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Selling small and smart: The Future of the sustainable enterprise

Sandra Rothenberg

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A Research Monograph of the Printing Industry Center at RIT

A Joint Project with the International Motor Vehicle Program at MIT

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An Alfred P. Sloan Foundation Center

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Weyerhaeuser

The Document Company XEROX

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Abstract

Much of the popular management thought on sustainability focuses increasing operational efficiency and innovation of more environmentally benign products and processes. Some would argue, however, that this is not enough to become a sustainable society because it does not address levels of consumption. As a means to address reduced consumption as an important component of sustainability, this paper will outline the experiences of three companies that have adopted business models that help customers purchase less of their traditional products. Drawing lessons from the experiences of these three companies, the paper will then outline the key challenges in adopting this business model, and steps to face these challenges.

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Introduction

As the scientific evidence for environmental degradation becomes harder to discount, many environmentally proactive firms have embraced the vision of "sustainable development." One of the most popular definitions of sustainable development is "the ability of current generations to meet their needs without compromising the ability of future generations to meet theirs."[1] While sustainable development is a desirable goal for a society, there are many critics who suggest that significant, if not radical, changes in the basic assumptions behind current models of business are needed to achieve sustainability. For the developed world in particular, sustainable development may require significant reductions in material consumption.

Much of the popular management thought on sustainability focuses on increasing operational efficiency and on innovation of more environmentally benign products and processes.[2] Some would argue, however, that this is not enough because it does not address levels of consumption. In the seminal book *Small is Beautiful*, for example, Schumacher argues that in order to be a truly sustainable society, we must ultimately consume less.[3] Schumacher argues that to do this we must place material things secondary, and not primary; material goods are to be the means with which we meet our goals, and not ends in and of themselves.

If we are to take the need for reduced consumption as a necessary condition for sustainability, the first place to look for this reduction may be within business, where there are strong financial and environmental motivations for reducing material use. For suppliers providing these material goods, this can be seen as a threat. Ironically, however, it may be that suppliers are often in the best position to help their customers reduce consumption of their own products.

Some suppliers have recognized their unique position and have turned demands for reduced material use into a strategic opportunity. Making a radical shift from the traditional manufacturer's business model, they have developed business models that *actually encourage customers to purchase less of their products*. Hewlett Packard, for example, has defined "tomorrow's sustainable business" as one in which they shift from selling disposable products to selling a range of services around these products.[4] A study by the Tellus Institute found that in business-to-business markets, firms such as Coro, DuPont, IBM, and Xerox Corporation, have turned to replacing products with services as an integral part of their environmental strategy.[5] They state that services have the potential to "change the way products are made, used and disposed of—or…*in some cases, supplant products altogether* [italics added]."

While some researchers have identified firms taking this approach, little has been documented about the challenges in this change process, and the ways to overcome these challenges. As one can imagine, shifting from a business model that focuses on "selling large" to one that focuses on "selling small" is not easy. It challenges one of the most basic assumptions about the goal of the average manufacturing organization. Namely, that selling more of a product is good for an organization, and less of a product is bad. Drawing from the experiences of three companies that have developed business models that help customers purchase less of their traditional products—PPG, Gage Chemicals, and Xerox—we outline a series of steps by which firms can change this basic assumption, as well as the structural factors that support it.

Cases in Selling Small

This section of the paper will briefly outline the experiences of three companies, PPG, Gage Chemicals, and Xerox. These cases are based on interviews with high level strategic managers, firm employees involved in the actual provision of services and products, and customers. As can be seen in Table 1, each of these firms offers a different set of products, yet all shifted the basic business model from one that focused on selling more of a particular product or set of products, to one that focused on helping customers meet their goals while using less of this product(s). In addition to the reduction of product use, other environmental benefits were seen in all three cases.

GAGE CHEMICAL

Gage Products started out as a distributor of specialty chemicals for Shell. Over time, however, they started making combination chemical blends for automotive paint application. Because of the specialty nature of their products, and the delicate nature of the automobile painting process, Gage slowly evolved to take a more active role in the management of their customers' paint shop operations. Employees would routinely work at assembly plants to consult on color changes, the adoption of new application equipment, or the use of specialty paint blends. Eventually, Gage was looked at by most customers not as someone who just supplied purge solvent, but as someone who was a color change expert.

A turning point in Gage's business model came when they introduced a new product called Cobra, which cleans paint circulation systems. Prior to the introduction of this product, most plants used methylene chloride to clean paint lines. But, for environmental reasons, plants needed to adopt a replacement for this heavily regulated material. Cobra was a non-chlorinated material that created mechanical clean-

	Gage	PPC	Xerox
Old Model of "Selling Large"	Selling chemical blends for automotive paint application	Selling paint for automotive paint application	Selling printers, copiers, and supporting products
New "Selling Small" Model	Providing an effective paint shop operation	Managing efficient and quality paint shop operations	Managing efficient document management processes
Material Good Reduced	Solvents and Cleaners	Paint	Printers, Copiers, paper, and toner
Other Environmental Benefits	Lower VOC emissions	Lower VOC emissions	Less energy use and reduced solid waste

Table 1. Summary of Three Cases

ing of the lines. Because of the unique nature of the product, however, Gage learned quickly that they could not sell this new material the way their products had traditionally been sold, which was by the gallon. As explained by Tim Wing, Vice President of Gage:

> [Cobra] needed some technical expertise to be properly managed in the system. We went to our customers and said, 'We are not only just going to supply your product. Our job doesn't end at the unloading dock. That's where it begins. We are going to bring you a quality product designed for your process and we are going to bring in people who know how to make it work most effectively in your system.'

This new service role was evolving just as one of their customers, Chrysler, was facing increased regulatory stringency. Due to this increased pressure for improved environmental performance, Gage started to take increased responsibility for not only introducing new materials, but for actually reducing chemical materials at Chrysler paint shops as well. As an example, one plant was facing very tight environmental requirements. Gage's role expanded to help the plant meet its environmental requirements. First, they took a more traditional technical approach and brought in a line of lower VOC products for paint shop maintenance. As environmental pressures continued, however, Gage placed an employee full time in the plant to manage the proper use of the material. Proper use, in this case, included more efficient use, which meant an ultimate reduction in the materials Gage supplied.

Under this new arrangement, Gage has to meet new targets for solvent use reduction on a yearly basis. As recalled by one Gage on-site specialist:

> When I was hired I was told [by the customer] 'your job is to put yourself out of business.' I thought that was a neat idea—a neat idea for the environment. That mindset was not hard for me to adopt since [customer focus] is part of Gage's philosophy—an attitude that comes from the president on down.

Since the implementation of this new business model, there have been significant reductions in the use of Gage solvents since the program was adopted. As an example, in early in 1996, one assembly plant was concerned that they were going to exceed the EPA VOC emission limits by the end of the year. With the help of Gage, they were able to cut VOC emissions by approximately one half, and were able to avoid adding additional abatement equipment. The plant paint environmental manager commented:

> We couldn't do it without [Gage]. [Their representative] has the specialized knowledge. What shows his commitment is that when he wants to cut the usage - he cuts into his own pockets. He puts the plant's goals ahead of money for his company. That is real teamwork.

PPG

In the late 1990s, PPG—one of Chrysler's paint suppliers—was also being faced with a customer that was demanding less use of their product. There were two main drivers for this, cost and environmental regulations. The strategic response for PPG was to help their customer reduce paint use. As explained by Connie Poulson, PPG Director Product Management, Decorative Coatings:

> 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 participating in that transition and helping manage that transition was more beneficial than waiting for it to be thrust upon us. So, what we did was we tried to structure a program that created a win/win scenario when that transition occurred.

With this new arrangement, PPG started to take over new management tasks, including material ordering, inventory tracking, inventory maintenance, and even some regulatory tasks for the plant. Through this increased service role, they have helped Chrysler reduce paint use. Interestingly, the new business model developed by PPG and Chrysler has started to become the norm for the industry. After

Chrysler developed the program with PPG, they asked PPG to teach it to their competitors, such as DuPont and BASF.[6] Most paint suppliers to the automobile industry are now learning how to work with their customers to reduce paint use.

XEROX CORPORATION

Xerox's move toward selling small was part of a larger move toward service offerings that was developed over the course of the 1990s as their core products were becoming more commoditized. In 1994, Xerox coined the phrase "The Document Company," marking a change in strategy that focused less on devices that produce the printed form and more on the content and information that flows within a business, which in the past happened to be rendered as a paper document. To drive this strategy forward, the company launched Xerox Global Services, the consulting division of Xerox, 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, where as much as 80% of an employees' activities are supported by documents. To help maximize the productivity of the office environment, Xerox introduced the Office Document Assessment (ODA), which uses Six-Sigma methodology to analyze the total costs associated with document processes. The assessment evaluates the cost associated with printing, faxing, copying, scanning and technical assistance, as well as archiving paper and electronic documents. The report also looks at the number of devices (printers, copiers, fax and scanners) per person, the number of footsteps it takes to get to a device and the time it takes to complete printing/copying tasks. Amazingly, it is not unusual for the study to indicate that the average device to employee ratio is greater than one. The final tollgate report recommends a range of suggestions to increase office efficiency, improve worker productivity and reduce costs.

These recommendations typically involve consolidating the number of devices, leading to reductions in the use of toner, paper and other consumables, all three 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 that is 1:10 or better. Moreover, the recommended changes often result in significant reductions in energy, network costs, communication costs and paper/toner waste that can be costly and detrimental to the ecology. Implementing Xerox's ODA recommendations can result in cutting costs by up to 30 percent.

Xerox, for the most part, sells this set of services to increase its clients' productivity and reduce costs. Environmental benefits are often mentioned, but as a side point to the cost and productivity benefits. Nevertheless, more proactive and environmentally aware customers recognize the environmental benefits of reducing material use. One customer commented:

> It is very sad that with spending over $250m per year in PC's, servers, and networks that we still find the need to print 300 million pages. Not only is it a massive expense but it also impacts our rubbish disposal…we can also save a small forest each year!

Challenges in the Move to Selling Small

The move to selling small is not easy; as with any change initiative, there will be resistance to change. Perhaps the largest challenge is to change some of the basic cultural assumptions in the organization. Firms needed to reframe the usual operating assumptions from "the goal of our firm is to sell more product" to "the goal of our firms is to help our customers do X, and use less of our product in the process." This challenge was reflected by Poulson:

> I think one of the things that we stress most when we start a program like this is that it 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.

Perhaps the group most resistant to change in this regard is the salespeople. At Gage, salespeople who worked on commission were resistant to a new business model that was in direct conflict with their own financial interests. Similarly, introducing a business model that resulted in customer using fewer of Xerox's core products was not a simple transition for Xerox either. As noted by one employee: "Within Xerox it was tough sledding in the early days, because very often what was implied here was less devices and not more." As explained by Jim Joyce, senior vice president, North American Operations for Xerox Global Services:

> It is a major transition. This sounds like motherhood and apple pie, but if one really believes that the best thing to do is concentrate on the benefit for your client… Reducing costs and improving the velocity and effectiveness of document-intensive business processes requires asset optimization, improved workflow and should also result in a reduction in the consumable. While traditionally a product company, we have 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 with in a culture formally dependent mainly on product sales. Luckily, this was anticipated by our research teams several years ago, which is why Xerox chose to develop products which were multi-functional, support heavy duty cycles, and are more secure and environmentally friendly than competitive products, supporting the needs of an optimized environment.

Resistance is not limited to the suppliers. At higher levels of the customer organization, employees may not have a clear idea of what this new relationship will look like and ultimately be implemented. This was something faced by Gage. As recalled by Wing:

> I think it was mostly there were entrenched ways of thinking. The biggest thing was to convince them that they needed to buy the system [rather than just a product]. We weren't really providing purge solvent. We were providing an effective color change.

Poulson agreed that this was a challenge for PPG as well. She explained:

> It is very difficult on the customer end to think that if they make a savings, they have to share that. So, it is really a cultural shift because if it is not going to be a win/win scenario, it won't work over the longer term.

At the operational level of the customer organization, reductions in the use of various materials are likely to mean change of long held routines and assumptions. The concerns of these employees presented challenges for the suppliers as well. At Gage and PPG, their employees on the plant floor were challenged by paint shop employees tied to long-held routines. Xerox found that some customers faced resistance to new modes of managing information and, perhaps something most people can relate to, the removal of their own personal device(s). In order to combat this, Xerox engages behavioral scientists, anthropologists and environmental engineers to assist in the transition to an optimized environment and support the personnel in the acceptance of the changes.

Managing the Change to Selling Small

Given these challenges, how can firms manage the change to selling small? There are cultural and structural factors that reinforce the traditional business model. It is only by dealing with these factors head on, and building on the existing knowledge of skills in the supplier organization, that the challenges can be met and overcome. Again, drawing from the experiences of PPG, Gage, and Xerox, there are some general steps that can be followed for firms wanting to make the shift to selling small. These steps are summarized in Table 2.

Steps	Summary
Build off Existing Strengths	Often, suppliers are in the best position to help their customers use less of their product. Recognize and build off existing technical expertise about the product and the customer operation in which it is used, as well as the existing customer relation skills.
Redefine the Basis for Profit in Contractual Agreements	Traditional contracts, usually based on compensation per unit sold, rarely offer any incentive for suppliers to help consumers use less of their product. New contracts need to offer "win-win" alternatives, in which both parties can benefit from reduced use of the traditional product. These contracts can even include explicit goals for product use reduction and associated environmental goals.
Communicate the New Business Model	Selling small does not fit in the traditional business model, challenges basic assumptions, and requires change on both the part of the supplier and customer. Leaders need to continuously communicate the value in reduced product use and sales to all affected parties involved.
Change Incentives	Most firms working under the selling large model offer incentives tied to increased product sales. These incentive systems need to be changed to allow salespeople and other employees to make the link between selling less and their own personal compensation.
Acquire New Employee Skills and Knowledge	While suppliers need to build off their existing skills and knowledge, it is likely that they are not sufficient to fully implement the new business model. Additional customer service skills or technical knowledge about customer processes may be needed. For some companies, acquiring the appropriate skills may only involve retraining workers. For others, it may involve hiring workers with specialized knowledge about customer processes or even acquiring another firm.
Highlight Environmental Advantages	Most approaches to selling small are motivated by customer interest in reducing cost. Yet, the environmental benefits are real and sometimes significant. Some suppliers will be approached by customers already interested in reducing environmental impact. For those that aren't, the environmental benefits of reduced product use can be a strong component of the marketing effort.

Table 2. Steps to Selling Small

BUILD OFF EXISTING STRENGTHS

Although seemingly against their own interest, suppliers may be the ideal party to help a firm reduce the use of a product. They not only know the product, but they often have intimate knowledge of the context in which it is being used. This is even more the case as customers have increasingly turned to suppliers for overall process management. Therefore, many suppliers already have significant technical and customer service skills that can be at the core of the selling small strategy.

Each of the companies in this paper facilitated the move to selling small by building off their existing strengths. For all of the firms, managers encouraged employees to think of this shift as an extension of existing service activities. As noted in the comments of the Gage employee above, the change in his role at the customer plant was made easier given that the he already had a strong customer service focus. Similarly, PPG on-site representatives already viewed themselves as service providers. While much of this service focused on more traditional performance metrics such as paint quality, it was easier to explain the new business model to employees by framing it as an extension of their existing service orientation. They also built upon the technical expertise of the employees. As Deborah Irwin, Business Analyst for the Chrysler team at PPG, noted:

> [Our plant level employees] were always very excellent in tracking material if there was anything going wrong within the system. This just wrote it on a piece of paper so that they actually had something to show the customer.

REDEFINING THE BASIS FOR PROFIT IN CONTRACTUAL AGREEMENTS

Under the traditional business model, most contracts are set so that firms are paid per unit sold. When selling small, both the parties have to move away from the mindset that profit comes primarily from selling product, and design contacts accordingly. The key to these contracts is that (1) they encourage suppliers to look for opportunities to reduce product use and (2) they offer a "win-win" solution under which both parties benefit from the relationship. Perhaps the simplest contract is to negotiate a set "profit" for a predetermined set of services and products. But, there are a number of other ways to structure a contract so that they meet the two basic criteria. Often, either explicitly or non-explicitly, these arrangements offer incentives for continuous improvement. Gage, for example, changed the way it sold its material from a per gallon basis to a "cost per unit" basis, where the customer paid a set amount per vehicle being painted. Explained Wing:

> We weren't really providing purge solvent. We were providing an effective [paint shop operation]. We saved them millions of dollars in [material] reductions. So, [we] evolved into what is called cost per unit. Under this relationship, contracts are arranged so that profits are not 100% dependent on the quantity of material sold to plants.

Using a slightly different approach, PPG and Chrysler reformulated their traditional contract so that both parties shared cost reductions achieved by supplier initiatives. Unlike before, where the plant would pay per gallon of material, Chrysler now pays a preset amount that is negotiated on a yearly basis. At the beginning of every year, based on the prior year's usage, PPG and Chrysler set a target for paint use and that becomes the amount that Chrysler pays. The goal of this arrangement is to reduce that usage throughout the course of the model year, and any reductions in usage are shared. If the paint shop uses more than the target goal, PPG must pay for the overage. If they use less, PPG keeps half the money and half of the savings goes back to the plant. This creates an incentive for PPG to reduce paint use, which benefits Chrysler's environmental performance, as well as the bottom line of both firms. Xerox has a similar savings sharing plan, in which cost savings achieved beyond an agreed upon level are shared between Xerox and the customer.

For firms with existing relationships with customers, the initial stages of selling small will most likely involve a period of communication and negotiation, during which both sides communicate expectations for this new basis of business. A trial period may be needed to show both the supplier and the customer that they are being provided with value under this new business model. Most contracts will include guidelines and expectations for the new service role that the supplier will be playing. These expectations can include the clearly stated objectives for improved environmental performance.

COMMUNICATING THE NEW BUSINESS MODEL

One way to reduce resistance to change is to continually communicate to employees the new business model under which the company is operating and the reason they are making this change. In particular, firms need to communicate to the employees how a program that seemingly is cannibalizing the sales of their products is actually beneficial to the firm. Much of this communication and education will be focused on the salespeople, who are likely to be the most threatened by the change and will have the most difficulty understand their new role in this business model.

At higher levels of the customer organization, suppliers also need to educate customers about the overall role they will be playing in their organization. At Gage, for example, a significant effort was directed at reducing resistance on the part of the customer. If the changes influence the operations of a customer, communication is also needed at the operational levels of the customer organizations, where employees are likely going to be asked to work with fewer material goods. When changes impact the daily routine of an employee, communication is needed to ensure successful adaptation. As mentioned previously, Xerox helps facilitate the cultural change by offering behavioral science insights and recommendations to customers derived from its research on this topic. Similarly, workers at Gage spend a great deal of effort explaining to sometimes resistant paint shop workers why they need to change long held work practices and restrict their solvent use. Given the attachments that people often build to material goods and the routines that they facilitate, any effort to reduce product use will likely require communication of the benefits of the change and understanding that the change can be viewed as a loss.

CHANGING INCENTIVES

Traditionally, salespeople are paid more when they sell more products. Under the business model of selling small, incentive works counter to the ultimate goals of reducing product sales. Therefore, incentives need to be aligned with the new business model to encourage employees to help their customer reduce product use. Again, there are a variety of ways to do this. At Xerox, they have stopped paying some employees on transaction-by-transaction basis. Instead, they pay them on an overall year-over-year revenue increase from their customer base or their targeted geography. Joyce explains:

> There is internal conflict with traditional reward and recognition systems. Not a lot of the people will make the journey easily. It is a tough [transition] because you are now selling an intangible alongside the tangible, and the intangible (services and optimization) is often the more important component of the transaction. Often times the intangible is very difficult for people to comprehend, because it is not a feature function benefit approach. It is a value proposition that benefits the client and the returns come from people-related action as opposed to product performance. When you ultimately concentrate on what is right for the client, the client is inherently going to give you more business and more revenue, which is an offset to the declining product element of a transaction. If you pay [the salespeople] 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.

At Gage, one of the largest obstacles to effective implementation of the solvent management program was that the sales force was still working under an incentive system that rewarded selling more of a particular product. They saw that compensating employees on a commission basis was working in opposition to their business objectives. As a result, the firm eliminated commission. As explained by Wing:

> [Employees] were no longer incentivized to push more product. They were incentivized to do what is in the best interest of the customer. When you do what is in the best interest of the customer it will also be in your best interest, because that is how you develop long term relationships.

ACQUIRING NEW EMPLOYEE SKILLS

While firms should build on existing technical and customer service skills, the business of selling small will almost always require a new skill set. New skills may include not only technical skills that involve a deep understanding of the customer's process, but also include new customer relations skills. Each supplier we looked at integrated new employee skills in both of these areas. At Gage, they retrained their more traditional engineers regarding customer service, as well as hired people whose personality and experience would fit with the role they would be playing in the customer plant. At PPG, employees that will be working at the customer's plant are given the traditional technical service training, as well as training in "value selling." With value selling, employees are taught to show the customer that their service - managing a more efficient paint process - is worth something. Employees are even shown how to estimate a dollar value for their services. The goal of this exercise is that even if PPG does not charge for a service, they can kind still put price tag on it and say, 'Here is what we've provided for you…It would have this value on the market.'

At Xerox, the new services required new information technology skills and industry specific process knowledge. Some of these skills they already had in-house. But, they also had to hire externally to augment their knowledge base. In one case, they purchased an entire company in order to obtain their expertise in information technology. They also retrained the existing salespeople to move from the more traditional product-focused selling to more consultative selling, which is an approach based on bonding, rapport and trust.

HIGHLIGHTING ENVIRONMENTAL ADVANTAGES

In each of these cases, the motivation on the part of the customer was largely economic. But, to varying degrees, there was also interest in the environmental impacts of these services. To sell small, therefore, suppliers have to recognize that their products not only affect their own environmental impact, but also play a role in the environmental performance of their customers. As pressures for improved environmental performance increase, so might the customer's desire to reduce product use. Instead of being threatened by this, suppliers can take an active role in this reduction; by redefining their business model, they can turn a potential problem into a strategic opportunity.

In fact, firms do not need to wait until customers express an interest in reduced product use to make this change. More proactive suppliers can educate their customers about the synergies between, for example, environmental performance and cost reduction. As explained by one supplier:

> For many years, to be environmentally friendly or to be green meant to be expensive. Well, we try to tell people, yes, you can have your cake and eat it too. You can put together these very beautiful environmental programs and it can save you money too.

Providing this overarching view and the data that backs it up is a valuable service to a customer. Framing services as a means to help both the environmental and financial bottom line makes an attractive proposition for customers. For firms already well known for their environmental activities, this could be a natural and significant part of the sales strategy.

Selling Small and Smart

Using this approach may be more likely to lead to success for some than for others. Looking at our three cases, firms are more likely to be successful if there is pressure for change, coming either from the customers, as in the case of PPG and Gage, or from the market, as in the case of Xerox. Recognizing and communicating this pressure helps create the sense of urgency that is often essential to the process of cultural change.

Second, firms that have a base of knowledge and skills to work from are also more likely to be successful. In-depth knowledge of the customer processes and needs, as well as existing close service relationships are two critical components of selling small; suppliers that possess them are several steps close to this model of selling than their competitors. Suppliers who are able to create relationships in which customers depend on them for process management are more likely to maintain this competitive advantage over time.

Perhaps even more important, suppliers can also use the selling small approach to build closer relationships with their customers and actually increase revenue in the process. As an example, although PPG now sells less paint at any given plant, PPG also views their new approach as an opportunity. For one, it creates a closer tie to the customer, making it harder for them to switch suppliers. It also opens up opportunities for other business opportunities. Often—either explicitly or implicitly—there is an agreement that the supplier will have opportunities to supply new or existing products to the customer. Some firms, therefore, also introduced new incentives that encourage their on site employees to look for such new opportunities. At PPG, for example, while on-site representatives are reducing paint use, they were given added incentives to identify other markets for PPG products and services. By doing a good job and achieving use reductions, they believe that they will be able to expand the business both internal and external to a particular customer. Gage and Xerox reflected a similar strategic approach.

This said, firms with a broader product base and strong R&D departments will most likely be able to benefit for the selling small approach more than those suppliers who only produce one particular product. While reducing the use of a particular product, having a broader product base, and the ability to research new solutions, allows suppliers to offer more innovative solutions and take advantage of new market opportunities that may develop with a particular customer.

Conclusions

To date, most management literature on sustainability does not question the basic assumption of the typical business model: that a primary goal of a product manufacturer is to sell more of their product, i.e., to "sell large." As society faces environmental limits to material consumption, this assumption must be questioned. This paper outlined the experiences of three suppliers that are operating under a new business model that allows economic growth, while also helping society to step away from the spiral of increasing consumption. In this business model, material goods are not seen as the ends, and the traditional model of selling more is abandoned in exchange for a model in which firms make money by helping their customers achieve their goals while using less product.

As pressures for reduced material consumption become more salient, it is likely that this model will become more common. The cases in this paper suggest that making this shift in the basic business model is not a simple task. Firms may struggle with creating and eventually communicating this new model. Internally, the basic assumptions about the very nature of the firm are likely to be challenged, requiring attention to cultural change. Change agents need to explain to employees how the firm can be a profitable entity while selling less of their products. Accordingly, firms are likely going to need to change incentive structures and the skill base within their organization. When possible, firms can build off the existing strengths of their organization. In our cases, there was already a service mindset in some of the firms that was used to help employees understand the new role they were playing for their customers. For others, they built off an existing base of technical expertise, which contributed to the detailed process information that was often needed to help customers find ways to use less product.

Externally, firms needed to create a joint understanding with their customer of the role they will be playing as a supplier. This is particularly challenging when dealing with customers with which traditional sales relationships already exist. Critical in this understanding was the idea that "product" that they are providing is no longer just material goods, but also a range of services to help the customer use less of these goods. Creating this mutual understanding may require experimentation with alternative contractual arrangements.

There remains a significant opportunity for firms to build this approach as an integral part of their environmental strategy. Because of the correlation between reduced material use and reduced cost, it is tempting to sell these programs based on the potential cost savings, and underplay the environmental benefits. There are broader benefits to be achieved, however, if these changes can be framed within a large context of sustainability. For each of the cases in this paper, customers expressed an interest in reducing their environmental impact. By stressing the environmental implications of selling small, suppliers could boost their own environmental profile, and attract a greater customer support for such an approach.

Looking into the future, pressures for reducing material consumption will increase. As we saw in this paper, most applications will be seen in the business-to-business market, where suppliers are often looked to for answers to operational and environmental problems. It can, however, be applied in a business to consumer setting as well. Environmental leader Patagonia, for example, made a strategic decision to reduce growth, and instead focus on providing value through product quality.[7] While a good example, one could argue that the strategy taken by Patagonia is suited to the unique nature of their company culture, consumer product, and customer base. The challenges of selling "smaller" are likely to be far greater for the average firm selling to the average consumer.

The question for most manufacturers of products is not if they should move to selling small, but when. As in other areas of service provision, early movers will have the advantage. Success in selling small, particularly in the business to business setting, relies on a close relationship with the customer; therefore, if done properly, it will increase the switching costs to new suppliers. Firms that move early can not only enhance their environmental profile, but also ensure a source of competitive advantage while contributing to a more sustainable environment. In essence, firms can find that through "selling small and smart," small is not only beautiful, it's profitable as well.

Endnotes

[1] World Commission on Environment and Development. (1987). *Our common future*. New York: Oxford University Press.

[2] See, for example: Marshall, R. S., & Brown, D. (2003, Fall). The strategy of sustainability: A systems perspective on environmental initiatives. *California Management Review, 46*(1), 101-127.; Reinhardt, F. L. (1998, Summer). Environmental product differentiation: Implications for corporate strategy. *California Management Review, 40*(4), 43-74.; Hall, J., & Vredenburg, H. (2003, Fall). The challenges of innovating for sustainable development. *MIT Sloan Management Review, 45*(1), 61-68.; Hart, S. L. (1997, Jan/Feb). Beyond greening: Strategies for a sustainable world. *Harvard Business Review, 75*(1), 66-77.

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[6] DuPont's program in this area is mentioned briefly in an article on providing services in general. See Sawhney, M., Balasubramanian, S., & Krishnan, V. (2004, Winter). Creating growth with services. *MIT Sloan Management Review, 45*(2), 34-43.

[7] Meadows, D.H., Meadows, D.L., & Randers, J. (1992). *Beyond the limits: Confronting global collapse, envisioning a sustainable future*. Post Mills, VT: Chelsea Green Publishing Company.

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