



# KYOTO CAPITAL

# In a new cultural and business environment where the Kyoto Protocol rules, knowledge will be a key ingredient to success. A few industry leaders explain how they're already hard at work using it to their advantage

By Anne Pappmehl

**M**aking the Kyoto Protocol work to a company's economic benefit requires the skillful deployment of its human intellectual capital. Easier said than done, but it shouldn't be surprising as we shift from the industrial age into the knowledge economy. Human intellect is the new means of production, and environmental problem solving is a logical place for its application. How does a company leverage its human intellectual capital to turn an environmental regulatory regime change into a competitive advantage?

Learn from the early movers. Suncor Inc., Shell Canada and Xerox Canada are three Canadian companies whose pioneering efforts in reducing emissions, energy and waste have put them ahead of the Kyoto regulatory curve and their competition. Alerted to the potential business consequences posed by environmental issues, particularly climate change, each company adopted an official environmental policy over

a decade ago. But, as all three admit, putting policy into practice, and making it profitable, has been and continues to be a learning process.

Perhaps the most striking lesson is the way this trio has learned how to apply business solutions to environmental problems. Most companies understand that an environmental incident such as a toxic spill, accident, or compliance violation can result in direct costs to the business in the form of heavy legal fines, clean-up costs, lost productivity and a tarried reputation. But simply avoiding environmental penalties doesn't necessarily drive economic value back to the company.

When environmental considerations are fully integrated into the business, the matrix changes. Business problem solving methods, wherever they're applied, seek to find creative and cost effective solutions. When employed within an environmental framework, this problem-solving approach can lead to ways to improve the company's environmental performance while saving the company money, or discovering new ways to make it.

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## House proud

Of course, it takes the collective skills, knowledge, education and imagination of all the employees within the organization to make it happen. And that starts with having the right people with the right skills, according to the needs of the sector and business. Shell, for example, keeps a large and diverse talent supply in house.

“You can bring in consultants for a lot of things, but they’re there for a limited time and they leave,” says Dr. Linton Kulak, general manager of health, safety and sustainable development and technology for Shell Canada. “We require a range of really deep internal expertise not just in environmental areas, but related areas like toxicology, medicine and health as they relate to the workplace, safety and the environment.”

The corporate culture is also important. Although not all employees are directly involved with environmental issues, they can integrate environmental thinking and practices into their jobs. “It truly takes a holistic approach from the organization with all employees looking at what they can do within their realm of responsibility,” says Darlene Crowell, media relations manager for Suncor. “That extends from the purchaser of office equipment buying the most energy efficient machinery, to the process engineer designing for minimal environmental impact, to the human resources professional recruiting individuals who share the company’s values.”

Within an organization, the senior environmental officer and his or her staff usually determine environmental directives and strategies for the company, and then deploy them to various business groups or units. However, obtaining the initial corporate buy-in can sometimes be challenging, admits Anne Stocum, Xerox’s manager of environment, health and safety market support. “These initiatives are always aided by being able to point out the economic benefits associated with them,” she says.

But once buy-in is achieved, and the corporate intellect engaged, economic and environmental benefits seem to flow freely, as Xerox has shown. “Our story really starts back around 1990-91, when we adopted a waste free strategy and applied it to our manufacturing facilities, our products and our products’ ability to enable our customers to be waste free,” says Stocum. Faced with high volumes of leased equipment being returned to the company, Xerox decided to integrate the waste free strategy into all its manufacturing operations, including its major outsourcer, Flextronics.

“We really took off in the early ’90s, finding ways to maxi-

mize the recycle benefits of the equipment that came back.” Old equipment was remanufactured into new products and parts, resulting in savings of hundreds of millions of dollars a year in addition to diverting the 167 million pounds of waste (as of 2001) from landfills in all of North America. “These efforts had a huge impact on the environment and the bottom line for Xerox,” says Stocum.

Stocum gives an interesting example of where an environmental benefit was discovered as a result of seeking to improve the quality of photocopy toner. The traditional method used for making toner involved grinding plastic with colourant and additives into fine particles. When Xerox researchers reversed the process, starting with very small particles and working upwards, they found they could save a tremendous amount of energy. “There’s a situation where the end goal was to get a toner that you can make and control, to get a better print resolution, but at the same time, we got this ancillary environmental benefit,” she says.

## Emissions missions

Xerox has subsequently incorporated the waste free concept to other areas of its business. It was the first company to install a power saver mode on its copiers; it has found ways to recycle print cartridges and toner, and has managed to reduce volatile organic compounds (VOCs) from its manufacturing. Many of these initiatives have had the secondary effect of reducing greenhouse gas (GHG) emissions.

GHG emissions bear greater consequences for oil and gas refining and production — Suncor and Shell’s stomping grounds. However, like Xerox the two energy companies have found economic payback through environmental problem solving, though in slightly different ways. An obvious innovation for them both has been improving energy efficiency. “When you reduce your energy use, it reduces your energy bill,” says Suncor’s Darlene Crowell. “Plus, you’re also reducing your CO<sub>2</sub> emissions, so there’s a direct payoff there.”

Dr. Kulak of Shell agrees. “I think energy efficiency is a pretty well-proven technology and mirrors the kinds of things we’ve been doing.” But he also notes that you can get to the point where energy reduction is no longer cost efficient. In such cases, the company might research other options. “There’s a wide range of activities one might explore apart from energy conservation activities within one’s own plant.” Shell has been researching initiatives such as separating CO<sub>2</sub> from process streams and injecting it into oilfields for easier oil recovery, as well as using and producing wind power.

He adds that discoveries are often made while in the process of doing. "Where we've had the best opportunity to really look at brand new technology and even develop it is through new ventures, and our oil sands is the best example of where we have a real state-of-the-art technology," something which Kulak believes will allow the project to start out with the lowest possible CO<sub>2</sub> emissions per unit of production, once it becomes operational.

Being involved in ambitious oil sands projects, both Suncor and Shell can expect to see significant increases in their greenhouse gas emissions. "You can't engage in growth that size and not have your emissions increase," says Kulak. However, both companies feel their advance work in reducing emissions will help them meet Kyoto targets without compromising their growth goals, though neither has ruled out the possibility of having to purchase emissions credits.

### Credit controversies

Emissions credits and trading is an emerging market mechanism, in which companies are given a limit by the federal government on how many tons of GHGs they can emit per year. Companies that reduce below the limit may obtain credits, which they can sell to companies that fall short of their reduction targets. In this way, the buyer meets its targets without compromising productivity, while the seller can earn revenue.

Crowell identifies this as a new knowledge area that still requires a great deal of human capital engagement, especially where the mechanics are concerned. "If you're going to have emissions trading, credits and offsets, how are you going to put a cost on them on both sides of the balance sheet? How do you work with partners to do emissions trades? Suncor has done some pioneering work in this area, but it's all still very new." As knowledge areas evolve, companies will need to be tuned in to new developments, both inside and outside the business world. This will require continuous stakeholder engagement, training and development of employees, and knowledge sharing among sectors.

Of course, there are costs to all of this. All three companies have made huge investments in research and learning, and the outcomes don't always prove successful. However, this view has to be balanced against the bigger picture. "We feel that our being proactive in a number of areas is going to make us a much better long-term business," says Kulak.

One also has to weigh in the costs of not being leading edge. If inferior technologies or inefficient processes mean a company doesn't meet environmental compliance standards, or is vulnerable to an environmental incident, it stands little chance of being competitive in the new Kyoto era. Furthermore, by not innovating and researching, the company might be forfeiting revenue-generating opportunities later on. For instance, a new proprietary technology can be sold or licensed to third parties, driving further value back to the company.

Research and learning, human capital-intensive activities, can generate payback to the organization in another way. Business literature is increasingly sympathetic to the link between a company's environmental mandate and the produc-

tivity of its employees. Quite simply, in applying their intellect and skills to environmental problem solving, employees seem to become energized, enthused and motivated to perform and produce at a higher level.

Of course, putting the organization's human capital to environmental and competitive advantage is contingent on having it in the first place. Here is where things come full circle. As the talent wars heat up, corporations are discovering that good employees want to work for good companies. A good company is frequently defined as having, among other things, a favourable environmental reputation. So to the fundamental question of how a company wins the talent war, the answer might well lie in its environmental branding. Which is why, in the knowledge economy, Kyoto is not only a viable environmental agenda, it's also a business one. ■

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## The CMA advantage

The new age of Kyoto spells new opportunities for management accountants, according to Bob Willard, author of *The Sustainability Advantage: Seven Business Case Benefits of a Triple Bottom Line*.

Without prior tracking and recording, many companies will have difficulty determining their 1990 emission levels. "Companies will need some credible help as they come up with those past numbers as well figuring out how to track them more effectively over the next ten years," says Willard.

Willard anticipates that assessing the appropriateness of the Global Reporting Initiative (GRI) elements to a particular industry will be especially challenging. "GRI is significantly more profound than just CO<sub>2</sub> emissions and I think there's an opportunity for businesses to do a better job capitalizing on their track records in these areas. Management accountants can help companies receive more public credit for their sustainability efforts through more effective reporting."

Willard also feels that, in the wake of the corporate scandals of 2001-2002, Kyoto provides an opening for the accounting profession to regain public trust by helping companies report more accurately, thoroughly and transparently on the environmental side. Furthermore, as accounting firms partner with companies, the function of management accountants will deepen to that of business consultants rather than straight auditors. As they assume more of a consultancy role, they will find opportunities to expand their businesses.

Finally, in the area of due diligence for mergers and acquisitions, environmental risks have become a lot less marginalized as boardroom considerations, says Willard. "Companies have to be very careful now about what they are acquiring or merging with. Here again accountants can certainly help read the tea leaves of those concerns with the expertise they bring to the table."