

Business model innovation: it's not just about technology anymore

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There was a time, not so long ago, when “innovation” meant that companies needed to invest in extensive internal research laboratories, hire the most brilliant people they could find, and then wait patiently for novel products to emerge. Not anymore. The costs of creating, developing, and then shipping these novel products have risen tremendously (think of the cost of developing a new drug, or building a new semiconductor fabrication facility, or launching a new product into a crowded distribution channel). Worse, shortening product lives mean that even great technologies no longer can be relied upon to earn a satisfactory profit before they become commoditized. Today, innovation must include business models, rather than just technology and R&D.

Business models matter. A better business model often will beat a better idea or technology. Consider Wal-Mart in retailing, Dell in PCs, or Southwest Airlines. But business models are not all the same. To innovate your business model, you must first understand what it is, and then examine what paths exist for you to improve upon it.

What is a business model?

Every company has a business model, whether they articulate it or not. At its heart, a business model performs two important functions: value creation and value capture. First, it defines a series of activities, from procuring raw materials to satisfying the final consumer, which will yield a new product or service in such a way that there is net value created throughout the various activities. This is crucial, because if there is no net creation of value, the other companies involved in the set of activities won't participate. Second, a business model captures value from a portion of those activities for the firm developing and operating it. This is equally critical, for a company that cannot earn a profit from some portion of its activities cannot sustain those activities over time.

There can be real tensions between the aspects of a business model that create value and those that help to capture a portion of that value. A high-value proprietary technology, for example, easily earns a profit for the firm, if alternatives offer lesser value. But in many circumstances customers are reluctant to buy such products (because of price, limited availability, or delivery or service issues). Yet making the technology more open, which makes it more appealing to customers, makes it harder to capture value from the offering. So these offsetting factors must be balanced.

How to define a business model? The term “business model” is often used, but not often clearly defined. Richard S. Rosenbloom, Professor Emeritus of Harvard, and I have developed a specific working definition (see Exhibit 1)[1].

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One benefit of this working definition is that each of its six parameters identifies where innovation might generate new value in an industry.

Exhibit 1 Functions of a business model

The functions of a business model are:

1. Articulate the value proposition, that is, the value created for users by the offering
2. Identify a market segment, that is, the users to whom the offering is useful and for what purpose
3. Define the structure of the value chain required by the firm to create and distribute the offering, and determine the complementary assets needed to support the firm's position in this chain. This includes the firm's suppliers and customers, and should extend from raw materials to the final customer
4. Specify the revenue generation mechanism(s) for the firm, and estimate the cost structure and profit potential of producing the offering, given the value proposition and value chain structure chosen
5. Describe the position of the firm within the value network (also referred to as an ecosystem) linking suppliers and customers, including identification of potential complementors and competitors
6. Formulate the competitive strategy by which the innovating firm will gain and hold advantage over rivals

- Value proposition. The GE Aircraft engines unit crafted an innovative value proposition when they shifted from selling airlines jet engines to selling them flight hours. This shifted the risk of downtime from the airline customer to GE, and enabled GE to establish a very profitable service operation.
- Target market. Ryanair, a growing European discount airline, innovated a different target market by going after leisure travelers, instead of the usual business travelers.
- Value chain. Wal-Mart (which targeted an innovative market by going after underserved rural communities in its early days) is celebrated for its management of its supply chain.
- Revenue mechanism(s). Xerox got its start in the copier business by leasing its copiers, instead of selling them. Air Products gets paid for the delivery of its industrial gases right to the manufacturing station inside the plant, instead of by the box car.
- Value network or ecosystem. Ryanair again innovated here, by striking novel arrangements with underutilized regional airports. Ryanair gets a percentage of concession sales at these airports, and in some circumstances even gets paid for landing passengers at the airports.
- Competitive strategy.. One interesting aspect of business models is how difficult it is for others to imitate them. Many airlines have tried to emulate Southwest's low cost approach. Most of their attempts have not fared well. Copying the Southwest model apparently creates too many conflicts with the airlines' established business model.

Thus this working definition points the way to certain improvements that can be made to a business model. But more can be done to improve a specific business model if managers think of stages of business model advancement. The Business Model Framework (BMF) is a model that sequences possible business models from very basic (and not very valuable) models to far more advanced (and very valuable) models. Using the BMF, companies can assess where their current business model stands in relation to its potential and then define appropriate next steps for the further advancement of that model.

The Business Model Framework

Type 1 – Company has an undifferentiated business model. The vast majority of companies operating today do not articulate a distinct business model, and lack a process for managing it. These companies are operating with Type 1 business models. A business using the undifferentiated model competes on price and availability, and serves customers who buy on those criteria. In a word, firms utilizing Type 1 business models are selling commodities, and are doing so in ways that are no different from many, many other firms. They often are caught in the “commodity trap”. Think of restaurants and barber shops as examples of this commodity model.

Type 2 – Company has some differentiation in its business model. In companies using Type 2 business models, the company has created some degree of differentiation in its products or services. This differentiation can also lead to a different business model from that of the Type 1 company, allowing the company to target a customer other than those that buy simply upon price and availability (such as a performance-oriented customer). This allows the Type 2 company to serve a different and less congested market segment from that served by its Type 1 counterpart.

The Type 2 company may lack the resources and staying power to invest in the supporting innovations to sustain its differentiated position. This gives rise to the pattern of so-called “one hit wonders”, where a company or inventor has a successful first product, but is unable to follow up this success with additional products of similar success. Many technology startup companies fall into this type.

Type 3 – Company develops a segmented business model. The company now can compete in different segments simultaneously. More of the market is thus served, and more profit is extracted from the market as well. The price sensitive segment provides the volume base for high volume, low cost production. The performance segment supplies high margins for the business. Other niches can now be addressed, creating a stronger presence in the distribution channels. The firm’s business model now is more distinctive and profitable, which supports the firm’s ability to plan for its future via product and technology roadmaps.

While its greater level of planning helps the Type 3 company avert the one-hit wonder syndrome, problems still remain. The Type 3 firm remains vulnerable to any major new technical shift beyond the scope of their current business and innovation activities, and also to major shifts in the market. Think of a mature, vertically integrated industrial company, as an example of this kind of model. Or in the IT space, think of an ERP system that is deeply connected to business processes, but has few ways to link in other software on top of its own code.

Type 4 – Company has an externally aware business model. In this business model, the company has started to open itself to external ideas and technologies in the development and execution of the business. This unlocks a significantly greater set of resources available to such a company.

The roadmaps of the Type 4 firm provide a shopping list of needs within the firm for external ideas and technologies. Relationships with outsiders help identify external projects that fulfill some of these needs. This reduces the cost of serving the business, reduces the time it takes to get new offerings to market, and shares the risks of new products and processes with external parties.

Internal roadmaps are now shared with suppliers and customers on a frequent basis. This enables the firm to make much more systematic use of innovative ideas from suppliers and from customers. It also allows suppliers and customers to plan their own activities in concert with the innovative activities of the firm. Companies that make it a practice to share real-time information with their suppliers exemplify this approach.

Type 5 – Company integrates its innovation process with its business model. In a Type 5 model, the company’s business model now plays a key integrative role within the company. Suppliers and customers now enjoy formalized institutional access to the firm’s innovation process, and this access is now reciprocated by the suppliers and customers. Customers and suppliers now share their own roadmaps with the company, giving the company much better visibility into the customers’ future requirements.

In this stage, companies begin to experiment more directly with the business model itself. Type 5 companies now take the time to understand the supply chain all the way back to the basic raw materials, as they look for major technical shifts or cost reduction opportunities. Type 5 companies also invest substantial resources to study “the customer’s customer” to learn about the deeper unmet needs and opportunities in the market. Some experimentation is conducted on alternative distribution channels, and indeed, upon alternative

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configurations of the business model. Companies that are moving from offering products to offering services, and are bringing in external technologies to support this new approach are examples of Type 5 models.

Type 6 – Company’s business model is an adaptive platform. The Type 6 business model is an even more open and adaptive model than types 4 or 5. This ability to adapt requires a commitment to experimentation with one or more business model variants. This experimentation can take a number of different forms. Some companies utilize corporate venture capital as a means to explore alternative business models in small startup companies. Some utilize spin-offs and joint ventures as means to commercialize technologies outside of their own current business model. Some have created internal incubators to cultivate promising ideas that are not yet ready for high volume commercialization.

In Type 6 firms, key suppliers and customers become business partners, entering into relationships in which both technical and business risk may be shared. The business models of suppliers are now integrated into the planning processes of the company. The company in turn has integrated its business model into the business model of its key customers. Intel, Microsoft and Wal-Mart are examples here.

One important capability that enables this integration of business models throughout a value chain is the ability of the company to establish its technologies as the basis for a platform of innovation for that value chain. In this way, the company can attract other companies to invest their resources, expanding the value of the platform without consuming extra investment by the platform maker. For example, anyone making software for PCs, accessories for iPods, or games for cell phones is indirectly contributing to the value of each of these platforms[2].

Improving your own business model

The Business Model Framework can help you generate an assessment of your current business model. Be objective about identifying the stage where your business is right now. Then look at the attributes of the next stage of the framework. They provide some guidelines for how to advance your business model further.

If you have already achieved a level 5 or level 6 model, there is good news and bad news. The good news is that your model is likely to be very profitable and hard to imitate. The bad news is that no great business model lasts forever. Xerox’s highly successful leasing model was later upset by Japanese firms entering the market with a simpler copier with replaceable cartridges that could be sold through retailers. As another example, pharmaceutical companies are finding that the blockbuster drug business model is becoming prohibitively expensive. The large market segments are saturated, the costs of R&D are rising steeply, and the failure rate has been disappointingly high. Future markets will be smaller, more highly targeted (and effective), and this new approach will require different processes to develop and launch drugs successfully.

So at any stage of the framework, a company is going to need to think hard about how to sustain and innovate its business model. This brings us to another dimension of the problem.

Why don't more companies innovate their business models?

In my observations, many organizations have a "business model innovation leadership gap." That is, no one person in the organization has the authority and the capability to innovate the business model. Think of your own company: who is responsible for business-model innovation? It can't be left to the chief technology officer and his or her staff alone; business-model innovation clearly requires involvement of top leadership. Yet who within the company, other than the CEO, is responsible for all the ways the business creates value in its products and services and captures that value in the form of revenue from its customers?

Certainly the chief financial officer needs to be involved, both for measuring accurately the results of the model and for communicating these results to outside investors. The marketing leadership focuses on brand development and channels of distribution. The chief legal officer has a role to play, particularly when intellectual property is an important contributor to the ability to capture value from the model. But no one of these people has the ability to drive the entire business.

In some businesses, a general manager or division president may have complete responsibility for the financial performance of a business unit. Even here, though, there often are sharp limits to the ability of these managers to innovate their business models. Some companies, for instance, put their general managers through two-year to three-year rotations running specific businesses, increasing the size of the businesses the managers run over time.

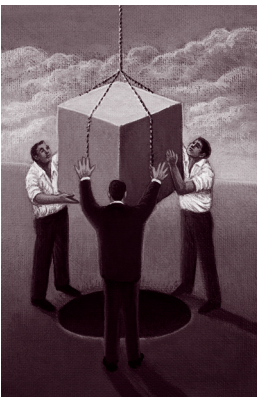
This is too short a time frame to create new business models. It takes more time than that to develop business-model experiments, obtain clear results, interpret and understand the results, and then carry out a broad deployment of those results. Little wonder, then, that most general managers simply stay with the current business model, and show top management their ability to grow the business within the constraints of that model. In turn, the CEO typically delegates responsibility for the business model to the general manager of the business unit.

All this inertia is reinforced by the fact that the top managers of the organization reached their current level of responsibility by executing within the current business model. So that model is familiar and reassuring to them. They know in their bones what its strengths are, and how best to exploit those advantages. And they are less comfortable with anything that differs from this model. And the more radically different a potential new model is, the more data needs to be provided to justify its consideration. All too often, the result is that the established business model becomes unchallengeable.

Nurturing a new business model isn't easy, but it can be done

Business model innovation is difficult, but it can be done. One great example is that of IBM, which saw the need for innovation in its business model and effectively reinvented. In the 1960s and 1970s, IBM was a very large, enormously successful, extremely well managed company. But by January of 1993, the company was in need of a new approach. That month, IBM announced what was then the largest loss in US corporate history, \$5 billion for 1992, along with the latest in a string of layoffs. Soon after that announcement, IBM fired its chief executive officer and brought in the first outside CEO the company had ever had in its history, Lou Gerstner. IBM's business-model innovation was born out of this financial crisis.

Once IBM realized that it had to change its business model, it began a fervent hunt for new revenue sources. One experiment was to offer IBM's semiconductor lines to act as a foundry for other companies' products. This brought in new revenue and increased the utilization rate of IBM's equipment and facilities. IBM's need to generate greater profits also led it to rethink its whole approach to managing its patents and technology. The company was able to raise hundreds of millions of dollars a year by licensing its intellectual property. However, the most successful experiment was the discovery that IBM's expertise could be the basis for a services business, taking care of customers' IT needs. More than half of the company's \$90 billion revenue in 2006 came from its IBM Global Services arm, a business that didn't exist 15 years earlier.



Ideally, of course, a company will figure out how to innovate its business model before it is compelled to act by financial stress. To begin with, an organization must give a senior manager the resources and authority to define and launch business-model experiments. This will require cooperation from many other parts of the organization. Once the data from these experiments are received, that senior executive can decide which experiments to continue, which new ones to initiate, and whether and when enough information exists to justify the wider adoption of a new business model.

Companies also need ways to protect their business-model experiments internally – so that they don't directly compete with the mainstream initiatives within the company. One way to do this is by funding these experiments with a separate pool of money set aside specifically for this purpose. This step prevents these projects from being perceived as taking resources away from immediately rewarding initiatives.

Once a new business model demonstrates real potential, the company needs to deploy that model more widely. This is another stage of testing: Can the new business model work at higher volume and greater scale of operation? If it can, its expansion increases the competition for resources between the new model and the established model (which, remember, has been proved successful over many years, and often the top executives of the company owe their career success to the current model). While the competition between the two models can no longer be avoided at this stage, it can and must be managed. Each model deserves a chance to demonstrate its continued viability. Customers will ultimately be the final arbiter of whether one is better than the other.

In many cases, though, there may be market segments in which each business model works well, and thus they can co-exist. At Barnes and Noble booksellers, for example, it is now clear that many of the company's customers prefer to buy books online, while other customers prefer to go to their local B&N bookstore, peruse the shelves, and purchase their books at the register. B&N now employs both business models as valuable ways to serve its market.

There is no way to know today exactly what your company's future business model will look like. The only way forward is to conduct some experiments, gather the evidence, identify the most promising direction and then run some further experiments. Later, a promising model will have to be scaled up, and integrated across the company. If this sounds expensive and time-consuming, it is. But the better perspective is to evaluate the cost of competing in the market with an obsolete business model, against other companies who made the investments and took the risks to innovate a superior business model. Seen this way, investing in business model innovation is money well spent.

Notes

1. Source, H. Chesbrough, *Open Business Models: How to Thrive in the New Innovation Landscape*, Harvard Business School Press, 2006, chapter 5.
2. For two excellent recent books on the topic of platforms and building the surrounding ecosystem, see Annabelle Gawer and Michael Cusumano, *Platform Leadership* (Harvard Business School Press, 2002), and Marco Iansiti and Roy Levien, *The Keystone Advantage* (Harvard Business School Press, 2004).

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