4.6: Radical Incrementalism

Learning Objectives

1. Examine the role of incremental steps in innovation.
2. Understand how systems changes can result from combining small steps.

Some companies enter the market with a mission of challenging existing products with sustainable replacements. Their strategy is radical from the start. Others, typically larger established firms, gain momentum in sustainability innovation by building upon incremental improvements in products and systems. Business analysis often juxtaposes incremental change with radical or dramatic change; a common assumption is that the two are mutually exclusive. Moreover, literature in the sustainability field privileges the latter over the former, dismissing incremental change as timid at best and “greenwash” at worst—accusations that may indeed hold true at times. Separating the two concepts, incremental and radical, can be useful for heuristic purposes. Perhaps doing so is also psychologically satisfying; it’s either this or it’s that.

In real life, however, people in business make a series of small steps over time that add up to larger, more profound change. Sometimes early successes build momentum for bigger changes that previously were viewed as too radical or risky. Alternatively, incremental successes can build courage and internal support, stimulating requisite imagination and energy to design more radical and innovative changes. By consciously pursuing incremental changes with a radical ultimate goal and tracking progress, one can catalyze significant innovation and ultimately differentiate the firm.

**Radical incrementalism** involves small, carefully selected steps that result in learning that in turn reveals new opportunities. It means taking marginal, integrated progress toward more ambitious sustainability goals. Ideally, your whole company would participate in discussing and defining ideal characteristics of this goal, track milestones along the way, observe lessons, and feed this data back into the definition of the goal and the next steps forward.
Others have used the term *radical incrementalism* to describe a deliberate strategy for business operations (particularly in information technology) in which a series of small changes are enacted one after the other, resulting in radical cumulative changes in infrastructure. Our use of the concept differs in that while company strategists should have a vision of what sustainability means for their company, the incremental steps to get there necessarily shape the course. In other words, the feedback you get along the way will accelerate, alter, and inform your next actions. This is iterative and adaptive learning—one gains knowledge along the way that affects future decisions. The companies we examine here demonstrate this strategy.

Corporate adoption of green and sustainability strategies is gaining global momentum. Its implications are radical for firms, supply chains, and consumers because it represents a significant challenge to conventional ways of doing business. We present leaders here because they offer us a window to the future. In this section and the discussion of adaptive collaboration through value-added networks (VANs) in Chapter 4 "Entrepreneurship and Sustainability Innovation Analysis", Section 4.5 "Adaptive Collaboration through Value-Added Networks", we discuss the means to implement sustainability innovation. The result, for those companies that successfully pursue it, is new market space shaped to the lead firm’s advantage. However, just as the journey of one thousand miles begins with a single step, so does the radical shift toward sustainability involve incremental changes.

### Kaiser Permanente

Kaiser Permanente (KP) deliberately adopted a radically incremental approach to implementing its strategy. The company has a sustainability perspective on its corporate purpose (health care) that widens the meaning of “health care” to include not only medical treatment but the broader community health impacts of its facilities and operations and the materials it sources. We examine here one relatively small decision in KP’s broader strategy: the company’s decisions on the use of polyvinyl chloride (PVC), a material of increasing environmental concern. Specifically, we will look at KP’s choices regarding flooring. KP measured everything it did to build the business case for greening each incremental step and discovered there were significant economic benefits to be gained by seemingly small changes. Moreover, these incremental decisions have had radical impacts on the company’s success and have facilitated moving forward on other sustainability fronts. This discussion puts KP’s incremental step on flooring in the wider context of green buildings as an important arena for companies to measure the collective impact of seemingly small decisions. We present the business case for greener buildings and the economic and environmental benefits that they generate for companies as an integral part of their strategy. Next, we will discuss SC Johnson’s award-winning product sustainability assessment tool, Greenlist. As SC Johnson (SCJ) evolved its efforts to incorporate sustainability into its corporate strategy, it constructed a powerful tool to measure the range of environmental impacts of chemical inputs into its products. As a result, the company has significantly altered its environmental footprint, improved product performance, and achieved significant cost savings. Moreover, this tool has had broader catalytic effects on SCJ’s supply chain and competitors. By patenting Greenlist, SCJ hopes to widen the circle even more.

Both of our company examples, KP and SCJ, illustrate the following three radically incremental tactics:

1. Set big goals but take moderate, integrated steps.
2. Measure everything—build your business case.
3. Incorporate knowledge gained back into new product and process design.
Both KP and SCJ illustrate the tactics we advocate: set big goals but take moderate, integrated steps to get there. Both companies have religiously monitored and measured their progress to build the business case for the next ambitious step. Now both are grappling with incorporating the knowledge gained from their earlier successes into future product designs, process designs, or both.

KP is the largest health management organization in the United States, with 8.2 million members and over 500 hospitals and medical buildings under management. KP’s Green Building Committee first met in 2001 to determine priority projects it would take on. Seated at the table were representatives from interior design firms, construction companies, health nongovernmental organizations (NGOs), and architects, along with KP’s national environment health and safety people (labor joined later). KP’s interest focused on identifying an area where the firm could move relatively quickly to eliminate a problematic chemical and thereby make a demonstrable difference for human and community health and ecological well-being. The group made the decision to investigate PVC-free flooring. Given growing research on PVC’s toxicity to humans throughout its life cycle, this choice met the groups’ selection criteria. It was a radically incremental step.

KP does not move precipitously. Prudent spending and sound financial performance enable KP to deliver quality care, convenience, and access and affordability. KP is also dedicated to individual and community health and is science-driven and acutely sensitive to lowering the costs of health care. In this last respect, there is no choice in the health care industry; new drugs and procedures, health care worker shortages, provider consolidation, aging populations, and the rise of chronic health conditions across population segments continually drive costs up. Careful consideration of costs therefore must be part of the equation for procurement and strategic change. Strong core values, however, including resource stewardship and leadership in improving the quality of life of the communities in which it operates, were taken seriously by senior management.

John Kouletsis, director of strategic planning and design, called the organization “fearlessly incremental” in its strategic approach. Though it takes on big issues, the company is meticulous in accumulating quantitative and qualitative evidence to support decisions, especially major changes in purchasing. Company leadership is akin to the old political notion of statesmanship. The belief that what is good for the environment and the community is good for the health maintenance organization (HMO) members and therefore good for KP’s financial success guides strategy. KP employs a systems view of health care, incorporating environmental and community aspects, and this wider perspective on health informs the company’s green strategic decisions.

Jan Stensland was half of the duo in strategic sourcing and technology for KP. Her friendly, easy-going exterior belied intensity, intelligence, and absolute dedication to achieving the multidimensional objectives of her job. She conversed equally comfortably about material costs per square foot, parts per million contaminants, construction specifications, human health, and PVC exposure research. She also tracked internal rates of return for new decisions—for example, alternative flooring technology projects under consideration to renovate dozens of medical buildings throughout California, ten states, and Washington, DC, where thousands of patients and staff would spend time over the next several decades. While health is in the forefront of her mind, her proposals must show how the company will save money or get better spaces for the same cost. The national health care crisis of escalating costs is the elephant in her office, and she stares it down with an optimizing strategy across financial, community, health, and environmental objectives.

Stensland’s team sought ways to influence KP’s suppliers’ research and development (R&D) shops to redesign products.
so that health care facilities would be more effective measured in terms of patient treatment, disease prevention, and costs. Thus business effectiveness is viewed in a larger social context. Stensland thinks in terms of today and fifteen years out in talks with suppliers, working through negotiations to maximize health benefits and minimize costs for multiple stakeholders.

For example, 16 percent of KP’s 8.2 million person membership suffers from asthma. The rate of children’s asthma recently has risen to an epidemic level of 27 to 30 percent in some counties in California. Chronic respiratory and immune systems problems increasingly have been linked to low exposures to different chemical compounds. There are considerable health impacts and significant monies at stake; therefore, suppliers bid with particular attention to KP’s interests. Moreover, the health care industry often follows KP’s lead. When KP was first among HMOs to move away from PVC gloves due to escalating allergic reactions and their associated costs, the industry followed, opening up opportunities for firms able to provide substitutes. However, that was only KP’s first effort involving PVC.

PVC

KP’s decision in early 1999 to begin to phase out the use of PVC was commendable but controversial. PVC is ubiquitous; it is used to make many everyday materials and is a key component of medical products such as IV bags and tubing. There is also growing evidence that it is a substance of concern. According to the Healthy Building Network, dioxin (the most potent carcinogen known), ethylene dichloride, hydrochloric acid, and vinyl chloride are unavoidably created in the production of PVC and can cause severe health problems, including cancer and birth defects.

Kathy Gerwig, director of environmental stewardship at KP, views the firm taking a precautionary approach, meaning that where there is credible evidence that a material it is using may result in health and environmental harm, it should strive to replace that material with safer alternatives. As a senior manager, Gerwig is convinced there is enough evidence about the hazards of vinyl that the responsible course of action for a health care organization is to replace it with healthier commercially available alternatives that are equal or superior in performance, especially in the design and construction of their buildings.

Stensland described the company’s efforts on non-PVC flooring as an ongoing effort—one piece of a larger puzzle with short-term wins and long-term goals. Thinking this intently about materials takes time but yields good results. The subcommittee assigned to investigate whether substitutes were available for PVC flooring found the inexpensive per-square-foot price of vinyl did not reflect true life-cycle, health, and environmental costs. PVC flooring was discovered to carry high maintenance costs not previously considered because they were not included in the first-cost price of the flooring. True costs are often disguised when budgets are divided between purchasing for new construction or renovation, and ongoing operations once the flooring is installed.

KP conducted pilot projects in several of its medical office buildings and hospitals, administering tests and comparing maintenance budgets in vinyl and nonvinyl flooring buildings, and interviewed the people who cleaned the floors in those facilities. These investigations revealed that up to 80 percent of flooring maintenance costs could be eliminated with the use of a rubber flooring product (Nora, from Freudenberg Building Systems) and another non-PVC flooring product, Stratica, an ecopolymeric product. The rubber and non-PVC vinyl flooring products were more stain and slip resistant and had improved acoustic properties. But that was not the end of the story.

Qualitative issues related to flooring often translated into significant ongoing expenses. “Slips, trips, and falls” are major
problems in buildings and an early indicator of problems with flooring. Accidents require expensive settlements awarded to employees and visitors to buildings. Stensland analyzed the square footage costs across buildings and examined data for two years running. The company’s new attention to the nature of, and differences across, various flooring materials uncovered two KP locations where rubber flooring was installed and for which data showed zero slips, trips, and falls. Furthermore, data from nurses revealed the harder vinyl floors generated more complaints and work absences by nurses who are on their feet all day. Non-PVC rubber flooring improved conditions for nurses and accomplished the environmental and health strategic goals. Analyses were conducted at multiple facilities. The magnitude of the flooring issue was significant for the company and its contract suppliers; in 2005, the company managed sixty-four million square feet of flooring. By 2015, it expects to have eighty-four million square feet under management.

However, that doesn’t solve the problem of flooring replacement in existing facilities. With regularly scheduled replacement of flooring in the more than five hundred medical buildings in the system, could PVC be eliminated there as well in a variety of areas? KP turned to the Collins and Aikman Corporation (C&A), its carpet supplier, and required that C&A develop a non-PVC carpet backing (the underlayer of carpeting contained most of the materials of concern), preferably at the same price. The manufacturer brought the new offering back to KP six months ahead of schedule. An equivalently priced new carpet backing whose performance exceeded the PVC-backed carpet was now available not just for KP but for all the manufacturer’s customers. The new material used postconsumer recycled polyvinyl butanol, the film used on safety glass for windshields that protects car passengers from broken glass in accidents. An enterprising engineer had discovered he could use the discarded sticky “waste” compound found at recyclers and brought it back into the materials stream for new applications.

By asking suppliers for alternative, safer products, KP—due to its size—has been driving the market toward products that reduce resource use and improve health conditions by eliminating chemical hazards and lowering maintenance expenses. Incremental steps are taken toward sustainability goals, pulling markets and supply chains along in what ultimately constitutes radical change: the substitution of a new, better product design for the old.

There are other examples. Refrigerants used in medical facility chiller systems have had the same problems as refrigerants in general use. When contracts for refrigerants came up for reconsideration, KP put bidders on notice that any problematic chemical in use or being phased out by 2008 could not be used in chillers. York Incorporated, an award-winning firm for its product efficiency and advanced technical designs, won the bid, producing new chillers with benign refrigerants in a unit that was 25 percent more energy efficient than the market standard. Thousands of chillers across hundreds of medical office buildings and hospitals now drive substitution of a radically more effective system for the existing products.

There are other examples of KP’s radically incremental approach. One of the companies selected to provide KP’s elevators produced a super energy-efficient design that addresses KP’s goal for more energy-efficient equipment, helping drive and justify that supplier’s improvements to its product design. Another elevator company had switched from petrochemical-based hydraulic fluids to soy-based fluids and was investigating more sustainable elevator car finish materials. In 2006 KP was talking with furniture and textile manufacturers to provide non-PVC upholstery. By 2005, KP was leading an effort to bring locally grown organic food into its hospitals, supporting local organic markets and working with food service suppliers like Sysco together with local growers to reduce fuel consumption in distribution. The goal is delivery of “clean” foods without chemical additives at reasonable cost to members and patients. The slow food movement, a grassroots and rapidly spreading effort to improve the quality of food through organic practices and limited radius distribution from the growing site, gains momentum when a company the size of KP focuses on locally grown...
organic produce. The head of Slow Food USA’s office, and founder of Slow Food International, Carlo Petrini views the organic and local food movements that have reinvigorated farmers’ markets and microbreweries across the United States as representative of a new dialogue emerging between traditional knowledge and advancing science knowledge that is creating a new business reality and a different model of business.

KP’s incremental steps to upgrade facilities add up to radical change. KP has put sustainable building design and construction practices into all new construction and “rebuids” (KP renovations) through facility templates. These practices incorporate the following:

- Implementing efficient water and energy systems
- Using the least toxic building materials
- Recycling demolition debris, diverting thousands of tons of materials from landfills
- Making use of daylight whenever possible
- Managing storm water to enhance surrounding habitats
- Reducing site development area (e.g., total gross square footage) to concentrate and limit total paving and other site disturbances
- Installing over fifty acres of reflective roofing
- Publishing an Eco Toolkit reference book and providing it to KP capital project team members and more than 50 architects and design alliance partners

KP also incorporates health and ecosystem considerations into national contracts. These considerations include the following:

- Reducing the toxicity and volume of waste
- Increasing postconsumer recycled content
- Selecting reusable and durable products
- Eliminating mercury content
- Selecting products free from PVC and di-2-ethylhexyl phthalate (DEHP)

Successful changes include replacing three DEHP-containing medical products in the neonatal intensive care units with alternatives, ensuring the continued elimination of mercury-containing medical equipment from standards, and negotiating a national recycling contract. KP’s purchasing standards include 30 percent postconsumer content office paper and mercury-free and latex-free products.

In addition, KP facilities often partner with local community organizations to implement community initiatives. One example is a mercury thermometer exchange at Kaiser Permanente Riverside (CA) Medical Center. A total of 540 pounds of material were collected from 3,000 mercury thermometers. Over 1,200 digital thermometers were distributed. “Kaiser Permanente’s accomplishments in environmental performance are impressive and unique,” said Kathy Gerwig, director of environmental stewardship. “We hope that by changing our practices, we can drive change throughout the health care industry.” GreenBiz Staff, “Kaiser Permanente Turns Green,” GreenBiz, April 22, 2003, accessed January 7, 2011, http://www.greenbiz.com/news/2003/04/22/kaiser-permanente-turns-green.

KP’s metrics demonstrating the benefits of its sustainability efforts include the following:
• In 2003, KP diverted 8,000 tons of solid waste from landfills.
• In 2003, KP reused or safely redeployed more than 40,000 pieces of electronic equipment, weighing 410 tons and containing 10,500 pounds of lead.
• KP eliminated 27,000 grams of mercury from KP health care operations by phasing out mercury-containing blood pressure devices, thermometers, and gastrointestinal equipment.
• KP phased out one hundred tons of single-use devices in 2003.

The impact of energy conservation measures at KP prevented the creation of more than seventy million pounds of air pollutants annually. The aggregate impact of pollution prevention activities eliminated the purchase and disposal of forty tons of hazardous chemicals. Other activities reported by the company in 2005 are as follows:

• Waste minimization resulting in the recycling of nine million pounds of solid waste
• Electronic equipment disposition resulting in the recycling of 36,000 electronic devices containing 10,500 pounds of lead
• Optimal reuse of products that led to reprocessing 53,851 pounds of medical devices and supplies
• Capital equipment redistribution
• Greening janitorial cleaning products, eliminating exposure risks for employees, lowering costs, gaining system efficiencies, and improving performance
• Recycling and reuse of 8,300 gallons of solvents
• Energy conservation resulting in the recycling of 30,000 spent fluorescent lamps

In conclusion, KP provides a compelling example of the immediate gains to be had through pursing sustainability practices in radically incremental steps. KP’s senior management team works from the premise that human health and environmental health are the same thing. As an institution engaged with human health, it makes sense for KP to be active in resolving a paradox facing the health care industry: that hazardous chemicals used in medical products and buildings have harmful effects on patients and employees. It makes sense to coordinate purchasing across member medical centers and hospitals to ensure improved health conditions for members and the communities in which they live. The opportunities are vast for KP. That means the hundreds of suppliers that provide technical and routine needs for the company and the more than two thousand minor and major construction projects under way at any one time also can take advantage of new sustainability-inspired market space opportunities. The question is which ones will step up to the challenge and follow KP into the next generation of “good business”?

Radical incrementalism means taking small, carefully selected steps that result in learning that in turn reveals new opportunities. In this case a seemingly small decision on a seemingly innocuous issue—flooring—resulted in larger systemic changes across the company and its supply chains, even sending an urgent signal to the flooring industry. By greening its flooring, KP is improving health by eliminating a questionable material, improving working conditions and health for nurses, and reducing costs by bringing employee absences down and lowering accident liability costs. Putting the pieces together took time; KP staff members measured each step and outcome to evaluate the effects on cost and performance. Moreover, the results are driving bigger goals. Three years from the start-up of the project, KP made a new-construction standards change: no PVC vinyl flooring would be used in any future facilities. If we take into account all the other incremental changes KP is making, the systemic and company benefits are profound. KP’s radically incremental steps are part of its strategy to better support community health while it grows its operations.

We turn next to sustainability ideas applied to facilities. Buildings are not just where your business activities happen.
Your facilities—and the decisions you make about resources, energy, materials, and so forth—are a significant investment and can either add to or subtract from your bottom line. They can also add to or subtract from your overall strategy. Buildings and their operating systems are an excellent area in which you can realize the benefits of radically incremental steps.

Among the many industries developing innovative strategies to increase profits and address environmental and related community quality of life concerns, the building sector presents some of the most accessible incremental opportunities that can aggregate into radical returns. Compared to standard buildings, “green” buildings can provide greater economic and social benefits over the life of the structures, reduce or eliminate adverse human health effects, and even contribute to improved air and water quality. Opportunities for reducing both costs and natural system impacts include low-disturbance land use techniques, improved lighting design, high-performance water fixtures, careful materials selection, energy-efficient appliances and heating and cooling systems, and on-site water treatment and recycling. Less familiar innovations include natural ventilation and cooling without fans and air conditioners; vegetative roofing systems that cool buildings, provide wildlife habitat, and reduce storm water runoff; and constructed wetlands that help preserve water quality while reducing water treatment costs.

The building industry and growing numbers of private companies are responding to these opportunities. Valuable economic benefits are being realized in improved employee health and productivity, lower costs, and enhanced community quality of life. Since 2000, adoption of green design and construction techniques has been greatly aided and accelerated by the Leadership in Energy and Environmental Design (LEED) rating system.

LEED is a voluntary green building rating system established by architects, interior designers, and the construction industry through a consensual process during the 1990s. The US Green Building Council (USGBC), a voluntary membership coalition, developed and continues to review the LEED standards. LEED guides building owners, architects, and construction firms to use industry standards and advances in those standards for environmental and health performance across a wide range of building criteria including site design, building materials selection, and energy systems. While each modification and upgrade to the building and site may seem small unto itself, the changes combine to create a dramatically more efficient building system with far lower operating costs and more satisfied owners over the life of the structure. While there is valid criticism about some of the specifications within LEED and its impact on innovation in the materials industry, overall the system has helped green the building industry. The Healthy Building Network criticizes the USGBC and LEED for continuing to include PVC in green building specifications. Others have criticized the LEED process for inhibiting innovation because it freezes the specific definition of "green" in a moment in time. This can mean that unforeseen, even greener, innovations will be left out of the criteria.

Green buildings perform the same functions and serve the same purposes as conventional buildings but with a smaller ecological footprint. They employ optimized and often innovative design features to reduce natural systems impacts throughout a building’s life cycle and all across the supply chain of materials, components, and operations.

Green buildings provide a range of benefits to stakeholders, from developers and owners to occupants and communities. Structural, mechanical, and landscape design elements can maintain comfort and indoor air quality, conserve resources, and minimize use of toxic materials while reducing pollution and damage to local ecosystems. A broad range of green design techniques, technologies, and operational strategies are available to building architects, engineers, and owners. Every building is different, and there is no single green design formula. However, there are common design objectives and classes of benefits. The potential benefits of green building practices include the
• Less disruption of local ecosystems and habitats
• Resource conservation
• Decreased air, water, and noise pollution
• Superior indoor air quality
• Fewer transportation impacts

While they may entail higher up-front costs (but not necessarilyLisa Fay Matthiessen and Peter Morris, “Costing Green: A Comprehensive Cost Database and Budgeting Methodology,” US Green Building Council, July 2004, accessed January 10, 2011, http://www.usgbc.org/Docs/Resources/Cost_of_Green_Full.pdf ), in the long term, green buildings can make up the shortfall. Careful design choices for particular locations can reduce that difference to zero. Some of the economic benefits they generate include the following:

• **Lower capital costs.** With careful design, measures such as passive solar heating, natural ventilation, structural materials and design improvements, and energy and water efficiency can reduce the size and cost of heating and cooling systems and other infrastructure. A new bank in Boise, Idaho, was able to take advantage of such considerations to go from an initially planned LEED Silver to an actual LEED Platinum with no added cost.US Green Building Council, “Banner Bank Building: Green Is Color of Money,” 2006, available from the project profiles at http://www.usgbc.org/DisplayPage.aspx?CMSPageID=1721.


• **Increased employee productivity.** Green buildings increase occupant productivity due to better lighting and more comfortable, quiet, and healthy work environments. This improvement can be at least equal to buildings’ lifetime...

- **Reduced absenteeism.** Lawrence Berkeley National Laboratory calculates that improvements to indoor environments could reduce health care cost and work losses by 9 percent to 20 percent from communicable respiratory diseases, 18 percent to 25 percent from reduced allergies and asthma, and 20 percent to 50 percent from other nonspecific health and discomfort effects, saving $17–48 billion annually. William J. Fisk, “Health and Productivity Gains from Better Indoor Environments and Their Relationship with Building Energy Efficiency,” *Annual Review of Energy and the Environment* 25 (2000): 537–66.

- **Market perception of quality.** Green buildings require careful design attention and the use of best practices and display superior performance.

- **Promotion of innovation.** Green buildings employ new ideas and methods that produce significant improvements.

- **Access to government incentives.** A growing number of federal, state, and local agencies require green features and offer tax credits and other incentives such as faster, less costly planning and permit approvals.

Green buildings provide a tangible means of measuring incremental steps that can aggregate into radical system-level benefits. Moreover, they are a visible area in which to demonstrate corporate sustainability strategy—the benefits derived from greening facilities and building systems add up to significant cost savings and represent a demonstrable area in which to see near-term return on investment in green technologies and operating systems.

**SC Johnson**

We turn next to the example of incremental changes creating system innovations at SC Johnson. By the mid-1990s, SC Johnson (SCJ) had a very respectable record on corporate environmental responsibility. In 1975, SCJ voluntarily removed ozone-threatening chlorofluorocarbon (CFC) propellants from its products worldwide. This was three years before the US government banned CFCs. In 1992, when eco-efficiency was introduced as a cost savings measure by the World Business Council for Sustainable Development (WBCSD), SCJ of the first companies to join the WBCSD. Millions of dollars of unnecessary costs were trimmed by using fewer resources far more efficiently. The company was able to eliminate over 420,000,000 pounds of waste from products and processes over the ten-year period prior to 2004, resulting in cost savings of more than $35 million.

In addition, the company built a landfill gas–powered turbine cogeneration energy plant that delivers 6.4 megawatts of electricity and some 40,000 pounds per hour of steam for SCJ’s Waxdale manufacturing facility in Wisconsin. This energy project enabled SCJ to halve its use of coal-generated utility electricity and thereby cut its carbon emissions.

SCJ is a 120-year-old family-owned (sixth generation) firm with explicit commitments to innovation, high-quality products, environmental concerns, and the communities in which it operates. SCJ is a consumer packaged goods (CPG) company and a “chemical formulator”—a company that chooses from a menu of chemical inputs to make its consumer products. With such well-known brands as Pledge, Windex, and Ziploc, the company had over $6.5 billion in sales in 2006 and sold its products in more than 110 countries.
In holding up sustainability criteria as goals, SCJ had set off on a journey in which the end destination was not entirely clear, and by the new millennium company strategists knew it was time to evaluate the systems currently in place. SCJ’s earlier positive results motivated the company to look for more opportunities, so it stepped back and looked at the progress it made over a decade. Company strategists discovered that while eco-efficiency had become second nature to product design at SCJ, strategy needed to shift beyond capturing relatively easy efficiencies and move deeper. They engaged outside expertise to help develop and introduce product design tools that could be used to build preferred ingredient choices into product and packaging design. The result of this assessment was the development of a new product evaluation tool, Greenlist.

Greenlist is a tool SCJ developed to improve the quality of its products through better understanding of the health and environmental impact of material inputs. In the Greenlist database are 2,300 chemicals including surfactants, insecticides, solvents, resins, propellants, and packaging. Criteria measured include the chemicals’ biodegradability, aquatic toxicity, vapor pressure, and so forth. Through Greenlist, SCJ has reduced its environmental impact while simultaneously witnessing increases in production and sales growth.

Greenlist is a patented rating system (US Patent No. 6,973,362) that classifies raw materials used in SCJ’s products according to their impact on the environment and human health. Greenlist has helped SCJ phase out certain raw materials and use materials considered to be environmentally “better” and “best.” The result is a process that gives SCJ scientists access to ingredient ratings for any new product or reformulation and enables them to continuously improve the environmental profile of the company’s products.

The Greenlist screening process covers over 90 percent of the company’s raw materials volume and is continually updated as new findings emerge. Materials are assigned a score from a high of 3 to a low of 0. An ingredient with a 3 rating is considered “best,” 2 is “better,” and 1 is “acceptable.” Any material receiving a 0 is called a restricted use material (RUM) and requires company vice presidential approval for use. If a material is unavoidable and has a low score, the goal is to reduce and eliminate its use as soon as substitutes are available. When existing products are reformulated, the scientist must include ingredients that have ratings equal to or higher than the original formula.

While some raw materials with a 0 score are not restricted by government regulatory requirements, over the years SCJ has elected to limit their use. SCJ replaces these 0-rated materials with materials that are more biodegradable and have a better environment and health profile.

An example of Greenlist in action involves one of SCJ’s glass cleaner products. In 2002 and again in 2004, SCJ assessed the formulation of Windex blue glass cleaner to reduce volatile organic compounds. The reformulations reduced health and environmental impacts while increasing the product’s cleaning performance by 40 percent and growing its market share by 4 percent.

Moreover, SCJ has eliminated all PVC packaging (a step taken to eliminate risk and liability) and, as performance results remain stable or improve, the company has moved to 10 percent of surfactants made from bio-based as opposed to oil-based materials. Each change required coordination with suppliers, which have made the more efficient or benign substitute available for other customers as demand for “clean” materials grows.

SCJ has patented Greenlist, but it has made the process licensable by other companies at no charge (although SCJ’s formulations remain protected). The goal is to encourage application of Greenlist thinking and analysis across industry sectors. The company has already shared its Greenlist process with the US EPA, Environment Canada, the Chinese Environmental Protection Agency, industry associations, universities, and other corporations. Moreover, the company has been able to use insights from Greenlist to work with partner suppliers to help identify and develop ingredients that are more environmentally sustainable.

To date, “the company has been recognized with over 40 awards for corporate environmental leadership from governments and non-governmental organizations, including the World Environment Center Gold Medal, and Environment Canada’s Corporate Achievement Award. SCJ received the first-ever Lifetime Atmospheric Achievement Award from the US Environmental Protection Agency." Five Winds International, “Greening the Supply Chain at SC Johnson: A Case Study,” accessed December 3, 2010, http://www.fivewinds.com/uploads/documents/q60tzmxo.pdf. In 2005, SCJ announced that it had entered into a voluntary partnership with the EPA under the agency’s Design for the Environment (DIE) program. SCJ is the first major CPG company to partner with EPA on the program, which promotes innovative chemical products, technologies, and practices that benefit human health and the environment. In 2006, SCJ received the Presidential Green Chemistry Challenge Award for its Greenlist process.

SCJ has evolved its sustainability strategy from well-meant but relatively piecemeal efficiency efforts to developing an award-winning, innovative product assessment tool. The company has achieved real leadership in the world of consumer products manufacturing. Not only has the company strategically positioned itself ahead of the pack by anticipating regulatory restrictions before they happen, but it has developed enviable preferred purchaser relationships with its suppliers. SCJ has simplified its materials inputs list to fewer, greener inputs and is helping suppliers develop market leadership in supplying greener inputs. Moreover, SCJ is trying to teach the world how it does what it does—and it is doing this for free.

An area in which the company has recognized it needs to take further steps is in incorporating Greenlist further upstream in the product design process. SCJ’s goal is to use the tool not only to assess existing products but also to inspire breakthrough green innovations to capture new market space. Given the company’s track record of conscious evolution of its strategy, this is not an unrealistic goal.

Radical incrementalism, as we have seen, offers a path that can both deliver real-time benefits and lead to market-shifting innovation. KP and SCJ demonstrate the tactics we advocate here: set big goals but take moderate, integrated steps to get there. Both companies have religiously monitored and measured their progress to build the business case for the next ambitious steps. Consequently, both now grapple with incorporating the knowledge gained from their earlier successes into future product designs, process designs, or both.

Being radically incremental requires having an ambitious goal of corporate sustainability, but it does not imply that you will be able to map out all the steps with clockwork accuracy. It does mean, however, that one’s incremental steps must be integrated, that each success and failure must be evaluated, and that the road map under one’s feet must be
redrawn accordingly. Being radical takes courage but so does radical incrementalism. Courage and resolve builds, however, with each successful step.

KEY TAKEAWAY

Radically incremental tactics include the following:

1. Setting big goals but taking moderate, integrated steps toward those goals.
2. Measuring everything (metrics are critical)—to build your business case.
3. Incorporating knowledge gained back into the process for new product and process design.

EXERCISES

1. List the small incremental steps Kaiser Permanente and SC Johnson took and the larger changes they added up to over time.
2. Select a familiar product and list all the incremental small steps that could be applied to its design, use and disposal that would reduce the product’s ecological/health footprint. As you consider these changes, look for imaginative leaps you could make to redesign the entire product, provide for the buyer’s need in new ways altogether, or consolidate incremental changes into a systems redesign involving supply chain partners that could improve the product and lower costs at the same time.