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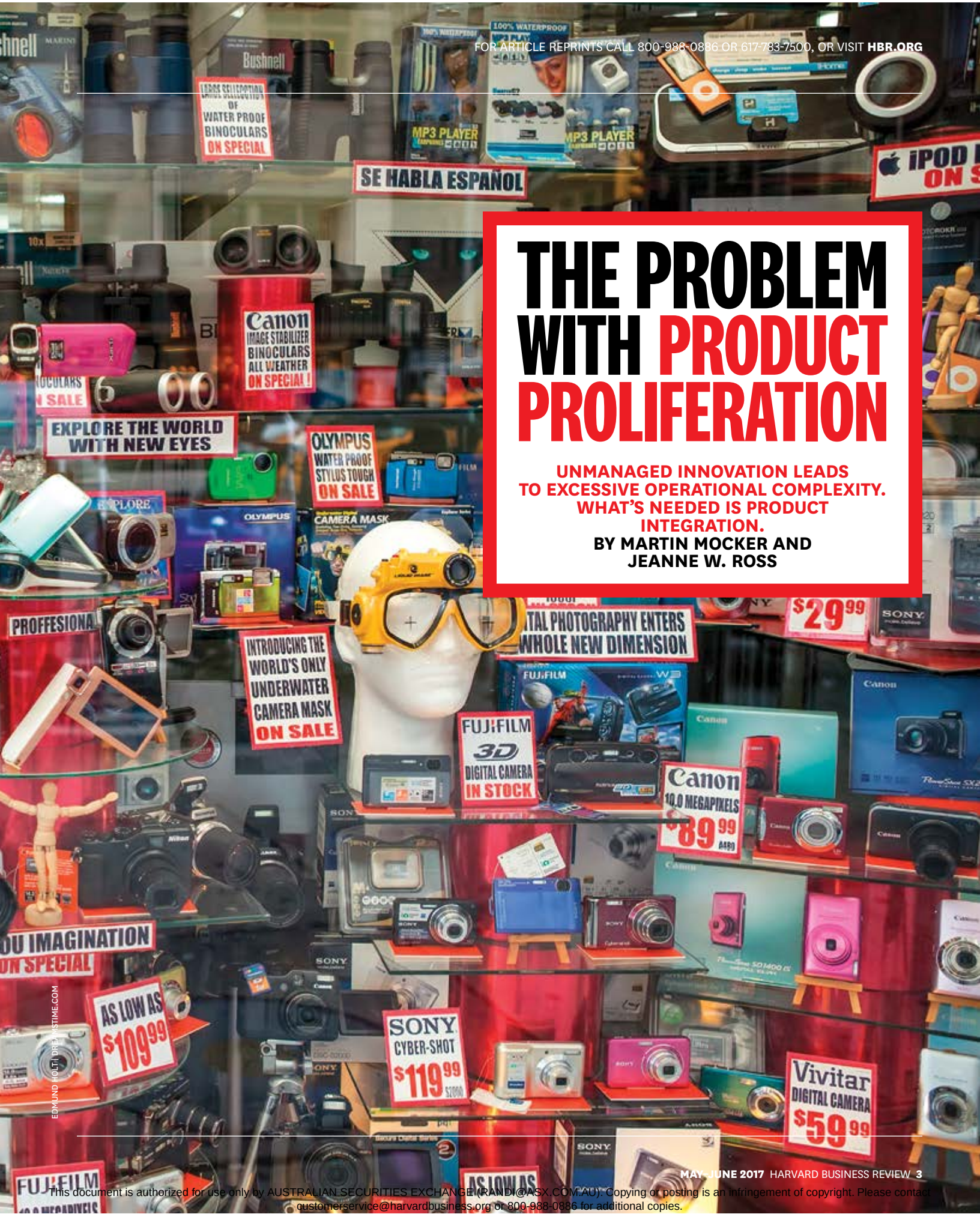

THE PROBLEM WITH PRODUCT PROLIFERATION

UNMANAGED INNOVATION LEADS TO EXCESSIVE OPERATIONAL COMPLEXITY. WHAT'S NEEDED IS PRODUCT INTEGRATION.

BY MARTIN MOCKER AND JEANNE W. ROSS

Royal Philips, the Netherlands' most valuable brand, has long been a leader in product innovation. But in the first 10 years of the new millennium, the company's revenue plunged 40%, profits for the decade were wiped out, and its market capitalization fell significantly. What went wrong?

The problem, it turned out, was excessive innovation. In the early 2000s, executives expanded the company's product portfolio, through in-house development and acquisitions, to encompass an extraordinary array of new products and services. In 2003, Philips was the top patent filer in Europe and among the top 10 in the United States. Innovations included energy-efficient light bulbs, medical scanners, web-enabled cameras, chipsets for in-car entertainment systems, software offerings, and product-related services. By 2011, Philips was active in more than 60 product categories.

But because Philips had allowed business leaders in various product lines and geographies to design standalone systems to support their products and customers, business complexity—in supply chain, sales and marketing, product development, and administrative processes—increased significantly, leading to much higher expenses. Complexity also led, not surprisingly, to greater customer and employee difficulties. For example, health care customers buying medical scanners and related software and services had to work with multiple account managers and received multiple invoices. Employees struggled to navigate the more than 10,000 IT applications, including 60 enterprise resource planning systems, that had sprung up. With customer data spread across all of them, it was nearly impossible for frontline employees to get a view of a customer's needs or to provide a consistent level of service.

Welcome to the dark side of innovation. Every time customers have to enter the same data twice, have inconsistent experiences when interacting with different parts of the business, or are forced to contact multiple people to get something done, it hurts the company. Every time employees can't access important customer information or have to wait for decisions and approvals by multiple people in multiple departments, it hurts the company. It can even destroy a business, as almost happened with Royal Philips.

Customers and frontline employees are well aware of the problems that product variety can introduce. Leaders, however, tend to focus exclusively on the potential benefits. The top team at one large financial services company we studied admitted to being "addicted to innovation." Even when executives recognize that some of their innovations generate little value and that their company has become difficult to do business with, they don't see the connection. The desire to be first to market with a new product—or to quickly replicate a competitor's offering—blinds companies to the potential downside of adding to the product portfolio. Most companies do assess the potential for cannibalization of other products, but few consider the costs of added complexity.

To examine this problem, we surveyed 255 senior executives and studied seven companies in depth through interviews with 72 executives. (The companies were DHL Express, IBM, ING Direct Spain, the LEGO Group, Principal Financial Group, Royal Philips, and USAA.) We found that on average, product variety is not correlated with company profitability—but it is correlated with customer and employee difficulties. The bottom line: The more potentially value-generating innovations you add to your company's product portfolio, the more value-destroying complexity you are likely to embed in your business. We offer three guidelines for addressing this problem: Focus on product integration rather than proliferation. Make sure that product developers are in close touch with customer-facing and operational employees. And define your purpose in a way that will guide decision making.

FACING THE DARK SIDE OF INNOVATION

When Philips set out to address the problems that unmanaged innovation had created, it soon realized it needed to transform both its operations and its portfolio of businesses. In 2011, as part of an ongoing business transformation program, the company began

IN BRIEF

THE PROBLEM
Companies create problems for customers and employees when product innovation goes unmanaged. Eventually, excessive operational complexity hurts the bottom line.

THREE SOLUTIONS
Focus on product integration, not product proliferation. Make sure your product developers work closely with customer-facing and operational employees. And settle on a high-level purpose that can guide decision making.

building a "greenfield" platform of globally standardized systems and processes that spanned three areas: from idea to market (all processes relating to innovation), from market to order (processes related to marketing and sales), and from order to cash (those related to finance and back-office fulfillment).

The goal of the platform was to significantly reduce employee and customer difficulties, but Philips management realized that with the current portfolio of products it would take years to implement. So the company also reduced product variety—dramatically. In 2000, it was doing business in six areas: lighting, consumer electronics, domestic appliances and personal care, components, semiconductors, and medical systems. The company gradually sold off low-margin businesses until it was down to just two units: HealthTech (health care and consumer lifestyle) and Lighting. In 2016, Philips sold off its lighting business so that it could focus exclusively on its HealthTech business. To be sure, the decision to focus on only one business sector was not motivated solely by the difficulties that operational complexity presented—but that was one of the biggest factors, according to executives we spoke with.

Philips's transformation achieved its midterm goal of increasing EBITA margins to more than 10%, and its share price has doubled since 2011. But its journey to reduce complexity—like that of many companies—has been long and painful.

You don't have to be as diversified as Philips to experience the dark side of innovation. In the 1990s, the LEGO Group reacted to the expiration of the patent on its iconic brick—and the growing popularity of computer games—with an all-out effort to innovate. The company doubled the number of unique bricks to more than 12,000 from 1997 to 2004. It also moved into new areas, such as computer games, children's clothing, and theme parks. As product variety grew, complexity crept into LEGO's operational processes. Customers and employees began to struggle with a lack of transparency in its supply chain. LEGO's popular sets began to experience out-of-stock issues, sometimes because just one brick in a set of more than 500 was not available. Retailers were frustrated by the company's inability to respond to a shortage in one country by moving excess inventory from another country. In 2004, LEGO found itself on the brink of bankruptcy.

Like Philips, the LEGO Group addressed its value-destroying complexity by initiating a major business transformation. Starting in 2004, it sold off theme parks and standardized its global supply chain and product-life-cycle management processes. It also reduced the number of unique bricks, although it continued to innovate around the way bricks were combined into sets. These efforts have paid off in profitability and growth. And they have made LEGO easier for customers and employees to deal with.

FIXING THE PROBLEM

The prescription for managing value-destroying complexity is not to stop innovating. Innovation is essential to growth and enables companies to respond to shifts in technology and market conditions. Advances in digital technologies, in particular, offer opportunities to enhance products with information and to personalize customer interactions. Companies that fail to embrace these technologies will surely sacrifice competitiveness.

EMPHASIZING INTEGRATION OVER VARIETY IS A STRATEGIC CHOICE—BUT IT CAN MEAN WALKING AWAY FROM NEW REVENUE IN THE SHORT TERM.

But to ensure that innovations do more good than harm, companies must minimize customer and employee difficulties. We have found that successful innovators follow three principles to help them recover from—or avoid altogether—the downside of innovation.

Focus on integration, not variety. Our research shows that product integration, unlike product variety, is related to better performance and does not create challenges for customers and employees. There are many ways to integrate products: Cross-selling and bundling are obvious options. Companies can also integrate by enriching products with information and offering services that help solve customers' problems. We found that efforts to provide integrated customer service had the potential to limit complexity.

USAA, a financial services company supporting members of the U.S. military and their families,

provides easy-to-use products and services focused on life events. These are major decisions and actions that have significant financial implications—such as getting married, buying a house, having a baby, or leaving the military. By integrating products around life events, USAA allows its members to reach out for help in addressing a financial need rather than seek a specific financial product that may or may not be appropriate.

For example, USAA's Auto Circle helps members who want to buy a car. The service guides a member through the process of buying, financing, and insuring a car in what can be a single interaction on the phone or online. Before Auto Circle was introduced, in 2010, a member would discuss prices with USAA's buying service, arrange financing with USAA's retail bank, and purchase insurance through USAA's property and casualty insurance business. Now Auto Circle addresses all aspects of the process while offering prenegotiated prices at USAA-certified car dealers. In addition, it recommends how much members should spend on a car given their financial situation and offers online tools for configuring the desired car. The company has some of the highest Net Promoter Scores in the world—even higher than Amazon's and Apple's.

Emphasizing product integration over product variety is a strategic choice—but it can mean walking away from new revenue in the short term. At USAA, leaders sometimes decide against introducing an otherwise desirable new product because it would be too hard to integrate into the company's offerings. Another company we studied, ING Direct Spain, delayed introducing a new product for a year because the systems for supporting it were still too messy. First it fixed the systems, and then it introduced the product.

Integration-focused innovation demands more internal coordination than siloed approaches do, but when systems and processes are designed to ease customer difficulties, they usually benefit employees too. Principal Financial Group offers retirement (pensions and 401(k)s) and insurance benefits packages to the employees of small and midsize organizations. Because small businesses don't have the resources to manage complex benefits administration, Principal emphasizes easy-to-use processes and high service over product variety. Simplifying and standardizing its business processes allowed Principal to automate more of them, which resulted in a consistent experience across interactions and significantly reduced employee difficulties. Customer service employees see the same integrated picture the customer does, facilitating efficient and effective customer interactions. Principal's competitors tend to offer more products, but their complexity often drives customers to Principal.

Although innovation through integration might seem like a narrow focus for companies, bringing products together may create more—and more-valuable—opportunities than it eliminates. In the past, Philips's health care business sold big machines such as CT scanners. Its innovation efforts focused on new features or new machines, which took a long time to test and roll out. Philips's HealthTech business aligns its machines with services such as clinical decision-support software and workflow management to help hospitals and doctors increase efficiency and lower costs. While Philips is closing the door on some innovations that it would have welcomed in earlier days, it is exploring ways that new technologies and data sharing can help make and keep people well. This focus on integrated products can actually accelerate innovation. Despite all the changes in Philips's approach, the company was again the top patent filer in Europe in 2015. But now it can innovate without creating difficulties for customers.

Eliminate the separation between your innovators and your complexity handlers. In most organizations, the people in charge of innovation are functionally separate from the people who eventually have to deal with the effects of it (for example, customer service, operations, human resources, and IT). This

IS YOUR BUSINESS TOO COMPLEX?

The dark side of innovation may not be immediately reflected in financial performance indicators. So we recommend that you track difficulties your customers and employees face as a leading indicator of financial performance.

To gauge the level of complexity in your business, ask yourself the following questions. "Yes" answers signal brewing problems.

Employees

- Do employees have to access several systems or use manual work-arounds to accomplish a task?
- Do they have to contact multiple people to get their jobs done?
- Do they have trouble identifying the appropriate in-house experts when needed?
- Do they frequently have to stop tasks to wait for decisions or seek approval?

Customers

- Do customers have to contact multiple people or call centers for each product and service?
- Are different log-ins required to access different products and services online?
- Do customers have to provide the same data multiple times during interactions or when switching channels?
- Is the customer experience inconsistent from one part of the enterprise to another?

division of labor allows complexity to penetrate the business unchecked.

To avoid that trap, companies should create cross-functional teams that break down the wall between the developers of products and the employees whose work is affected by them. ING Direct Spain positions IT architects and customer service representatives alongside product managers from the very beginning of a product introduction. In fact, according to Daniel Llano, ING's former executive vice president of products and strategy, "Nobody comes into my office saying 'This is a product I want to launch' without understanding what will be the impact on the whole bank." IT, operations, and customer service people take responsibility for adjusting product requirements and features so that the company reaps the upside of the innovation (such as revenue increases) without adding undue complexity.

For example, when ING Direct Spain was deciding to offer payment accounts (called checking accounts in the United States), it was concerned about the complexity that would accompany the product offering. In particular, signing up new customers involved sending out separate mailings—welcome packages, debit cards, PIN codes—over the course of several weeks. (To the frustration of many, this is still how it works with most banks today.) An IT employee on the cross-functional team suggested displaying the PIN code to users online after they authenticated themselves for the first time on the website. This tweak eliminated the need for multiple mailings.

Cross-functional teams also provide insights into end-to-end processes, which can greatly ease customer and employee difficulties. When the LEGO Group committed to attacking its business complexity, it created a set of process expert networks (PENs) consisting of leaders from key functional units such as order to cash, manufacturing, finance support, and innovation and development. They met regularly to discuss interdependencies and help design optimized processes. PENs ensured knowledge sharing across the organization and helped bridge the functional and organizational gaps within and across business units. These efforts initially produced greater operational efficiency. More recently, LEGO's integrated processes have proved essential to digital innovation.

Executives may fear that using cross-functional teams will slow down innovation. LEGO's leaders are convinced, however, that their investment in cross-functional collaboration—from their 20-person management team to their PENs—generates clear benefits. The CIO told us, "We talk about a decision or change for a long time, but when we finish with that and everybody nods and says, 'I am on board,' we execute in a flash of a second!"

Similarly, Philips now employs agile methodologies with teams of engineering, sales, and IT people. This helps the company ensure that as it designs new digital offerings, it is capable of manufacturing, selling, and supporting them in ways that limit complexity. Because digital innovations come to market much faster than traditional products do, early assessment of potential impacts on complexity are essential. Cross-functional teams can warn of problems on the horizon and avert product introductions that don't add value. And once digital offerings are developed, they go live with a much shorter time to market because all the relevant functions have been involved.

For cross-functional teams to work effectively, though, leaders need to ensure that everyone in the company understands the purpose of their innovations.

Commit to a vision to direct innovation. USAA's mission is to "facilitate the financial security" of its members and employees. LEGO wants to "inspire and develop the builders of tomorrow." Intuit articulates a vision to "simplify the business of life." Although very broad, these mission statements are more than slogans. They establish the purpose of innovations and are thus essential to innovation and, over time, to the success of the business.

If a company embraces innovation but lacks a clear vision, it runs the risk of becoming addicted to innovation for its own sake. Any and all innovations look good. By contrast, a clear mission inspires people to innovate for a purpose.

Consider again USAA. In the past, the company offered financial products in a fragmented way—40% of its revenues were generated by auto insurance, for

MISSION STATEMENTS CLARIFY THE TYPES OF INNOVATION THAT ARE NOT DESIRABLE AND HELP ESTABLISH PRIORITIES.

example—but those individual products did not increase members' financial security as much as they could. Once corporate leaders reconsidered their mission, they realized that the decision to buy a car has far more impact on members' finances—and their financial security—than does the choice of auto insurance. If USAA wanted to advise members on which car to buy—or whether to buy a car at all—it needed to be part of the entire auto-acquisition cycle.

Mission statements can also clarify the types of innovation that are not desirable and help to establish priorities. When in doubt about whether resources should be directed to introducing a homeowner's insurance product or to making the overall home-buying process simpler, for example, USAA decision makers apply the imperative of "doing what is best for members' financial security." USAA expects employees to debate which of the two investments will benefit more members in a bigger way—and thus have more impact on achieving its mission.

A clear mission statement not only guides individual product innovations, it also influences decisions about infrastructure investments. Philips is investing heavily in its HealthSuite Digital Platform, which enables devices such as health watches, internet-connected scales, and smart thermometers to feed data into the same repository that holds clinical data on blood pressure, heart rate, temperature, and weight. The platform can integrate all the data with readings from CT scanners and other machines to give patients and their health care providers a holistic picture of their health.

The litmus test for an innovation vision is whether employees can use it to differentiate between a truly valuable innovation and one that creates more complexity than value.

HOW THEY DID IT

Companies with a history of growing—or even an inclination to grow—by introducing innovative new products need to take stock of their operational difficulties. How hard is it for your employees to get things done? How hard is it for your customers to deal with your company? In particular, our research suggests, companies should focus on the challenges employees face. Great employees work hard to shield customers from negative impacts of complexity, but those efforts can wear down employees and may cause them to leave. Even if they stay, ever-increasing complexity could well mean that their best efforts will prove futile over time. To gauge the effects of complexity on your business, you may need to do some internal research to find out the answers. (See the exhibit "Is Your Business Too Complex?")

The bad news is that if you conclude that you need to reduce variety and increase integration, doing so is not easy and, for most companies, requires tough organizational choices. Royal Philips rationalized several of its most important internal processes—and then radically simplified its business portfolio. USAA created a Member Experience unit and required that all 12,000 customer-facing employees work in this unit for several years. Service representatives had to be retrained, and IT systems supporting separate lines of business had to be integrated. In addition, USAA adapted its incentive system to emphasize enterprisewide performance. The LEGO Group took a different approach. To facilitate integration, it reorganized the company into three areas: Marketing, Operations, and a corporate functions group called Business Enabling. Enterprise architects and other IT leaders introduced disciplined architecture and governance processes to ensure that LEGO coordinates across areas as needed.

As with most organizational changes, companies need to take an experimental, learning-focused approach; they probably won't get everything right on the first go. For example, when USAA introduced the Member Experience unit, an overwhelming number of decisions were initially pushed up to the executive committee, because issues involving integrated services crossed business unit borders and required companywide decisions. Adapting its decision-making forums eventually reduced the load on the executive committee and accelerated decision making.

Although the process is arduous, there's good case evidence that conquering the dark side of innovation is worth the effort. USAA, Principal, the LEGO Group, and ING Direct Spain are all growing profitably. In fact, their profits exceed industry averages. And because their growth has not introduced significant complexity, it appears to be sustainable. USAA grew from 8 million to 10.7 million members over four years while introducing a succession of integrated services. At the same time, its profit margin grew from 11.2% to 14.2%. The LEGO Group's innovations following its near-demise in the early 2000s allowed it to regain profitability and battle Mattel to become the world's largest toy company.

THE DIGITAL ECONOMY offers unlimited opportunities for innovation. Some companies are innovating in ways that improve customers' and employees' lives and offer sustainable business benefits. Others are frittering away their resources on innovations that in the long run do more harm than good to the company. An honest assessment of your customer and employee difficulties will indicate which way you're headed.

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