

Sustainable Development: A Path for Getting Closer to Customers

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Long-term, profitable growth is becoming increasingly difficult to create. Products that once occupied secure niches are becoming commoditized. Brands in areas as disparate as automobiles and electronics are losing their power to retain customers. Manufacturers are losing control over suppliers and customers to retailers and distributors. Markets, from appliances to fast food, are becoming saturated. Prices are dropping and margins are shrinking, while customers demand „more, better, cheaper, and faster.“ In the automobile industry, for example, return on assets over the last 10 years has dropped from 25 to 10 percent in the United States, and from 10 to 5 percent in Europe.

The thread running through these challenges is the customer relationship – and how it is changing. Recognizing this, companies have increased customer satisfaction by sharply improving efficiency and product and service quality. They’ve reduced costs and held onto margins through measures such as standardizing operations, outsourcing nonstrategic operations, and redefining the supply chain through, for example, increasingly globalized sourcing. On the strategic front, many companies have developed new ways to reach and retain customers. In the United States, Ford is aggressively moving into distribution and retailing to head off the likes of Wayne Huizenga’s Republic Industries – a chain of car „supermarkets“ that weaken automakers’ links to customers and dilute brand identity. Levi Strauss is differentiating itself from other jeans makers with a new method for providing custom-fit jeans to its customers. BP and Mobil have formed a downstream/retail partnership in Europe that will provide both companies with instant access to a larger customer base while reducing their combined capital assets. Chemical companies such as ICI, Hoechst, Monsanto, and GE Plastics are moving away from commoditized chemicals and into value-added specialties with the potential for higher margins and unique positioning.

Despite these efforts, real growth is hard to obtain. Competitors grow ever more adept at quickly imitating bold new approaches. Alliances and joint ventures may leave customers uncertain about the identity and stability of their suppliers. And continual reorganization of operations and resources entails major capital costs, as well as hidden costs in lost company morale, knowledge, and continuity.

For growth opportunities that build on company strengths and are hard to imitate, companies need new ways to think beyond the next step to the step after that – *and* manage the consequences of the changes these steps set in motion. And they need a process to think about all of the ways in which they create value for customers – and how that system can be leveraged to acquire and retain more customers.

Creating Customer Pull Through Sustainable Development Thinking

Sustainable development, a business paradigm for achieving economic goals today while ensuring that the natural and social environment can sustain the economic needs of future generations, offers fresh ways for companies to attract customers, deliver added value, tighten operations, and build enduring customer relationships. First fleshed out in the 1987 Brundtland Commission report, and given center stage at the 1992 United Nations conference on the environment in Rio de Janeiro, the concept recognizes the deep interdependence of the three „pillars“ of Sustainable development:

- Economic growth
- Environmental quality
- Social well-being (including wealth creation)

Most of today’s successful companies are built on one or two of these pillars, but very few on all three. The environmental and social components of sustainable development have tended to be seen as obligations, not sources of ideas that could fuel significant growth. When companies leave these factors out of their thinking, however, they relinquish business control of some of the consequences of their economically driven activities – and opportunities to serve their customers better.

The automotive industry, for example, has succeeded like almost no other industry in this century in achieving and driving economic growth and creating wealth for society. Henry Ford intuitively grasped this possibility when he broke ranks with industry and paid his workers exceptionally high wages. He reasoned that if the kind of people who made his cars couldn’t afford to buy them, the mass market he envisioned would never exist. As the number of cars in use has grown, so has the pressure for car companies to help address the environmental implications of car-based personal mobility. If car companies move into the 21st century regarding the issue as a hindrance to business success and competitiveness, they risk losing control over how it is resolved. By stepping up investments in more-efficient, less-polluting power sources, as many companies are doing, the industry can

build a portfolio of future power-source options and ensure that new generations of cars are economically feasible and meet customer needs while also addressing environmental concerns.

When applied in terms of the product and service value chain, sustainable development thinking opens new channels to meeting customer needs and getting closer to them in ways that can provide unique competitive advantage. Through these new ways of satisfying and retaining customers, companies can change the basis of competition in their industries and reposition themselves for long-term business success.

In this article, we recast the six links of the business value chain in terms of customer needs (Exhibit 1), summarize how sustainable development thinking can uncover operational and strategic leverage points, and suggest how companies can use these leverage points to build customer relationships and loyalty and add significant value to products and services.

The Six Links of the Business Value Chain

When viewed from the customer's perspective, strategic opportunities – those with the greatest potential to provide sustained competitive advantage and long-term business success – are richest at three points along the value chain: design, sales and service, and end-of-life. The materials and energy, manufacturing, and distribution stages also offer a wealth of operational and strategic actions for improving quality, reducing costs, and minimizing environmental impacts. But since customers increasingly expect high performance in these areas, opportunities for generating excitement and achieving unique market positioning are less significant here.

Design. The design stage offers the greatest opportunities for integrating sustainable development features that create meaningful product differentiation for customers. In the automotive industry, sustainable development thinking has helped spur the recent renaissance in design. Mercedes-Benz is launching the A-series, a new family car that is shorter than a standard supermini, for use in urban environments, where land space and clean air are increasingly coveted. Ford's new Ka and Renault's innovative Twingo represent a new generation of supermini people-carriers designed primarily for congested urban environments. Even the new electric cars now on the road in California are an innovative first step toward awareness of sustainable development parameters, in spite of their intensive use of energy.

Electrolux also believes that reducing the environmental impact of its products is a differentiating factor. It has created products such as a chain saw lubricated with canola oil and a solar-powered lawn mower that systematically works its way across a lawn, much like a small grazing animal. The lawn mower releases no emissions and makes almost no noise. Dow has developed a new pellet-based approach to termite control that reduces the quantity of pesticide used by a factor of 10,000 when compared to traditional methods. The termites, attracted to the pellet, consume it and carry the pesticide back to the nest, where it kills the colony – eliminating the need to spread large amounts of pesticide throughout the target area. The product thus provides both clear environmental benefits and economic benefits. Dow reduces its material, energy, manufacturing, and distribution costs.

As exciting as each of these developments sounds, their success is determined by the marketplace. Designing solely for environmental quality makes no business sense. Instead, companies must make every effort to tune into their customers, understand their needs, and ensure that all design criteria, including those associated with sustainable development, are meeting these needs. The essential task is to find the point of synergy between traditional customer needs and sustainable development attributes.

For instance, attempts by several major appliance manufacturers to introduce environmentally friendly front-loading washing machines into the United States may prove to be premature in terms of customer desires. These washers use much less water, energy, and detergent than top loaders. They inflict less wear and tear on clothes and clean them more thoroughly. But they cost substantially more up front than top loaders, and U.S. consumers are reluctant to pay the premium, despite being able to recover added costs within two to three years through water, energy, and clothing savings.

Apparently, very few buyers see „saving the environment“ as a compelling reason to pay more for a new washer, and underpriced energy and water only fortify their resistance. If customers do not value pay-back periods beyond six months, then manufacturers must design financing schemes to match such customer thinking, whether this thinking is „rational“ or not. Rather than saying, „We must integrate environmental benefits into the products and services our customers want and need,“ companies should be asking, „Can we wrap environmental benefits within the customer's frame of reference and design products for customers that run cheaper, work better, cost less, and do more?“

Sales and Service. Selling and servicing products is traditionally the point in the value chain at which companies find the greatest opportunities to build enduring customer relationships. But the relentless pace of change in sales and service operations and logistics has forced companies to continually transfer and adapt sales and service knowledge to new situations.

Exhibit 1

Six Links of the Business Value Chain

	Design	Raw Materials	Manufacturing	Distribution	Sales, Use & Service	End of Life
Customer Need	"Match what I want or need today and tomorrow"	"Incorporate the right materials at the right price"	"Make a high-quality product, when I want it"	"Deliver the right product, in the right quantity, when I want it, without damage or loss"	"Tell me what I want to know, help me in the way I want to be helped, providing the services I need"	"Solve my disposal problems and help me replace the product easily"
Sustainable Development Strategy/Action						
Economic Performance	Design for the market and for manufacturing efficiency Recapture value at end of life	Minimize costs of extraction, transport, power, etc. Maximize efficient use of materials and energy	Right-size capacity Achieve quality and manage costs	Reduce losses, costs, mistakes	Match sales and service to customer potential Manage markets	Recapture and extend product value Extend points of contact with customers Redefine value in terms of function, not material Develop new business activities in product recovery
Environmental Quality	Design for environment, reducing materials intensity, compliance costs, etc., through the value chain	Reduce materials and energy intensity and natural environment	Minimize impacts by controlling or eliminating emissions and waste Enhance employee knowledge and pride, leading to commitment, satisfaction, stability, etc. Build appropriate community relationships	Minimize impact of inefficient transport and products wasted through damage or loss	Integrate environmental benefits in product image (where appropriate) Sell function, not "stuff"	Close the loop, reduce waste, conserve resources
Social Integrity	Design for safety and health	Minimize load on built infrastructure and natural environment Build appropriate community relationships	Safeguard safety and health Enhance employee knowledge and pride, leading to commitment, satisfaction, stability, etc. Build appropriate community relationships	Protect safety and health along distribution path	Develop loyal, proud, committed front-line staff Develop positive front-line presence in communities, marketplace Leverage new technology for better service	Create more jobs and prosperity Create new roles and new people challenges
Customer Result						
	Satisfaction, excitement, reduced liabilities or problems	Lower direct cost Lower indirect costs Health and safety goals	Better products at right cost Enhanced image	Increased satisfaction Stronger relationship and identification with seller	More personal connection Better service	Willingness to keep the relationship going, growing, evolving

In the world of consumer products and appliances, the emergence of high-volume chain super-stores has undermined customer brand loyalty. Customers like the low prices and wide choices that this selling system provides, although they do not necessarily like the associated remote, low-accountability repair service, or the uninformed retail staff who have little enthusiasm for the products they sell or the stores in which they work. But because consumers like the system's cost, range of choices, and short-term convenience, mom-and-pop retail won't be retaking the hill. However, the door is wide open for something new: more personalized sales-and-service that combines the power of information technology and personalized frontline service – the so-called „high-tech, high-touch“ approach.

HomeRuns, an initiative of Hannaford Brothers Company, is following an overtly high-tech path to customer satisfaction by allowing customers to go grocery shopping via the Internet and then delivering orders either free of charge or for a small fee. By delivering directly from its warehouses, HomeRuns eliminates the myriad costs of running a retail operation. From an environmental and social standpoint, this approach vastly increases the efficiency of transporting food and drink to customers' homes. Everyone benefits. For the company, this method reduces the need for land- and energy-intensive retail space; for the community, it reduces traffic congestion;

and for the consumer, it reduces fuel consumption, automotive wear-and-tear, and the likelihood of accidents.

What most interests the customers is that the service saves time. Instead of spending 90 minutes going to the store, shopping, driving home, and putting away the groceries, customers spend perhaps 20 minutes placing an order and 15 minutes putting the groceries away when they arrive. They can then focus their shopping time on pleasurable activities, rather than lugging home the same 50 kilograms of groceries every week.

Through their high-tech ordering systems, initiatives such as HomeRuns can derive such additional benefits as detailed customer knowledge, which allows them to pinpoint their marketing and incentives programs. For example, when customers log on, they are greeted with purchase incentives on one or more of their favorite products. Ultimately, food and drink delivery could be provided by a multi-utility: one company serving a home's every regular need.

The sales and service equation can also be rewritten to meet business, customer, and sustainable development needs in markets far removed from individual consumers. For example, when requested, chemical companies such as Ashland Chemical and Olin can deploy on-site management staff and resources for some of the more environmentally sensitive chemicals they provide to manufacturing clients. This reduces the number of environmental, health, and safety staff clients would otherwise need to employ, and leverages the chemical companies' own EHS knowledge. On-site management also affords these companies an excellent opportunity to get closer to their customers and understand their ongoing needs.

Another way to reconfigure the sales and service relationship is to focus on selling a product's function or value rather than material. In leasing arrangements, which have proven popular in automobile markets, the customer is buying the use of a new car and not the car itself. Atlas Copco, the Swedish construction equipment manufacturer, has recently acquired a large rental equipment company precisely to get closer to its customers and provide them the functionality they expect from Atlas's equipment. The system optimizes equipment use and maintenance, and Atlas Copco avoids having to compete solely on the price of commodity products – unlike competitors, who are competing on the basis that, for instance, „a compressor is a compressor“ and branding is unimportant.

A new housing development in Edinburgh, Scotland, may offer a glimpse into one future approach to car use, as the costs of urban living (land use, air pollution, parking, etc.) continue to rise and customer demands from their cars become more complex. Residents of the development don't need to own cars. Instead, they have access to a pool of vehicles that a central organization cleans and services. Residents can order a station wagon for longer trips such as holidays with the family, or a subcompact for shorter trips. The arrangement minimizes the number of vehicles needed, as well as emissions and land use, and creates jobs for organizing the pool. Automotive companies may wish to consider how such arrangements affect their branding and value propositions, which are now squarely focused on ownership and individuality.

End-of-Life. Of all the parts of the value chain, the end-of-life segment has traditionally been regarded as the most potentially rewarding from an environmental perspective. „Move beyond linear systems to cyclical systems,“ say environmentalists. „Return used-up goods to the materials base.“

Although recycling has advanced considerably in the past quarter century, the system remains highly inefficient and is driven more by regulatory authority than business utility. Of the tens of thousands of materials in the marketplace, only a few are recycled from households. The infrastructure involves cumbersome hand-offs between consumers, municipalities, private haulers, and materials recyclers, leading to high costs, shortages, and backlogs. Commodity prices are also notoriously cyclical, creating difficult economics for recycled materials processing.

Business-driven product recycling, or end-of-life activities, are still rare, but several companies are beginning to create efficient systems for recapturing value and meeting customer needs – when they see an economic opportunity to do so. Xerox has succeeded in selling the function of photocopying rather than specific machines, so that when a photocopier reaches the end of its useful life, the company can recapture the value of its parts and materials. Parts that can be refurbished go into other machines; other materials are recycled or disposed of in an efficient, rational manner. Xerox also ensures that the program (which generated \$70 million in raw materials savings in 1995) stays focused on serving customer needs, sustaining customer loyalty, and creating a basis for competitive differentiation.

When government action drives product take-back, that opportunity diminishes, as companies strive to meet regulations, not customer needs. In Europe, for instance, regulations are emerging for automobile and appliance take-back and recycling programs and targets. To meet these requirements, companies such as Bosch Siemens (Germany's biggest appliance maker) are effectively subcontracting their take-back responsibilities to retailing partners. These arrangements provide participating companies with a timely solution to the take-back challenge and relieve them of needing to develop costly internal capabilities that may not be aligned with their business goals. On the other hand, passing on take-back activities to third parties may deprive these companies of the

opportunity to reconnect with the customer when a product reaches the end of its life and thus start a new chapter in the customer relationship.

Biffa, a U.K. waste management company, has focused its strategy on building strong customer relationships so as to secure supply streams and choose the most rational disposal or recycling route. By building and securing long-term relationships based on the exchange of resources, Biffa has focused on value rather than the cost equation that typically drives the waste management industry. At the same time, the company is addressing all three pillars of sustainable development: building a sustainable company, reducing environmental impacts, and creating wealth.

Realigning for Sustained Growth

A first step in determining what sustainable development thinking can do for a company and its customers is to sort out its significance and implications for the company's industry. Clear away perceptions of sustainable development as a religion for „saving the planet.“ The issue for industry is pragmatic: are current industry practices and strategies leading to a better business environment in the future – one sustained by stable, prosperous societies and a functioning, healthy environment? Or is the current industrial path providing near-term benefits at the expense of future well-being for companies, their customers, and the societies that sustain both? Depending on how a company sees these questions, the response it frames could range from an „options“ approach that opens the way to a greater investment if circumstances change, to a major strategic commitment such as Monsanto's. Ultimately, what drives an investment in sustainable development is the conviction that the company's strategic shift and new products serve its customers better – and position the company to win new customers and achieve dramatic growth.

Second, companies that perceive strategic value in sustainable development thinking should examine how this thinking, applied to the value chain for their products and services, can change the basis upon which they compete for customers. A better understanding of the flow of materials through the value chain, for example, can help pinpoint ways to tighten production and process loops, use resources much more efficiently, and improve quality. Thinking creatively about the value and service a product provides, rather than a traditional focus on products as objects passed from seller to buyer, can help companies chart innovative ways to satisfy customer needs, use resources more efficiently, and capture strong market positions.

Finally, companies can use sustainable development thinking to look beyond internal processes or loops to the systems that link their enterprises and other parts of the economic and social system. Like the internal processes that create product and service value, these systems can be assessed for opportunities to create tighter, more efficient relationships (loops, in some cases) that reduce the cost (and intensity) of industrial activity and may enhance the customer relationship as well. For example, the concept of industrial ecology, for which Arthur D. Little provided an early definition in a 1991 white paper¹, focuses on achieving more efficient links between enterprises. It's possible, for example, that one company's byproduct is another's raw material. If a link exists between them, a supplier-customer relationship is born and the producer turns what was a disposal problem into a value-creating sale. For example, a chemical plant in the Midwest produces hydrogen cyanide as a byproduct. Across the highway is a plant that converts the hydrogen cyanide into chelates and other materials to be sold to industry customers. A pipeline carrying the byproduct from one plant to the other physically links the two plants. In another case, a chemical company whose wastes included isobutyl esters became a supplier of raw material to companies in the pulp and paper industry when these companies identified isobutyl esters as a viable, less polluting solvent than methylene chloride. But plentiful as these opportunities may be, they won't emerge unless companies look for them.

In a sense, the greatest opportunity that sustainable development offers is for companies to look systematically, and with fresh eyes, at the internal and external systems that interact (or could interact) to generate business value. Can relationships within and across these systems be tightened to reduce cost and increase quality and customer satisfaction? Can new products, services, and customers emerge from new ways of using and integrating these systems? Carried forward in this way, sustainable development thinking becomes a pathway to one of the richest sources of lasting growth: the creation of new businesses and new business areas.

¹ „Industrial Ecology: An Environmental Agenda for Industry,“ Arthur D. Little, Inc., 1991.

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