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Sustainability Through Servicizing

In an increasingly environmentally conscious and cost-conscious world, suppliers can make their business both more sustainable and more profitable by focusing on services that extend the efficiency and value of their products.

Sandra Rothenberg

As the scientific evidence for environmental degradation becomes harder to discount, enlightened companies have begun embracing the vision of "sustainable development," defined by the World Commission on Environment and Development as "the ability of current generations to meet their needs without compromising the ability of future generations to meet theirs."[1] But while sustainable development is a desirable goal for society, critics suggest that significant, if not radical, changes in the basic assumptions behind current business models are needed to achieve it.

Contemporary management scholars suggest that sustainability can be addressed by focusing on increased operational efficiency or more environmentally benign products and processes.[2] Some argue, however, that while these changes are necessary, they are not sufficient because they do not address consumption levels. Gains in operational efficiency and environment-friendlier technology may even eventually be counteracted by increases in consumption.[3] Thus, in order to be a truly sustainable society, developed nations must consume less.[4]

This is no small challenge to industrial societies, where consumption has traditionally been an end in itself. Yet companies are often in the best position to help customers reduce consumption — even of their own products. By "servicizing," suppliers may change the focus of their business models from selling products to providing services, thereby turning demand for reduced material use into a strategic opportunity.

This new approach is part of the larger move throughout industry to the provision of services, which, evidence has shown, is linked to higher and more stable profits.[5] In addition, some argue that because services are more difficult to imitate than products, they are a source of competitive advantage.[6] Thus many traditional manufacturing companies, especially those faced with shrinking markets and increased commoditization of their products, are adopting service provision as a new path toward profits, growth and increased market share.[7]

Hewlett-Packard Co., for example, has defined "tomorrow's sustainable business" as one in which it shifts from selling disposable products to selling a range of services around fewer products.[8] Another company embracing this approach is Interface Inc., a commercial carpeting company based in Atlanta,

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Georgia, whose seven-point model of sustainability includes providing "the services their products provide, in lieu of the products themselves." A study by the Tellus Institute found that in business-to-business markets, companies such as Coro, DuPont, IBM and Xerox have turned to replacing products with services as an integral part of their environmental strategy.[9]

While some researchers have identified companies that are taking this servicizing approach, little has been documented about the process of executing the strategic change.[10] Shifting business models so profoundly is not easy, as it challenges the traditional organizational assumption that selling more of a product is good and selling less of it is bad. But for those companies willing to accept the challenge, the result can be even greater financial success.

Case Studies in Servicizing

Drawing from the experiences of three companies — Gage Products, PPG Industries and Xerox — whose present business models help customers purchase less of their traditional products, I discuss a few of the obstacles these companies faced and the ways in which they were able to overcome them. (See "About the Research.") Each company offers a different set of products, yet they all profitably shifted to providing services that help customers meet their goals while using less of these products. Moreover, in all three cases, environmental benefits resulted as well. (See "Three Cases in Servicizing," p. 86.)

Gage Based in Ferndale, Michigan, Gage Products Co. started out as a distributor of specialty chemicals for Shell Oil Co., but over time it shifted to making combination chemical blends for automotive paint applications. Because of the specialized nature of its products, Gage has long needed to take a more active role in the management of customers' paint shop operations. Its employees would routinely work at assembly plants to consult on color changes, adoption of new application equipment or the use of specialty paint blends. Eventually, Gage was looked at by most customers not just as a supplier of solvents but also as a color change expert.

A turning point in Gage's business model came when it introduced a new product called Cobra, which cleaned paint circulation systems in an environmentally friendlier manner than did its predecessor. Gage quickly learned that it could not sell this new material, which had some unique characteristics, as it had sold its traditional products; the company needed to be even more active in managing product use at the customer's site.

This new service role was evolving just as one of Gage's customers, Chrysler Corp., was facing more stringent environmental regulations. To help Chrysler meet these regulatory demands, Gage started to take greater responsibility not only for introducing new materials but also for ensuring their proper use, which included more efficient use, and that meant an ultimate reduction in the volume of cleaning solvents that Gage supplied to Chrysler paint shops.

For example, early in 1996, one assembly plant was concerned that it was going to exceed the Environmental Protection Agency emission limits on volatile organic compounds by the end of the year. With Gage's help, it was able to cut VOC emissions by approximately one-half, thereby avoiding the installation of costly abatement equipment.

PPG Industries In the late 1990s, PPG Industries Inc. of Pittsburgh, Pennsylvania, a coatings manufacturer, was also faced with Chrysler's demand for reductions in product use as a result of two main drivers: high costs and environmental regulations.

About the Research

This article is part of a cross-industry research program that looks at how companies develop and implement strategies for more environmentally sustainable business practices. The program is supported by the International Motor Vehicle Program at Massachusetts Institute of Technology, the RIT Printing Industry Center, and the Alfred P. Sloan Foundation. The article draws from the experiences of three companies: Gage Products, PPG Industries and Xerox. For each of the companies, access occurred through different parts of the organization, as it was important that data come from multiple perspectives. Therefore, semistructured interviews were arranged with at least one high-level strategic manager, a company employee involved in the actual provision of services and products, and a customer representative. When possible, multiple interviews in each of these categories were conducted. A total of 24 people were interviewed, as detailed below.

Summary of People Interviewed

Level of Interview	Gage	PPG	Xerox
High-Level Manager	1	3	3
Line-Level Employee	1	2	4
Customer Representative	4	4	2

Interviews were coded, and coded segments were then separated from the field notes and placed in a matrix in order to explore how the cases differed from one another.[i] In this matrix, a mixture of direct quotes and summary phrases was used. An iterative analysis of the data revealed underlying patterns.

i. This method is suggested by R. Yin, "Case Study Research: Design and Methods" (Thousand Oaks, California: Sage Publications, 1994); and M.B. Miles and A.M. Huberman, "An Expanded Sourcebook: Qualitative Data Analysis" (Thousand Oaks, California: Sage Publications, 1994).

The strategic response for PPG was to help its customer reduce paint use.

As one PPG manager explained: "The automotive companies were going to move down a path of trying to decrease usage, whether we participated in that relationship or not. So what PPG decided pretty early in the game was that participating in that transition and helping to manage it was more beneficial than waiting for it to be thrust upon us. We tried to structure a program that created a win-win scenario."

With this new arrangement, PPG on-site representatives started to take over new management tasks at the plant, including material ordering, inventory tracking, inventory maintenance and even some regulatory-response duties. Through this increased service role, the company has helped Chrysler reduce material use. Interestingly, the new business model developed by PPG and Chrysler has started to become the norm for the industry. Chrysler even asked PPG to teach the model to its competitors, such as DuPont Coatings & Color Technologies and BASF Corp., and PPG agreed. First, it did not want to lose Chrysler as a customer in the relatively small automotive paint market, and second, PPG considered such teaching a part of its service offerings.

Xerox Corp. Xerox's move toward servicizing was part of a larger move that developed during the 1990s as its core products were becoming commoditized. In 1994, Xerox started calling itself "the Document Company," marking a change in strategy that focused less on devices that create printed materials and more on the information that flows within a business. To drive this strategy forward, the company launched Xerox Global Services, its Paris-based consulting division, in late 2001 to help customers improve efficiencies in their document-intensive business processes.

A key component of Xerox Global Services is its focus on the office. To help improve the productivity of the office environment, Xerox introduced the Office Document Assessment tool, which analyzes the total costs associated with alternative document-making processes. A typical ODA report offers a range of suggestions for increasing office efficiency, improving worker productivity and reducing costs. Often central to such suggestions is reducing the number of devices through consolidation, which leads to reductions in the use of toner, paper and other consumables, all of which Xerox sells. The reduction in total devices can be substantial, moving from a ratio of more than one device per employee to a ratio of one device per 10 or more employees.

For one of Xerox's clients, United Health Services Hospitals of Binghamton, New York, the opportunity to benefit from these services persuaded it to stay with Xerox, which had been providing UHSH with office equipment for more than 10 years. In 2001, UHSH was tempted by offers from Xerox's competitors. But after Xerox completed an ODA, the hospital organization was impressed enough with the potential savings that it entered into a new partnership with the company. While some of the initial estimates for savings were high, Xerox eventually helped UHSH reduce costs by about $60,000 annually. That was done, in part, through reductions in the number of printers being used, the use of related materials and the amount of overall print produced.

As was the case with UHSH, Xerox sells this set of services primarily as a way to increase its clients' productivity and lower its costs. But environmentally aware customers recognize and value the benefits that accompany reductions in material use. As one Xerox customer commented: "Not only is our printing system a massive expense, but it also impacts our rubbish disposal. We can save a small forest each year!"

Multiple Advantages

One major concern with the servicizing business model is that companies could suffer loss of revenue, and maybe even put themselves out of business, if reduced demand for their products goes to the limit. That has certainly not been the case for the companies profiled or for numerous others. With PPG and Chrysler, for example, PPG saw that its customer was already moving toward decreased paint use. By helping Chrysler sustain this shift, the servicizing strategy not only generated good will but was also a way to extract revenue from a new source. For its part, Xerox was able to keep UHSH from defecting to a competitor by offering an attractive combination of services and products that reduced costs. Meanwhile, all three companies believe they have attracted new customers with their new business strategy.

The benefits of servicizing extend beyond customer attraction and retention, however. For Xerox, this strategy moved the company from focusing on products that were becoming commoditized to a mix of products and services that increased revenue. In 2005, approximately 22% of Xerox's revenue was driven by Xerox Global Services; future service provision represents a $20 billion market opportunity for Xerox, the company estimates.[11]

Additionally, all three companies note that as a result of a servicizing strategy, they are able to build closer customer relations, which has three main advantages. First, the customer is less likely to change suppliers. As the UHSH representative says, "For us to even look at somebody [other than Xerox] would require something pretty significant to change."

Second, through these closer relationships, suppliers can expand the range of products they sell within the company. A Gage on-site representative at Chrysler, for example, discussed how he has found other opportunities for his company's products there. At UHSH, Xerox provides a greater portion of the printers that remain. As one Xerox manager explains, "When you concentrate on what is right for the client, it is inherently going to give you more business and more revenue, which is an offset to the declining product element of any one transaction."

Third, companies can use this business model to attract new customers impressed by the company's social consciousness, manifested in its array of environmentally friendly services and products. The first words you see rolling across Gage's Web site are "Sustainable solutions, cost reduction, environmental efficiency,"[12] and Gage has indeed won several environmental awards for its programs. These alone, according to one top manager, have been leveraged into significant market-share gains.

Challenges in the Move to Servicizing

As with any large-scale initiative for change, the move to servicizing is not easy. It is no small task to reframe the company credo from "sell more product" to "help our customers do X and use less of our product in the process." A manager at PPG reflected on this challenge: "One of the things we stress most is that this is a cultural shift. It is very difficult as a supplier to get the people on your staff used to the idea that they want to help take product out of the system."

The people most resistant to such change are often the sales staff. At Gage, salespeople who worked on commission opposed

Three Cases in Servicizing

The transition to a service-based business model is not an easy one. Three companies that have profitably shifted to providing services — Gage Products, PPG Industries and Xerox — all still offer a set of products, but they actually help customers to use less of those products, creating an environmental benefit.

	Gage	PPG	Xerox
Old Business Model of Maximizing Product Sales	Selling chemical blends for automotive paint application	Selling paint for automotive paint application	Selling printers, copiers and supporting products
New "Servicizing" Business Model	Providing an effective paint shop operation	Managing efficient and quality paint shop operations	Managing efficient document-management processes
Material Goods Reduced	Solvents and cleaners	Paint	Printers, copiers, paper and toner
Other Environmental Benefits	Lower VOC emissions, lower paint use	Lower VOC emissions, improved health and safety protection	Reduced energy use and solid-waste generation

the new business model, seeing it as directly conflicting with their own financial interests. The transition was not a simple matter for Xerox either. As one top manager said: "While traditionally a product company, Xerox has certainly recognized the need to lead our clients in finding ways to better leverage their assets, and in some cases that leads to a cannibalization of our own installed base, which can cause angst within a culture formally dependent mainly on product sales."

Resistance is not limited to the suppliers' staffs. Within the customer's organization too, higher-level managers may not have a clear idea of what this new relationship will look like and how it will ultimately be implemented. At UHSH, it took the purchasing manager some time to understand the new relationship with Xerox and the value it would provide to his organization.

Moreover, reductions in the use of various materials are likely to mean changes in customers' work patterns and assumptions at the operational level. And the concerns of workers there can present issues for suppliers as well. Gage and PPG employees on the plant floor were sometimes challenged by disgruntled paint shop employees tied to long-held routines. Xerox found that some customers faced employee resistance to new modes of managing information and, perhaps something most people can relate to, the removal of their own personal printing devices.

Managing the Change

Given these challenges, how can companies manage the shift to servicizing? In analyzing the three cases, I observed that strategies to facilitate such change fell into six general categories:

Building on Existing Strengths At all the companies, managers encouraged employees to think of the shift as an extension of the companies' existing service orientations. This new thinking was least difficult for on-site representatives, who already had a strong, direct customer-service focus. The companies also built on the technical knowledge of their staffs. At Gage, for example, employees used their expertise in cleaning materials and paint shop color changes to offer innovative ways to reduce solvent use. And PPG employees used their expertise in paint material properties, material tracking and data analysis, all of which are critical in analyzing opportunities for material use reduction.

Redefining the Basis for Profit in Contractual Agreements All three cases involved changing contracts so that they would (1) encourage suppliers to look for opportunities to reduce product use, and (2) create a win-win situation by which both parties would benefit from the relationship. Perhaps the simplest contract specifies a set profit for a predetermined bundle of services and products. The contract between Xerox and UHSH, for example, outlines a cost per printed impression, which includes estimated service and new-product costs. Gage also changed its contract with Chrysler from one that states a cost per gallon of product to one that often sets a "cost per unit," whereby the customer pays a set amount — including both products and services — for every vehicle painted. "Under this relationship," explains one top manager, "contracts are arranged so that profits are not 100% dependent on the quantity of material sold to plants." Thus, there is no incentive on the part of the supplier to increase material use. In some cases, these contracts even include specific targets for cost reduction or solvent reduction as part of the service provision.

PPG and Chrysler reformulated their traditional contract so that both parties could share in the savings realized from annual reductions in material usage.

Using a slightly different approach, PPG and Chrysler reformulated their traditional contract so that both parties could share in the savings realized from reductions in material usage. Before, the customer would pay per gallon of material; now, it pays a preset amount, negotiated yearly, based on the prior year's record of efficiency. In this way, both PPG and Chrysler have an incentive to reduce paint use, which not only benefits the bottom lines of both companies but also improves Chrysler's environmental performance — and image.

When developing contracts, uncertainties emerged about how the new relationship would actually play out. What, for example, would be the supplier's role in the customer's operations, the extent to which operational changes could be made (particularly if they involved new technologies or high levels of resistance), and the actual amounts of material and money that could be saved? Mutual trust and a willingness to experiment, observe and adjust were critical factors in facing such uncertainties. It was likely, for example, that there would be variances from the contracted numbers based on projections. In fact, for UHSH and Xerox, the first year actually saw increased costs. But because of the strong relationship between the partners, UHSH understood the reasons for this transient increase and stuck with the partnership to see savings in the following year.

Communicating the New Business Model In order to reduce resistance to change — and, on a more positive note, elicit active cooperation — it is important for management to communicate continually to employees the new business model and the reason it is making this change. In all three cases, managers needed to explain how a program that was seemingly eroding the sales of its products would actually benefit the company.

Suppliers must also help to educate staff at the customer organizations, where managers often are confused about their new responsibilities and employees at the operational level are being asked to alter processes and do their work with fewer material inputs. For example, Gage spends a great deal of time explaining to sometimes-resistant paint shop workers why they need to change customary work practices and restrict their solvent use.

> **"If you pay salespeople based on overall revenue as opposed to per-device transaction," explains a Xerox manager, "they are more inclined to concentrate on the bigger picture."**

Changing Incentives Traditionally, salespeople are paid more when they sell more product, but this incentive structure is inconsistent with the goals of servicizing. Therefore, in all three cases, sales incentives were changed to be more aligned with the new business model.

Gage, seeing that compensating employees on a transaction-by-transaction basis was working in opposition to the company's objectives, eliminated sales commissions. Similarly, Xerox has started paying sales staff on the basis of total year-over-year revenue increase from their customer base or their targeted geographic area.

Still, explains a Xerox manager, "not a lot of the salespeople will make the journey easily. It is a tough transition because you are now selling an intangible alongside a tangible, and the intangible (services and optimization) is often the more important component of the transaction. But if you pay them based on overall revenue as opposed to per-device transaction, they are more inclined to concentrate on the bigger picture and you transcend those boundaries of traditional compensation."

Acquiring New Skills While companies should of course build on their staff's existing skills, each supplier we studied had to acquire new skills as well. These included technical skills that involve a deep understanding of the customer's processes, as well as new customer relations skills. At Gage, engineers have been retrained for improved customer service, and new hires are being selected for personality traits and experience that fit with roles they might play in customers' plants. At PPG, employees who will be working on-site are given the traditional technical-service training as well as training in "value selling," in which they are taught to show the customer that their services — such as managing a more efficient paint process — are worth something. In fact, they are taught how to estimate the actual dollar value of their services.

At Xerox, the new business model required information technology skills and industry-specific process knowledge. Some of these skills were already available in-house, but the company also had to hire additional staff to augment its knowledge base. In one case, Xerox purchased an entire company in order to obtain expertise in a particular information technology field.

Highlighting Environmental Advantage To varying degrees, interest has been generated in this new business model's positive environmental impacts. For Gage and PPG, their customer (Chrysler) was already motivated to reduce material use. Gage also actively educates some of its customers about the connections between environmental performance and cost reduction. "For many years, to be 'green' — that is, to be environmentally friendly — meant to be expensive," says Gage's in-plant representative. "But we try to tell people that you can have your cake and eat it, too. You can put together these very beautiful environmental programs and it can also save you money." Providing this overarching view and the data that back it up, he adds, is a valuable service to a customer.

Similarly, Xerox finds that framing its services as a means to help both the environmental and financial bottom lines makes an attractive proposition for many customers.

The Future of Servicizing

To date, most management literature on sustainability has not questioned the basic assumption of the typical business model — that a primary goal of a product manufacturer is to sell more product. But as society faces environmental limits to material consumption, that belief must be questioned. This article outlined the experiences of three suppliers operating under a business model that allows economic growth to occur while also helping society to step away from the spiral of increasing consumption. In the servicizing approach, material goods are not seen as ends in themselves; instead, companies make money by helping customers achieve their goals while using *less* product.

Because of the correlation between reduced material use and reduced cost, it is tempting to sell these programs based on their potential cost savings alone. But companies may also use servicizing as an integral part of their environmental strategies. In fact, for each of the cases in this article, some customers expressed interest in reducing their environmental impacts — often prompted by external (that is, regulatory) pressures. As these pressures increase, so too might the customer's desire to reduce product use. Instead of being threatened by this phenomenon, suppliers can take an active role in the reduction. By redefining their business model, they can turn a potential problem into a strategic opportunity.

Many questions remain to be answered about servicizing. The three case studies are encouraging, but given the universe of different companies it is not clear under what conditions a company adopting the servicizing model will be rewarded with increased revenue or indeed put itself out of business. Notable, however, is the experience of Xerox, which suggests that companies with a broader product base and a strong research and development department may be best placed to benefit from the servicizing approach. They have the potential to offer more innovative solutions and to take better advantage of new market opportunities that may develop with a particular customer.

Another question is whether this model can also be applied in a business-to-consumer setting. It certainly worked for Patagonia, based in Ventura, California, which sells clothing and equipment to practitioners of "silent sports" (which use no motors), such as fly fishing, paddling and trail running. This company, which made a strategic decision to reduce growth and instead focus on providing value through product quality[13] to its unique consumer base, may well be atypical. The challenges of selling services that replace material use are likely to be far greater for the average company trying to cater to the average consumer.

Future research may therefore include exploring whether or not the application of this model is as promising for consumer markets as it is for business-to-business ones, and whether the process of change differs. Answering these and other questions may help diverse companies move toward business models that do not rest on the assumption that selling more is better but instead emphasize sustainable levels of consumption.

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