

# Business Model Innovation in Practice

*A systematic approach to business model innovation can help capture value and reduce risks.*

Jim Euchner and Abhijit Ganguly

**OVERVIEW:** Business model innovation is often the key to capturing value from innovation within corporations. Developing and implementing new business models in practice, however, is difficult and fraught with risk. This paper discusses a systematic approach to developing new business models and identifies concrete steps to reduce the risks associated with them. It draws on literature on elements of the process as well as experience developing and implementing new business models at Goodyear.

**KEYWORDS:** Business model innovation, Adoption risks, Co-innovation risks, Business model canvas

Business model innovation has gained increased attention over the last five years, driven in large part by the tremendous returns generated by companies that have developed new business models—Netflix, Dell, and the Apple iTunes store are the most frequently noted examples. The term itself, however, has been only vaguely defined. Keeley and coauthors (2013), for example, characterize business model innovation by the number of attributes of a business that are changed, while Osterwalder and Pigneur (2010) define a business model in terms of a completed canvas. The vagueness of these representations makes it hard to study (or even to discuss) the process of developing a successful business model to harvest value from innovation.

The concept of the business model is actually simple: the business model is the means by which a firm creates and sustains margins or growth. The business model, defined in this

way, is inherently embedded in a firm's competitive environment: the ability to create margins and growth is dependent on what competitors are doing to create margins and growth for themselves. The business model is not simply the means by which a firm creates and captures customer value. Focusing on creating customer value without regard to competitive advantage will leave a firm vulnerable to both margin erosion and anemic growth. Because the competitive environment is forever changing, business models require constant vigilance; they must be adapted and strengthened over time as the competitive environment evolves.

Business model innovation, in this context, is any innovation that creates a new market or disrupts the competitive advantage of key competitors. Business model innovation is confused in many discussions with building new capabilities (for instance, a new channel). This may or may not be business model innovation: while business model innovation may require new capabilities, new capabilities will constitute business model innovation only when they significantly disrupt the competitive dynamics of an industry. A few common examples of business model innovation make this distinction clear:

- *Dell:* Dell disrupted the cost structure of the personal computer industry with its build-to-order model by eliminating the costs of retail outlets, which radically reduced working capital, enabled customization of orders, and (riding Moore's law) assured that its products had newer and cheaper components than competitors' offerings.

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- *Netflix*: Netflix’s mail-order DVD rental model disrupted the cost structure of Blockbuster Video (which had previously disrupted the cost structure of its smaller rivals). Netflix eliminated retail outlets and used some of the savings to create a pricing structure that eliminated late fees. It continued to build on its advantages by optimizing both its infrastructure and its recommendation engine.

In this paper, we are particularly concerned with developing business models to capture value from innovation inside a corporation. Successful innovation inside corporations requires not only developing an appropriate business model, but also sustaining that model in an environment that can be resistant to change. In a study of the innovations developed at Xerox PARC in the 1970s and 80s, for example, Chesbrough and Rosenbloom (2002) showed how the benefits of breakthrough innovation are often fumbled because the innovation does not match the dominant business model of the corporation that developed it. He examined 32 significant innovations developed by Xerox PARC and showed that substantially more value was created when the new technologies were spun out than by their use internally. This is a challenge common to many corporations, and the one we have sought to address in our work.

### The Process of Business Model Innovation

At Goodyear, we have created and tested a six-step process for developing business models capable of capturing value from innovation (Figure 1). The pyramid structure of our process reflects the evolution of risk as the process develops: at the bottom of the pyramid, the unknowns are many and the risks high; at the top, many of the inherent risks have been defined and, to the extent possible, mitigated.

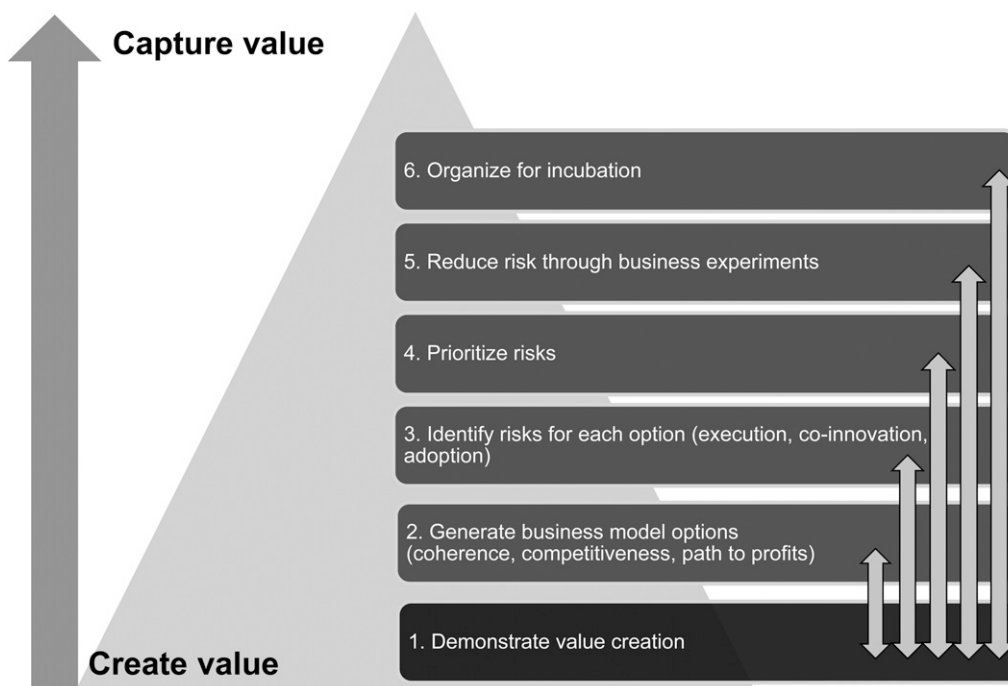


FIGURE 1. Goodyear’s business model innovation process

The purpose of the business model work is to reduce the risks through learning through targeted experiments *with* customers in the market before incubating the business *in* the market. The process, which begins by identifying the potential for value creation and ends with the beginning of incubation, is iterative: it continues until a compelling business model is defined, one we believe can deliver the value proposition to our target market at an acceptable cost. A similar learning process continues during incubation, where we are actually in business, selling to customers at a small scale. Two businesses have entered incubation at Goodyear in the past two years and two others are in earlier stages of development.

Although any innovation process is inherently iterative, there is a sequence to the analyses and experiments that lead to effective new business models. Each stage of the process draws on work others have undertaken in defining and benchmarking particular aspects of innovation (see “Creating a Language of Innovation,” p. XX). We have integrated that work into a coherent process that has now been tested in practice.

#### 1. Demonstrate value creation.

We start by ensuring that we have a clear understanding of the new value the innovation will create for customers. We explicitly separate the definition of the value proposition from the business model development work in order to maintain focus. We have found that if we try to develop the business model at the same time we are creating new value propositions, the focus shifts away from the customer and toward our value capture. The result can be a great business model that sells something customers don’t want.

There are risks in making this separation: it sometimes leads to value propositions that are economically unrealistic, and teams may ignore the inherent potential of the company’s assets. However, we find that making the distinction is worth the trade-off. Any successful business model starts with the desire to fill a compelling customer need, and it is important to get this first step right.

Thus, the first deliverable of the business model innovation process is clarity about value creation. Reaching clarity begins with uncovering customer needs and developing concepts for new value propositions; Goodyear uses a range of well-established design methods for this step. Such methods have been discussed extensively in the literature (see, for example, Kelley [2001], Martin [2009], and *RTM*’s

## Creating a Language of Innovation

Developing a practice requires developing a common language. We have systematically sought to develop such a language within Goodyear, by exploring as an organization the works that inspired our process. Our approach has been to read the references as an organization and to discuss their application to the work underway in new business development.

Key references that have been helpful to our practice are:

- *The Art of Profitability* by Adrian Slywotzky (New York: Warner Books, 2002). Slywotzky introduces the concept of profit models. He describes 23 archetypal business models and their underlying dynamics in a way that illustrates the key characteristics of coherence, competitive advantage, and economic leverage. The archetypes themselves are a good starting point for identifying potential business models.
- *The Wide Lens: What Successful Innovators See That Others Miss* by Ron Adner (New York: Portfolio-Penguin, 2013). Adner discusses innovation ecosystems and two primary types of ecosystem risks: co-innovation risk and adoption-chain risk. Many business models are critically dependent on identifying and managing these risks.
- *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses* by Eric Ries (New York: Crown Business, 2011). Ries has formalized the experiment-driven approach to rapid, in-market learning that has propelled the success of many startups. The process requires discipline but creates a focus and pace that are very productive.
- *The Other Side of Innovation: Solving the Execution Challenge* by Vijay Govindarajan and Chris Trimble (Cambridge, MA: Harvard Business Review Press, 2010). In their study of new ventures inside established corporations, Govindarajan and Trimble identified the dedicated innovation team, independent of the core performance engine, as a critical success factor. The book offers a language and an approach that makes clear that many issues that appear to be political are actually the natural consequence of breakthrough innovation in large organizations.

May–June 2014 special issue, “The Art and Science of Design”). For an example of the application of such methods inside a corporation, see Euchner and Henderson (2011).

Once we have identified a set of value propositions, we attempt to quantify their benefits from the point of view of the prospective customer. This exercise defines the ways in which the customer's world will be materially improved as a result of adopting our innovation.

The key to success at this stage is to deal with real-world data: What are people *actually* doing? How much improvement is possible *in practice*? For example, we have quantified the benefit to truck fleet operators of maintaining

optimal air pressure in their tires. To accomplish this, we needed to understand current practice and quantify the benefits of an optimal tire management protocol in terms of tire life, reduced roadside failures, reduced administrative costs, and improved fuel economy.

### 2. Generate business model options.

Business model innovation, at its heart, is about capturing a share of the value created. A strong business model will capture a significant portion of that value and do so in a way that is difficult for others to replicate. It will also offer the potential to build competitive advantage, often through leveraging assets available within the corporation. Although there may be a best business model, depending on the nature of the innovation and the assets of the corporation, there is rarely a single good business model. At Goodyear, we explore a number of options.

Good business models have three characteristics: they are coherent, they offer competitive advantage, and they provide some form of economic leverage. *Coherence* refers to the way the parts of the model work together to create advantage; the customer set, the basis of competition, the channel, and the assets that create advantage all must articulate. *Competitive advantage* is the differentiation that will attract customers and perhaps allow flexibility in pricing. Competitive advantage must be built on a strategic asset—a unique product, differential power in the channel, a speed to market advantage, or some form of information advantage. In *The Profit Zone* (1997), Slywotzky, Morrison, and Andelman list what they call strategic control points and their relative strengths. Referring to these potential points of advantage is a useful reality check.

*Economic leverage* ensures the business model can deliver profit at scale. Every coherent business model has an economic story behind it, an intersection of economic forces that enables value creation and value capture. In *The Art of Profitability* (2002), Adrian Slywotzky outlines 23 distinct business models, including the experience curve, cost leadership, and multicomponent profit, and the dynamics that make them work. It is vital to understand these dynamics in order to understand the key point of leverage—what must be done in order to be successful.

Strong business models cannot be generated by brainstorming the *elements* of a business model using a tool like the Business Model Canvas (Osterwalder and Pigneur 2010). The canvas may be useful in representing a business model, but it misses the key dynamic elements of working business models—it does not represent coherence (or the relationship among elements); it does not represent the competitive

The business model canvas misses the key dynamic elements of working business models.

position (which is off the canvas); and it does not quantify the economic leverage points.

Instead, recognizing that there are a limited number of coherent, effective models, we use Slywotzky's (2002) 23 archetypes as a starting point. For a given value proposition, we try to identify the archetypes that might be appropriate. We ask, who is offering a similar value proposition in another field? What business model are they using? Often, we will try to visit a company that is using an analogous model.

As we were thinking about business models for the value proposition associated with reducing the total ownership costs of tires, for example, we were inspired by an insurance company, FM Global. FM Global sells insurance, but its policies are bundled with a value proposition that significantly reduces the probability of loss. Unlike other insurance companies, FM Global invests in R&D in technologies that reduce the probability of loss and in experts who can advise on best practices for risk management; it offers its customers a tiered pricing model based on adherence to good risk-management and loss-reduction practices. The costs are higher in this model than in the one used by most other insurers, but the casualty losses are much lower. The value to the customer is not just insurance (and potentially reduced premiums for compliance with FM Global-identified best practices) but also uptime.

The FM Global model inspired Goodyear to develop an analogous model for tire management. We invest in technologies, management protocols, and product selection that increases some costs but reduces the total cost of ownership for fleets, and we are able to capture some of that value. There are important elements that differ from the insurance model, of course, but the essence is similar.

In the field of problem solving, selecting from a list of archetypes and refining the result to fit the specific need is known as *structured selection*. That is a good description of the approach we use at Goodyear, with Slywotzky's archetypes as the core options.

### **3. Identify the risks for each option generated.**

A business model concept is only a concept. It is fraught with unknowns and risks. We attempt to clearly identify these risks up front, focusing on the three types of risks identified by Adner (2006): business execution (initiative) risks, co-innovation (interdependence) risks, and adoption (integration) risks.

To assess the business execution risks, we build a financial model. Although most of the data in the model are estimates, we can identify our best estimates of, for example, basic pricing, the costs of customer acquisition, the costs of goods, customer startup costs, and customer servicing costs. For each element in the financial model, we estimate a range and incorporate the connection of each element to other elements. Everything about this model may be wrong, but it is still extremely valuable. Trying to express the logic of the business quantitatively requires that the elements be carefully thought through. Estimating values both makes them explicit and highlights their raw uncertainty. The discussions that are

engaged in the construction of the model, like how one might account for unused tire inventory in a fleet, are productive in mapping all of the implications of the value proposition and business model.

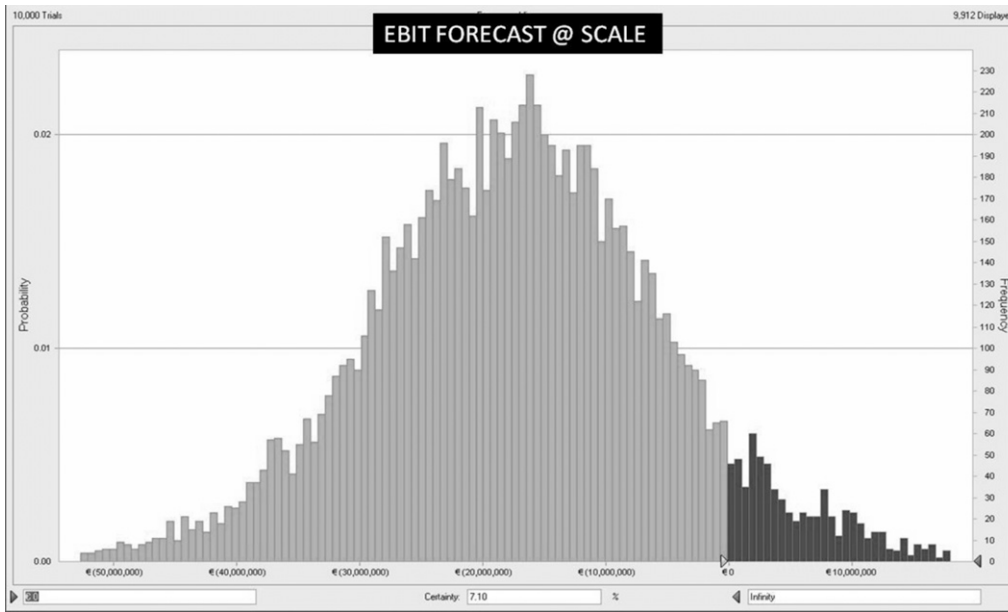
There are risks that are beyond the direct control of the innovator, which Adner refers to as ecosystem risks. The two primary categories of ecosystem risks are co-innovation risks—uncertainties related to innovations others must create in order for your business model to be successful, such as an enabling technology or a new process—and risks associated with the innovation adoption chain. Adoption-chain risks relate to the process of building the alignment among all of the stakeholders required to bring an innovation to market. Assuming customers want to buy the new offering, who else might need to be on board for it to be successful? At Goodyear, the alignment of the dealer network with a new services offering is an essential element in the success of a new business model; it therefore represents a significant adoption chain risk.

To identify the risks for each option, we bring together participants with a wide range of backgrounds and map out what must be true for the business model to hold. We identify each element associated with the value delivery system, our level of knowledge for that element, the parties who need to align with it, and our best estimate of the associated costs.

We then use the financial model we have developed to perform a stochastic analysis of the business model. With off-the-shelf tools, such analyses are relatively simple to perform. In essence, the model is run thousands of times, with different selections for the unknown variables, dependent on their probability of occurrence. The result of the model is not a single number for projected profit, but a distribution of profit, which typically includes instances (combinations of variables) that are possible but not profitable (Figure 2). The stochastic model is a starting point for reducing risk. In the example, there was a very slim chance that the business could have ever been profitable (the dark zone). All our subsequent work focused on increasing the chances of profitability. It was not easy, but a disciplined focus on key drivers of the model got us there.

### **4. Prioritize the risks.**

Stochastic methods can be used to quantify the chances of business success given your current state of knowledge and to identify the variables that are likely to have the most effect on the success (or failure) of the business model. We use a tornado diagram, which is an artifact of the stochastic model, to depict, in rank order, the variables that most affect the profitability of the model (Figure 3). The variables at the top of the list are the ones with the largest potential effect on the model—and the ones it will be most beneficial to invest in understanding and controlling. In the example of the business above (that originally had a slim chance of being profitable), we identified that our commercial relationships with our co-innovators were unsustainable from a profit perspective. Often, the variables that drive profitability are not



**FIGURE 2.** Results of stochastic modeling of a business model's profitability

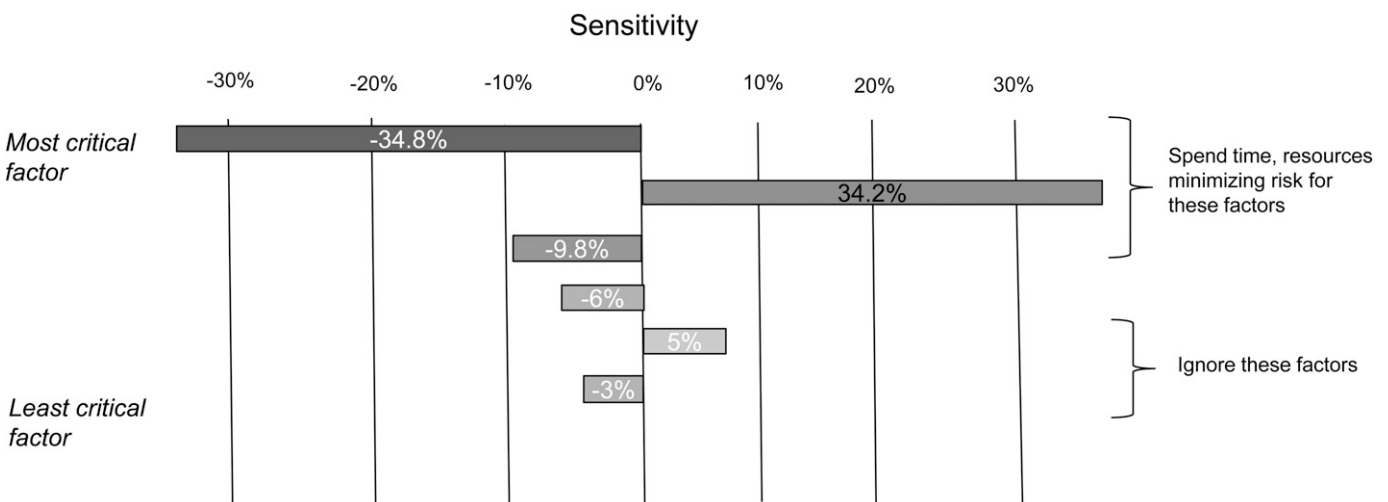
intuitively clear. The tornado diagram derived from the stochastic model makes them explicit. In some cases, assumptions that have been in the background take center stage. Once the importance of such an assumption is identified, customer research and even modification of the value proposition can increase the potential for profitability.

As an example, in one initiative, we demonstrated value creation by outfitting commercial trucks with tire monitoring technology (Step 1). Our business model option (Step 2) was an add-on service that augmented our product offering and leveraged our service provider network for competitive advantage. The model was enabled by a strong ecosystem of technology partners (Step 3). Our financial model (Step 4) assumed that customers would sign long-term contracts (allowing us to amortize the technology costs). The stochastic modeling highlighted the importance of that assumption. A significant customer set was unwilling to agree to long-term

contracts, which made the model unprofitable. In order to make the business model profitable, we had to go back to the drawing board to develop lower-cost solutions.

**5. Reduce risk through business experiments.** The heart of the business model innovation process is business experiments, conducted in the real world using prototypes, simulated user experiences, and short trials. These experiments are designed to provide enough insight to allow us to validate (or invalidate) a crucial assumption, and reduce the risk associated with it. For instance, in developing its managed-services business model, Goodyear conducted trials of two new enabling technologies to assess their efficacy, user acceptance, and economic indicators. This involved collecting and analyzing operating data to quantify the benefits of the technology and assessing an operations protocol in the field. Results from these experiments revealed that one of the technologies would not work in the real world, and the other required extensive user training at multiple points in the organization to realize its benefit, which created an unsustainable cost structure. Based on this important insight, we adapted our business model and technology strategy to increase the likelihood of success.

We model our experimental efforts on the body of work that has become known as the "lean startup" approach (Ries 2011; Blank and Dorf 2012). The premise of this work is two-fold: (1) crucial learning happens with real customers, and



**FIGURE 3.** Tornado diagram identifying key factors affecting a business model's profitability

(2) successful learning arises from something akin to the scientific method, moving from hypothesis through testing to proof. Much of the work around lean startups has been in the digital realm; Goodyear is attempting to apply it in manufacturing and service, which have their own sets of challenges.

The experiments we perform shed light on the riskiest variables identified by the modeling. A business experiment is generally short term and limited in scale, but it answers a question that is critical to the success of the business. As with the scientific method, it is crucial to isolate the underlying hypothesis that is being tested and to specify how the assumption—the hypothesis—will be tested, what will be measured, and how the results will be interpreted. We attempt to define experiments formally and rigorously; the rigor of approach ensures that the experiments are measuring the right thing, but it is also important for the legal reviews and coordination required to conduct such experiments, especially those that directly involve customers, within a large corporation. We time-bound the experiments in order to maintain the pace of learning.

The process of reducing the risk associated with a business model is iterative, continuing until all of the important risks have been defined and resolved as far as possible, and it can be extensive. At some point, the likelihood of the business model's success becomes more clear, leading to a decision point: If there is very little downside risk associated with the business, or if the downside risk can be managed effectively, the initiative can move into incubation. If it emerges that profitability is very unlikely, even under the best of circumstances, the business model (and maybe even the initiative) will have to be abandoned. The risk analysis process must continue until the picture is clear enough to make one decision or the other; that point of decision depends on the organization and its tolerance for particular risk types and levels.

### **6. Organize for incubation.**

The goal of business model innovation is to bring a new offering to market. But an entirely new venture typically can't be introduced to the market as a full-blown offering at scale. The first step in deploying the new model, then, is small-scale incubation. The primary goals of the incubation phase are to demonstrate profitability and scalability in the market, and to identify a business-building strategy.

Incubation at Goodyear follows the same lean startup approach used in developing the business model, but the ventures are funded by a corporate incubation fund and overseen

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by a New Venture Board (NVB) composed of a few forward-looking general managers within the company. The agenda of an NVB meeting is organized around the top five key assumptions central to the success of the business. NVB reviews involve identification of a hypothesis about a key assumption, assessment of actions taken to test the hypothesis, discussion of the current state of knowledge about the new venture, and decisions about what is to be done next to further that knowledge and by when.

A key decision in incubation is whether to organize the new business within the relevant business unit (what Vijay Govindarajan and Chris Trimble, in *The Other Side of Innovation* [2010], call the “performance engine”) or as an independent entity. The work of Govindarajan and Trimble, as well as Chesbrough and Rosenbloom's study, argue for an independent entity if the new business challenges the business model of the core. They believe that an independent entity has a greater ability to escape the orthodoxies of the existing corporation and yet borrow key assets of the corporation as necessary. Their work shows that business models operating within established performance engines are frequently strangled by practices developed to support the operational efficiency of the core, starved of critical resources, or co-opted to support the core business. A change in management in the core or a short-term crisis can eviscerate the nascent enterprise altogether.

For these reasons, we have chosen to incubate new businesses as separate divisions with their own staff and general manager, although this may not apply as a general rule in all situations. The businesses leverage the resources of the core for support functions (such as legal and accounting), but have their own sales, operations, IT, and technology staff. They work closely with the core business to avoid unnecessary channel conflict or customer confusion and buy resources (like tires and services) from the core. The businesses report through the corporate innovation function and are accountable to the NVB, which provides oversight and guidance.

The ultimate decision about integration with the core, at least for the businesses currently in incubation at Goodyear, will be addressed when we make the decision to scale. The options for scaling range from organic growth of the startup to reorganization or transformation of a business unit around the new business model.

### **Conclusions**

Most of us are faced with scarce resources and high opportunity costs inside corporations. A disciplined approach to business model innovation creates the quickest path to market for ventures, in addition to increasing chances of success. The approach we are evolving at Goodyear has had many challenges. From a project standpoint, knowing when to kill a venture remains a challenge. From a team standpoint, attracting and developing talent with the nontraditional skills required has been difficult. Managing the relationship with core businesses has also presented challenges, especially where the new venture and the existing business compete

for resources or customers. Business oversight is essential for building credibility, but it requires a time commitment from operating and a shift in orientation toward learning.

Business model innovation can be managed as a disciplined process. Much has been written about different elements of this process. The contribution of this paper is an integrated view, which combines the elements in a way that can be successfully applied inside corporations. The process we propose has been applied with several value propositions in a range of business contexts. It has resulted in two businesses that are currently in incubation and two at late stages of development. We will continue to refine these methods and tools as we create new businesses.

## References

- Adner, R. 2006. Matching your innovation strategy to your innovation ecosystem. *Harvard Business Review* 84(4): 98–107.
- Blank, S., and Dorf, B. 2012. *The Startup Owner's Manual: The Step-by-Step Guide for Building a Great Company*. Pescadero, CA: K&S Ranch Publishers.
- Euchner, J., and Henderson, A. 2011. The practice of innovation: Innovation as the management of constraints. *Research-Technology Management* 54(2): 47–54.
- Chesbrough, H., and Rosenbloom, R. S. 2002. The role of the business model in capturing value from innovation: Evidence from Xerox Corporation's technology spin-off companies. *Industrial and Corporate Change* 11(3): 529–555.
- Govindarajan, V., and Trimble, C. 2010. *The Other Side of Innovation: Solving the Execution Challenge*. Cambridge, MA: Harvard Business Review Press.
- Keeley, L., Pikkell, R., Quinn, B., and Walters, H. 2013. *Ten Types of Innovation: The Discipline of Building Breakthroughs*. Hoboken, NJ: John Wiley & Sons.
- Kelley, T. 2001. *The Art of Innovation: Lessons in Creativity from IDEO*. New York: Doubleday.
- Martin, R. 2009. *Design of Business: Why Design Thinking is the Next Competitive Advantage*. Cambridge, MA: Harvard Business Review Press.
- Osterwalder, A., and Pigneur, Y. 2010. *Business Model Generation: A Handbook for Visionaries, Game Changers, and Challengers*. Hoboken, NJ: John Wiley & Sons.
- Ries, E. 2011. *The Lean Startup: How Today's Entrepreneurs Use Continuous Innovation to Create Radically Successful Businesses*. New York: Crown Business.
- Slywotzky, A. 2002. *The Art of Profitability*. New York: Warner Books.
- Slywotzky, A., Morrison, D. J., and Andelman, B. 1997. *The Profit Zone: How Strategic Business Design Will Lead You to Tomorrow's Profits*. New York: Crown Business.

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