

Sustainable Innovation and Change: The Learning-Based Path to Growth

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For companies that want to make sustainable development a reality, building organizational learning capabilities can be invaluable. Organizational learning – now embraced as a core competitive strength in successful global companies such as British Petroleum (BP), Coca-Cola, and Royal Dutch/Shell – has proven very effective in bringing about lasting change and fundamental innovation. In fact, every company interested in capturing growth through innovation and change has needed to develop critical organizational learning capabilities to meet its goals.

When these approaches take hold in an arena such as sustainable development, exponential increases in the rate of innovation become possible, leading to compelling breakthroughs in new products and processes, as well as cost savings from energy efficiency and reduced materials use and waste. Moreover, assumptions behind sustainable industrial design, such as dematerialization, cradle-to-cradle product responsibility, and „natural“ strategies for growth, cooperation, and competitive success (i.e., strategies based on patterns observed in nature), shake up existing industrial habits of thinking and doing and spur people to fresh solutions. Finally, sustainable approaches to business challenges can reduce exposure to incident and liability risks.

At the same time, companies can strengthen and reinforce existing organizational learning efforts when sustainable development objectives become part of a corporate vision. Employees strongly identify with the values represented by sustainable development. Experience at companies that have taken an early lead in this area indicates that because sustainable development often aligns personal values with business goals, staff bring exceptional energy to efforts in sustainable development.

Because sustainable development is still quite new to the corporate world, evidence demonstrating its business impact is still limited. However, in the related area of environmental performance, a growing number of studies and stock performance appraisals are highlighting the value of new strategies and practices that address broad environmental issues and concerns. Companies that act on these approaches have been consistently outperforming the broader market by about 2 percentage points. In the face of this evidence, according to *The New York Times*, investment analysts are rethinking their traditional resistance to corporate environmentalism.¹ ‘An eco-efficient company is making efficient use of its resources,’ suggested the Swedish investor Ingeborg Schumacher of UBS Brinson, ‘and that’s probably a strong signal that it’s well-managed as a whole.’

But efficient management alone doesn’t explain why environmentally motivated companies prosper. There are many well-managed, efficient companies without much environmental awareness. Something more is at play: a combination of vision, values, awareness of market and customer opportunities, technological prowess, and organizational learning, reinforcing each other in a way that fuels a continuous process of innovation and growth.

Implementing Learning for Sustainability

Committing to sustainable development puts a company to the test. Because the concept links so directly with basic human values and hopes, people both inside and outside the company will expect real, sizable results from sustainable development efforts. For this reason, it may be best to keep the early stages of a sustainable development effort focused on pilot projects that produce tangible results. This will enable companies to build knowledge, confidence, and credibility. Moreover, the often substantial cost savings from initial sustainably based product and process improvements can help fund investments in longer-term initiatives that may require broader involvement of customers, suppliers, or communities. When they do take sustainability efforts public, companies are likely to find that the public is keenly interested in what they’re doing – interest that may challenge them to push for even further innovation and change. For these reasons, linking a sustainable development initiative with a culture of learning and change is critical to success.

In our experience, three elements of organizational learning are essential to success when companies embark on innovation efforts such as those generated by sustainable development: *compelling aspirations*, a focus on *collaboration and rethinking*, and a *whole-systems approach* to solutions and follow-through. The mutually reinforcing effect of these three elements, and the synergy of their interplay with the core issues of sustainable development, can build an extraordinary capability for innovation.

Compelling Aspirations. Linking a company’s aspirations with personal visions creates a „pull“ for change, which is far more powerful than the „push“ dynamic of traditional, highly directive management. When DuPont announced an aggressive campaign to drastically reduce emissions, employees responded with pride, enthusiasm, and focused action. Edgar Woolard, Jr., DuPont’s former Chairman and Chief Executive Officer, has described the emissions program as „one of the most unifying, self-propelling initiatives the company has ever undertaken.“

IKEA, a global interior furnishings company headquartered in Sweden, was also able to tap into this reservoir of energy for change when its competitive framework shifted abruptly. The use of formaldehyde in furniture manufacturing came under media scrutiny after Denmark issued tough new regulations on its use. To promote compliance, the government decided to prosecute a well-known company – and chose IKEA, even though consumers had expressed no concerns and the quantity of formaldehyde used by IKEA only slightly exceeded the new limits. The press treated the prosecution as a major story. As a result of the intensely negative media campaign, IKEA soon experienced a one-third drop in its Danish retail sales. To IKEA, whose mission is to make life better for its customers, the adverse publicity and lost sales were a total shock.

IKEA's president, Anders Moberg, responded by convening a task force under the company's Quality Division to examine how environmental issues would affect IKEA in the future and how IKEA was likely to affect the environment. After conferring with numerous organizations, including environmental, government, business, and academic groups, the task force engaged the assistance of The Natural Step, based in Stockholm. IKEA decided to adopt the four „system conditions“ for sustainable industrial activity posited by The Natural Step (Exhibit 1) as part of its business approach. The company embarked on a series of rapid innovations, culminating in the production of an „eco-plus“ line of furniture. Although the eco-plus line was generally higher in cost than other IKEA lines, it was priced to be the „lowest-cost environmentally friendly furniture available.“

At Ault Foods, a Canadian food products company, the meeting of personal aspiration and a corporate objective drove an environmental initiative much faster, much farther, than top management could have imagined when it sought to improve regulatory compliance efforts. The commitment of a small task force of volunteers led top management to adopt something much stronger than a compliance program. Enthusiasm within the company for the initiative broke down old barriers between areas such as plant management and **R&D** and led to environmental solutions that generated significant profits.

Exhibit 1

The Natural Step

Swedish physician Karl-Henrik Robert founded The Natural Step in Sweden in 1989 as part of a personal effort to enable that country to move toward becoming a sustainable industrial economy. The Natural Step has brought together an international network of experts focused on moving beyond a climate of debate on policies and costs to see how much can be accomplished through a rigorous process of consensus building.

To accomplish this, Robert and his colleagues embarked on a search for principles that would garner the widest possible agreement while providing clear direction toward achieving a sustainable society. After a lengthy consensus process in Sweden, they articulated four key principles:

1. Substances from the earth's crust must not systematically increase in nature.
2. Substances produced by human society must not systematically increase in nature.
3. The physical basis for the productivity of nature must not be systematically deteriorated.
4. The use of resources must be efficient and just with respect to meeting human needs.

In Sweden, the first Natural Step report was endorsed by the King and many national leaders, and 4.3 million copies were distributed – one to every household and school. The network has grown to include scientists, economists, teachers, environmental activists, politicians, business leaders and artists. Natural Step organizations are now active in the Netherlands, the United States, and many other countries.

Scandic Hotels, the largest hotel chain in the Nordic region, underwent a dramatic turnaround under new management in the early 1990s. Scandic drove its change effort with a vision based on strong core values, including a commitment to sustainability. Using The Natural Step framework, Scandic created an environmental program involving all 5,000 employees in the company's 100 hotels. In the first year, employees identified more than 1,500 innovations to improve environmental and economic performance.

How does one go about creating the energy and pull for this type of activity? First, by recognizing that it does not have to be created. It is already there in the form of people's deep concern about the environment. Leaders can legitimize the effort by clearly affirming, in a vision or value statement or business rationale, the link between the company's core mission and sustainability. Once the direction and rationale have been established, the company should create forums where people can come together to envision the implications for their parts of the business. Structured so that people can articulate their own values and aspirations, these meetings enable people to organize themselves around the new opportunities. Finally, leaders must reinforce the message through speeches and memos and through tangible support of early initiators' efforts.

Rethinking and Collaboration. Just as we've repeatedly seen the benefits of vision and aspiration that bring together collective and personal values, we've seen the power of people breaking free from their mental and organizational fiefdoms. Companies that align with sustainable development will need new mental models for thinking about their businesses and new ways to reach across internal and external boundaries to meet sustainable development challenges. This is hard work, but it can produce breakthrough levels of improvement – as at Ault Foods – when the „pull“ power of sustainable development brings people together in collaborations that break down the old boundaries.

Hyde Tool, a Massachusetts-based family-owned business that manufactures hand tools, gained a competitive cost position in its market by relentlessly focusing on pollution prevention. Environmentalism galvanized a spirit of organizational learning and experimentation across traditional boundaries. A purchasing department employee suggested a change in the display of putty knives that cut annual paper-board purchases by eight tons, reduced distribution box sizes by 12 percent, saved the company \$40,000 per year, and increased the enthusiasm of retailers (including WalMart) for the product. The company cut its annual discharge of process wastewater from 29 million gallons to 1 million – moving on the way to zero. Hyde Tool also reduced its potential future liability by diverting 1,000 tons of the solid waste generated from its tool-grinding operation from a landfill to use as an ingredient in the production of blacktop.

Employee teams at Scandic Hotels, using sustainability principles to drive a fundamental rethinking of their products and services, have focused in the past two years on a second environmental initiative called the „Resource Hunt,“ which seeks to reduce water and energy consumption by 20 percent and unsorted waste by 30 percent. Breakthroughs include a computerized system for tracking energy and emissions per guest, allowing Scandic to give discounts to guests who use less energy. The company has saved 17 percent of its annual laundry costs by reducing its use of energy, water, and detergent – enough to recover the cost, within a year, of the new equipment it had bought. Because Scandic's environmental sustainability goals are so much in line with those of its employees and guests, innovations are easy to implement at Scandic and consistently reinforce Scandic's image as a company that cares about people. That reinforcement in turn fuels employee and customer loyalty and contributes to Scandic's dominant position in its markets. In 1997, for the first time, Scandic was placed on the list of the 100 most desirable companies to work for in Sweden. For Scandic, the key to progress is learning. „We know one thing,“ said a Scandic manager. „What we are doing is better than what we were doing before. We are not experts. We are not waiting for die perfect solutions. We are just learning as we go.“

Other companies that have challenged existing assumptions and created new fields for collaboration and change include BP, Interface, and Royal Dutch/Shell. BP opened doors to new forms of internal and external collaboration and new solutions to business challenges when it chose to shift its position on global climate change and tackle the issue as an important possibility. As a result, BP has seen strong internal support for a stance that aligns with employees' personal values, as well as positive external attention for its new degree of openness.

On the surface, getting people to collaborate in ways that generate new ideas and add real value to the enterprise seems straightforward. In reality, it can be difficult to initiate and sustain. While people are generally in favor of teamwork and collaboration, we have identified two key issues that must be recognized and addressed:

- *Short-term goals and measures that are department- or function-based.* People's excitement about sustainable development will quickly succumb to other pressures if suitable goals and measures are not put in place to make the activities important.
- *A lack of skills for conversing about complex, contentious issues in ways that promote real discovery and learning.* To generate real out-of-the-box thinking, it is helpful, if not essential, to bring together people with diverse perspectives and opinions. Rather than deeply exploring and learning from these differences, groups often settle for superficial agreement or polarize into different camps, reinforcing existing preconceptions and approaches. New skills in areas such as dialogue and the effective use of advocacy and inquiry, along with protocols for collective reflection, enable groups to quickly turn diverse perspectives to their advantage and discover „breakthrough“ ideas.

Whole-Systems Outlook. Sustainable development is essentially about systems thinking – driven by a newly reenergized appreciation that the economic, environmental, and social spheres are interdependent. Actions to meet goals in one of these spheres affect the others and are helped or hindered by them. Bring that thinking down a few degrees of abstraction, and we see companies experimenting with systemic impacts and actions. One chemical company, for example, while siting a facility in a town in India, undertook not just to train new employees, but to support an educational infrastructure for the whole town. The company reasoned that its facility would flourish better in an environment with enough trained workers to attract other similar companies and develop a center of manufacturing competence. A number of companies, recognizing that environmental protection doesn't stop at the plant gate, have embarked on programs to bring other companies in their supply chain to the same level of environmental performance.

As IKEA worked through its experience with formaldehyde and rolled out its new „environmental“ line of furniture, it learned a powerful lesson about systems and unintended consequences. IKEA had a well-established reputation for providing value for money and promoting a better life through access to attractive, affordable furniture. By creating a new, more „environmentally friendly“ line, IKEA inadvertently divided its customers into those who could afford the better line and those who could not – which is contrary to its business vision. In addition, because IKEA provides detailed information to its customers about the contents of its products, information about the new furniture line could potentially raise questions in customers’ minds about the contents of the other product lines. To remain consistent with its core business vision and to focus on activities that would contribute to reducing its environmental impact, IKEA rethought its strategy and decided to approach all its product lines from an environmental perspective. The revised strategy was first applied to IKEA’s best-selling lines, which, because of the quantities sold, would provide the greatest immediate sustainable benefit.

Looking back at these events, people at IKEA view them as pivotal to a shift in how they achieve their vision of providing customers a higher quality of life. IKEA is developing systems to account for closed-loop, „cradle-to-cradle“ product accountability, covering dematerialization, design for disassembly, and recycling. In some countries, IKEA is experimenting with ways to enhance furniture recycling by partnering with firms that will distribute old furniture for reuse or disassemble and recycle old furniture components.

Leading commercial developers are now demonstrating that they can design and build „green“ office buildings at initial costs that are competitive with conventional construction, but with operating costs that are half those of conventional buildings.² To achieve these results requires a total-systems view of the building – extending from the interaction of its physical systems, such as windows, lighting systems, heating, ventilation, air-conditioning, public areas, workspaces, furnishings, and beyond, to how these systems best support the needs of the occupants. These buildings have tangible benefits, such as natural light, increased air flow, personal control of lighting, and the right balance between individual work areas and areas for collaboration – factors that have all been shown to contribute to marked increases in productivity and job satisfaction. Thus the initial investment in design and construction is repaid over and over, not only through substantially lower operating costs, but in the increased value of the work accomplished in a „green“ building over the years. To make this innovative design and construction process work, developers and owners have had to create new levels of collaboration and teamwork across all the disciplines involved – for example, to provide incentives for builders linked to operating costs, not just construction costs.

Developing and adopting this whole-systems outlook takes new knowledge and skills combined with practice. Knowledge of basic natural and environmental principles such as those developed by The Natural Step provide a framework for people to understand how their organizations’ actions affect the larger systems of which they are a part.

Additionally, building skills in the organizational learning discipline of systems thinking enables people to better understand the systemic implications of new strategies. These include issues such as balancing short- and long-term tradeoffs, anticipating potential unintended consequences, and addressing underlying limits to success. Knowledge and skills will have no impact if left in the classroom; the most powerful way to introduce these new capabilities is in real-time to groups and teams striving to discover and implement more sustainable approaches to building the business and improving performance.

Reaching for Sustained Learning and Success

The IKEA story illustrates the challenges and rewards facing any company that undertakes to realign its principles and business activities with sustainable development goals. As a result of this whole-systems thinking and proactive approach, IKEA has not only regained market share that had suffered after earlier negative environmental reports, but the company continues its strong global expansion. Today IKEA is the largest interior furnishings company in the world, with over \$6 billion/year in revenues. The key to IKEA’s success was the willingness to keep learning from experience. Rather than back away from a vision of environmentally friendly furniture, the company chose to take its commitment one step further – which led to a revitalized brand, recaptured market share, and a highly motivated workforce. IKEA’s focus on learning and innovation transformed a problem into competitive advantage.

In die end, sustainable development can’t be achieved without innovation, and innovation is best achieved in a culture that embraces and fosters learning and change. There is risk in taking a company down the path of sustainable innovation. Old ways of doing things will be challenged. People inside and outside the firm will ask tough questions about the depth of the commitment or the strength of the business rationale. But the potential for engaging employees, satisfying customers, and coming up with inspiring answers to short- and long-term business challenges will increasingly draw firms to the path of sustainable innovation. These real-world successes can help companies achieve new levels of collaboration in the search for sustainable systemic solutions.

¹ „Increasing Evidence that Green Begets Green“ The New York Times, July 19, 1998, page BU-7.

² Green Development: Integrating Ecology and Real Estate, John Wiley and Sons, 1998.

Examples of companies using The Natural Step framework were provided by Brian Nattrass and Mary Altomare, authors of The Natural Step for Business: Wealth, Ecology, and the Evolutionary Corporation, to be published by New Society Publishers in 1999.

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