By Mark L. Frigo

How CFOs Can Drive Innovation

Innovation is sometimes one of the most difficult areas for companies to master. In this interview, Vijay Govindarajan explains some innovative ways of thinking and offers CFOs some advice on how they can succeed and become leaders in this crucial sphere.

In today's economic environment, companies are challenged to find the right pathways to innovation and growth. CFOs can play a vital role in this area. This month's column features a special interview with Vijay Govindarajan (known as VG), director of the William F. Achtmeyer Center for Global Leadership at the Tuck School of Business at Dartmouth; author of *Ten Rules for Strategic Innovation—From Ideas to Execution*; and first Professor-in-Residence and chief innovation consultant at General Electric (GE). Widely regarded as one of the world's leading experts on strategy and innovation, he will publish his next book, *The Other Side of Innovation: Solving the Execution Challenge* (HBS Press), in fall 2010. This book will focus on successful execution of innovation. In this interview, he shares his thoughts and insights on how CFOs can drive innovation.

MLF: In today's economic environment, companies are seeking ways to achieve growth through innovation. Why do management teams need to redefine business strategies in 2010?

VG: One of the important reasons as to why companies need to redesign their business strategies is the fact that industries transform fundamentally because of nonlinear shifts. These nonlinear shifts fall into three broad categories. There could be *technical* discontinuities. Examples would be digital technologies, which are fundamentally transforming media,

entertainment, and music industries; nanotechnologies; and genetic technologies, which are fundamentally transforming the pharmaceutical industries. The second discontinuity relates to *customers*. Customers of the future could be fundamentally different from customers of the present. If they're fundamentally different, they would also demand fundamentally new business models. Take, for instance, the aging of the population in developed economies. This opens up all kinds of opportunities for the healthcare industry. The third discontinuity is *nontraditional competitors*. We are seeing a whole new class of competitors coming from emerging markets—countries like India and China. For instance, in the agricultural tractor business, John Deere Company historically faced multinational competitors like New Holland or Kubota. In the future, John Deere will face a nontraditional competitor from India called Mahindra & Mahindra.

Richard Pascale has given us an effective illustration of nonlinear change in the history of the high-jump event at the Olympics [Figure 1]. There have been four distinct "business models" in the high jump. Each has enabled athletes to achieve breakout performance.

Early on, the "scissors" style dominated. (It was much like hurdling.) Because all high jumpers used the scissors approach, winning depended upon being the best at

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that technique. The high jumpers were operating in Box 1 of my Three Box Model of thinking. [See Figure 2.] Had they been businesspeople, they would have been competing on cost, market share, and margins.

Someone changed the rules of the game one day by inventing the "western roll." (High jumpers launched and landed on the same foot and kept their backs to the bar.) The western roll was the style for 25 years until someone changed the rules again, introducing the "straddle," aka the "eastern roll." (High jumpers launched and landed on opposite feet and faced the bar.) In the 1968 Olympics, former gymnast Dick Fosbury broke the Olympic record by three inches, creating a third, discontinuous change. (The "Fosbury flop" involved a straight approach, jumping with both feet and twisting the body 180 degrees, like a gymnast, looking away from the bar.) These nonlinear shifts exemplify Box 3 thinking. Each transformed the high-jump "industry." In each case, the inventive high jumpers were not just managing the present, they were creating the future.

MLF: In your writings and presentations, you discuss the Three Box Model for thinking strategically: Box 1, Manage the Present; Box 2, Selectively Abandon the Past; and Box 3, Create the Future [see Figure 2]. In today's economic environment, how can CFOs use this approach to help senior leadership teams drive growth and innovation? Do you have any recommendations or guidelines on approximately what percentage of resources should be devoted to managing the present and creating the future?

VG: In my view, companies need to allocate from 50% to 60% of the projects in 2010 to what I call Horizon 1 [see Figure 3]. Horizon 1 projects are really targeted at the core business. Companies should allocate about 20%-30% of resources in 2010 for Horizon 2 projects. Horizon 2 projects are in the adjacent space. What the company is doing here is taking the current core competencies and pushing them outside their core business into an adjacent space. It could be an adjacent product space, an adjacent customer space, or an adjacent geography space. As an example, when GE moved from selling aircraft engines, which was their core business, to servicing the aircraft engines, that was an adjacency. Companies should allocate 10%-20% of their resources in 2010 to Horizon 3 projects, which are entirely new business concepts. An example would be Apple's fundamental transformation of the music industry with iPod, or the telecom industry with iPhone, or the computer industry with iPad.

MLF: In the *Harvard Business Review*, your article with Jeffrey Immelt and Chris Trimble described how GE is disrupting itself through "reverse innovation." How would you describe reverse innovation to CFOs, and how can CFOs facilitate it?

VG: We introduced the concept

Figure 1

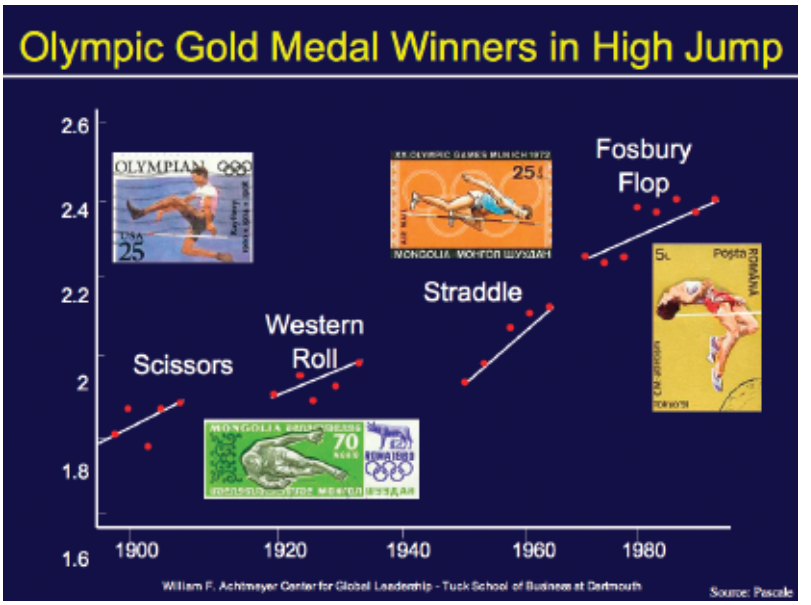
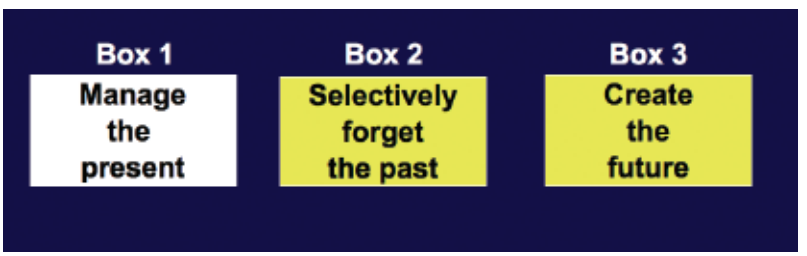


Figure 2



of reverse innovation in our *Harvard Business Review* article "How GE Is Disrupting Itself" [October 2009]. Historically, multinationals developed products and then sold them in poor countries. Reverse innovation is doing the exact opposite. Reverse innovation is about innovating breakthrough products in poor countries and then bringing them into rich countries. In our view, emerging markets will represent the next growth vector, and reverse innovation is the way to capture that growth.

In the 1980s, GE Healthcare led the development of big, powerful, premium-priced ultrasound scanners designed for use in U.S. hospitals. In 2002, GE introduced its first portable ultrasound scanner, and, by 2008, the portable product was offered for a price of $15,000, which was 15% of the cost of the traditional ultrasound. Today the portable machine is the growth engine of GE's ultrasound business in China. Rather than the bulky conventional machine, the new scanner looks like a laptop computer. In the Chinese health system, most patients are not treated in hospitals, so equipment has to be portable. The new scanner is also cheaper—recognizing that the Chinese market required "value products." Even more important, portable ultrasounds have created new markets in the United States. They have been put into use in nontraditional applications, sometimes in entirely unexpected ways. They are employed, for example, in U.S. hospital environments where space is limited and patients are immobile, such as emergency rooms and operating rooms. Between 2002 and 2008, worldwide sales from portable ultrasound products skyrocketed from $4 million to around $278 million—an average annual compounded growth of 50% to 60%.

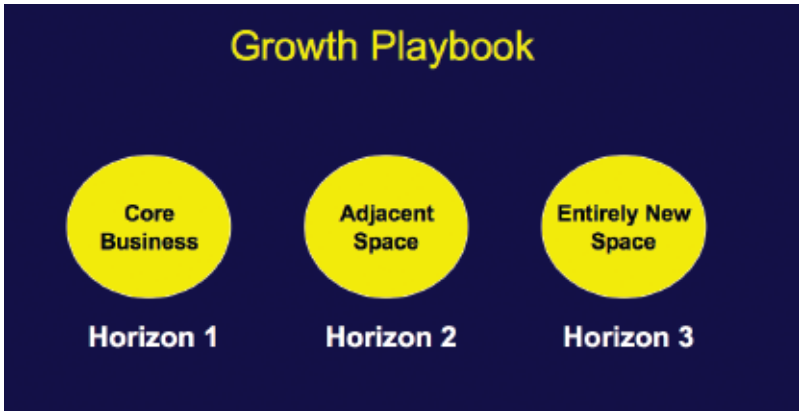
MLF: What questions would you pose to CFOs to help them frame the strategies of their organization toward greater innovation and growth?

VG: I would say that CFOs should focus on three important issues in generating innovation and growth. The first is to participate in discussions that identify nonlinear shifts that could potentially transform industries. The second is that CFOs should participate in conversations around identifying the current core competencies of the corporation: What is the organization really good at doing? The third area where CFOs can help is to identify projects for the three horizons. Horizon 1 focuses on core business, Horizon 2 focuses on adjacent growth, and Horizon 3 focuses on entirely new business models.

MLF: What advice would you give to CFOs about driving innovation?

VG: The major advice I will give CFOs is they should use very different criteria to select projects that support Box 1 projects, which are related to the core business, as compared to selecting projects that are in Horizon 2 or in Horizon 3, which are really Box 2/3 projects. In Box 2/3 projects it is very difficult to ask for net present value, market research, cash flows, return on investment, etc. because a Box 2/3, by definition, is creating the industry. It would be very difficult to supply market research when you're trying to create the market. Therefore, CFOs need to approach the selection of Box2/3 projects very differently from the way they select Box 1 projects. **SF**

Figure 3



Editor's Note

The ideas presented by Vijay Govindarajan provide great insight for CFOs as they seek to drive innovation and growth. "Reverse innovation" can become an important strategic theme in organizations, and it's one that can be linked to the overall strategy of the organization. Readers of *Strategic Finance* will recognize the logic of reverse innovation when viewed through the lens of Return Driven

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Strategic Management

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Strategy. The development by GE of the $15,000 portable ultrasound machine shows how focusing on customer otherwise unmet needs (price, portability, and ease of use in India and China vs. high performance in the U.S.) enabled GE to innovate its offering around those targeted customer needs, partner strategically through joint ventures in China and India, and use reverse innovation as a viable options strategy for growth. In addition, reverse innovation can be an effective way to avoid "Innovation Risk" (the inability of an organization to innovate its offerings to better fulfill changing customer needs and needs of customers of the future). This type of strategic leadership and strategic thinking is needed by CFOs as they face the challenges of driving innovation and growth in today's environment.—*Mark L. Frigo*

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