HARVARD BUSINESS REVIEW

Innovation

Build an Innovation Engine in 90 Days

by Scott D. Anthony, David S. Duncan and Pontus M.A. Siren

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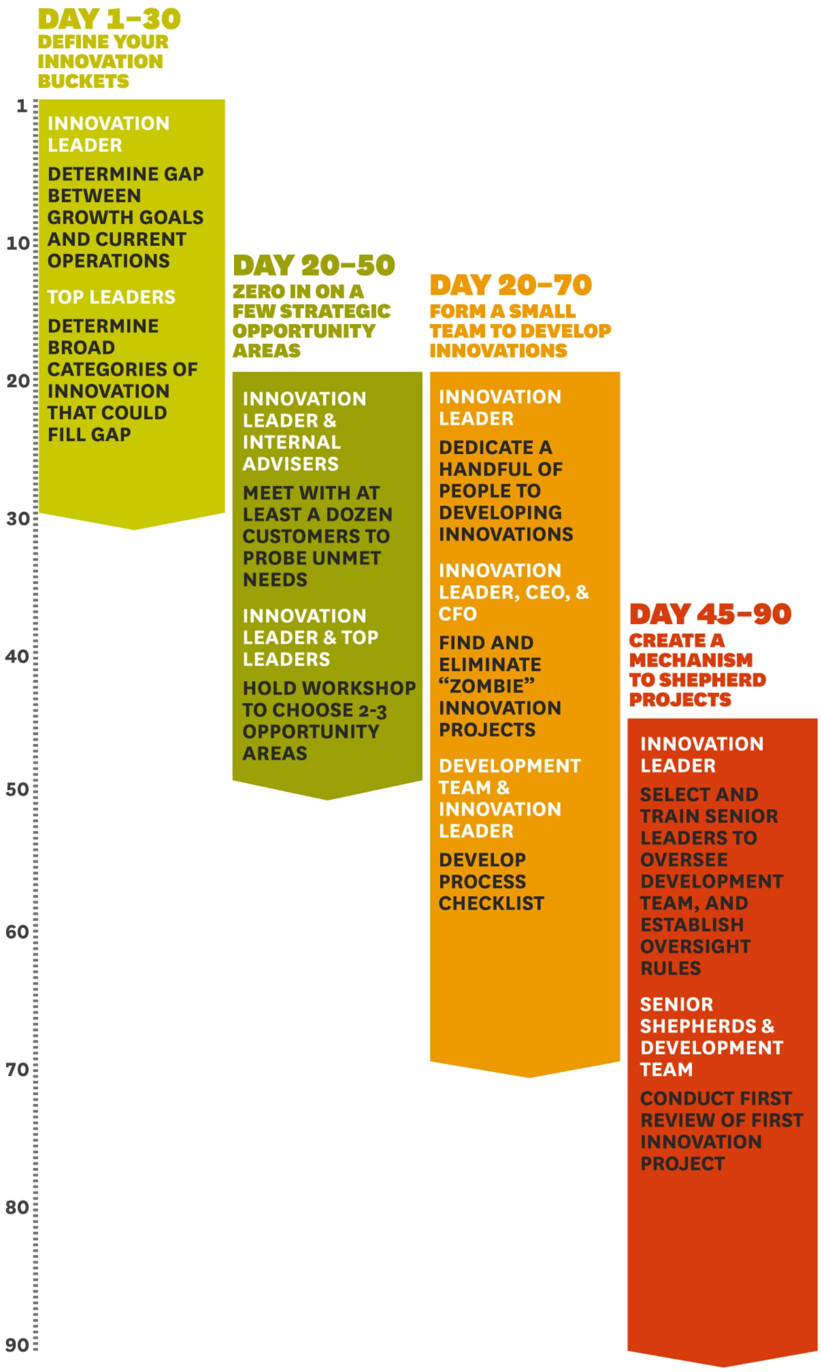
Artwork: Berndnaut Smilde, Nimbus Dumont, 2014, digital C-type print, 75 x 110 cm/125 x 184 cm, courtesy of the artist and Ronchini Gallery

Summary. Most executives will admit that their companies don't innovate in a reliable, orderly way. Too many breakthroughs happen only because of serendipity or individual heroism. Great ideas remain locked inside employees' heads, and the concepts that... **more**

Practically every company innovates. But few do so in an orderly, reliable way. In far too many organizations, the big breakthroughs happen despite the company. Successful innovations typically follow invisible development paths and require acts of individual heroism or a heavy dose of serendipity. Successive efforts to jump-start innovation through, say, hack-a-thons, cash prizes for inventive concepts, and on-again, off-again task forces frequently prove fruitless. Great ideas remain captive in the heads of employees, innovation initiatives take way too long, and the ideas that are developed are not necessarily the best efforts or the best fit with strategic priorities.

Most executives will freely admit that their innovation engine doesn't hum the way they would like it to. But turning sundry innovation efforts into a function that operates consistently and at scale feels like a monumental task. And in many cases it is, requiring new organizational structures, new hires, and substantial investment, as the "innovation factory" Procter & Gamble built in the early 2000s did.

Building a Minimum Viable Innovation System: The First 90 Days



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For the past decade we've been helping organizations around the globe strengthen their innovation capabilities, and that work has taught us that there's an important intermediate option between ad hoc innovation and building an elaborate, large-scale innovation factory: setting up a minimum viable innovation system (MVIS).

We borrow the language for this term from the world of lean start-ups, where "minimum viable product" denotes a stripped-down functional prototype used as a starting point for developing a new offering. "Minimum viable innovation system" refers to the essential building blocks that allow a company to begin creating a reliable, strategically focused innovation function. An MVIS will ensure that good ideas are encouraged, identified, shared, reviewed, prioritized, resourced, developed, rewarded, and celebrated. But it will not require years of work, fundamental changes to the way the organization runs, or a significant reallocation of resources.

What it will require is senior management attention—most critically from some member of the top leadership team. That might be the chief executive officer or a chief innovation officer, but it doesn't have to be. If you're responsible for innovation in your company at the highest level, we're talking to you. With a little help from other executives and innovation practitioners, you can set up an MVIS by completing four basic steps in no more than 90 days, with limited investment and without hiring anyone extra. And as early success builds confidence in your innovation capabilities, it will set the stage for further progress.

Day 1 to 30: Define Your Innovation Buckets

There's no shortage of terms for innovation. Sustaining innovations, incremental innovations, continual improvement programs, organic-growth initiatives. Disruptive innovations, breakthrough innovations, new-growth initiatives, white-space and blue-ocean strategies. But strategically speaking, all innovations fall into one of two buckets. In one are innovations that extend today's business, either by enhancing existing offerings or by improving internal operations. In the other are innovations that generate new growth by reaching new customer segments or new markets, often through new business models.

The MVIS encompasses both types of innovation, but it's critical that everyone involved in an MVIS (or any innovation program) understand the difference between the two buckets. The failure to do so causes many companies to either discount the importance of innovations that strengthen the ongoing business or to demand too much revenue from the new-growth initiatives too early. Agreeing on what to call the two buckets is a good starting place. For the purposes of this discussion we'll call the first one "core innovations" and the second "new-growth innovations."

Innovation projects meant to strengthen the core should be tied to the current strategy and managed mostly within the main business's organizational structure. (The MVIS will keep track of them, though, as you'll see later on.) They're the projects expected to offer rapid and substantial returns in the near future and need to be funded at scale.

Conceivably, all your current innovation projects may be core. But what of the future? Will they be enough to enable you to reach your longer-term financial targets? If your company is typical, the answer is no. There will be a gap between your growth goals and what your current operations and core innovations can generate. It's the purpose of the new-growth innovations to fill that gap.

New-growth initiatives push the frontier of your strategy by offering new or complementary products to existing customers, moving into adjacent product or geographic markets, or developing something utterly original, perhaps delivered in a completely novel way. The larger your company's growth gap, the further from your core those innovation efforts will likely need to be, and the longer it will take to realize substantial revenue from them.

You can work up a serviceable estimate of the size of the gap if you spend up to two weeks developing rough but honest numbers for the revenue and profits your current operations will deliver in the next five years and then compare them with your five-year goals. This will give you a basic sense of what percentage of your time, effort, and resources needs to be focused on core innovation, and what percentage on new-growth efforts, and how ambitious the latter need to be.

When your growth gap is fairly large, you may wish to subdivide your new-growth efforts so that you can map them to different possible directions for future growth. This being a minimum innovation effort, we suggest designating no more than three such categories.

Manila Water is a public/private partnership in the Philippines that has done a good job of mapping its core and new-growth innovation efforts to its current and future goals. In 1997 it received a concession to provide water services to the eastern part of the city of Manila, covering about 6 million people. At the time only about 30% of the city's households had reliable access to water. In the next 16 years the company made it available to almost every home in the area and approached international levels on key benchmarks such as pressure, purity, and turbidity.

The organization couldn't have achieved such impressive performance without being highly innovative in the way it solved the challenges of operating within the chaotic environment of the Philippines. To improve the productivity of the core, it needed to keep pursuing those kinds of innovations—which it dubbed "core optimization."

However, in 2013, CEO Gerardo Ablaza recognized that core optimization would not be enough to reach Manila Water's long-term growth goals. The company's calculations made it clear that over the next few years, 80% of its growth had to come from outside the core.

To fill such a large gap, Ablaza and his leadership team decided that the new-growth initiatives should fall into two broad categories: The first was adjacency moves, in which Manila Water would export its core business model to other geographic markets. The second was the pursuit of new kinds of offerings entirely, beyond the core mission of providing clean water.

That move presented Manila Water with a challenge: The more novel a category of innovation is, the more it will run counter to systems and processes designed to strengthen and support the current business. The next three pieces of the MVIS puzzle help companies overcome that difficulty.

Day 20 to 50: Zero In on a Few Strategic Opportunity Areas

Sophisticated innovators like Procter & Gamble, W.L. Gore, and Apple have elaborate processes to tie their various types of innovation to their short- and longer-term growth goals. The MVIS also does this, but in a simpler way. It makes efficient use of limited resources and productively channels innovators' passions by focusing innovation efforts on a small number of strategic opportunity areas. These are areas that fit within your new-growth buckets and seem large enough to take the needed bite out of that growth gap.

How do you pick them? You could spend months or even years conducting a comprehensive analysis, but of course we don't recommend that. Instead we suggest doing three weeks of research, with the aid of a handful of executives you expect will eventually be involved in your innovation efforts. Have them meet with at least a dozen customers, probing for unmet needs that could be the foundation of a new-growth innovation, and investigate new developments in and around your industry. Also, take a close look at new-growth efforts currently bubbling up inside your organization. These sometimes signal strategic objectives that aren't yet getting proper attention from senior management. For example, when one financial services company examined the ideas emerging organically within its ranks, it saw that a number of them involved sophisticated analysis of customer data, even though it hadn't yet announced that "big data" would be a strategic imperative. Competitive forces and customer demands had naturally begun to attract organizational energy.

Next, lock the members of the senior leadership team in a room for an afternoon, share the findings, and instruct them not to leave until they have identified three strategic opportunity areas that each combine the following:

- A job that many potential customers need to do that no one is addressing very well.
- Either a technology that will enable customers to do that job much more easily, cheaply, or conveniently, or a change in the economic, regulatory, or social landscape that is greatly intensifying the need for that job.
- Some special capability of your company that competitors can't easily copy that will give you an advantage in seizing this opportunity.

Manila Water used those criteria to identify a number of strategic opportunity areas, including treating wastewater generated by commercial enterprises. Manila Water selected this area because it recognized that a great many enterprises across the city produced wastewater. What's more, increasing regulatory scrutiny meant that they could not continue to flush wastewater down the drain or casually dump it elsewhere, as they had been doing. As for a competitive advantage, Manila Water not only had substantial experience in treating wastewater but, as the enterprises' water supplier, already knew these potential customers well, giving it a head start in developing the best solution for their needs.

If you take care to combine all three criteria, you can avoid some of the more common innovation traps, such as pursuing a phantom opportunity only because it seems so big that there must be money in it somewhere, or wandering into a new market where you have no natural advantage. Manila Water had initially considered, for instance, whether it might expand into advertising. After all, every month it was sending out millions of paper bills, on which someone might want to advertise, and the Filipino ad market was growing. But ultimately that area was deemed too far from the company's existing capabilities to be reasonably defended against more-experienced competitors.

Identifying strategic opportunity areas will direct the energies of forward-thinking employees who might be playing with ideas at the fringes of your organization. It also helps highlight where people might be wasting their time. After all, its corollary is that it defines what you are *not* going to do. That's something we'll focus on in the next section.

Day 20 to 70: Form a Small, Dedicated Team to Develop the Innovations

Because you're trying to set up a minimum innovation capability, you may think you could layer it into your existing organization by setting aside some time for everyone to innovate. But consider this: About 75% of venture-capital-backed start-ups fail to return one penny to their investors. Fewer than 50% of start-ups make it to their fourth birthday. These are businesses with dedicated teams whose members are pouring every ounce of their souls into succeeding. What hope does a group of part-timers have to beat the odds?

Even a minimum viable innovation system requires that at least one person (and typically more) get up every morning and go to sleep every night thinking about nothing but innovation. (That won't be you, though it should be someone who reports to you. As the executive sponsor, you presumably have other responsibilities as well.)

But there's no need to recruit an army. Manila Water created a three-person team to explore the first two strategic areas it identified. The team then developed a backup list of half a dozen extra opportunities that could be pursued if the first set didn't pan out. We generally recommend starting in this focused way rather than setting up a large innovation function, which often creates work for itself to justify its existence. That said, we do recommend building the capacity to handle at least two ideas at once, since there inevitably will be course corrections and failure.

Are We Following the Best Practices?

As experienced innovators, we use checklists to make sure we haven't left out any critical step. These lists contain questions we ask when considering an investment or advising a new-growth innovation team. You can use them for the same purposes—or as a starting point for developing your own checklist.

1. Is innovation development being spearheaded by a small, focused team of people who have relevant

experience or are prepared to learn as they go?

2. Has the team spent enough time directly with prospective customers to develop a deep understanding of them?

3. In considering novel ways to serve those customers, did the team review developments in other industries and countries?

4. Can the team clearly define the first customer and a path to reaching others?

5. Is the team's idea consistent with a strategic opportunity area in which the company has a compelling advantage?

6. Is the idea's proposed business model described in detail?

7. Does the team have a believable hypothesis about how the offering will make money?

8. Have the team members identified all the things that have to be true for this hypothesis to work?

9. Does the team have a plan for testing all those uncertainties, which tackles the most critical ones first? Does each test have a clear objective, a hypothesis, specific predictions, and a tactical execution plan?

10. Are fixed costs low enough to facilitate course corrections?

11. Has the team demonstrated a bias toward action by rapidly prototyping the idea?

Two obstacles, in our experience, may daunt companies at this stage: a lack of resources and a lack of people with pertinent experience to staff the MVIS. Here's how to overcome them:

Free up resources.

If you're encountering the first problem, it's time to bring your invisible innovation efforts out of the shadows. The odds are high that they include "zombie projects"—walking undead that shuffle along slowly but aren't headed anywhere. Sometimes companies unwittingly spawn zombies by setting up redundant teams for core initiatives. Sometimes new-growth zombies lurk in an organization's dark corners in unsanctioned efforts.

Finding the bulk of your zombies is a straightforward process: List all the innovation efforts that have the equivalent of at least one half-time employee working on them. Try to identify which market each idea targets. Estimate the size of the opportunity, and inventory the resources currently devoted to it. Which efforts enhance your core strategy and which focus on strategic opportunity areas? It should be fairly easy to identify the projects that are neither and are frittering away your resources.

In 2011, when Francesco Vanni d'Archirafi, then CEO of Citi Transaction Services, pushed his organization to track its innovation efforts, substantial duplication and fruitless efforts came to light. CTS streamlined its innovation portfolio by consolidating 75 mobile projects into 10, which liberated resources and increased strategic focus.

Identifying zombies is easier than killing them off, however. Many people find it hard to throw in the towel on a project that might somehow, someday work. And few people have the fortitude to admit that their project is essentially the same as someone else's.

As a start, consider instituting "zombie amnesty," whereby people can admit that their idea is too small, not strategic enough, or too riddled with difficult-to-address risks to justify further funding. Make it clear that there will be no penalty for purging a project. In fact, hold a celebration to honor those who do. They're heroes and should be treated as such. One round of amnesty will probably release enough resources to get your innovation team up and running, although it's a good idea to hold the exercise every couple of years to ensure that efforts haven't wandered off course.

Learn by doing.

If your organization is just starting to focus on innovation, it's unlikely that anyone you appoint to the team will have much experience with it. And yet we promised that you could get started in 90 days without hiring anyone. How?

Over the years, innovation thinkers and practitioners have offered up a wealth of best practices aimed at making new-growth innovation as orderly as the processes for manufacturing and marketing mature products. Companies like Intuit, Syngenta, and General Electric have elaborate systems to spread those practices throughout their organizations. In essence these systems combine some formal training with immersion in an actual product-development experience. A simpler version of this is an effective starting point for a neophyte MVIS team.

As experienced innovators, we use process checklists to make sure we haven't left out any critical step. Those newer to innovation can do the same. Have your team devour the literature of best innovation practices and develop its own checklist, hang it on the wall, and refer to it frequently. (For some of our favorite books, see the sidebar "An Innovator's Bookshelf.") The team members will develop their skills as they work through problems, but the checklist will help ensure that they don't go off the rails in the meantime.

A nonprofit, the Settlement Music School, used this approach to reach new student populations in inventive ways. Founded in 1908, SMS offered classes in jazz and classical music to 5,000 students—primarily children—weekly in the Philadelphia area. Executive director Helen Eaton hoped to transform SMS's facilities into a "third place," like a house of worship (or a neighborhood Starbucks), that could provide adults with a sense of community. After dividing her innovation ideas into core and new growth, she identified four strategic opportunity areas she called "best in class," "community arts changes lives," "innovation meets changing needs," and "smart solutions for sustainability and growth."

An Innovator's Bookshelf

Here's a list of some of the best books on innovation.

General Overview

The Innovator's Solution
Clayton M. Christensen and Michael E. Raynor
Harvard Business School Press, 2003

Creativity, Inc.
Ed Catmull with Amy Wallace
Random House, 2014

Playing to Win
A.G. Lafley and Roger L. Martin
Harvard Business Review Press, 2013

Innovation and Entrepreneurship
Peter F. Drucker
Harper & Row, 1985

Only the Paranoid Survive
Andrew S. Grove
Currency, 1996

The Innovator's Extinction
David E. Ulmer
Create Space Publishing, 2012

Seizing the White Space
Mark W. Johnson
Harvard Business Press, 2010

How-to Books: Developing Ideas

Where Good Ideas Come From

Steven Johnson

Riverhead, 2010

Business Model Generation

Alexander Osterwalder and Yves Pigneur

John Wiley & Sons, 2010

Borrowing Brilliance

David Kord Murray

Gotham Books, 2009

Made to Stick

Chip Heath and Dan Heath

Random House, 2007

Assessing and Testing Ideas

The High-Velocity Edge

Steven J. Spear

McGraw-Hill, 2009

The Other Side of Innovation

Vijay Govindarajan and Chris Trimble

Harvard Business Review Press, 2010

Discovery-Driven Growth

Rita Gunther McGrath and Ian C. Macmillan

Harvard Business Press, 2009

The Lean Startup

Eric Ries

Crown Business, 2011

The Four Steps to the Epiphany

Steve Blank

K&S Ranch, 2005

The First Mile

Scott D. Anthony

Harvard Business Review Press, 2014

Building Capabilities

Building a Growth Factory
Scott D. Anthony and David S. Duncan
Harvard Business Review Press, 2012

The Innovator's DNA
Jeff Dyer, Hal Gregersen, and Clayton M. Christensen
Harvard Business Review Press, 2011

Led by community engagement manager Joseph Nebistinsky, a small team of innovators, which included several branch and department directors, began to conceive of new offerings in the "community arts changes lives" area, using our best-practices checklist. After two days of training, they went into the field to interview prospective customers about what offerings might enrich their lives. In his discussions, Germantown branch director Eric Anderson saw a recurrent theme: a desire for adults to reclaim their youth, meet new people, and dust off that guitar they'd stopped strumming in college. What if we created some way for adults to jam together in a band, he wondered? The team drafted a three-page brief outlining the idea, which ultimately became known as "Adult Rock Band."

In an initiative so far from SMS's core, many uncertainties needed to be resolved. How would the school attract students? What type of music should they play? One hook could be a culminating concert where the jam band would perform, but maybe the program should more open-ended, with no big event?

Like seasoned innovators, the team laid out the assumptions underpinning a complete business model, which included how the program would be designed, marketed, and delivered. The idea was that a group of like-minded adults would come together and practice under the tutelage of an expert instructor. The class could continue indefinitely, separated into 10-week sessions; at the end of each session the band would hold a concert in the school's performance space. As instructor Ed Wise told a local publication, "There's something good for the soul about strapping on the old Fender and banging out a few Jack Bruce lines."

Would that work? The members of the team had spent enough time with customers to be confident that Adult Rock Band addressed a real market need, and their back-of-the-envelope analysis showed that the program would break even if an individual branch could attract just eight participants. They set out to test the idea by running a pilot at a single branch and then expanding to two more.

The program did well at two branches but struggled at the third. Rather than walk away from the perceived failure, the school did a careful analysis. It showed that SMS needed to fine-tune the classes to the socioeconomic makeup of its local branches, taking into account each community's musical traditions, cultural traditions, and social networks. As the school continued to innovate and look into why certain programs took hold in one community and not in another, the MVIS team found it could begin to predict the success rates of new offerings. Its success helped SMS earn a coveted grant from the Pew Charitable Trusts to support further investment in innovative programs.

Day 45 to 90: Create a Mechanism to Shepherd Projects

If you have robust planning and budgeting systems, by all means use them for your core innovation efforts. But new-growth innovations call for an approach that borrows from venture capital practices. Any entrepreneur who's been backed by VCs will tell you that they operate within a system that's just as disciplined as a traditional corporation's annual budgeting cycle. But it's a sharply different discipline, one designed to manage strategic uncertainty.

Begin by forming a group of senior leaders who, from then on, will have the autonomy to make decisions about starting, stopping, or redirecting new-growth innovation projects. Don't just replicate the current executive committee, however. If you do, it will be too easy for group members to default to their corporate-planning mindset or to let day-to-day business creep into discussions about innovations meant to fulfill long-term goals. Manila Water, for instance, picked four members of its top management team to serve on what it called the New Services Review Committee, which met every few weeks to help teams working on new-growth ideas.

In overseeing projects, this group should copy some standard VC operating procedures:

- Venture capital partners often disagree about investment opportunities. In fact, seasoned VCs will tell you that the best investments are the most polarizing. Every project in your MVIS should have a senior executive sponsor or champion who believes in it deeply, but you shouldn't require approval from the entire shepherding group to go ahead.

- A decision to invest in a start-up is considered very carefully, but most day-to-day spending decisions are left to the start-up's CEO. Corporate innovation shepherds should set a threshold investment amount that project teams can spend themselves without asking for leadership approval.

- Major VC funding doesn't follow quarterly or annual budget cycles. When a start-up resolves a key risk, it gets further investment. (In Manila Water's case, for instance, significant expansion capital was contingent on commercial clients' signing water treatment contracts, rather than just saying they would.) And when a big issue arises, the board of a venture-backed company gathers within 36 hours. You should ensure that your shepherds are likewise capable of assembling and making decisions that quickly.

Venture capitalists, of course, don't need to concern themselves with integrating their start-ups into a larger organization. Corporate shepherds, by contrast, are responsible for helping strengthen their whole organization's innovation capabilities.

This is something that Mary Jo Haddad, who was the CEO of Toronto's Hospital for Sick Children from 2004 to 2013, understood when she kicked off a major innovation effort there in 2010. Haddad created a shepherding mechanism: an 18-person cross-functional team called the Innovation Working Group, which was armed with $250,000 in funding. The IWG helps innovators understand the needs of users, test prototypes, make adjustments, and then build scale. It also works to identify latent organizational innovation talent by running workshops that gather ideas from staff, patients, families, and the public and gives employees with promising proposals the opportunity to step out of their day jobs for a while to push their ideas forward. Equally important, the IWG runs an annual Innovation Expo, which celebrates innovators who experiment with new ideas, regardless of whether they succeed or fail.

> **One area that absolutely cannot be shortchanged is personnel. If you have no one fully focused on new growth, you've decided not to focus on new growth.**

While an MVIS approach avoids the arduous work of rewiring a company's systems for performance management, budgeting, and supplier management, it has a downside: It requires senior leaders to get involved in those issues on an ad hoc basis. For instance, at one organization a high-performing employee was in danger of losing a promotion because the innovative business she was helping build didn't cross a revenue threshold set by corporate HR's advancement policies. But her responsibilities were at least equal to those of many others who did qualify for promotion, and there were clear signs that, managed appropriately, her business could deliver substantial long-term revenue. Her unit leader stepped in to preempt the HR decision.

You might not want to spend time mired in these types of discussions forever. So at some point you may wish to integrate an MVIS into the broader organization—the subject of the next section.

Scaling Up the MVIS

At the end of 90 days, you should have established your broad innovation buckets, identified your strategic opportunity areas, assembled a team that has started on its first project, and created the shepherding mechanism to speed the team on its way. Once you have the MVIS in place and see signs that specific projects will bear fruit (which may occur within the first few months or may take longer, depending on circumstances), it's time to consider next steps.

First, consider hardwiring the components of the MVIS that are working well into more-formal systems. Manila Water created a master plan of innovation efforts, which forecast the pace and scale of its investment activities and their financial impact over a multiyear period. CTS assigned individuals to oversee certain processes and created tracking tools to enable them to regularly monitor the portfolio of innovation projects. Though such efforts can feel like creeping bureaucracy, they're part of the natural maturation of innovation as an organizational capability.

Second, consider creating specialized functions to carry out parts of the innovation process. A small organization might, for example, assign a single person to act as a "scout," keeping abreast of market changes. A large one might establish a business development team that looks for opportunities to form partnerships and alliances to amplify new-growth efforts. Or it might form groups to conduct ethnographic market research or develop rapid prototyping techniques.

Finally, work on the MVIS should highlight some of the larger barriers to innovation inside an organization. These often reside within corporate budgeting, incentive, and strategic-planning systems, which, after all, are designed to further today's business, not create tomorrow's. Rewiring those systems or establishing robust parallels presents substantial challenges but is critical to scaling up and spreading innovation efforts.

A division of a massive financial services company. A leading pediatric hospital. A water utility in an emerging market. A 100-year-old nonprofit. The organizations we've highlighted here are in different industries, have different missions, and operate in different contexts. But they share a problem faced by countless organizations around the globe: How do we start to make the magic of innovation more systematic and strategic? It is a daunting challenge. We conclude with three pieces of advice:

- Remember, the "S" in MVIS stands for system. You can't pick and choose between the four elements described above. Do everything, or do nothing.

- One area that absolutely cannot be shortchanged is personnel. If you have no one fully focused on new growth, you've decided not to focus on new growth.

- How you treat failure is more important than how you reward success. Hiding or fearing failure spawns projects that never die and that suck up all your capacity for innovation.

Creating an MVIS won't miraculously turn you into Pixar or Amazon, but it will help you make tangible progress in increasing the predictability and productivity of critical investments in future growth.

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