




Hewlett-Packard: Sustainability as a Competitive Advantage

By Eric M. Lowitt and Jim Grimsley

May 2009

>
accenture



Institute for
High Performance

Case Study

• Consulting • Technology • Outsourcing

Having worked with thousands of corporate and government clients around the world, Accenture has long understood the special characteristics that enable organizations to outperform their peers—to become high-performance businesses.

High-performance businesses are those that:

- effectively balance current needs and future opportunities,
- consistently outperform peers in revenue growth, profitability and total return to shareholders,
- sustain their superiority across time, business cycles, industry disruptions and changes in leadership.

In this case study, we investigate how a genuine commitment to sustainability—defined as environmental and social responsibility—is helping HP to grow its leadership in key markets. We look at how HP translates its green credentials into profitable new businesses and better-performing existing ones, all while advancing its long-term position as a model corporate citizen in the global arena.

Transforming a good-citizenship heritage into contemporary sustainability credibility

For HP, building a global sustainability program—one that is held to the same rigorous standards of accountability and profitability as its other business initiatives—is an ambitious and ongoing challenge. With little precedent in the IT sector and virtually none in organizations of HP's size and complexity, the endeavor has required the company to continually innovate, adjust its strategy, and regularly re-commit to its vision through an evolving process that touches every level of the 321,000-employee organization.

For HP, sustainability, efficiency, and profitability go hand in hand. "Among HP's values is a deep respect for the environment, and an ingrained commitment to reducing our impact today and building a sustainable global economy tomorrow," says Bonnie Nixon, Director of Sustainability for the company. HP aligns its technology, environment, and business strategies to reduce its carbon footprint, provides practical solutions to make it easy

for its customers to go green, and conducts high impact research on sustainability solutions.

Historically, HP has placed a priority on corporate citizenship, even as the company grew from its 1939 founding in the iconic Palo Alto garage into a diversified \$100 billion technology company operating in 170 countries. HP's first statement of corporate objectives, "The HP Way" (a perennial citation in management texts), was written in 1957 by founders Bill Hewlett and Dave Packard; by as early as 1966, it included a provision "to meet the obligations of good citizenship by making contributions to the community and to the institutions in our society which generate the environment in which we operate."¹ Still, HP's approach to corporate citizenship had always been very much an intramural affair—and the company consciously avoided trading on its efforts in areas like sustainability, preferring to quietly advance its social agenda.

"Up until about five years ago, we had the 'Boy Scout and Girl Scout approach,' as I call it," says Mark Heintz, HP's stakeholder relations manager, who works on HP's Social and Environmental Responsibility (SER) team, managing relationships with nongovernmental organizations (NGOs). "We just relied on our reputation as sort of the 'good scouts' of the industry, but we didn't actively publicize any of our activities in this area to NGOs or other sustainability organizations." But as issues like climate change and global supply-chain responsibility became more prominent in the mainstream press, HP soon realized, in the face of public questioning and competitive promotion

of its various green initiatives that it needed to raise awareness of its decades-long commitment.

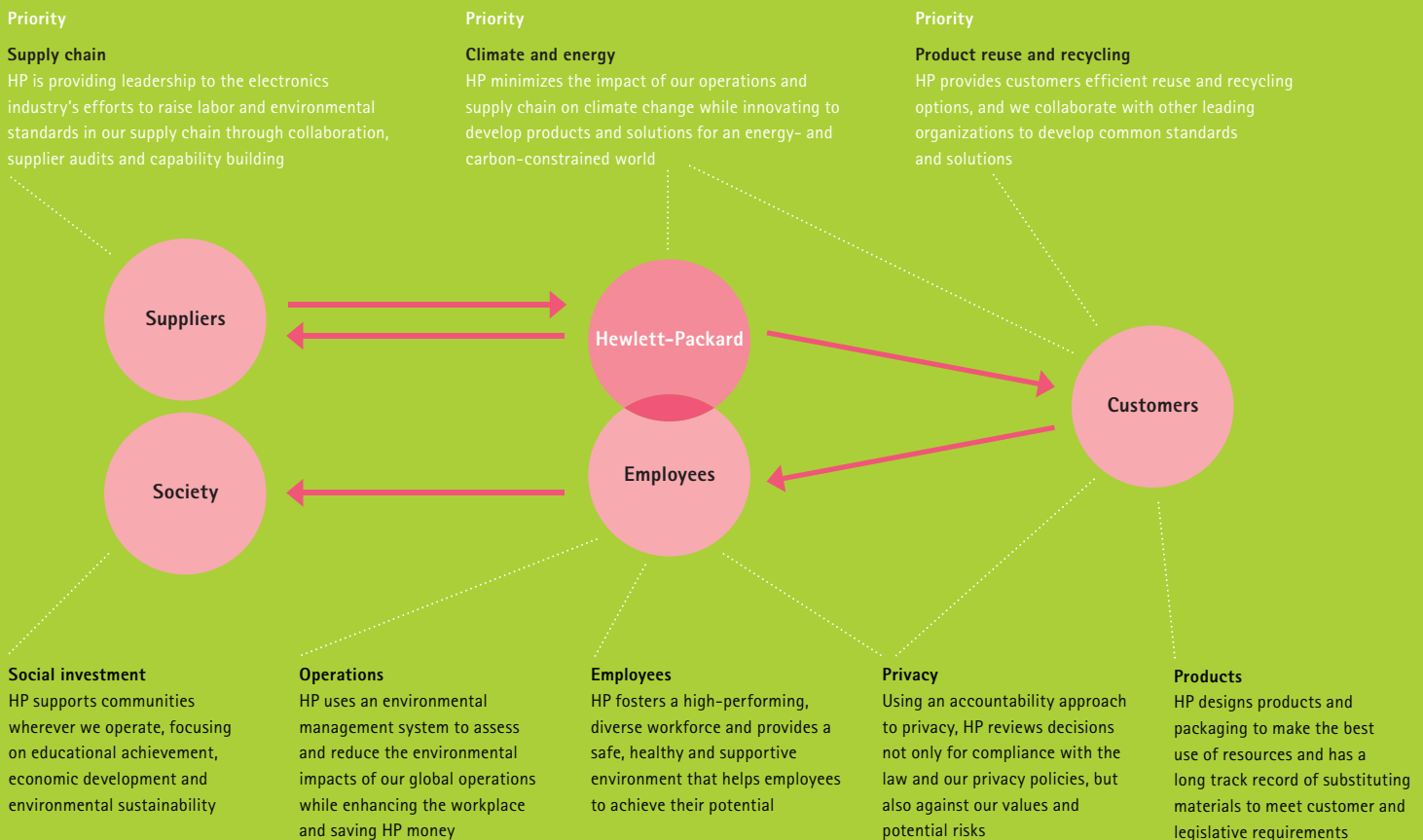
"I think a challenge for HP, honestly, is that we have been working on environmental and sustainability initiatives for quite a long time, well before such issues were really of interest to customers," explains Shelley Zimmer, who is responsible for SER policy within all of HP's product groups. "We're only now beginning to understand how to communicate the details to customers. Now that they are interested, it's become a bigger issue for companies and for consumers across the world.

"But we still say a lot less than what we are capable of. There's always the concern about greenwashing and not wanting to over-promise. And so I think our Web site still reflects that somewhat modest approach to talking about our environmental achievements and goals."

In formally incorporating sustainability into its overall corporate citizenship program, HP identified three overarching priorities that every business unit is required to embrace: raising social and

environmental standards in the supply chain, improving the energy efficiency of operations and products in order to reduce carbon emissions, and promoting product reuse and recycling. (See Figure 1.) These priorities reflect HP's commitment to balancing corporate values and business goals with the company's impact on society and the environment.

Figure 1: Global citizenship at HP



Empowering and organizing a sustainability team

The company's global citizenship agenda is organized into five "pillars" within the organization, with senior managers assigned general oversight in the following areas:

- Ethics and compliance
- Social and environmental responsibility (sustainability)
- Human rights and labor practices
- Privacy
- Social investment (philanthropy)

Three primary bodies have been established to help manage and advise on sustainability initiatives throughout

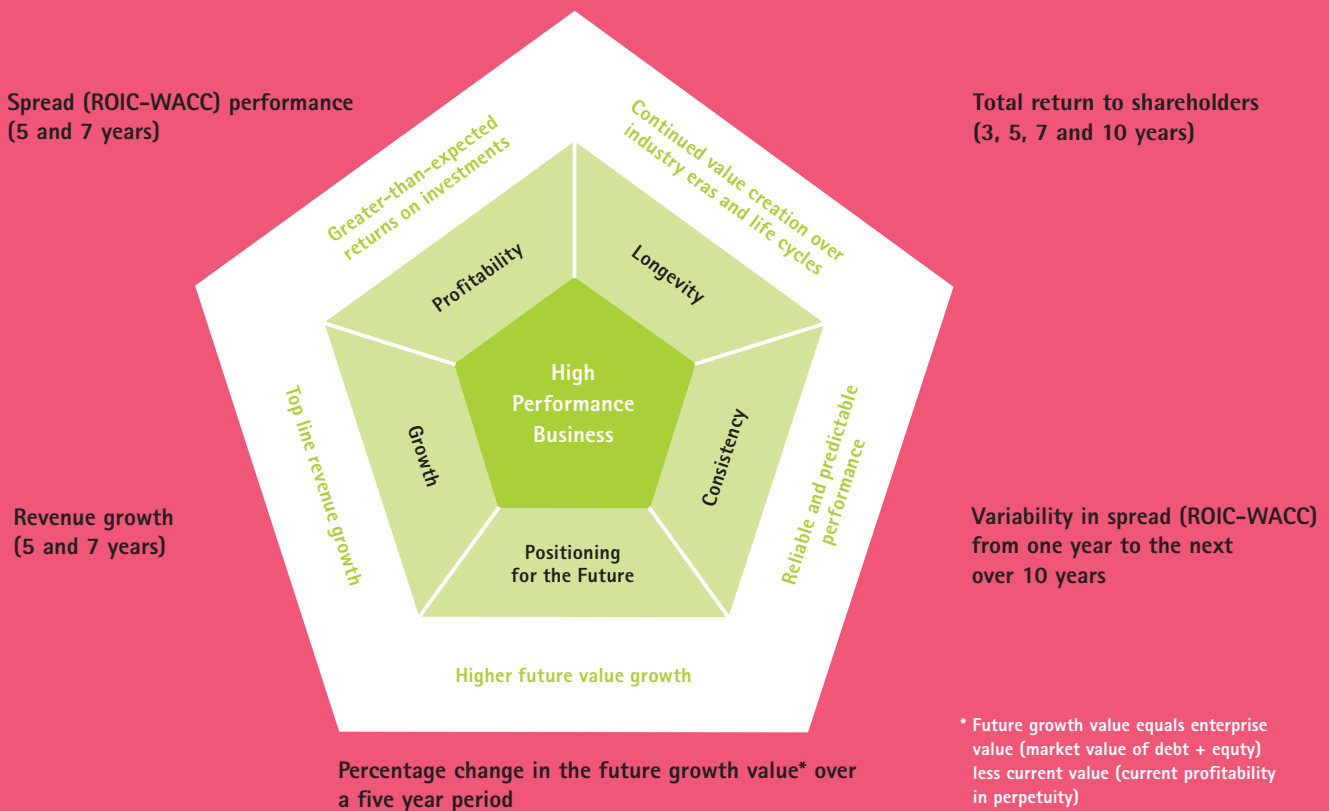
HP: the Supply Chain Council and the Global Marketing Council, both made up of senior HP managers; and the Stakeholder Advisory Council, a collaborative group comprised of HP vice presidents along with representatives from supplier organizations, environmental activist groups, labor-rights groups and other NGOs.

"We partner with a number of regional and global organizations like the World Wildlife Foundation (WWF), CSR Asia, even CEREAL, the labor NGO in Mexico," explains Bonnie Nixon. "We hold two summits a year with the Stakeholder Advisory Council to look at our goals, peek around corners, look at policies and what's happening within the NGO community, what's happening within

the legislation and within customer environments. We find out what people care about."

Charged with overseeing HP's long term vision and sustainability strategy, Nixon reports to the corporate marketing organization. "I'm responsible for helping to drive HP's sustainability strategy across the company and for reporting against it, but a lot of the specifics of implementation are the responsibility of the functions or product groups and they, in turn, have responsibilities to help conceive and execute. So IT has its mission, systems groups have their missions, everybody has their own part to play," Nixon says.

Figure 2: Five Elements of High Performance. Better positioning and performance relative to its peer set on the following elements:



Applying the high-performance business model

While every high-performance business travels a unique path, HP's sustainability effort maps very clearly to Accenture's proven High-Performance Business model. As defined by Accenture, a high-performance business shows quantitative superiority along five key dimensions (see Figure 2):

Growth—as measured by revenue expansion;

Profitability—as measured by the spread between the return on capital and the cost of capital;

Positioning for the future—as represented by the portion of share price not explained by current earnings (what we call "future value") and by the portion of the industry total each company's future value represents;

Consistency—as measured by the number of years (out of seven) the peer set median in profitability, growth and positioning for the future was beaten;

Longevity—as measured by the duration of out-performance in total return to shareholders.

The remainder of this case will examine how HP's sustainability initiatives have performed along the five key high-performance business dimensions.

Growth

HP is using its sustainability strategy to drive real revenue growth through four approaches: by winning new business while retaining existing business,

by expanding the company's distribution in Europe, by charging a premium price for energy-efficient products and by entering new markets.

Winning new business while retaining existing business

Recent requests for proposals (RFPs) have requested details about HP's internal IT energy-savings plan and HP's own energy usage, broken down by nuclear, coal and renewable sources. The customers that are asking about sustainability represent some of the larger contracts, creating the potential for significant sales. Indeed, one recent customer, a mobile communications giant, made a major purchase of personal computers after indicating that the primary consideration for awarding the contract was finding the "greenest" units available.

"Our statistics show that more than two-thirds of the RFPs contain environmental questions. I would say actually it's 100 percent of the large enterprises," says Klaus Hieronymi, HP's Europe, Middle East and Africa head for SER. "All of our major customers have contacted us in the last 12 months on environmental questions. For example, the German government had an off-site meeting in November 2007 on climate change. And they came up with 13 areas they want to focus on. I think it was number 11 which says that in every public tender in Germany the cost of energy should be included in the price comparison. So the German government now has the rule that says, 'For future procurement, we will consider not only the hardware price but the hardware price plus lifetime electricity.' I think that will be the future. And that will then automatically drive companies like HP into more energy efficiency. I have also seen one particular tender, based

on a recommendation from Gartner, that goes as far as asking HP about what energy-savings plans we have internally in our IT and how much of the energy we are buying is nuclear, how much is coal and how much is renewable."

"Our sustainability efforts certainly get us a seat at the table," says Carl Eckersley, the manager of Environmental Product Stewardship for the Personal Systems Group. "Without them, we wouldn't even be able to bid on these projects." Many HP executives agree that the weight being given to environmental issues in the tendering process has been significant—and is growing—in many cases, representing up to 25 percent of the scoring on a bid.

In an effort to quantify the stakes, HP developed an internal tracking tool, informally known as "Green Baby," to help value the revenue implications. The tool tracks the value of the deals, the value of the revenue at risk, type of information and presentations requested, deals won and lost, and the justification for the outcome. "Our sales force is giving us feedback on which deals are successful or not. What we're pressing to know is, what was the real contribution of the sustainability aspects of our presentation to the overall win?" says John Frey, who is responsible for sustainability strategy planning and execution across HP.

Expanding the company's distribution in Europe

HP's sustainability strategy has helped the company gain new distribution. A European customer proposing to resell retail HP products conducted a very thorough evaluation of HP's sustainability program. "They wanted

to know who our suppliers were for the particular products, how we evaluate them, how we work with our suppliers on corrective actions when needed. And it was only after that detailed review that they viewed us as a qualified supplier and agreed to actually begin selling our products," recalls Judy Glazer, the director of Global Operations, Social and Environmental Responsibility.

Charging a premium price for energy-efficient products

HP's line of energy-efficient PCs and notebooks command a price premium of \$10 to \$20 compared with non-Energy Star-rated products. However, the energy savings they offer provide an attractive 24-month payback. According to HP, the average enterprise customer holds onto this type of equipment for approximately three years. For customers looking to purchase 1,000 or more units at a time, that's the kind of savings that makes a difference.

Frey explains HP's head start in this area, as additional enterprise buyers warm to the energy-savings message: "Our enterprise customers generally tend to keep their gear for two to three years. And if you can make a 24-month or better ROI, generally speaking they're willing to pay the price premiums. And increasingly, where that used to be a differentiation point that only our most savvy customers would make, it's amazing now how whole industries, the financial industry for example, has come on board in the last year or so and they have things like that directly in their purchase criteria."

Entering new markets and pursuing joint ventures

HP has entered into a solar-technology licensing agreement for a revolutionary transparent transistor technology with Xtreme Energetics (XE), a developer of solar energy systems. Together, the companies are creating an energy system designed to generate electricity at twice the efficiency and half the cost of traditional solar panels.

The transparent transistor technology was co-developed by HP and Oregon State University and includes thin film transparent transistors made from low-cost, readily available materials such as zinc and tin. The materials raise no environmental concerns and allow for higher mobility, better chemical stability and easier manufacturing. What's more, the transparent electronics technology allows solar panels to be artistically patterned to mimic the appearance of any building material or terrain for aesthetic appeal. The energy systems will serve both the central utility and rooftop markets.

"Open innovation to foster collaborative research is essential in today's fast-paced, innovation-fueled market," says Joe Beyers, the vice president of Intellectual Property Licensing at HP. "Through our collaborative research and by licensing HP's core intellectual property in electronics, we are accelerating the pace of technology transfer so that it can be applied more rapidly into creating commercial, renewable energy solutions."

HP encourages other organizations worldwide to leverage its vast research and development network and portfolio of nearly 30,000 patents. As these organizations bring new technologies to market through intellectual-property licensing agreements with HP, HP also

benefits from a return on its research and development investments through licensing fees and royalties.

Profitability

Within HP's own operations, the company is leveraging its sustainability strategy to drive profitability through a wide range of efforts—everything from making adjustments to shipping and logistics and reducing the need for virgin materials in manufacturing, to realizing cost savings through new efficiencies within data centers, to replacing business travel with virtual meetings.

Making adjustments to shipping and logistics and reducing the need for virgin materials

In logistics, a simple move from using wooden shipping pallets to environmentally friendlier plastic pallets (less than a quarter of the weight of the wooden ones) is saving 7,000 tons of CO2 emissions per year in Asia-to-Europe camera and notebook PC shipments. The higher cost of the pallets themselves is significantly outweighed by the savings in air freight.

HP is reducing its air freight as well, in favor of ocean freight, and moving many truck shipments to rail—changes that are both saving money and reducing environmental impact. According to Blair Chikasuye, HP's environmental program manager for the Global Logistics Group, this is a clearly emerging corollary. "We're finding that any time there's a logistics cost savings, there is typically an environmental savings as well," says Chikasuye. "Yes,

shipping by ocean is cheaper than flying it on a plane, but it's also a significant CO2 emissions savings. Same with taking it off the road and putting it on rail."

According to HP, each cargo container of notebook PCs shipped by ocean instead of air reduces GHG emissions by the equivalent of an average car driving 100,000 km. However, these environmental gains also have a price: increased transit time and longer time-in-inventory during shipping. To counteract these effects, HP works with its planning teams to adjust their forecasting process and optimize coordination.

The process of appropriately escalating decision making was also identified as a key component of HP's success in implementing essential changes and overcoming organizational resistance. Sometimes a single issue (like the additional cost of plastic pallets) could pose a fatal roadblock in achieving important gains. Packaging engineer Randy Boeller explains the benefits of assembling all the facts and then getting to the right level of management: "We got the people who negotiate air freight and some finance people in the same room to sit down and do the math. And then we did the math again to double-check. We then followed the management chain to find the people who own the materials costs and the people who own the air freight costs and then followed those management chains up to find the one person they all reported to. Then, we made the presentation to that person and said, 'You want to save about \$28 million a year? We know how.'"

In reducing consumption of new materials, HP's 2008 Global Citizenship Report lays out some of the company's overarching goals:

HP works with suppliers to identify materials that will reduce the environmental impact of HP's products and that of our customers.

We evaluate the total life cycle, environmental impact and cost of any new material, and we strive to identify substitute materials that have lower total environmental and health impacts than the materials they replace. It can be difficult to confirm claims for new materials because they may not have been researched as thoroughly as existing materials. For example, we cannot yet be confident about materials to replace PVC from wires and cables. Thermoplastic rubber/elastomer (TPR/TPE) and polyethylene-derived hybrids are emerging, but these materials are not sufficiently developed for wide-scale use. Long-term environmental impact assessments and safety approval for these materials have yet to be finalized.

HP has an extensive recycling network that is a potential source of recycled plastics for use in new products. While HP would like to take advantage of this fact, the potential is limited for several reasons. The greatest difficulty is that most recycled plastics contain substances that we have eliminated from our current products. Also, mixed plastics do not have the mechanical properties necessary for use in new IT products, and it is difficult to separate dissimilar plastics during recycling to produce a homogenous material. Finally, logistical constraints limit our ability to move large volumes of material from the regions where recycling is conducted to the regions where most

new products are made. Recycling is an area in which we continue to look for improvements.

Realizing new efficiencies within data centers

HP recently completed a three-year program to consolidate 85 of its data centers into just six high-efficiency locations in the US. This move is netting yearly energy savings from of up to 350 million kilowatt hours and annual energy cost savings of up to \$30 million. The project has also served to eliminate many older technologies while reducing HP's overall data center footprint by about 35 percent. The consolidation had its roots in a long-standing recognition on the part of HP Labs (the exploratory and advanced research group of the company) that there was a significant opportunity in this area. HP fellow and director of the Sustainable IT Ecosystem Laboratory at HP Labs, Chandrakant Patel, recalls talking to colleagues about rethinking data centers as early as the mid-1990s: "I came up with the idea that a data center can be thought of like a computer and that the walls of the data center are akin to the walls of enclosure, and that data center needs an 'operating system,'" recalls Patel. "So we proposed this work on Smart Data Centers—looking holistically at everything from chip systems, racks, data centers and cooling towers, all the way to the utility providing power to the data center. When I went to talk to my boss, he said, 'Chandrakant, why do you want to do facility research?' But our contention was the state of the art is lacking. I consider a data center akin to Carnegie Hall—but with 100 to 150 people per

seat. And when you have that kind of thing, surely state of the art needs to be advanced. It became about sensing and more precisely controlling the provision of resources so that we don't overprovision and waste energy. One of the comments that came back was, 'Nobody ever gets fired for wasting energy. But you could get fired if a site shuts down' [due to insufficient power]. But, as we are a research lab, going forward our contention was, 'You would get fired for both.' So we charged ahead and continued to work on developing products that provided efficiencies at a data center level. And as we developed a total cost of ownership model, we found that the burdened cost of power in the data center exceeded the depreciation of the industry standard hardware." Today, the company carefully examines each data center's design for new efficiencies. This process—along with the innovations it has generated—has, in turn, created a large growth opportunity for HP products and services. Lessons learned from its own optimized data centers have led to large consulting opportunities—along with significant competitive advantage in positioning HP's hosted data centers. "Data centers are an area of increasing interest for HP because we manage a lot of data centers for ourselves and for our customers," explains Frey. "We're doing a lot of work around power management software, the ability to control those units more holistically. Then we take it a step higher to the work on the data center: How do you measure the heat put out by a data center? How do you minimize it? Because about 50 percent of the power consumed by the average data center is used for cooling—it's not

being used to process data. HP has invented a series of technologies to run data centers more efficiently. The average server runs about 20 to 40 percent of its rated capacity at any given time. Yet the power supply uses 80 percent of its total draw, even fully loaded when it's idling. So if you're using 80 percent of the energy and yet you're not processing any data, that's very inefficient as well. So there's a lot of work in that space," he says.

In 2007, HP Labs built a 70,000-square-foot data center in Bangalore, India, concentrating the equivalent computing power of 14 traditionally designed facilities under one roof. The Bangalore data center uses HP's new Dynamic Smart Cooling (DSC) system, which reduces energy and costs by coordinating cooling with the real-time needs of the servers, using 7,500 sensors that monitor equipment environment temperatures and adjust the air conditioning accordingly. HP achieved initial savings of 20 percent of cooling costs compared with legacy data centers, and expects those savings to reach 40 percent once the system is optimized. The new center is expected to save 7,500 MWh annually, equal to 7,500 tons of carbon dioxide equivalent emissions. It represents the largest implementation of DSC to date and demonstrates that the savings achieved in smaller data centers are possible in much larger facilities.

HP is now focused on reducing data center energy costs. According to Hieronymi, "Many companies have started to show the electricity costs of their data centers as a separate cost item, which is then allocated to the IT center. Where, in the past, the electricity cost of companies was just distributed and allocated to everybody, now, all of a sudden, the IT center manager has a new cost element which is quite

significant, especially if you look into the server business. There are servers where the cost of their energy consumption for one year is more than the hardware purchase prices."

Beyond looking at energy use in data centers, HP travels further back along the supply chain to uncover more opportunities for savings and reengineering. "We are looking at how much energy is used to extract material, manufacture it, use it and reclaim it," explains Patel. "We look at the entire life cycle. This way we are getting closer to the true cost. And we are building data centers with just enough material so that it becomes a lower-cost, lower-energy provider of the same or greater level of service."

Reducing carbon footprints by substituting business travel with telepresence

In other areas where HP's operations serve a broader audience the company's SER efforts are also creating new business opportunities.

The evolution of videoconferencing as an alternative to corporate travel represents a "fat target" for reducing environmental impact. Here, HP's state-of-the-art telepresence solution, called Halo studios, is now being rolled out as a distinct product for innovative customers.

Halo studios bring meeting attendees from around the globe into an environment that feels as if they are in the same room. Halo also includes energy-saving features, such as displays and lights that automatically turn off when not in use.



Source: Battelle Media, <http://Battellemedia.com/archives/003632.php>.

HP currently has 34 Halo studios in 14 countries and plans to nearly quadruple that number by the end of 2009. This effort is expected to significantly reduce HP travel and save at least 32,000 tons of CO2 emissions per year, which translates into roughly \$1.28 million in bottom-line savings (assuming \$40 for the price of carbon emissions per ton).

"This is a good example of a solution which itself has a fairly small footprint. We're talking about a few plasma screens for a studio, which has a few kW hours a day of consumption. But on the other side of the equation, you are saving a significant amount of business travel. If each studio avoids even a single business trip a year, that saves about 237 tons of carbon emissions annually. And if you add that up, that gets to very significant savings," says Pierre DelForge, HP's Environmental Sustainability Strategies manager. "In Europe, we believe that we will save a minimum of 15 percent in travel costs this year through the use of Halo. We are also working with two major hotel

chains to create virtual presence rooms that they can rent out like they do conference rooms. So we might see some of those in the future as a standard offer where you can go in, just rent it for half an hour and maybe there will even be a family reunion or something in between [these meetings]," says DelForge.

Positioning for the future

HP's sustainability strategy has already established the company as a clear thought leader in the industry—an advantage that leads to first-mover opportunities and first pick of top suppliers, employees and partners. As HP retools its infrastructure and distribution strategies, it further aligns its operations with emerging best practices, giving it a competitive edge...and opening new growth horizons.

According to Nixon, "The WWF reports that the IT industry contributes to 2 percent of global warming—roughly on par with the airline industry." But HP believes that, unlike the airlines, the IT industry is unique in its ability to help reduce carbon emissions in other

industries. Nixon says: "Through use of technology, we can influence or reduce that other 98 percent through smart controls and manufacturing processes, or in power plants or other applications of technology to reduce greenhouse gases, or also calculate the impact of greenhouse gases."

DelForge adds: "We believe there is an opportunity for IT to be a significant part of the solution in providing energy efficiency, reduction of resource conservation and substitution of high carbon by low-carbon processes. This is a whole area that we call the 'low-carbon-economy opportunity for HP.' That means we will define what solutions we can take to market or develop or deploy further that have significant benefits outside of just the energy used by IT. We can reduce the energy used and the carbon emissions from other processes, for example, whether it's manufacturing, or transportation or buildings, or even just behavior change and consumption patterns."

Hieronimi cites desktop printing as an example where new technology can combine with new behaviors to have a wider impact on the environment: "One of the trends in printing is that companies are taking away the personal printer from every desk, including the desk of the CEO or the HR department or the legal department. If you had done that five years ago, people would have argued with you, saying that sensitive documents should not be able to be read by anybody who might be passing by a common printer. Nowadays, you can go to a printer and the moment the printer reads your ID badge, it starts printing your documents. And you can do that with every printer in the network. So even if you are, for

example, sitting in a boardroom and you need certain documents, your secretary sends it to the printing network and you just go to the nearest printer to the boardroom, put your ID card there and then it's printed. These are all technologies that enable us to reduce paper."

"We recognize two aspects of energy consumption: HP's internal operations and the consumption of energy by HP products," Delforge says. "We have an overall energy consumption reduction goal of 25 percent, of which 16 percent is expected to come from the operations side. We wanted to have the most comprehensive goal that we could, so we included both the operational savings and the product savings in that goal. Products and services is the second facet of the strategy that includes both the energy used by our products along with other resources like paper for printing, for example. So it's the whole life cycle of our products. And if you look at that whole scope, our products and services footprint is an order of magnitude of between 20 and 25 times bigger than our operations footprint."

HP's expertise and innovation are also pointing toward more service business, such as energy assessments of enterprise data centers for large commercial customers.

"I remember one company in Austria where within a two-day consulting engagement, we identified a savings potential of 1 million kW per year, which was about 15 percent of the total energy use of that client—worth about EUR 80,000 per year," recalls Hieronymi. "And this is helping to

change, I think, the perception of environmental initiatives with enterprise customers. They are seeing, today, that whenever they do something to reduce their environmental footprint, they are realizing bottom-line savings very quickly."

Leading the way in the low-carbon economy

Of course, IT-related carbon output is just a small piece of the puzzle. "Of all the carbon emissions in the world, the IT industry generates only 2%," Nixon says. "HP wants to lower them, but it is also working on reducing the other 98%." An assortment of energy-saving solutions can help companies in all phases of their business. These range from print management and print-on-demand services that save energy and paper, to solutions that let manufacturing plants operate more efficiently.

Some of the areas in which HP is laying the groundwork for leadership in the transition to the low-carbon economy include:

The "dematerialization" of data centers, including the implementation of a photonic interconnect to eliminate the need for heat-producing, resource-intensive copper cabling while improving processing speed and lowering bandwidth costs;

Low-carbon IT solutions to increase resource efficiency across the enterprise;

An aggressive materials recovery program that goes well beyond traditional recycling; the program will create a profit center from both refurbishment and materials/ component sales into secondary markets. (Through 2007, HP has reclaimed more than one billion pounds of used hardware and is on target to process another billion pounds by 2010.)

Consistency

To ensure that its sustainability and corporate social responsibility (CSR) efforts stay true to their aims and are providing the kind of measurable returns this high-performing company insists on, HP has several processes in place to regularly assess and revise the company's strategy. Some of the most effective processes have been the result of a radical move toward transparency, which has helped to co-opt the services of "watchdogs" and leveraged them to HP's long-term advantage.

Building alliances and inviting dialogue with key groups

HP's leadership in CSR and sustainability has provided a powerful platform to work with industry peers, NGOs and government agencies to influence the shape of future industry and national regulations. One of the first actions required in the implementation of HP's SER strategy was to address the complex issue of an extended and diverse supply chain—a lightning rod of attention for many NGOs.

While it has been a challenge to coordinate everyone within HP to share and support a unified vision of social and environmental responsibility, it has been even more daunting to try and elicit that same level of passion from the industry's most-envied list of global suppliers, who together represent a workforce of nearly 400,000 people. To begin, HP insisted that all its vendors adopt the same supplier code of conduct. Having played a key role in the creation and adoption of the industry's Electronics Industry Citizenship Coalition (EICC) guidelines, HP used them to formulate clear policies that cover everything from sourcing environmentally responsible materials to ensuring that workers are treated with respect and dignity.²

"My ten-year vision is for consumers to know that when you touch an HP product, you are guaranteed it was made in a socially and environmentally responsible way," says Bonnie Nixon in her former role as HP's lead for Supply Chain, Social and Environmental Responsibility.

Since 1999, Nixon has been instrumental in ensuring that all of HP's suppliers meet expectations and adhere to the terms of the EICC. In 2004, the Catholic Agency for Overseas Development, a human-rights watchdog group, issued a withering report, alleging "dire working conditions" by overseas contractors serving the computer industry. Nixon used the report as a lever to ramp up HP's efforts, not just among its own suppliers but across the entire electronics industry.

To ensure the code would be uniformly embraced, the company took unprecedented action: In April 2008, HP released a comprehensive list of its top-tier vendors in a bold move that stunned many industry veterans—inside and outside of HP. Glazer recalls: "We released the names despite a long-standing operational policy in the company that defined our supply chain as a source of significant competitive advantage. This list had never been shared. And it was very counter-intuitive for our senior management when we put that forward. We spent a lot of time talking about whether it was the right thing to do. And we ultimately concluded that the value in doing it exceeded any possible competitive loss that might go along with exposing that information."

The response was almost universally positive—not only among influential analysts, NGOs and consumer/advocacy

groups but among suppliers as well, who viewed the move as a sign of a long-term commitment from HP. At the same time, this radical transparency put significant new demands on HP's suppliers, including intensive audit from the company to evaluate suppliers' performance in areas like environmental responsibility, energy efficiency and labor policies. From May through September 2007, HP engaged Environmental Resources Management (ERM) and Verité to conduct verification audits of dozens of suppliers in China and Thailand, including those suppliers identified in NGO reports as having poor standards.

"The audits help suppliers understand exactly what we're looking for," says Glazer. "They can read something that says, 'Working hours should be this.' Then they answer six questions about it, and they gain a much deeper level of understanding of what we're looking for. After the written portion, an on-site audit is arranged by the person who normally manages our business with that supplier on an ongoing basis."

Some of HP's suppliers bristled at the new requirements, and others worried that implementing them would raise their costs; some even sought price increases or other guarantees from HP. Chi-Luen Lee, HP's SER supply chain lead for China, remembers explaining to suppliers, "Look, this is part of the law and you ought to be meeting these requirements anyway. And if you wish to continue working with HP, you will have to comply because you are obligated to do so under our contract. But don't worry—we'll work with you to make improvements if you are interested and committed." In two Chinese factories, HP tested a new approach to taking corrective action. Verité conducted Management Action Planning sessions with these suppliers,

working with their managers to identify the root cause of the violations and fix the issues. Both of these suppliers have made improvements in their systems—and understand now how to identify issues on their own and develop sustainable corrective actions.

Here, too, sound social and environmental strategy proved to be good business. Lee and his team found that when a supplier had a poor result on the EICC audit, often they also had product quality issues. This discovery allowed HP to either adjust its supplier base or take quick and efficient steps toward remediation—with a clear focus on measurable objectives. "We treat a supplier as a partner. It's not easy to become an HP-approved supplier, but once you become one it is not very easy for us to terminate the relationship. We always prefer to work with suppliers for improvement," Lee says.

Nixon agrees: "You have to get out there and manage your supply chain, engage with your suppliers and be willing to share tools, people and expertise to help them grow. CSR issues need to be embedded in your sourcing organization's ethos, and you have to go beyond the first tier of suppliers."

HP's Stakeholder Advisory Council (SAC) is another means of keeping the company's sustainability strategy current and on course. As Mark Heintz says, "The NGO community is a much more trusted body than business and also than government. So for us at HP, partnering with WWF adds a certain level of credibility to programs that we're creating. WWF has got leading climate scientists working for them that help advise us on being aggressive

yet realistic about our goals. And I think the goals that we put together as a result are perhaps more credible than those of other companies that develop them on their own. So my perception of shareholders and others is they view this as a good partnership and as something that legitimizes and adds credibility to HP's sustainability program."

While the company has often engaged stakeholders—inside and outside HP—for various projects or for informal input, the SAC has a very broad, high-visibility mission within HP but also with the public. From HP's perspective, the recruitment of key NGOs holds the promise of ironclad credibility, along with a fresh viewpoint. "HP has always had a stakeholder engagement function with extensive inputs at the regional level," says Heintz. "But now we bring outside stakeholders in at the global level, to get them in front of the SVP community in a way that they hadn't been before—by bringing them into strategy sessions and into the goal-creation process and into development from an operations perspective. We kind of use them as an advisory panel. It's a pretty big commitment from EVPs, SVPs, as well as from the people we bring in.

Heintz remembers his recruiting efforts within HP getting a mixed reception, at least at first: "A lot of managers said, 'Great! No problem. Let's meet with these guys. I think this is a great idea. This will help us manage these campaigns. We'll find some proactive programs, we'll get some advice and this will be great! And we'll answer their questions.' But some of them were much more apprehensive at the beginning. I think there are

some myths in the business community that NGO types are running around with protest signs behind their backs, or shareholder resolutions in their breast pockets ready to whip out at any moment. And so one of the things that has been fascinating as I've put this council together is the camaraderie and the teamwork that's been built and the transformation of HP. A few people were very surprised that the NGO folks behaved much more like consultants and advisers than any of these myths would have led them to believe. So one of the benefits of this council is the transformation of perceptions within the HP executive community. And I've heard others talk about this as well in other companies where they've had meetings and engagements with the NGO community saying, 'Oh my God, this is not what I thought.' There really is, now, a shared sense of mission around the transformation of HP," Heintz says.

The proximity of the NGOs has also helped HP monitor and redress lapses more effectively. Heintz recalls a particular incident that took a much different turn than it might have, had the company not been as engaged and responsive in its CSR efforts: "There is a network of NGOs called the Good Electronics Network. Their focus is on working conditions in the supply chain for the IT industry. They started a campaign in early 2007 called "High Tech—No Rights?" and graded five IT companies: HP, Dell, Apple, Acer and Fujitsu Siemens. Fortunately, HP was rated the highest. But in the evaluation criteria we noticed that we had a red mark in China. And we were a little confused by that because we've done a lot of work in China. So we met with this NGO, and we discovered they were gathering their information by standing outside one of the factories of our suppliers in China and inter-

viewing workers as they came out of the plant. These were large operations with 10,000 to 20,000 employees and \$100 million of revenue. And here the NGO was trying to assess the situation inside by just interviewing a few people coming out the gate. At any rate, we got wind of this and said, 'OK, this may explain why you're giving what we consider to be an erroneous rating. You're just not getting good information.' So we actually helped the NGO people get inside our supplier's factory. We introduced them to the management team and allowed them to interview workers on the inside rather than standing outside the gates trying to piece something together. So we were able to take a situation that was kind of negative and use our transparency and HP's proactive approach to turn the situation around. It resulted in a bit of a competitive advantage for us as well because this group of NGOs has influence over what is said about our company and the perception of HP in the industry."

The forum has also allowed HP to learn from leaders in other industries that have dealt with these issues—the WWF, for example, and its methods for reducing greenhouse gas emissions (WWF helped HP develop realistic but aggressive goals) as well as Nike and its experience in addressing the social issues of a diverse global supply chain. Other collaborations are blossoming as well. HP and the WWF now make joint presentations at universities around the world, discussing how IT can help reduce energy emissions and drive change.

Introducing HP Pavilion

In September 2008, Wal-Mart named HP the winner of its Home Entertainment Design Challenge, singling out the technology company for its success at further reducing the environmental impact of personal computers.

A radically redesigned product, the HP Pavilion dv6929 Entertainment Notebook is the first ecocentric consumer product to command premium pricing. The notebook features an innovative design that reduces product packaging by 97 percent, conserving fuel and reducing CO2 emissions by removing the equivalent of one out of every four trucks previously needed to deliver the notebooks to nearly 1,700 Wal-Mart stores and 594 Sam's Club locations.

To package the Pavilion notebook, HP replaced conventional protective shipping materials and boxes with the HP Protect Messenger Bag, made from 100 percent recycled materials. This allows for a dramatic reduction in overall packaging content and size while delivering equal, if not better, product protection compared with conventional packaging. Customers who purchase the HP notebook leave the store with the computer and its accessories cushioned safely in the notebook bag. (See Figure 3.)

Packaging engineer Randy Boeller discusses the mechanics of such a radical re-conception: "We assembled a team that included the product marketing group, a program manager who handles sales and marketing for North American consumer products, the packaging engineer from the notebook group, and then a number of people from the manufacturing group. You're talking about a pretty high-volume product line, and anything you

do in the manufacturing operation that causes a change and could interrupt production and shipment, you've got to be real careful not to mess with that.

"We also needed a number of production people and ancillary support groups like marketing communications for some of the artwork as well as other marketing people to make aesthetic

Figure 3: HP Pavilion Entertainment Notebook and Accessories



Source: HP

decisions about the bag. Then we worked with the bag supplier to get the preliminary samples, do the shock and vibration testing to make sure that the product was as protected as it was in conventional packaging."

Boeller explains that an "apples to apples" comparison of packaging costs (cardboard and styrofoam versus a designer messenger bag) was not relevant, as the new bag also represented part of the value of the product as well—and part of the reason for the premium pricing opportunity.

To reinforce the product's environmental appeal, HP made the notebook an Energy Star product that uses a high percentage of recycled materials. To date, it is HP's greenest consumer computer.

Longevity

HP has always had a competency in long-term planning and vision. Additional product and marketing innovations (beyond the Pavilion/Wal-Mart collaboration) are in place for the long-term as well, and the company has established ambitious stretch goals in areas like carbon emissions. It is clear that HP aims to achieve and retain leadership positions across as many dimensions as possible, with strategies that take a very long view. Critical to executing these visions will be the company's ability to maintain a "white hat" position amid growing public and regulatory scrutiny.

Achieving long-term gains by investing in suppliers and partnerships

Centro de Reflexión y Acción Laboral (CEREAL) is a labor-rights organization that advances the rights of maquiladora employees in Mexico, including electronics workers in Guadalajara, where many HP suppliers are located. According to HP, this NGO community of Catholic priests also operates several universities in Mexico and is one of the more influential communities dedicated to improving working and living conditions in the region. Over the past several years, HP has taken what was potentially a highly adversarial relationship with CEREAL and transformed it into one of mutual trust and cooperation.

Julio Acevedo, HP's head of Guadalajara operations, remembers how the collaboration began: "Our suppliers in the electronics sector were saying, 'Don't even talk to them. They're dangerous. They want to really damage our image.' So four or five years ago, Bonnie Nixon came here to a meeting with CEREAL in Guadalajara, and we were pretty much the only attendees from the industry. I think it was the first meeting when we found out that they were doing an analysis of the industry. They were conducting interviews with workers (some of whom were probably fired for a reason and who were mad at the electronics industry), and that's what they were writing about. So I told the CEREAL people, 'This is really hurting the electronics sector because you are not giving companies the chance to provide the other side of the story.' So we sat down with CEREAL and worked out a plan to conduct systemized audits. Because HP was such an important customer for many of these manufac-

turers, we had some clout. After a couple of years, as everybody began to understand this was a very, very important subject, people began to see that implementing the code of conduct was something good for the industry, for the workers and for the people and to make better places to work. And we got commitments from all the contract manufacturers."

After two years, most manufacturers had adopted robust plans for communication and training for all their HR people and hired environmental health and safety people to implement the code of conduct. Bimonthly meetings with representatives from the manufacturers and CEREAL are now held. CEREAL has begun serving as a frontline resource for employees in resolving disputes, advising employees with problems, weeding out nuisance cases and taking advantage of their improved access to electronics executives to negotiate satisfactory solutions. Manufacturers that have chosen to ignore the industry standards and fair practices have been dropped from HP contracts.

HP now has a system of 70 auditors who regularly inspect 200 factories owned by 150 key HP suppliers—a greater number of auditors than any other EICC member. HP says allegations of labor problems contributed to its decision to break with three suppliers that didn't make the grade, including South Korea-based Trigem Computer. Trigem says it wasn't aware of the problems.

HP's suppliers have also reaped clear business benefits from their improved relationships with NGOs like CEREAL—mainly, lower employee and customer attrition rates as well as better workers seeking employment because of improved conditions in the electronics sector. "Our suppliers can spend less on training because there is lower turnover," says Acevedo. "People also feel a lot more loyal to the company. For example, one of the companies implemented an employee suggestion to allow pregnant women to leave five minutes ahead of other employees so they don't get so stuck in the evening rush. And the company came back not only with that, they also provided a different color of uniform, a pink color, so people can see that the women are pregnant and can put them in areas that are less stressful to work in. And everybody was very happy. So I believe that the most important thing is that we have started a culture of doing better for both the worker and the company. And I think that this is great to have this kind of culture. Employees are now more likely to ask themselves, 'How can I be more productive? How can I do more with less? How can they treat me better?'"

Staying ahead of the sustainability curve

To outperform its peers, HP is using a threefold approach as part of its sustainability strategy: It ensures that its suppliers adhere to a stringent code of conduct (as discussed previously); keeps its finger on the pulse of trends in the enterprise business and individual consumer markets; and educates employees

on expected behaviors that both drive performance and are consistent with HP's sustainability objectives.

Expanding the appeal of a sustainability message from a few forward-thinking companies in the upper echelons of global business to full-on "ethical consumerism" still represents a steep educational and adoption curve. But HP is in it for the long haul with its SER program—and its approach allows HP's markets to drive the pace. "Most people have bought into the wisdom of energy reduction," concludes Pierre Delforge. "The problem we have is figuring out how that is compatible with our business objectives in terms of market readiness or market demand. What are our customers really asking for? What are they ready to pay for? And how much does it cost us to deliver that?" By having a consistent, long-view policy—and mechanisms in place to implement and quickly modify its strategy—HP ensures that its product and service development processes dovetail with the market, while maintaining industry thought leadership.

John Frey says: "We are seeing enterprise buyers in general getting much more sophisticated around issues like the environment. We published a white paper that helps them spec greener products, explaining the variety of eco-labels and international standards that exist along with questions to ask IT vendors. It's not HP-biased in any way, but even when purchasers use objective sustainability criteria, HP tends to win a lot of business." And though HP's energy-efficient, newly eco-labeled products are commanding a premium price with enterprise customers due to an aggressive 24-month payback period, the message is still slow to resonate with retail customers.

"We've figured out time and time again that you can do market surveys and consumers will tell you, 'Yes, absolutely, I want to buy an environmentally preferable product, and I'm willing to spend extra for it,'" says Frey. "But the reality is, at point of purchase, it's all about price. Our enterprise customers have warmed up to more energy-efficient power supplies and equipment that uses a lot less energy—even when it has a price premium associated with it because those components are more expensive—but consumer customers are still unwilling to pay for that."

Another danger is deliberate confusion in the market: "It often takes a detailed explanation to make the case for a truly greener product," says Frey. "Meanwhile, it's easy for others to 'greenwash' or divert attention, talking about things like 3-watts-lower standby power, which is a bit disingenuous when, really, 70 percent of the associated energy use of a printer is in making the paper."

Building on a culture of responsibility

HP is ensuring its ability to sustain itself long-term by maintaining a corporate culture built on CSR values, by investing in suppliers and partners for the long-term, and by encouraging ideas about sustainability to bubble up from employees at all levels.

In a letter that accompanies HP's Global Citizenship Report for FY2007, HP's chairman, CEO and president, Mark Hurd, pledges to use the company's "focus, resolve and ingenuity" (along with that of its partners, suppliers and

customers) "to help address some of the planet's most critical challenges." The mission is not seen only as altruism but also as savvy business strategy—a message that is reinforced at all levels within HP.

"You can't save the environment by losing money," Nixon says. "That's a losing proposition because if you do that, then you're not going to be a leader and if you're not a leader, you're not influencing what is happening in society. So I think we need to find win-wins, where you can do well and you can do good. And to have a successful environmental strategy, you need to be successful from a business perspective."

To make sure that employees at every level of the company understand this win-win view, the company hosts a number of internal "sustainability networks"—groups within each HP office where employees can sign up for different distribution lists, coffee talks and committees. There is a companywide program called "Live Green," where employees can avail themselves of programs such as solar panel reimbursement. Live Green also offers access to a large database called "Green Base," where all of HP's environmental documents, customer presentations and competitive research are stored. One valuable business benefit of this universal focus and awareness is that many of the company's best SER ideas have come from relatively junior employees. According to Judy Glazer, "Almost all of our supply chain ideas originate from more junior folks and work their way up to the SVP

level. The three senior VPs who drive this from a strategic standpoint are collectively responsible for roughly \$50 billion in expenditures for product materials and manufacturing and the entire fulfillment for HP products. So they're not sitting around having meetings with each other deciding when we should eliminate which material or how we should resolve compliance issues. Many valuable ideas come to them in the form of proposals that have been developed lower in the organization."

Sharing lessons learned

As pioneers, HP's SER executives are very eager to share what they're learning with other organizations. Frey advises aspiring sustainable companies to "find out what is meaningful to you and your customers. Focus on the things where you can really make an impact. That sounds really obvious, but you'd be amazed at how many companies put together a sustainability strategy and focus on things that are incidental to their business or in the eyes of their customers, while ignoring opportunities that are much bigger. Also, get a solid baseline before you start so that you know when you're making an impact. The final thing I tell companies is, measure your progress and be transparent about it. Increasingly, on today's world stage, you're not credible if you're not transparent."

Nixon counsels every company to take a realistic view of the near-term: "One of the reasons we came out with our eco-attributes label is that we see what's going on in the landscape and ultimately it's going to be regulated. So why not get out there and try to influence it and harmonize it and just be transparent with your products? What we're out there with now is kind

of a first step, but where we're taking it is really going to be pretty innovative in terms of being just full 'open kimono' about what's in our products."

"I think HP is lucky in the sense that its founders believed in sustainability," continues Nixon. "It's something that has had visibility and has really withstood the test of time. It has to be understood and endorsed from the top down. Mark Hurd is a pretty pragmatic guy: He's focused on the numbers and has the most balanced view of sales, operations, products, technology, etc. that you could get. So being able to frame the dialogue and the programs and the initiatives in a way that makes business sense for your customers is key. That's HP at our core, a company that makes sustainability make sense."

About the authors

Eric Lowitt is a research fellow at the Accenture Institute for High Performance, where his research focuses on the connection between sustainability and high performance. Lowitt's most recent sustainability research has been published on prominent websites such as the World Business Council for Sustainable Development and Forbes.com.

Jim Grimsley is the Accenture Sustainability Practice Lead for North America. Based in Houston, Texas, Grimsley has significant experience leading a number of successful reengineering and transformation projects. Prior to his current role, he was the global managing partner for upstream in Accenture's energy industry group. His consulting background encompasses a broad range of leadership experiences, including major merger integration efforts in the energy industry as well as several significant supply chain projects.

About the Institute

The Accenture Institute for High Performance develops and publishes practical insights into critical management issues and global economic trends. Its worldwide team of researchers connects with Accenture's consulting, technology and outsourcing leaders to demonstrate, through original, rigorous research and analysis, how organizations become and remain high performers.

About Accenture

Accenture is a global management consulting, technology services and outsourcing company. Combining unparalleled experience, comprehensive capabilities across all industries and business functions, and extensive research on the world's most successful companies, Accenture collaborates with clients to help them become high-performance businesses and governments. With more than 186,000 people serving clients in over 120 countries, the company generated net revenues of US\$23.39 billion for the fiscal year ended August 31, 2008. Its home page is www.accenture.com.

Notes

1. "Company History, the Fifties," HP Memory Web site, http://www.hpmemory.org/wa_pages/wall_a_page_08.htm, accessed December 5, 2008.
2. The Electronic Industry Code of Conduct (Version 2.0, October 2005) outlines standards to ensure that working conditions in the electronics industry supply chain are safe, that workers are treated with respect and dignity and that manufacturing processes are environmentally responsible. The Code was initially developed by a number of companies engaged in the manufacture of electronics products between June and October 2004] Participating companies included Celestica, Dell, Flextronics, HP, IBM, Jabil, Sanmina-SCI and Solectron. Companies either adopting or endorsing the code or joining the Implementation Group include: Celestica, Cisco, Dell, Flextronics, Foxconn, HP, IBM, Intel, Jabil, Lucent, Microsoft, Sanmina-SCI, Seagate, Solectron and Sony.



High performance. Delivered.

Copyright © 2009 Accenture
All rights reserved.

Accenture, its logo, and
High Performance Delivered
are trademarks of Accenture.