation, though the form it takes may be in question. Nevertheless, should firms perceive carbon management as a long-term priority? Verdantix research indicates that firms expect the impact of factors driving carbon management, and the value at stake, to increase over the next 10 years. The strategic importance of carbon will increase due to:

- **The cumulative impact of a combination of factors across the firm.** Multiple drivers with impacts across the firm combine to elevate carbon to the level of a strategic priority. Increasing energy and carbon costs impact finance, sustainability weightings in procurement criteria affect sales and marketing, and the expectations of new graduates demands strong communication between CSR and human resources. IT departments are tasked with global implementation of sustainable business software, and logistics managers are tasked with optimizing and 'greening' the supply chain. The relative importance of the factors detailed in Figure 2 varies across sectors, but the overall impact is that the total value at stake will increase over the next 10 years.
- **Increasing governance complexity and shifting goalposts.** The multiple impacts cutting across multiple business functions create new governance challenges for firms. In addition the rapidly evolving market response creates constantly shifting goal posts. Strategies for carbon management need to be regularly refreshed. Decision makers grapple with multiple, complex and interrelated impacts stemming from climate change predictions (see Figure 1).
- **The growing importance of individual drivers.** The factors defined here (see Figure 2) are clearly interrelated, and interact in many ways. Individually, the impact of all drivers are projected to increase over the next 5 to 10 years. The breadth of geographies and industries covered is likely to increase, but also the depth of impact within regions and sectors.
- **Discontinuities or tipping points in projected trends.** There are several types of discontinuity or tipping point affecting the trends identified in Figure 2, that could occur within the next 5 to 10 years. Most prominently, natural disasters perceived to be related to climate change will deeply impact public opinion, impacting business through increased stakeholder expectations and indirectly through government action, spurred on by renewed voter interest. Other notable discontinuities include a global agreement on climate change regulation, which will free engaged governments to tighten national carbon policies and push more recalcitrant governments into action.
- **The actions of leading firms.** Leading firms are forcing broad-based action on carbon management in their markets and value chains. By taking a public leadership position they increase internal awareness and stoke competitive responses within competitor organizations. As they invest early, leading firms raise the bar for the minimum acceptable action on carbon management.

Figure 2: Factors driving carbon as a strategic priority and their evolution

Market driver	Impact on business	Affected business units	Trend	Tipping points / discontinuities
Energy costs/ price volatility	Energy costs have a bottom line impact. Supply crises and price volatility create significant uncertainty and financial risks.	Finance, Energy, CSR / Sustainability	Near term Increasing	Energy supply crises
Carbon costs / fines for non-compliance	Financial risk and reputational risks.	Finance, CSR / Sustainability	Increasing Already material in some sectors, in some geographies	Global agreement on climate change regulation
Customer expectations	Consumers and business customers challenge firms and request carbon data. Responsible action on climate change may be an issue of brand trust.	Sales & Marketing CSR / Sustainability IT Logistics / Supply Chain	Increasing Present: Perceived as an issue of brand trust Future: Customer demand for specific carbon information increasing slowly.	Linked to public opinion, which will be strongly influenced by climate-related natural disasters
Procurement criteria	Procurement criteria include a significant weighting for carbon management performance	Sales & Marketing CSR / Sustainability IT Logistics / Supply Chain	Increasing Public procurement weighting particularly strong	
Competitors investing	Competitors acting on carbon builds awareness and raises market expectations.	Strategy	Increasing	Competitive dynamics creates positive feedback
Generational change	Shifting expectations of employers. Affects recruitment and employee retention.	HR, CSR / Sustainability	Increasing	Particularly relevant for firms with an aging workforce
Climate change impacts	For some sectors the physical impacts of climate change directly impact revenues. Strong links between climate change and human health mean that action for many is first perceived as a social responsibility.	Strategy, CSR / Sustainability	Increasing Perceived as occurring already in some geographies	Climate-related natural disasters
Investment community	Challenges for disclosure of information. Carbon management performance influences access to capital.	CSR / Sustainability IT Strategy	Increasing Performance expected to impact access to capital in near future	Climate-related natural disasters

Part 2: Market leaders are rewarded with tangible benefits

Firms expect the impact of factors driving carbon management, and the value at stake, to increase over the next 10 years.

Carbon management is rapidly becoming a strategic priority for all firms through the cumulative effect of a variety of drivers including energy and carbon costs, social change and market expectations. Of the 409 Global 500 firms responding to the CDP in 2009, 81% stated that a board committee or other executive body had overall responsibility for climate change. Leading firms have already recognized the need for carbon management and implemented successful management programs. Executives may simply view this as a necessary cost, but are there any benefits?

Leading carbon management programmes harvest cost reductions

Managers looking to secure a budget for carbon management initiatives will focus on those which offer a solid business case and a quantifiable rate of return. This research indicates that firms acting on the carbon management imperative can achieve significant cost savings. Key areas in which firms achieve cost savings through carbon management include:

- **Carbon emission hotspots.** By viewing processes and facilities through the carbon management 'lens', firms identify the optimal areas to act on in reducing both carbon emissions and energy costs. In some cases senior management was unaware of the extent of energy costs and waste until implementation of a carbon management programme. Sustainability and carbon managers summarize this as "follow the carbon, find the energy cost savings."
- **Optimizing logistics and the supply chain for carbon.** Logistics managers use carbon management as a driver for waste minimization. Fuel use and carbon emissions are reduced using both sophisticated tools like supply chain optimization software and efficient vehicle design, and simple methods such as driver training and tire management.
- **Recycling and material efficiency.** Firms implementing effective waste management programmes can reduce both carbon emissions and costs. The Dow Chemical Company identified waste material reductions of 70,000 tonnes per year through waste repurposing under the US Business Council for Sustainable Development's By-Product Synergy programme. These reductions translated into opportunities for annual cost savings of US\$15 million and CO₂ emissions reductions of 49,000 tonnes per year. Associated British Foods achieved cost savings and new income by using waste biomass from sugar manufacture (bagasse) for power generation.¹ The UK's National Industrial Symbiosis Programme, set up to assist firms in returning business waste to productive use, estimates that in five years member firms have saved £780 million and reduced industrial emissions by 30 million tonnes.
- **Substituting telepresence for business travel.** Leading firms are turning to travel substitution technologies such as remote working and telepresence in order to curtail carbon emission and shrink travel costs (see CDP/ Verdantix report "The Telepresence Revolution"). Intel identified travel cost savings of \$14 million after implementing videoconferencing technology as part of its sustainability strategy.

Successful carbon management can mitigate three types of risk

Firms are already experiencing the bottom-line benefits of successful carbon management programmes. Cost savings present a straightforward business case, with relatively easy to quantify benefits. Carbon management initiatives will often also generate co-benefits in the form of risk management which are much harder to quantify but nevertheless tangible. Executives should view the main risk mitigation benefits of carbon management as falling into three main categories:

- **Regulatory risks.** Most firms are likely to face carbon constraining regulation in the near future, whether at the state, national or regional level. Firms acting early reduce the financial burden of future compliance and increase their chances of high performance, with positive reputational impact. Early action and high performance enables firms to engage as a 'trusted advisor' with regulatory bodies such as the US Environmental Protection Agency (EPA). This closer working relationship further reduces the risks of unexpected and intractable future regulation.
- **Brand risks.** For many consumer-facing firms responsible action on climate change is an issue of brand trust. Increasingly firms are obliged to publicly disclose performance on scope I and II emissions. In addition, poorly managed environmental impacts in the supply chain create significant brand risks. Witness the rush of pledges and policies from shoe retailers following Greenpeace's report linking leather from the Amazon to deforestation. Leading firms audit their supply chain and provide support to improve their supplier's performance.

- **Resource scarcity risks.** The confluence of multiple factors including climate change will stress global supply chains, creating risks for the supply of resources such as energy, fuel and raw materials. Carbon management initiatives improving energy efficiency and reducing consumption of fuel and raw materials reduce a firm's exposure to supply risks such as price volatility. Initiatives implementing on-site renewable energy generation will also mitigate energy supply risks.

A mature carbon management program opens the door to new revenue streams

It has been established that carbon management can produce tangible benefits through both cost savings and risk mitigation. It is less obvious, however, whether early action on carbon management can lead to top-line benefits. Revenue rewards from carbon management are derived from:

- **Product and service innovation.** 20 years ago the Porter Hypothesis² outlined how environmental regulation can drive beneficial business innovations. Today firms examining product life-cycle emissions and mapping emissions to business processes can spark innovation across the value chain. For example, firms that have invested significant capital and human resources creating innovative internal carbon management efforts become recognized as experts. Internal initiatives such as Intel's work on datacenter efficiency have been leveraged into external consulting services.

- **Support for marketing.** Communicating carbon management performance is becoming increasingly important as a result of growing procurement weightings, particularly for the public sector. In addition, to become the preferred supplier to new markets such as the emerging 'smart energy' ecosystem firms need to demonstrate credible carbon management efforts. Firms need to avoid the risk of dissonance between their external marketing and internal carbon management efforts.

2. Porter Hypothesis – <http://ideas.repec.org/p/wpa/wuwppp/0407014.html>

Peer learnings: case studies from three carbon management leaders

HP's strategy revolves around four sustainability objectives: reductions in HP's operational footprint, reductions in the environmental impact of their products, development of new products that reduce customers' environmental footprints and advocating a public policy to drive comprehensive action on climate change.

HP reaps rewards from Carbon Management Vision, Governance and Strategy

HP is one of the world's largest technology firms with revenue of \$118 billion in 2008-09, and 321,000 employees worldwide. Due to the corporate culture fostered by HP's founders the firm has placed constant emphasis on environmental performance.

Four sustainability objectives

HP's strategy revolves around four sustainability objectives: reductions in HP's operational footprint, reductions in the environmental impact of their products, development of new products that reduce customers' environmental footprints and advocating public policy to drive comprehensive action on climate change.

HP has set itself absolute and relative environmental performance targets across its products and operations. Goals include reducing energy consumption and GHG emissions from products and operations by 40% below 2005 levels by the end of 2011.

Initiatives generate cost savings

HP has reduced business travel costs by 43%, partly through use of its own telepresence solution, HP Halo. HP's data centre design for energy efficiency, flexible working policies and real estate consolidation contributed to a reduction in energy consumption of 9% in 2009 over 2008.

Leadership mitigates regulatory and brand risks

HP's revenue grew by a CAGR of 8% between 2005 and 2008, while scope I and II emissions decreased by 6%. This means that HP cut CO₂ emissions by 31% per revenue unit,

a rare achievement. HP's year-on-year energy and carbon reductions place it in a strong position for dealing with future federal and state-level carbon regulations, such as AB32 in California. HP's leadership across multiple environmental issues, including carbon, has enabled it to take a 'trusted advisor' position with regulatory bodies such as the US Environmental Protection Agency (EPA). This close engagement enables HP to stay ahead of new regulatory developments and influence product energy efficiency standards such as the EPA's Energy Star.

In 2008 HP engaged 635 of their suppliers on sustainability issues, auditing 76% against the new Electronics Industry Citizenship Coalition standard. The firm plans to gain greater control over its indirect environmental impacts using product lifecycle analysis to examine impacts through multiple supply chain levels. Through combining audits with assistance to improve sustainability performance HP protects its brand reputation while avoiding a negative backlash from suppliers.

Products for the low carbon economy

HP's corporate culture has embedded environmental thinking across business processes, enabling exceptional internal reductions but also the rapid development of innovative new products. In addition to its existing telepresence solution HP is developing a range of products to enable more sustainable behaviours. The firm is targeting smart grid and sensor technologies for utilities like National Grid and Duke Energy, and in 2007 acquired EYP, a specialist consulting firm, to boost its sustainable data centre advisory work.

Marks & Spencer enhances brand and boosts eco-product sales

Marks & Spencer is one of the UK's largest retailers with sales in the 2009/10 financial year of £9.5 billion, and 76,000 employees worldwide. The firm states an ambition to be the world's most sustainable retailer by 2015.

All products to contain one Plan A attribute by 2020

In 2007 Marks & Spencer CEO Stuart Rose announced "Plan A", a sustainability strategy covering a wide range of ethical business and environmental issues, including climate change. The carbon management elements of the plan included a target to improve energy and fuel efficiency in warehouses and offices by 20% by 2012 and to source 100% of its electricity from renewable sources. In 2010 and update of Plan A extended this target to reduce energy use 35% per square foot by 2015. The firm also announced its aim that all products contain at least one Plan A attribute by 2020, with 50% achieving this by 2015. Plan A attributes include certification from bodies such as the Marine Stewardship Council, Fairtrade and the Forestry Stewardship Council.

Energy and fuel efficiency drive cost savings

The implementation of initiatives under Plan A improved store energy efficiency by 10%, and fuel efficiency by 20% between 2007 and 2010. Marks & Spencer estimate that these efficiency improvements and sales from new eco-products resulted in net revenues of £50 million from Plan A in financial year 2009/10.

Strategy mitigates brand risks

In the UK both Marks & Spencer and Tesco have very publicly staked a claim to brand leadership on sustainability, sensing that sustainability and climate change in particular are increasingly key issues of brand trust for consumers. In the UK the CRC poses regulatory risks, particularly to consumer-facing firms, through the publication of carbon management performance, beginning in October 2011. In addition to taking a leadership position on carbon management, Marks & Spencer aims to engage with customers and suppliers to cut their carbon emissions.

'Eco-' product enhancement

Marks & Spencer's Plan A is strong on brand enhancement and customer engagement, which provides a strong foundation for increasing sales of 'eco-product' lines. The firm aims for 50% of products to have a Plan A attribute by 2015, and to actively help customers identify and buy these products.

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Under the 2009 'Renault Commitment' management bonuses are influenced by the firm's environmental performance.

Renault acts early to achieve low carbon vehicle leadership

Renault is a global automobile manufacturer with revenues of €33.7 billion in 2009 and 121,422 employees spread across 118 countries.

Strategy and governance approach

Renault launched its first climate change policy in 1998 to capitalise on cost saving opportunities and respond to increasingly stringent manufacturing regulations. Since this time the strategy has evolved to exploit significant revenue generation opportunities in low carbon and zero carbon vehicles. Under the 2009 'Renault Commitment' management bonuses are influenced by the firm's environmental performance. Between 2007 and 2012 Renault has targeted reducing emissions from fixed sources burning fossil fuels by 10% year-on-year, and will require all investments in new equipment to yield minimum energy savings of 10%. The firm plans to cut vehicle energy consumption by 1.5% annually and has set targets for the reduction of their vehicles' life cycle emissions, aiming for 95% recyclable cars and light commercial vans.

Early action on life-cycle carbon emissions

Renault runs a range of energy efficiency initiatives for its operations, including the renovation of boilers, variable speed drive installations and lighting controls. The firm also has greenhouse gas reduction initiatives including the renewal of refrigerant units and a 545MWh solar thermal plant in Spain. Together these initiatives have helped Renault cut scope I GHG emissions by 17.4% between 2004 and 2008, or a revenue-adjusted decline of 12%.

From 2015 it will be mandatory for manufacturers operating in the EU to take responsibility for end-of-life vehicle disposal. Recycling raw

material, particularly metals, has significant carbon savings over use of raw materials. Recycling one tonne of steel scrap saves 80% of the CO₂ emissions associated with production of steel from iron ore. Renault has acted early in response to the EU regulation, training engineers and designers in environmental issues and monitoring performance with life cycle analysis and its custom-designed Index of Recyclability.

In 2007 recycling end-of-life vehicles generated cost savings of €400 million for Renault from the recovery of metals, rubber and plastics. In 2008 the firm sought to leverage this expertise by partnering with SITA, the recycling specialists, to build a network of car collection and recycling points across France. The partnership is now developing a recycling process for batteries from Renault's future electric vehicle ranges.

Renault aims for rewards from low-carbon vehicle leadership

Renault sees the development and sale of electric vehicles as a key element of its long-term business strategy. With this in mind, the manufacturer has partnered with over 50 innovators in the emerging electric vehicle market, including utilities such as Energie Acciona and A2A, the cities of Madrid and Massachusetts, Avis and Daimler AG.

Renault has committed to the emerging low carbon vehicle market by investing €60 million in environmental technologies in 2009 and planning the launch of four electric vehicle models in 2010. Investments in cutting CO₂ emissions from production and lifetime vehicle emissions aim to position Renault as the preferred supplier for this emerging market. These efforts have been rewarded with new revenues as Better Place, the electric vehicle infrastructure developer, has contracted Renault to produce 30,000 electric vehicles, while the French government has a contract for 100,000.

About the Carbon Disclosure Project (CDP)

The Carbon Disclosure Project launched in 2000 to accelerate solutions to climate change by putting relevant information at the heart of business, policy and investment decisions. We further this mission by harnessing the collective power of corporations, investors and political leaders to accelerate unified action on climate change. 2,500 organizations in some 60 countries around the world now measure and disclose their greenhouse gas emissions and climate change strategies through CDP, in order that they can set reduction targets and make performance improvements. Data is made available for use by a wide audience including institutional investors, corporations, policymakers and their advisors, public sector organizations, government bodies, academics and the public. For more information please see: www.cdproject.net

This study was produced by Verdantix

Verdantix is an independent analyst research firm that helps senior executives and change leaders with its strategic and commercial analysis of climate change, sustainability and energy issues. Verdantix clients include managers, advisers and entrepreneurs in blue-chip corporates, services firms, new ventures and government agencies. For more information please see: www.verdantix.com

The logo for Verdantix, featuring a large, stylized blue letter 'V' on the left, followed by the word 'ERDANTIX' in a smaller, blue, sans-serif font.

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For more information on Lavish visit www.lavishconnect.com

Lisa Lee
CDP
lisa.lee@cdproject.net

James Beresford
Verdantix
jberesford@verdantix.com

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