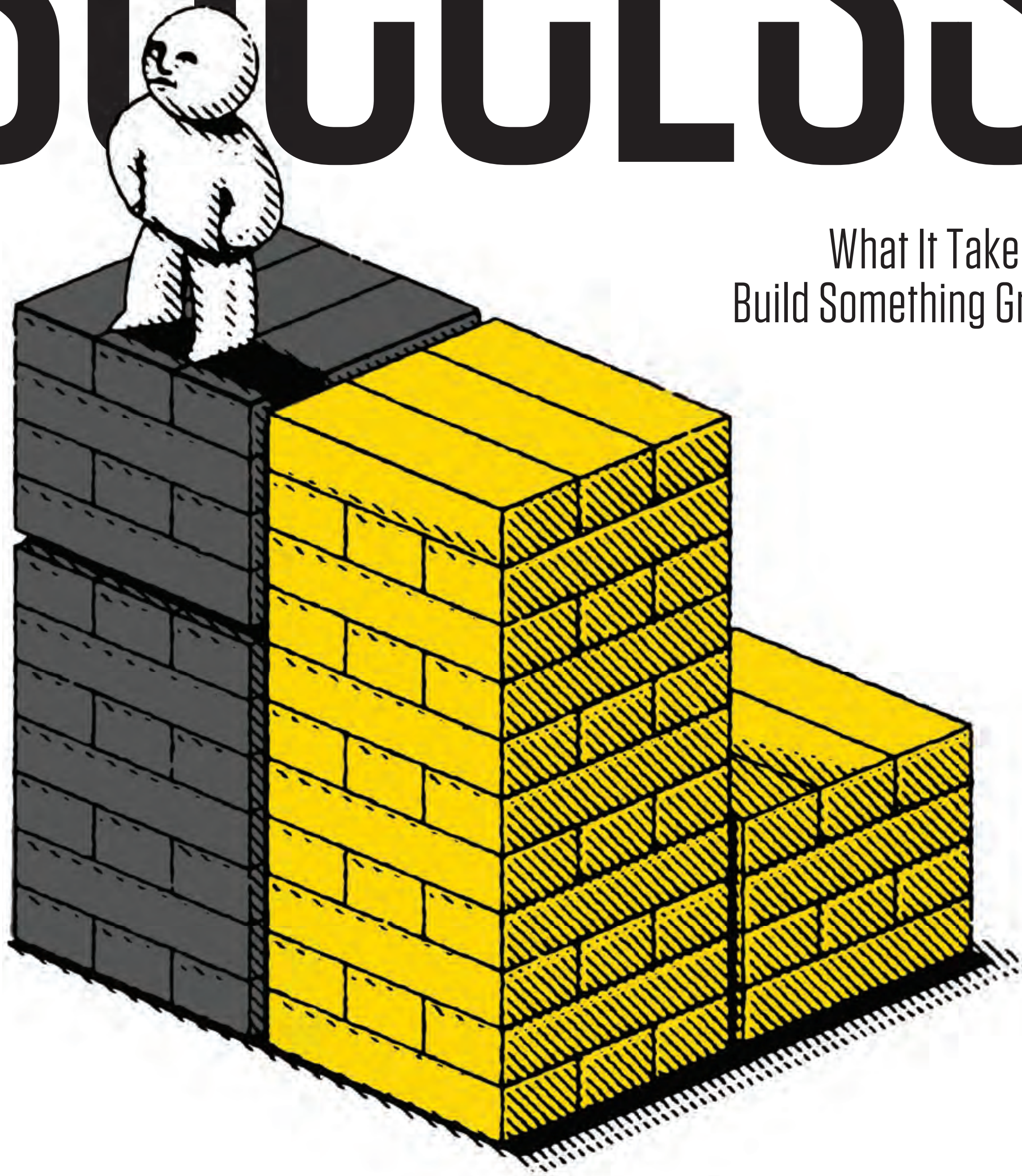
INNOVATION LEADER
ISSUE Nº 10 — FALL 2019

SUCCESS



What It Takes to Build Something Great

THE SUCCESS / FAILURE ISSUE

ISSUE Nº 10 — FALL 2019

INSIDE: ROYAL CARIBBEAN CRUISE LINES, W.L. GORE, THE NATURE CONSERVANCY, IMPACT AWARD WINNERS, AND MORE...

Table of Contents

"I failed my way to success."

THOMAS EDISON

Inside

ABOUT THE COVER(S)

We worked with **Michael George Haddad**, a Canadian artist whose work has been seen in *The New Yorker*, *Wired*, and *The Economist*, to create cover illustrations that capture the thrill of success and the sting of failure. Haddad also produced the illustrations that appear atop our two Table of Contents pages. Which side did you start with?

Celebrating Success

YOU MAY HAVE NOTICED something a little bit different about this issue of *Innovation Leader*. We flipped (pun intended) our traditional approach on its head to give you a look into two of the most discussed topics in corporate innovation: success and failure.

If you're reading this side first—the success side—I'd love to know why! (Shoot me a note at the email below if you'd like to share.) Maybe you're just a glass-half-full kind of person. Or maybe you're motivated by inspiring stories of moonshots that actually worked.

Or perhaps you've come to the conclusion that we have here at Innovation Leader: learning from failure is useful, but it's also essential to understand how your peers create a foundation for success over the long haul.

When looking for stories for the success side of this issue, we had a lot to choose from. But what we ended up including is the best of the best. We highlight our Impact 2019 award winners; success in nonprofit innovation at The Nature Conservancy and AARP; and how Royal Carribean deploys new technologies on its fleet of 26 cruise ships. We also worked with Gensler, the design and architecture firm, to create an illustrated guide to building a successful innovation hub. (You can find that at the center of the magazine—where the success section meets the failure section.)

But it's not just about bragging rights—all of the stories in this section provide concrete pieces of advice that will ideally help you get more projects across the finish line in your organization.

Speaking of bragging, one of our biggest successes here at *Innovation Leader* has been the launch of our podcast, "Innovation Answered." Season Three launched in September and runs through the end of the year, and it will feature innovators from *The New York Times*, Bose, Shell, Marriott, NASA, and more. You can download it wherever you listen to podcasts.

So, what else can we be doing to help make you more successful at innovation? What do you want to see from us? Let us know!

Kelsey Alpaio

Kelsey Alpaio, Managing Editor
editor@innovationleader.com

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For questions about memberships, article reprints, or additional copies, e-mail info@innovationleader.com or call 1-855-585-0800.

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How to Succeed

Excerpts from recent *Innovation Leader* online stories featuring advice from Aflac, NASA, and Google

BHARAT RAJARAM, MANAGING DIRECTOR AT AFLAC VENTURES

Build Confidence in Your Initiative

The initial few months [of Aflac Ventures], maybe even the first year, was all about trying to prove out the model—building the sourcing networks, building the right sort of relationships with the ecosystem partners. ... If you're doing this for the first time in the company, you want to take your time and prove that you can do something well, you can do quality transactions, and you can execute them well.

Having really built the confidence, as far as the organization and executives are concerned, in the capabilities of this team, [helped us go] back and say, "Hey...can we increase the allocation?"

[Bringing] the business in is...a part of this credibility. I have monthly touch-base meetings with key leaders in the business, just to expose them to some of [the] startups [we're working with]. Potentially...there's opportunities that are interesting that they may not be familiar with or aware of. So it serves as a nice way to build that relationship with the business.

We [also] sponsor some of the biggest conferences in the insurtech space. And we take our business people there. We set up meetings for them. We have meet-and-greet sessions with startups and other players. So it's about...exposing the organization to more innovation, more of what's happening in the outside world.

STEVE RADER, DEPUTY MANAGER OF NASA'S CENTER OF EXCELLENCE FOR COLLABORATIVE INNOVATION

Crowdsource the Right Way

Never post a challenge or a statement out there that says, "Give us all your best ideas," because you're not equipped to actually go and implement any of them. Those people will just be really frustrated. You won't have a way to actually evaluate them. And it'll just be a big dud. And we call that the suggestion box black hole.

[Create] a challenge that is very narrow. You set expectations for what's going to happen with that, [and] you make sure you have the owner of that challenge be somebody who can actually implement whatever comes out of it... [You shouldn't try] to solve somebody else's problem, or you're doing a throwaway problem that no one's actually going to do anything with. In most cases, people are most interested in having their ideas come into reality... That's [advice] on the internal side.

On the external side, I would say just make sure you start to understand what's possible out there, and start to understand what it takes to do that challenge out in the real world. We see that over and over, there are these folks that are living in other domains, other industries...and if they can just see the overlap, they can apply solutions

that they're using to a problem you have. And that's where the real innovation magic happens.

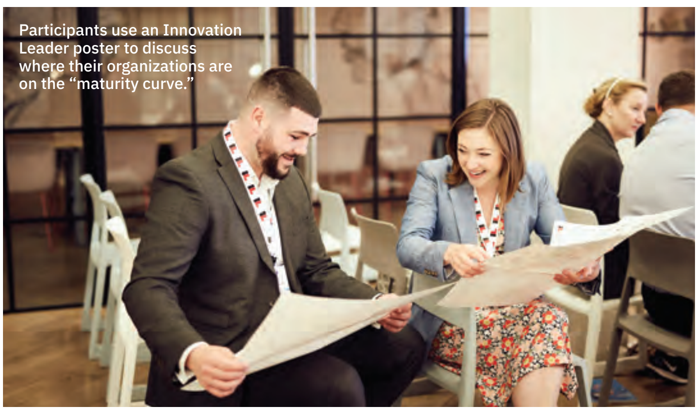
RAJEN SHETH, VP OF PRODUCT MANAGEMENT FOR GOOGLE CLOUD

Start with Your Key Business Objectives

One of the interesting things I find is that people, when they think about AI, oftentimes think about something big and grandiose. But what that does is it prevents them from doing things that actually can impact their business very quickly. Start with your key business objectives. What are the drivers for your business overall, and then how can AI fit into that? A good example of this is Ocado, which is a grocer in England. One of their business objectives is customer satisfaction, because they're an online grocer. They depend on the customers coming back to them. So one of the things they wanted to figure out was how can they serve their customers better and how can they actually get on top of customers that are dissatisfied. They use AI in natural language understanding to understand when a customer is sending in an angry email, [and] automatically escalates that down the right route. The customer gets an immediate response. They saw the response time greatly, greatly reduce. As a result of that, customer satisfaction went way up. It affected the top-line metric for them.

Rather than thinking about the most grandiose uses, there are simple things that you can do that can make a difference. One of the examples from [Google] is predictive search. Whenever you type into a Google search bar, it'll give you suggestions. That was actually started by one engineer at Google a long time back. But it's had such a transformative effect. Similarly, we have customers like Bloomberg who have a lot of things that they want to do with AI. But one of the quick things that they did is use translation to translate articles coming from a variety of different sources. That helps their customers get a wider base of information. It was a simple use, but it dramatically impacted their business. ⬢

John Stewart of Royal Bank of Scotland leads a breakout session on building a system for scouting startups and emerging technologies.



Participants use an Innovation Leader poster to discuss where their organizations are on the "maturity curve."

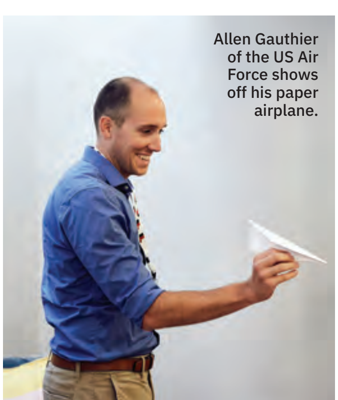
Innovation Leader team members (from left): Donna Rice, Kelsey Alpaio, Elana Wilner, and Scott Kirsner.

LONDON **FIELD STUDY**

JUNE 27-28, 2019

Our 2019 London Field Study brought executives together to discuss fostering "smart risk-taking" inside established organizations. We toured Bayclays' Rise London, Cisco's IDEALondon, General Assembly, and ING Labs. Attendees also participated in whiteboard sessions led by executives from BAE Systems, Heathrow Airport, the British Red Cross, Royal Bank of Scotland, and more. Thanks to our sponsors at Planbox and PA Consulting.

Senior Innovation Advisor Chris Docherty of Planbox sets up a board game.



Allen Gauthier of the US Air Force shows off his paper airplane.

The group descends a staircase at IDEALondon, a shared startup space operated by Cisco.

To kick off Day Two, we played the game of "Urgency Bingo." The focus: How much innovation urgency exists in and around your company?

Innovation Leader's Scott Kirsner with Dana Naberezny, Head of the Jewelry Design and Innovation Workshop at Tiffany & Co.


Will Handzel, Engineering Group Manager, iHub at General Motors.

NEW YORK CITY **DEEP DIVE**

MAY 6-7 , 2019

Our Deep Dives are designed to enable leaders to learn from one another. Our recent New York City gathering explored approaches for starting and expanding innovation initiatives. On Day One, we met at KPMG Ignition to discuss early data from our benchmarking survey. On Day Two, we moved over to the Brooklyn Navy Yard for fireside chats, tours, and whiteboard sessions. Thanks to our speakers, participants, and to our sponsor, KPMG LLP.


Innovation Leader CEO Scott Kirsner explains some of the participant-suggested topics for breakout discussions.


Participants enjoy lunch discussions in the New Lab atrium.


Benoit Guyamier of American Express, Jasmine Khan of the Medici Group, and Elizabeth Biezugbe-McFadden of Occidental Petroleum.


Mohammad Ehaab of GM inspects the Farmshelf growing system at New Lab.

Kirsten Aune,
Director of Strategy & Innovation,
General Mills.

Brant Cooper of Moves the Needle helps guide the roundtable conversation in Minneapolis.

Ann Finkner,
Chief Administrative Officer
of Farm Credit Services
of America.

Roundtables:
Boston & Minneapolis

JUNE 2019 & JULY 2019

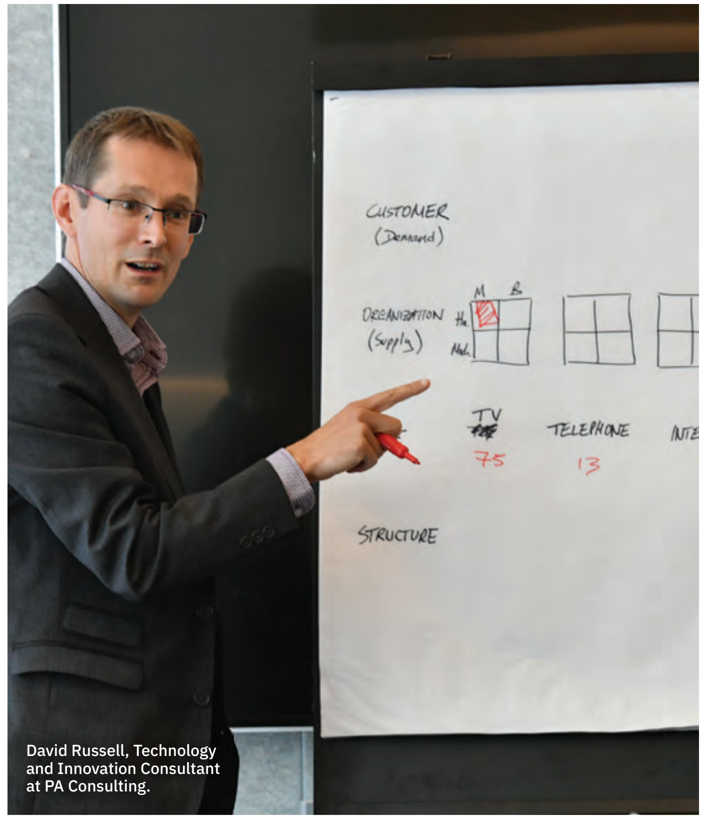
Our roundtables are each designed to explore a topic, like navigating digital transformation (Boston) and getting leadership on board (Minneapolis). Thanks to our sponsors, PA Consulting and Moves the Needle. To learn about upcoming roundtables, visit innovationleader.com/events.

Steve Weisner
of Nihon Koden
and Fuat Koro
of Bose.

Jessica Anselmi of
Panera with Jiten Kachhela
of PA Consulting.

Alex Slawsby of EmbraerX with
Ajay Kapoor of SharkNinja.

Abbey Nystedt, Innovation Principal at Hyatt Hotels.



David Russell, Technology and Innovation Consultant at PA Consulting.

Simon Lockwood-Bean, Project Coordinator at Bennett Day School.

Roundtables: **Boston & Chicago**

MAY 2019 & JULY 2019

Deloitte co-hosted a gathering focused on "elevating the human experience" at LogMeIn in Boston, and PA Consulting co-hosted a roundtable on organizational agility at Hyatt Hotels HQ in Chicago.

Participants formed breakout groups to dive deeper into topics.

Amelia Dunlop of Deloitte leads one of the breakout groups.

Winners!

FROM PORTUGAL TO GERMANY TO SILICON VALLEY, NINE INNOVATION INITIATIVES DELIVERING SERIOUS IMPACT

EACH FALL, *Innovation Leader* presents the Impact Awards to companies that are leveraging innovation, technology, and R&D initiatives to achieve concrete business results. The awards are given out as part of our annual Impact gathering for corporate innovators, taking place this year in San Francisco from October 22-24. ¶ There are two categories: a main category, and a few special awards for "Best New Initiative," given to programs that are relatively new and thus aren't yet producing the same level of metrics or business outcomes as honorees in the main category.

For more details on the winners, finalists, and how to submit next year, visit innovationleader.com/events/awards.

Adtalem Global Education

Initiative: **myVRscope**
Launched: **2017**

In many lab-based science courses, there simply aren't enough microscopes to go around. That usually means that some students do the experiments while others watch. At $1.2 billion Adtalem Global Education, a team in the Innovation Center of Excellence addressed that issue by developing myVRscope, a virtual 3D microscope that can be used by individuals wearing a virtual reality headset—or using a mobile device or laptop, without goggles. Students can pose questions to Dr. Beaker, the artificially-intelligent lab instructor, on topics including the history of microscopy and how specific components of the microscope work. They can also get quizzed on course content while using myVRscope.

When faculty and students were surveyed after testing the system, 100 percent of the faculty said they would be comfortable having students use myVRscope to perform lab activities as part of courses at Adtalem's Chamberlain University, which educates nurses. Ninety-three percent of students agreed or strongly agreed that myVRscope gave them a sense of actually being in a lab.

"The team did an amazing job of clearly articulating the problem statement to a big challenge," writes judge Shanker Sahai of LogMeIn. "The solution directly addressed the problem, and also showed how myVRscope will scale and meet the needs of the schools."

Bosch

Initiative: **Bosch Innovation Framework & Accelerator Program**
Launched: **2015**

With 410,000 employees and $86 billion in annual revenue, Bosch is the world's largest supplier of auto parts, and the German company also manufactures an array of other products, from air conditioning systems to power saws to coffee makers. CEO Volkmar Denner has been encouraging Bosch employees to focus more on the creation of new business models, noting in a 2016 message that "product innovations are important, but [they] alone won't be enough to ensure our company's continuing success."

An internal team called Bosch Management Consulting partnered with the Innovation Acceleration Group at UC Berkeley to develop the Bosch Innovation Framework, "a clearly-defined and repeatable business process that systematically validates products and new business models with maximum speed and capital efficiency, so Bosch can effectively compete against startups and other new competitors," according to the award submission. The framework covers all phases of business model development, from "Problem Definition" to "Validation" to "Incubation/Scaling." A completely digital accelerator program, with 25-30 teams from all around the world participating simultaneously, covers the validation phase.

Of the teams that have been through the accelerator, 14 are now acquiring customers and scaling revenue. "A typical Bosch product development process lasts three years and costs millions of dollars," according to the submission. "The teams using BIF are typically getting to first revenue in under seven months—a greater than 3× increase in product development speed. Additionally, because these startups are validating their customer needs and business model before product development, they are stopping opportunities that do not demonstrate promise in weeks or months, which cuts product development costs by a factor of 6-10×."

Citigroup

Initiative: **Citi Ventures Corporate Venture Investing Program**
Launched: **2015**

In addition to making strategic investments that deliver financial returns for the firm, the corporate venture investing program within $73 billion Citigroup also aims to accelerate the adoption of new technologies and business models within the company. In addition, startups backed by Citi Ventures can get introductions to Citi clients that often lead to new partnerships.

Citi Ventures has defined five focus areas for its investments: financial services technology, including new models for banking and financial services; data analytics and machine learning; commerce and payments; security and enterprise IT; and customer experience and marketing. One example in the commerce and payments category is Singapore-based Grab. Citi Ventures participated in a funding round in 2018, and in June 2019 launched a co-branded credit card with Grab in Southeast Asia.

Citi Ventures meets with roughly 1000 startups each year, making more than 50 introductions to businesses within Citi and 100 introductions to Citi clients. The active portfolio of 45 startups includes four "unicorns," startups with a valuation of more than $1 billion. And since 2016, the investment portfolio has delivered hundreds of millions of dollars in benefits, by Citi's estimate, through investment gains, incremental revenue, and cost savings.

Delta Cafés

Initiative: **MIND (Delta's Innovation Model)**
Launched: **2015**

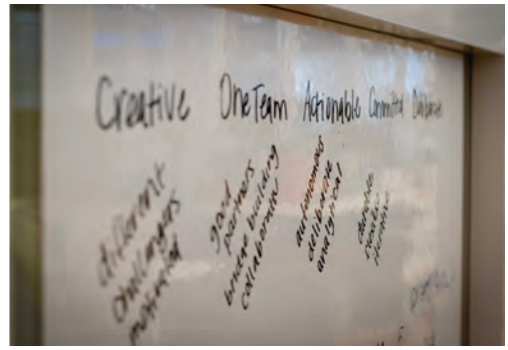
Based in Portugal, the coffee roasting and packaging company Delta Cafés has operations spanning from Brazil to Angola to China. MIND (a Portuguese acronym for "Delta's Innovation Model") involves a digital platform from InnovationCast that helps gather ideas and get employees working together to improve them. Bootcamps help Delta's employees develop and test minimum viable products with customers or partners, and begin to shape a business plan. Based on the business plan and a pitch (which takes place in front of hundreds of colleagues), one winning team is chosen in each cycle.

Two products, a caffeine-infused cereal bar and a line of packaged milk and oatmilk beverages, have already hit the market, and two more are on the way. Over three cycles of the program, about 170 employees have participated. According to the award submission, MIND has "helped to decentralize innovation," and disseminate across the company "the importance of validating new services and projects with the customer...."

Duke Energy

Initiative: **Analytics Products and Transformation**
Launched: **2015**

Headquartered in Charlotte, N.C., $25 billion Duke Energy is one of the biggest energy generation, transmission, and distribution companies in the US. Within Duke, the Analytics Products & Transformation (APT) team's focus is translating complex data analytics concepts into user-friendly products, helping end-users make



better data-driven decisions. The team originally formed in 2017, and it brings together product developers with data scientists.

The team averages about 90 days to prototype an idea, and has so far shepherded four ideas into production. APT has already contributed $48 million in net revenue growth for the company, primarily by tackling "non-technical line loss," or energy that was delivered without collecting the appropriate revenue.

Houston Methodist

Initiative: **Center for Innovation**
Launched: **2018**

With eight hospitals, more than 2,300 beds and 24,000 employees, Houston Methodist is one of the nation's leading hospitals. It has been named by *US News and World Report* as the No. 1 Hospital in Texas for seven consecutive years, and by *Forbes* as the top employer in Texas in 2019.

The century-old organization had always been innovative when it came to developing new medical devices and therapies, but, according to the award submission, "financial pressures, changing consumer expectations, and the pace at which new [players] enter healthcare [have] challenged hospitals in ways they have not been equipped to react. Digital needed to be added to Houston Methodist's innovation toolkit."

An informal group called Digital Innovation Obsessed People (DIOP) led to the creation of the Houston Methodist Center for Innovation in 2018. Among the center's principles: "We are embracing new technologies and constantly looking for ways to innovate with existing technologies," and "we aim to succeed fast or fail fast."

A 2019 deployment of robotic process automation—devising software "robots" to perform tasks that adhere to a standard set of rules—helped the hospital avoid $2 million in insurance and Medicare coverage denials over the course of just two months. Providing better information to patients before and after surgeries, using their communication channels of choice, has

produced improved outcomes while reducing calls to physicians' offices. And text messages to remind patients about upcoming appointments has cut the no-show rate by more than 20 percent in some of the clinics under the Houston Methodist umbrella.

The hospital "seems poised to build upon those gains and further expand their use cases," writes Colin Maclay of the University of Southern California's Annenberg Innovation Lab, a member of the judging panel.

Johns Hopkins Applied Physics Lab

Initiative: **Ignition Grants—HELP Challenge**
Launched: **2018**

Founded in 1942 as part of the war effort, the Applied Physics Lab at Johns Hopkins is an R&D and engineering organization with 6,700 employees, making it the country's largest university-affiliated research center. APL's key project sponsors include NASA, the Department of Defense, and the Department of Homeland Security.

The roots of the Ignition Grants HELP Challenge trace back to 2018, when a cave flooded in Thailand, trapping a team of soccer players inside. The Applied Physics Lab knew that it had "capabilities, technologies, and experts that could make a difference" in developing a rescue strategy, according to the awards submission. "Elon Musk was able to pull together his top engineers. Why couldn't APL?"

The first part of the HELP Challenge involved a "data call" for relevant staff skills. The second part involved a micro-grant mechanism to enable staffers to modify existing technologies or create dual-use technologies that might be applicable in disaster or rescue scenarios, similar to the cave situation in Thailand. The challenge resulted in 153 staff sharing relevant technical skills that might not be on their traditional résumés, and 50 ideas submitted. Eleven of the ideas were funded for a short-timeframe exploration of their potential.

Among those ideas: leveraging artificial intelligence to create more effective flu vaccines; low-cost air quality sensors; and using virtual reality to see what a physical space looked like before a disaster struck.

▸ Best New Initiative Honorees

Merchants Fleet

Initiative: **INNOV8 2019**
Launched: **2019**

Founded in 1962, New Hampshire-based Merchants Fleet helps customers manage about 74,000 fleet vehicles. But the company acknowledges that customer expectations, an on-demand mindset, and new technologies are changing the way people want to use vehicles. The INNOV8 program, launched in January 2019, has included design thinking training based on Stanford's open source curriculum; a peer-to-peer innovation coaching academy; a quarterly INNOV8R award for individuals and teams; and a partnership with Southern New Hampshire University to envision how the fleet management industry will change over the coming decade. Among the outcomes: a more seamless way to ensure that customers' older fleet vehicles get sold, and ways for neighboring companies or universities to share one another's fleets, reducing costs.

Vertex Pharmaceuticals

Initiative: **Vertex Innovation & External Research Team**
Launched: **2015**

The Innovation & External Research Team at $3 billion Vertex Pharmaceuticals is comprised of scientists, legal and contract experts, startup catalysts, human-centered design thinkers, and it includes employees with deep organizational and industry understanding. Among the programs the team oversees are VOICE, a global innovation tournament, and i2: Innovator's Institute, a 16-week program to train employees in the skills necessary to develop, test, and deploy new ideas. Some of the team's outcomes include promising new research programs in sickle cell disease and beta-thalassemia; a 3-D printing lab to help Vertex scientists create new tools and models; a commuter bus program; and Vertex U, a learning platform that serves all company employees. ⬢

▸ **The 2019 Impact Award Judges:**

Chip Blaufuss, VP of Strategy & Innovation, HCA Healthcare

Algernon Callier, Former VP of Emerging Technology, Universal Parks & Resorts

Tim Gorman, Associate Director, Verizon Innovation Centers and 5G Labs

Jennifer Kirby, Managing Director of Innovation & Growth Initiatives, Hyatt Hotels

Fuat Koro, Head of Corporate Strategy & Innovation, Bose

Colin Maclay, Executive Director, USC Annenberg Innovation Lab

Chris Mayer, Chief Innovation Officer, Suffolk Construction

Carol Miller, Former VP of Corporate Innovation, American Greetings

Shanker Sahai, Manager, Innovation Enablement Team, LogMeIn

Alex Slawsby, Director of Innovation, EmbraerX

Robert Urban, Former Global Head of J&J Innovation

Dan Wheeler, SVP of Marketing & Innovation, Wahlburgers

How ‘Culture Matching’ Can Help Startup-Corporate Collaborations Deliver Value

By Paul Campbell

CONTRIBUTING COLUMNIST
CHIEF INNOVATION OFFICER, GORE INNOVATION CENTER

Famed management consultant Peter Drucker is credited with the quip, “Culture eats strategy for breakfast.” You hear a lot about the impact and import of culture these days, but what exactly is it—and how do executives harness it as an asset for disruptive innovation? Building an innovation culture is easier said than done. And companies often see their culture programs launch and then quickly vanish.

Corporate innovation and venturing teams spend little time assessing culture’s role in aiding collaboration and investment programs with startups. Some corporations ignore culture’s role entirely when they are setting up collaborations and making acquisitions. As a result, projects are gobbled up by corporate antibodies and die a horrible death. But other corporations recognize culture’s role in killing projects, and carve out small teams that work independently from the rest of the company. In this approach, innovation teams define new ways of getting things done that are effective for startup collaborations, while avoiding antibodies long enough for the new project to withstand them when they transfer into core business units. This “skunkworks” approach enables projects to move at the speed of startups initially, but they eventually hit a wall when it’s time to integrate into core operations. And integrating into core operations is an essential stage of startup collaboration, because it’s where corporations contribute the most value: They can leverage infrastructure and scale, and provide access to global markets and vast resources. The skunkworks approach only delays the inevitable outcome. Instead, culture matching is central to overcoming these roadblocks.

WHAT IS CULTURE MATCHING?

At the highest level, culture is simply a shared vision that guides behavior. Organizational culture grows from a combination of company values, norms, systems, symbols, language, environment, location, assumptions, and habits.

Culture can be divided into two categories: principles (i.e. core values) and practices (e.g. guidelines and procedures). For example, a company might outline culture principles that include innovation, customer obsession, frugality, and bias for action. These values don't specify the practices to deliver them; that is, they don't specify a "right" way to develop new products, brand strategy, pricing strategy, supply chain strategy, finance policies, go-to-market strategy, etc. These policies are strategic and operational choices made in the strategy phase of business creation. They are choices which are optimized for each business. Collaborations with startups introduce a wider range of choices for each section of the business model than corporations have ever had to contemplate for their core businesses.

By dividing culture into these two categories, innovation and venture leaders are able to break an insurmountable obstacle—culture—into manageable pieces and build competencies in both categories. Executives can build competencies in screening potential startups that match the core values of the corporation. We'll show an example below. Similarly, executives can build competencies in recognizing policies that need fine-tuning—or even radical modification—to ensure the success of a collaboration.

THE 'VALUES' CATEGORY

Corporations and startups enter collaborations initially with different expectations about how to create a great new business together. Both parties have a different understanding of how teams will operate, how decisions will be made, speed of execution, and many other areas. Most corporations and startups have learned how to define operating terms as part of a joint development agreement (JDA) or master development agreement (MDA), but many assumptions remain unaddressed. Culture is one area that frequently falls through the cracks.

Let's start by looking at common values through the prism of culture in a sample startup-corporate collaboration (See Figure 1).

As you see in the third column ("Corporation—Culture Gap"), there is a huge chasm between the two firms' values. Hence, this startup-corporate collaboration isn't going anywhere. Their values are not aligned sufficiently to withstand the stresses and strains of the project. The corporation will simply ignore or starve the partnership, wasting the startup's valuable resources.

How can corporations match cultures for a successful collaboration with startups? The first step is getting closer on the way they practice core values. This can be done in one of two approaches:

1. Find startups with values that match theirs

Figure 1: Common Values Through the Prism of Culture in a Sample Startup-Corporate Collaboration

Values	Start Up	Corporation (Culture Gap)	Corporation (Culture Matched)
Customer Obsession	Empathy, win new customers	Existing, Big	Existing, and new, empathy
Frugality	Optimize burn rate	Annual budgets & earnings	Seperate budgets
Bias for Action	Speed, agility, validation	Quarterly earnings	Dedicated teams & metrics
Ownership	All in	CYA	Dedicated teams & incentives
High Bar for Talent	Each hire is critical	HR's job	Functional experts, intrapreneurs
Innovation	We disrupt	Sustaining	We disrupt

(easier than #2, but this approach reduces the pool of potential startup collaborators). The "Corporation—Culture Matched" column, in these cases, is nicely matched to the startup's culture and hence has a decent shot at success.

2. Modify their culture to match that of a startup (more difficult, but not impossible). What would it take to match the corporation's values to that of the startup?

This is a fundamental challenge for corporations, which see core values as so carved in stone that they are non-negotiable or untouchable by innovation and venture leaders. In one example at a company I worked with in the past, a startup collaboration required modifications to supply chain policies. I learned the supply chain organization had "golden rules" that were untouchable. After working our way around them, we learned about their "platinum rules"—which were *really* non-negotiable. One barrier after another was navigated until we made the changes that made the business successful. This happened because we separated values from guidelines to ensure we upheld the supply chain group's values, while creating flexibility that supported the collaboration. For companies that define core values at a high enough level of abstraction, there's room to re-interpret them for each new era or each new business model to increase odds of success. Similarly, these same companies are able to adapt to startups and match cultures successfully. What else needs to happen?

THE 'PRACTICES' CATEGORY

Now, let's look at common practices in a sample startup-corporate collaboration (See Figure 2).

Again, there is a huge gap in business practices between the first two columns, which means this startup-corporate collaboration is unlikely to succeed. The lack of agile business practices within the corporation will crush all hope of success with the startup collaboration. As an example, I remember an initial meeting with a startup we intended to acquire. We initiated due diligence with a day-long meeting. In the first 30 minutes, the startup's CEO explained his vision for the new business after the deal was completed. After each sentence, I responded, "We don't do things that way," or, "That's not how things work in a big company." With each exchange, the frustration built, and after 30 minutes, we recognized the need for a break. During the break, I walked into the men's room and literally washed my face to convince myself that I needed to be more open to the CEO's ideas. When we resumed, I started by saying, "Let's go over that list again." And with each suggestion, I said, "I like that," and asked for details on how they were doing things within the startup, as opposed to being closed-minded and wed to existing practices. It worked. We created a fabulous business together—but only because we tackled critical practices that enabled disruptive new business models to gain traction enough for the corporate executives to understand how the new business would succeed.

An example of matching practices between startups and corporations to increase the odds of a successful collaboration is shown in the far right column of Figure 2.

"Organizational culture grows from a combination of company values, norms, systems, symbols, language, environment, location, assumptions, and habits."

TESTING CULTURE FIT

As part of an initial collaboration discussion, both parties should identify and address practices that could hinder the project's efforts. Issues for consideration include:

- **Branding**: Is the corporation open to new strategies (co-branding or independence from master brand)?
- **Business model**: What new business models will the corporation consider (freemium, platform-as-a-service, device-as-a-service)?
- **Decision-making/speed**: Who owns decisions? Are timelines realistic?
- **Go-to-market**: What new routes to market is the corporation open to? New distribution/sales models?
- **Finance/supply chain**: Will the corporation consider new approaches? What kind?
- **Team/project management**: Are dedicated resources available, or fractions of people? Who manages the project?

CULTURE MATCHING TIPS

In pursuing collaborative arrangements, both startups and corporations dedicate enormous resources and significant energy to perfecting strategy, but very little in the way of culture matching. The result is plenty of failed projects.

It's important to assess aspects of culture expressed in the principles and practices of both organizations; identify where differences will likely impede success; and be transparent up front about where there is (and isn't) flexibility.

One tip is to test the culture fit at the earliest possible opportunity. I call this phase determining Minimum Viable Synergies™. The idea of MVS is that both parties put all their cards on the table to see if the collaboration can deliver on its promise. For example, if the corporation is identified as the party that will access customers for the new jointly-developed product, you might have one of the corporation's sales or marketing employees schedule a meeting with the target customer and "sell" them the new product. In one case, a collaboration with a startup stalled out because the corporation couldn't access the right people in their Fortune 500 accounts. The corporation had access to buyers in purchasing, but the new product that resulted from the startup collaboration was a disruptive product that required access to C-suite executives, and the corporate sales teams didn't know them. After 12 months of technical development and a lot of resources, the collaboration disintegrated because the corporation didn't accurately distinguish between account access (the company) and customer access (the decision-maker).

Another tip is to listen for statements inside corporations that could be warning signs of culture mis-matching. For example:

- "We don't do things that way here."
- "Marketing will never let you do that."
- "Finance will never change allocation models."
- "Supply chain 'golden rules' can never be broken."
- "We can do it ourselves, and better."

Making the effort to match cultures—both core values and practices—is often ignored. But when it is done right, it can lay the foundation for a successful startup-corporate collaboration. ⬢

Figure 2: Common Practices in a Sample Startup-Corporate Collaboration

Values	Start Up	Corporation (Culture Gap)	Corporation (Culture Matched)
Brand	'Powered by'	My brand	New brand or sub-brand for target
Supply Chain	Low volume, anyone	Design for Manufacturing, Absolute Best Cost, preferred suppliers	Phased ramp-up, speed, relationships
Finance	Make it up as we go	Inflexible, apply standard rules	FASB compliant but flexible
Decision Making	Local	Central	Local
Go-to-Market	Find partners, anyone	Existing channels,sales teams	Explore new channels
Project Management	Everyone	Small fractions of many people	Dedicated team

THE BIG QUESTIONS

LESSONS FROM BOSE: HOW DO YOU LAUNCH A NEW BUSINESS?

BY NED CALDER
Partner, Innosight

THROUGH WAVES OF technological change, the Bose brand has remained synonymous with state-of-the-art sound—in homes and cars, for business travel, and in professional settings like hotels, restaurants, and concert halls. But like many successful companies, as it faces new competitors and blurring industry boundaries, the company's search for new growth has forced a kind of existential dilemma: Are we an audio company? Or something more?

In asking this question, the company began a path toward "dual transformation"—a two-pronged approach to optimizing its core businesses while launching an entirely new business. In the core audio business—its "A transformation"—the company is, for example, fortifiying its noise-cancelling headphones franchise, adding digital services, and launching an innovative new audio-focused AR platform.

For its "B transformation," Bose has launched a new wellness division, with products aimed at helping people live healthier lives. It may seem like a surprising move, but a closer look reveals not only the logic, but interesting lessons for other companies looking to successfully build and scale new businesses outside of their historical focus.

Starting in 2015, Bose began quietly building this new division alongside its consumer, auto, and professional divisions. The group's first product, Bose Hearphones, is a "conversation-enhancing headset" that combines noise-cancelling with directional microphones. It is controlled by a phone app, so that users can customize their listening for different situations, such as noisy restaurants. Bose is also focused on the 60 percent of adults who report problems with sleep. In June 2018, it introduced the Bose noise-masking Sleep Buds, which filter out sounds such as snoring and other ambient noise.

Creating a new B business comes with unique challenges, and when Bose launched the effort to move into health and wellness, it recognized that it would need to make deliberate choices about strategy, talent, and scaling. Below are a few insights from Bose's efforts that have relevance for any company trying to launch a new business outside the core.

To create a successful B business, exploit unfair advantages. Many companies get animated by big trends that create potential for new businesses, without being sufficiently clear about what gives them a right to play. Without a clear basis for competitive advantage, companies often struggle with better-positioned competitors. As Bose looked for adjacencies in the areas that they are distinctive in—audio, control systems, brand trust, and the ability to communicate the benefits of technology—health and wellness applications rose to the top. Seeing that the company's technologies and competencies could be applied in a way that could help people lead healthier lives, it's no surprise that the two initial products are audio-based. That's not to say they are extensions of existing products. Bose's efforts in hearing and sleep offer fundamentally different value propositions, have new approaches to the channel, and require

Visit Innosight.com, or follow @InnosightTeam additional technical capabilities. But the grounding in what has historically made Bose a market leader gives the company a foundation to build on.

Don't launch the B business before you have the B business. To minimize organizational complexity and manage expectations, Bose did not set up a separate division until they had made substantial progress on real business opportunities. Many organizations make the mistake of establishing separate organizations that are larger than necessary for early-stage exploration. In fact, Bose did not establish a formal wellness division until two years after it started exploring sleep and hearing assistance. The focus for these two years was to carefully explore customer needs, test product-market fit, and determine whether their products could solve real problems. Only when the two emerging businesses demonstrated significant progress did they begin to build a more holistic strategy to attack the wellness market and begin building the necessary infrastructure and teams to scale the business.

Don't make the new business simply a place to house non-core projects. There should be a clear strategy that defines what is in and out of bounds for the new business. Bose's strategy focuses on specific areas of wellness where they believe they can create value in a differentiated way. Even after launching the division, they have continued to sharpen their portfolio focus, rather than expand.

Build linkages with the core business that are made up of 'boundary spanners.' One of the most difficult challenges when creating a new business is borrowing from the core without it becoming a constraint. To address this challenge, some of the key leaders in the wellness division are long-term Bose people with strong networks and knowledge of Bose systems. These leaders can help effectively tap into resources and processes that accelerate progress, helping get things done and leveraging the core effectively. Of course, any new business area will require new talent and skillsets as well. The wellness team tries to create the right balance with at least 30 percent new employees from other industries—mostly from medical and healthcare. Actively and thoughtfully managing this existing-new talent is critical for new businesses.

Focus on building a strong culture. In addition to new solutions and business models, entitites outside the core business often require distinct, purpose-built operating models and cultures to succeed. One of the keys to building a strong culture is having a clear purpose. The wellness division's purpose—helping people live healthier, more engaged lives—serves to create a strong, motivated team while also attracting new talent. Further reinforcing the unique culture, Bose Wellness moved from the Framingham, Mass. headquarters to Boston Landing, a new mixed-use development closer to downtown Boston. This new space puts them closer to the the startup and venture capital communities.

Anticipate the step change between development and scale. Going from an emerging to a scaled business is difficult, even for a company with lots of experience designing, building, and selling hardware. Many of the skills and capabilities that are essential for early-stage iteration are not the same required for scaling a proven concept. For example, Bose found that the early engineering teams, who were great at rapid prototyping and concept development, didn't necessarily have the right skills to craft production-quality code. In addition, once you have a product in market, there are new challenges that will inevitably arise, including product support and updating. Successful companies anticipate these challenges and put in place the right structures and processes to deliberately manage a scaling business while also continuing to explore and launch next generation products.

> "While forging into new markets is replete with challenges, they can be thoughtfully addressed with deliberate design choices when it comes to strategy, focus, people, and culture."

Few companies can rely exclusively on their existing engines to meet all their growth needs. While forging into new markets is replete with challenges, they can be thoughtfully addressed with deliberate design choices when it comes to strategy, focus, people, and culture. By building on elements of what has made Bose successful—and starting small with careful investments—Bose is positioning itself to take advantage of new opportunities, rather than be disrupted by them.

Ned Calder is a partner at Innosight, the growth strategy consulting firm, where he leads the industrial and technology solutions practice.

Revera Inc. operates more than 500 senior living facilities in North America and the UK. 97-year-old Hazel McCallion serves as the company's Chief Elder Officer.

AGELESS IDEAS

Revera Senior Living Is Tackling the Challenges of Aging—Collaboratively

By Kaitlin Milliken

PHOTOGRAPH BY CHRIS CHAPMAN

Over the course of his career, Dennis Champ has held many jobs. He worked in sales, then spent 35 years as a chemical engineer in the plastic and chemicals industry. But now, at age 85 and well into retirement, Champ has landed a new gig as an "innovation ambassador."

Two years ago, Champ moved to a Revera Senior Living facility in the greater Ontario area. In 2018, the senior care provider, with over 500 communities across North America and the United Kingdom, began looking for a resident to provide feedback on new initiatives at its facilities. After a recommendation from a recreation center coordinator—and an interview at company headquarters in Mississauga, Ontario—Champ landed the gig. Champ is now one of two Resident Innovation Ambassadors at the company.

"When [you're retired], you look for other things to add to your accomplishment list," Champ says. "I enjoy doing it."

Every month, Champ holds office hours in Revera's headquarters, where employees come to him with ideas. Champ then gives feedback, bridging the gap between innovator and end-user. Recently, he organized a focus group of residents to discuss ways to decrease slips and falls.

"I made a list of…dos and don'ts. But throwing them at people—that doesn't work. You have to get them involved with the solutions," Champ says. "When you talk about innovation, [it] can be a big project. It can be a little project. But that focus group was a little project that gave us a new approach to doing things."

Innovators often discuss the importance of co-creation, a message that Revera has taken to heart. The company's three-person innovation team (which doesn't include the two resident ambassadors) seeks to tackle the challenges of aging collaboratively—engaging partners inside and outside of the company.

"Often, this demographic is ignored, or it is seen as a homogenous group, so that everybody over 65 is in one homogenous category, and that's just completely incorrect," Senior Vice President of Innovation Patricia Barbato says. "For innovators, there is so much that can be done in this space, I get so excited about it. You think about living a purposeful life, right through to the end, that has a lot of quality in it."

From involving residents in the business, to running internal idea challenges, to partnering with fledgling tech companies, Revera's team seeks to find new opportunities and solve existing problems by engaging the full spectrum of the senior living ecosystem.

INVOLVING RESIDENTS IN INNOVATION

Innovation Ambassadors like Champ represent the voice of residents in the retirement community. In addition to holding office hours, he also provides feedback to suppliers on new products, meets with Revera's new hires to explain the innovation process, and travels to conferences with other innovators in aging.

"Some of the ideas [I heard] were pretty novel, and some were fairly obvious," Champ says. "So we now [give] the people who are doing [projects] some feedback that they can then turn to action."

Additionally, Revera also designates one resident as the company's Chief Elder Officer. This position, currently filled by 97-year-old Hazel McCallion, gathers feedback on new ideas from residents across Revera's different locations. (McCallion is a former mayor of the city of Missisauga, a suburb of Torornto.)

During one conversation, McCallion told Barbato, "Don't change the soup spoons without getting feedback from your residents." That advice has stuck with Barbato since. Barbato says gathering candid comments from residents leads to innovation that benefits the customer, instead of interesting concepts that may miss the mark.

Sometimes, she says, "We just think, 'Time for an upgrade here.' And we source something, and we buy it. But next thing we know, people are trying to use something that's not as good as what they had before. And that does not make for a happy day for the customer."

BUILDING INCLUSIVE INNOVATION CHALLENGES

Residents aren't just encouraged to vet ideas. They also can be active participants in bringing projects to life. Both residents and employees can enter submissions for the company's annual iChallenge.

But in order for a facility to participate in the challenge, residents must be involved.

"[A community] can't submit an idea unless they identified residents who have participated in the challenge," Barbato said. "This year…we had over 1,300 residents and family members participate and almost 3,000 employees. So all of the winners had resident input."

Revera's challenge in 2018 focused on reducing falls. According to the US Centers for Disease Control and Prevention, falls result in more than 800,000 hospitalizations and more than 27,000 deaths in the US annually.

One winning idea, suggested by a resident, involved installing lighting under seniors' beds to help guide them safely to the washroom. According to Barbato, an initial pilot test of the idea has already reduced falls in communities by 40 percent.

During Revera's first iChallenge, Barbato's team—aided by both Resident Innovation Ambassadors and their Chief Elder Officer—vetted every submission. However, Barbato says that her team changed the judging process to give more authority to regional leadership in Revera's care facilities.

"[This year,] we asked each of our regions to pick a winner, and they did that in various ways. They had 'Shark Tank'-style activities. They had committees formed with residents and families to make a decision," Barbato says. "[Then,] we were able to choose amongst 17, which made the whole process much smoother, more efficient."

> **"Don't change the soup spoons without getting feedback from your residents."**
>
> **HAZEL MCCALLION**, REVERA CHIEF ELDER OFFICER

Revera's national innovation team, along with the Resident Innovation Ambassadors and their Chief Elder Officer, declare gold, silver, and bronze winners. According to Champ, judges looked at factors like improving the resident experience, reducing costs, helping employees do their jobs better, and scalability. Multiple teams can win in each category. After the awards ceremony ends, Barbato says, the pilot process begins.

PILOTING IDEAS IN REVERA COMMUNITIES

Barbato's team kicks off the pilot process by writing a one-page plan that outlines how to ex-

Chief Elder Officer Hazel McCallion welcomes guests to the Revera and Reel Youth "Age Is More" Film Gala in Mississauga.

ecute on the idea.

"We try to identify who needs to be involved, what exactly is the problem we're trying to solve, how are we going to test it, and what are the metrics that we're gonna measure in order to ensure that it is or is not working," Barbato says.

After her team trains staff and residents on how to use the technology, the pilot launches.

"People tend to feel that seniors are not innovative. They can't use technology; they don't want to use technology. And that's a bit of a myth," Barbato says. "Many of the projects that we have done, what we have learned about working with seniors is that if you can find the thing that is important to them...they are very willing to learn."

Most pilots at Revera last between three weeks and five months. At the end of that timeframe, Barbato and her team decides if projects should be rolled out to more communities, declared a failure, or evaluated over a longer period of time.

For example, one pilot involved using aromatherapy, massages, and a turn-down service to help residents sleep soundly. During the pilot, Barbato says, staff observed that residents with cognitive decline wandered less at night.

"It actually reduced the amount of staff time required to manage someone with dementia, who is restless and possibly confused about where they are, and therefore they get out of their room and try and understand what's happening," Barbato said. "[We decided] to explore [further] if... we can help keep people with some dementia issues more calm...and have a better night's sleep."

ALIGNING WITH OPERATIONS

When asked to share advice for other innovators, Barbato emphasizes the importance of "staying joined at the hip" and building relationships with the operations team.

"Our [innovation] goals are not different than what we're trying to do as a company. We are trying to enhance the resident experience...and engage employees," Barbato says. "We [also] want to find efficiencies and increase revenue. We want to create value for our shareholders."

During Revera's first iChallenge, Barbato says her team did not align with the operation team's planning schedule, making implementing and scaling ideas difficult.

"There wasn't that alignment with operations on including these winners in the planning process, in project management, in prioritized lists and capital," Barbato says. "So that was a big learning for us around the timing, making sure that we have submitted for an operating budget—even if it was a placeholder."

Bill Jarvis, Resident Innovation Ambassador, Long Term Care; Trish Barbato, SVP Innovation & Strategic Partnerships; Hazel McCallion, Chief Elder Officer; and Dennis Champ, Resident Innovation Ambassador – Retirement Living.

Revera's iChallenge empowers residents and staff to solve challenges collaboratively.

LOOKING FOR INNOVATION OUTSIDE

In addition to engaging residents and staff at Revera communities, the company also innovates externally. Startups can apply to Revera's Innovators in Aging program, where selected candidates can pilot and test ideas in Revera's facilities. According to Barbato, the company has also dedicated $20 million to invest in promising companies working in the aging space.

Revera also engages with the other players in the ecosystem through Aging2.0, a network for those working to improve the lives of older adults. With 80 chapters around the globe, Aging2.0 hosts events on innovating senior care, runs an accelerator program, and facilitates connections within the ecosystem. According to co-founder Katy Fike, participants include businesses, tech companies, startups, and seniors.

"The way we talk about it is really three-fold: it's interdisciplinary, intergenerational, and international," Fike says. "In the innovation process, we put older adults at the center. What we believe in is designing with [older adults], not for [them]."

According to Fike, many of the startups that Revera has run pilots with are also part of Aging2.0's network. She points to experiments with Luna Light, a dynamic lighting solution aimed at preventing falls, and Sensassure, a startup that creates sensor-enabled incontinence briefs.

"Revera [has been] a really avid and organized pilot-er," Fike says. "They've really put a lot of good process in place around identifying their priorities, having good criteria for companies to partner with, capturing outcomes data, and tracking those pilots."

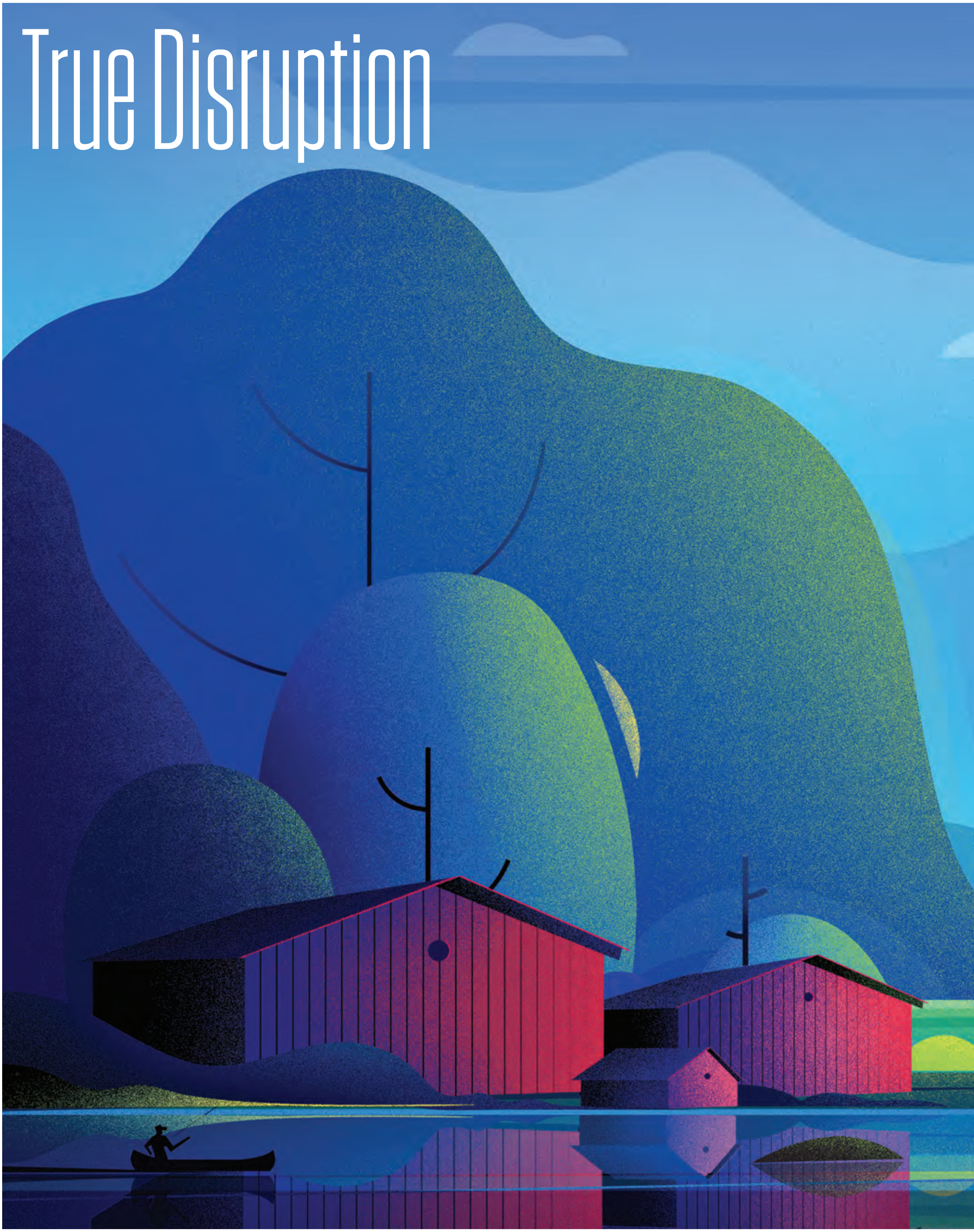
According to Barbato, Aging2.0 helps her team stay connected with industry leaders and potential collaborators from around the world.

"Those relationships have been so valuable, because you can learn from each other," she says. "Collaboration between industry leaders in innovation—that has been a huge benefit for us." ⬢

"People tend to feel that seniors are not innovative. They can't use technology; they don't want to use technology. And that's a bit of a myth."

PATRICIA BARBATO, SENIOR VP OF INNOVATION, REVERA

True Disruption



How can a nonprofit like The Nature Conservancy create a winning innovation strategy when the disruptive force is something like climate change?

By Kelsey Alpaio

ILLUSTRATIONS BY FEBIN RAJ

Stepping inside The Nature Conservancy's New York City office is like finding an oasis in a concrete desert. Tucked into the 14th floor of a seemingly standard skyscraper in Chelsea, one of the first things that greets you is a full-grown tree. It spirals one story up, passing desk clusters lined with greenery and bathed in natural light.

This is home to 150 employees who work in TNC's New York Division. But when it comes to innovation, Jennifer Chin stands alone.

"In terms of having somebody who's 100 percent dedicated to understanding how to integrate innovation into the conservation work we do, and how to achieve the mission using the tools of innovation, my role is pretty unique," says Chin, Director of Conservation Innovation for The Nature Conservancy's New York State Division.

Chin's role isn't just unique inside her organization—it's rare across all nonprofits. According to a 2017 report from the Bridgespan Group that surveyed 145 nonprofit leaders, 80 percent reported that innovation is an urgent imperative at their organizations. However, only 40 percent believed that their organizations were set up to innovate.

Founded in 1951, The Nature Conservancy is one of the largest environmental nonprofit organizations in the world. Headquartered in Arlington, Va., the organization has a presence in 72 countries and all 50 states. Its main priorities are to tackle climate change, protect land and water, provide food sustainability, and build healthy cities. The New York Division focuses on these goals specifically with New York state in mind—from the Adirondacks to the Great Lakes to New York City and Long Island.

The organization raised a record $791 million from supporters in 2018 (with total revenue of $1.29 billion).

"Our mission is more urgent now than it ever has been. That's driven, in large part, by all of the impacts we're seeing from climate change," says Chin. "The recognition that the world is changing very, very quickly right now. That we need to keep up. I think that's the main disruptor."

We sat down with Chin to learn more about innovation at the organization, its Sustainability Accelerator, and what corporates can learn from nonprofits.

BIG OPPORTUNITIES

When it comes to "keeping up" with a disruptor like climate change, Chin says funders play a big role in helping the organization stay focused on innovation. Chin's role itself, which she took on in 2017, was the result of a major funder making a gift and directing it towards innovation efforts.

In terms of the Conservancy's innovation focus, Chin says it's all about increasing the impact they have across all environmental priorities. To do so, the organization is training its employees to be more innovative, while also looking for new tools and technology from outside.

According to Chin, The Nature Conservancy already understands the need to move fast, but is still building out the structure to make innovation happen across the whole organization, which employs 3,500 people globally.

"The sense was that we have a really big opportunity to be impacting clean water, conserving land, oceans, making cities more healthy and, of course, addressing climate change at a scale that other organizations, frankly, I think are not equipped to tackle as well as the Conservancy is," says Chin. "Looking across that, there's also the recognition that we are not getting the impact that we want, and that we need new tools."

Chin says that there has been an increase in executive leadership attention on innovation, but that there is still room to grow when it comes to understanding how innovation can impact the organization as a whole.

Some questions Chin is working to answer include: "What is it that we need to do as an organization to enable innovation here? How do we generate the right mindset? How do we develop the skillsets in our people? How do we make sure that the systems that have been built around a more waterfall-type way of working can be altered and shifted in a way that begins to support a more nimble way of working?"

One way Chin is bringing innovation into the organization is by training employees on various methodologies that have not traditionally been used in the conservation space, such as design thinking and human-centered design.

"There is a very strong recognition that we can't just save the environment," says Chin. "The health of people and the health of nature are inextricably intertwined. That means that we need to bring stakeholders to the table much earlier, really practice our human-centered design."

Chin is also focused on bringing new technology into the organization.

"If you want to look specifically at the technology side, we're seeing cheaper hardware," says Chin. "Now, you can get sensors into places that you couldn't before, and gather data from them at a price that, previously, was not affordable for us..."

Chin also mentioned advanced imaging technology, drones, data modeling, AR, and VR as technologies that will impact the organization's work in the future.

SUSTAINABILITY ACCELERATOR

When it comes to discovering technology outside of the organization, Chin says the Conservancy's Sustainability Accelerator, operated in partnership with Techstars, plays a big role.

"What does set nonprofits apart is people who work here are really passionate about changing the world. They're passionate about the mission."

The accelerator welcomed its first class of startups in 2018, and is driven by an equity fund created by investors looking to support sustainable technology. In the accelerator's first cohort, 10 startups were selected for a three-month program in Denver. Techstars and the Conservancy's investors receive equity in the participating companies—a six percent stake that is split between the two organizations.

"Part of our role in the Sustainability Accelerator is not only to explore new technologies, but with our size and our network, to generate a better ecosystem for startups working in the environmental field," says Chin. "It's a tough area [for a startup] to be able to both have impact and make money."

Chin says the types of startups they attracted during the first cohort ran the gamut. These companies included Aqulytics, a data platform to help governments and communities manage water use more sustainably; This Fish, a provider of seafood traceability software; and Sustain, a business-to-business software platform that incentivizes employees to reduce energy usage.

"There are a couple of outstanding companies that came out of the last [accelerator]," says Chin. "It really brought home for us...how important it is for us to be in the space, to be encouraging this ecosystem, to be putting major investment into the space to grow it. Startups are fast, and they are nimble, and they can try things out in a way that the Conservancy is not set up to do."

According to Chin, the accelerator also plays a major role in changing the way innovation is perceived by the organization.

"I'm part of an internal advisory committee that thinks about how we can use the Techstars engagement to influence internal thinking about innovation," says Chin. "[How can we] influence how our partners potentially utilize technology?"

FOCUSING ON IMPACT, NOT PROFIT

One of the biggest challenges for nonprofits when it comes to innovation is that they're not concerned with—you guessed it—profit.

"For many organizations, [profit] is the litmus test of whether or not something is working," says Chin. "For us, it's impact, and that impact is defined in different ways depending on the area in which we're working. Impact in water quality is a very different metric from impact in carbon reduction. We are always chasing that impact."

But according to Chin, the way nonprofits receive their funding can hinder them from pursuing methods that may increase overall impact.

For most nonprofits, including The Nature Conservancy, funding comes from a mix of individual donors, government grants, and foundation money. These different types of funding, however, come with different restrictions and regulations. For example, some multi-year funding commitments can require an organization to lay out long-term plans without much flexibility. This can make experimentation and pivoting based on early results more difficult.

"That type of funding locks organizations into doing things a certain way, even if they might not be having as much impact as they could be," says Chin. "There's a slowly growing movement to get funders on board with providing more flexibility, but I think that's going to be a long road."

In the New York division, Chin says there are funders that recognized the need for innovation early on, allowing the organization to focus more effort on creating that impact. This innovation-directed funding pays for Chin's salary and other innovation activities inside the organization. But Chin says deciding where to spend that money takes a careful hand.

"The Conservancy...provides employees a lot of resources in terms of training," says Chin. "I

Advice from the AARP: "No Money, No Mission"

Most nonprofits have one thing in common—they're mission-driven. Whether it's preserving the environment, searching for a cure, or empowering people as they age.

But according to Andy Miller, SVP of Innovation at AARP, the Washington, DC-based nonprofit, "Social mission is great, but we often say 'No money, no mission.'" So how can nonprofits make the case to create or scale their innovation teams with both funding and social mission in mind?

We asked Miller to share how the innovation team at AARP, with about $1.6 billion in revenue, has grown, and what advice he has for other innovators at nonprofits.

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SCALING INNOVATION INSIDE NONPROFITS

AARP Innovation Labs has been around now for three years. It grew from three people to over 20. The general roadmap here, or the equation of success is pretty simple. There's only so many things you can do as an organization. It is "I can create new products myself," "I can work with the startup ecosystem," or "I can drive internal innovation." And to be successful, you have to do all those things. But you can't start with all of them. If you start with all of them, you're done. Because you're going to be a mile wide and an inch deep, and no one's going to see value.

What I did here is to look at the landscape and go, "What's going to have the most impact the fastest?" And at AARP, it was around knowing our CEO's desire to have everyone trained [on design thinking]. We are primarily an organization that is not product-centric. So, how do we start to get people to be product people? It was simple. It was, I have to start with the culture aspect. I have to start with human-centered design training back into the core business. And then how do I sort of amp that up a bit by [CONTINUED ON NEXT PAGE]

wanted to make sure...it's very clear that innovation requires a different mindset."

This has included bringing in design thinking consultants to work with project teams, and providing funds for augmented reality experiments.

Another way the organization utilizes donations for innovation is through corporate partnerships. Four percent of The Nature Conservancy's funding came from corporations in 2018, but donations can also come in the form of free training. For example, one funder that works at a large financial services organization provided the Conservancy's marketing department with Agile training. Now, Chin is working to roll out this training to the entire New York division.

"We're hoping that this training will allow people who are interested to come in and get a sneak peek into what it's about," says Chin. "If they feel like it's going to be useful, they can then engage more deeply, both with that training group, with me, and with others who have been through some of these processes in the experimental phase over the last year."

According to Chin, the training is working. She's seeing individuals using more "innovation language," and asking questions including, "How can we bring the scope of [a project] down? Can we do it more innovatively?"

"Our mission is more urgent now than it ever has been. That's driven, in large part, by all of the impacts we're seeing from climate change."

LEARNING FROM FAILURE

The Conservancy's funding model also has an impact on how failure is perceived at the organization.

"We have funders that we have made commitments to," says Chin. "Oftentimes, those funders are laying out, 'In order for you to continue getting funding from us, here are the milestones that you need to be hitting. Here are the specific metrics that you need to measure yourself against.' We can't fail on those."

Chin says failure has a different connotation in nonprofits—one that doesn't always reflect the "fail fast" mantra.

"Nonprofits have a different perspective on failure," says Chin. "This is in part because a lot of the work that we do is with communities. Oftentimes, you're trying to plug gaps where corporations or for-profit models are not bringing the right services, and the government is also not providing an additional service, in the case of our internal consultancy. You have to have those wins. And the faster you can get those wins, you can help others.

Then the second thing we did—our CEO is really [interested in] creating new products. She wants AARP to have its own products. So the second thing I did to make sure we scale this was look at all the things that we had been working on as an organization and said, "Is there anything out there, any ideas or any projects that could really work that maybe were overlooked, or people didn't know how to execute?" There was this idea around creating a curated wellness box. So we went all in on this box idea, [and were] successful in getting the business off the ground—the speed at which we did that, and the…lack of money that we spent was sort of anti to how things are done here. Within six months, we launched a product that was doing six figures in revenue.

Each time we had a success, I would sort of leverage that a bit to say, okay, we can do more, I just need more resources. As long as we kept showing that, we were able to continue to scale the team.

ADVICE FOR NON-PROFITS

[Regardless of where your funding comes from,] I wouldn't run the innovation program any differently. I think you have to think like a startup. We're a nonprofit. But we're an enormous nonprofit, one of the largest nonprofits in the United States. So it feels like a corporation, not a nonprofit.

If you're a small nonprofit, that means you're probably scrappy by nature. You have to go out and—especially if your funding is coming from donations—you have to be scrappy, you have to figure out how to create enough value that people want to keep writing checks. And so you probably have that scrappy gene already in your DNA.

Continue to leverage that scrappy gene, but understand what your goal is. My goal is both revenue and social impact. If your goal is just revenue, as a nonprofit, you probably don't win, you probably aren't going to be successful. Because at the end of the day, you'll be creating products, services, programs, whatever it is you're creating, that may go against the grain of what your organization stands for.

I also would advise people, social mission is great, but we often say, "No money, no mission." So can you create products, services, programs, whatever the innovation teams are doing. Just remember—no money, no mission. So it doesn't mean you have to be a for-profit, a greedy organization trying to make a million dollars. But you shouldn't lose money. Try to at least operate at a break-even, if not a slight margin.

If you're going to get into the product business, use this to your advantage. We're building our own products. I'm often competing with for-profit organizations, and in many cases, publicly-traded for-profit organizations. I have a huge advantage. I don't have Wall Street pressure, or revenue targets that Wall Street's going to punish me for if I don't hit. So from a price perspective, I just have to make sure I'm not losing money.

Understand what you're building and who you're building it for. That social mission really, really matters, and don't deviate from it. In fact, use that to your advantage.

providing what people need. [Nonprofits are] helping people who are not getting what they need to get for whatever reason. Many of these populations are vulnerable, so you can't just go in and experiment willy-nilly. These are people's livelihoods."

Chin says they are much more cautious about using "failure" in the traditional definition of the word, but that experimentation is definitely on the table. She says it's important to make sure that "we're failing with learnings."

"For the nonprofit sector, it's more fruitful to think about failure as things [that] didn't go the way that you thought they were going to go," Chin says. "If you had designed the project in such a way that you are at least limiting the unknowns, then you can pinpoint what you learned from it, so that in the next iteration it can be better."

WHAT FOR-PROFITS CAN LEARN

In a lot of ways, nonprofits aren't different from the for-profit world. For example, Chin says the Conservancy, like most big companies, still deals with the curse of success. People may think, "We've been successful in the past, so why do we need to change?"

Chin also noted that while some companies choose to keep their innovation arms separate, The Nature Conservancy realized that innovation needed to be integrated from the start.

"[Our approach may be] slower and harder, because you're trying to change people, but our belief is that it is going to pay off, because everyone who works here will be onboard with the same thing," says Chin. "We won't run into the issue that some corporations have, which is when you try to reintegrate your innovative product with the core, there are a lot of culture [issues], and stepping on toes..."

One of the biggest learnings for the Conservancy has been to bring stakeholders to the table early, and communicate directly with individuals inside vulnerable communities. Chin says it's important to co-create solutions, as opposed to simply imposing already-baked ideas.

And Chin says one big advantage nonprofits have is the dedicated, passionate employees they attract—and their desire to see results out in the world.

"What does set nonprofits apart is people who work here are really passionate about changing the world," says Chin. "They're passionate about the mission. If you introduce such individuals to ideas, and [the] ideas make sense and they're applicable and they work, they will use them, because they see, 'If I do this, it does get me to impact faster.'" ⬢

“Nonprofits have a different perspective on failure. This is in part because a lot of the work that we do is with communities. You can’t just go in and experiment willy-nilly. These are people’s livelihoods.”

JENNIFER CHIN, DIRECTOR OF CONSERVATION INNOVATION FOR THE NATURE CONSERVANCY’S NEW YORK STATE DIVISION

Upgrading

Your

Vacation

How the innovation and transformation team at Royal Caribbean Cruise Lines is deploying high-tech on the high seas. By Kaitlin Milliken

In mid-August, tourists hustle through PortMiami's Terminal A, dressed in Bermuda shorts and floral print dresses. They eagerly hand their baggage to crew members, then ascend the escalator to Royal Caribbean's security checkpoint.

Nicknamed the "Crown of Miami," Royal Caribbean's new terminal opened to the public in November 2018. When guests turn to the shore as their boat departs, the 170,000-square-foot structure resembles a crown. When viewed from the east or west, the building looks like an "M," for Miami.

Navigating a crowded terminal has often been something of a pre-departure headache for cruise passengers—the last series of logistical hurdles before vacation begins. And in Terminal A, many guests do queue up to check-in with crew members. However, some families have already uploaded their photos to an online database—a step that allows them to board their ship even more quickly.

"We use [a] selfie...to bring you through our facial recognition boarding process, which is—we like to say—from the car to the bar in under three minutes," says Joey Hasty, Head of Innovation and Transformation at Royal Caribbean. "Or if it's our Celebrity brand, maybe from motorcoach to martini. They're a little classier."

The system can identify multiple members of a family at once while they are in motion. No need to stop and smile for the camera. If the device encounters an error during its scan, a nearby crewmember with an iPad provides assistance. Hasty says the new system is a big improvement from the traditional, 45-minute security process. But it wasn't without wrinkles.

"We were getting people on the ship so quickly that our bar staff was actually overwhelmed with people. They're wanting drinks and wanting to start their vacation," says Josh Nakaya, Creative Director and Lead Designer at Royal Caribbean's Innovation Lab. "You end up with...sometimes unintended consequences. In this case, it was a good one, right? But what that means for our crew [is] having to respond to more guests on the ship sooner."

The new onboarding process is one of several digital advancements pioneered by the company's innovation team.

Miami-based Royal Caribbean International operates four global cruise brands, including Royal Caribbean, Celebrity Cruises, Azamara Club Cruises, and Silversea Cruises. It's the second-largest cruise company in the world, after Carnival, with revenue of $9.5 billion in 2018. Last year, the company's brands served more than six million passengers, an 18 percent increase since 2014.

But to keep that growth going, Hasty and his team know they need to continually improve guests' experience, delivering both memorable "wow" moments but also reducing some of the hassles—as with the boarding process. Smartphones and newer waves of technology will play a central part.

Innovation Leader visited the innovation lab at Royal Caribbean's headquarters in Miami and toured their ship, *Navigator of the Seas*, to see the company's digital developments in action. Throughout the conversation, Hasty and Nakaya discussed how they cultivate, test, and launch ideas to upgrade the guest experience.

THE MISSION

"What we mean when we say innovation," Hasty says, "is just the relentless pursuit of new product development for our crew and our guests."

According to Hasty, the company pursues new ideas via three strategies. They can make investments in companies, especially those that have strategic technology. The innovation team can partner with technology companies to create new guest experiences. And lastly, in-house innovators can build something new.

"Build is...my favorite, truth be known," Hasty says. "When we can't find a company out there doing it to buy or to partner with, we build it ourselves."

When innovating internally, Hasty says ideas move through a cycle that takes four weeks, on average. The team starts with a "hunch" inspired by guest needs and research. They then brainstorm with the relevant business unit and guests. Prototyping follows. Then, the team tests with end-users who can provide feedback.

"We believe...not doing [slide] decks, not doing presentations...is the solution to what we do," Nakaya says. "We actually build things. We make experiences for people."

CODENAME: EXCALIBUR

A journey on the Seven Seas combines aspects of several different industries—from hospitality, to food and beverage, to security, to supply chain. According to Hasty, there are opportunities to innovate at the intersection of these different elements of the business.

“What we mean when we say ‘innovation’ is just the relentless pursuit of new product development for our crew and our guests.”

JOEY HASTY, HEAD OF INNOVATION AND TRANSFORMATION AT ROYAL CARIBBEAN

Many of these innovations are digital. Technological advancements from Hasty and his team fall under Excalibur—the codename for Royal Caribbean's digital transformation efforts. Facial recognition at port is just one of many projects already rolled out to Royal Caribbean guests. But the digital experience begins long before passengers arrive at the cruise terminal.

"We learned that lots of the joy of vacationing comes in the planning part of the vacation. So we make that a lot of fun," Hasty says. "Our Royal Caribbean app...allows planning in a super simple way, from the things you'll do on board the ship to your shore excursions that you'll do at the destinations."

When on board, guests have the option to purchase WOW Bands. These water-resistant wristbands allow guests to unlock their stateroom doors, make purchases on the ship, and access special lounges.

Augmented reality provides another digital layer to the vacation experience. Today, VIP guests can opt to take a tour of their ship, getting a behind-the-scenes look from real, live crew members. "But you don't really get that if you're just the general cruise guest," Nakaya says. "[With an AR tour, using their smartphone, guests] can understand the amazing engineering marvel that's going to be their home for a few days."

On the company's recently launched Celebrity Edge, guests can use their phones to learn more about how the ship works and what's behind the scenes, narrated by the company's CEO, Richard Fain.

Hasty also highlights digital elements that may not be obvious to the customer. One example is cameras coupled with artificial intelligence software.

Together, they're used to monitor the density, movement, and numbers of people in particular areas of the ship, Hasty says. "We're using that data to understand how to design ships better in the future. [And] we use that data in real time... to see if we can improve [the guest experience]."

According to Hasty, the crew uses the AI-powered cameras to make sure food is served at the perfect temperature and that popular buffet items remain in stock. Traffic patterns on the ship's shopping level can help determine which stores should be swapped out for new retail.

The team is halfway through a five-year-long, digital transformation mission. Concurrently, Royal Caribbean continues to expand its fleet. The company plans to launch 12 new ships—about one a year for the next decade.

"Each [new ship] is a platform of new and never-before-seen things," Hasty says. "Another advantage we have that maybe some innovation teams don't have is [that] the build cycle for new ships is five years. So that's a lot of runway to get [new initiatives] right..."

CHALKING UP EARLY WINS

Hasty joined Royal Caribbean in 2017 as the third member of the company's digital team, and the first member of the innovation team. Prior to assuming his current role, he worked on Disney's Magic Bands—RFID enabled bracelets that guests can use to unlock their hotel room, buy things in the park, and get fast passes to attractions. After he moved to Royal Caribbean, he built the innovation program from scratch, which included assembling the right team to pursue digital innovation.

"Part of my success was just hiring really talented people to help us get where we need to go," Hasty said. The other element? Building confidence in the burgeoning innovation unit.

"This organization had some false starts...with technology. So there was a big sense of, 'technology doesn't make anything better' with the company when we got here," Hasty says. "We worked hard to get a really great relationship with our business owners, to let them know we're here to help solve big business problems."

Hasty also recognized the role that early wins play in the survival of an innovation teams. As a result, Hasty says, the team has launched over 90 percent of its concepts.

The goal, he says, was "showing that technology is a democratizing force. Those early wins helped a ton in just building credibility, having people come and ask us for help directly."

While the innovation team remains small, with a staff of 24, Hasty says the team can pull additional resources and manpower when pursuing different projects. According to Hasty, hundreds of people across the organization get involved with many of the innovation projects.

INSIDE THE INNOVATION LAB

A short sidewalk connects Royal Caribbean's Miami headquarters with the building that houses the innovation team.

The whir of power tools can be heard upon entering the prototyping area, as teams construct full-scale replicas of spaces that exist on a ship. A large wooden box sits in the center of the room. When visitors step inside, they find themselves in a model of a cruise ship hallway—exact in both dimensions, lighting, and build material.

"I wanted to see the way the technology would react to the actual space...because we have...our new door locks in here," Hasty explains. "So these use RFID, you can open it with your phone, and I wanted to see it work

The promenade on the *Navigator of the Seas*. This pathway runs through the center of the ship and includes shopping, restaurants, bars, and guest services.

“We learned that lots of the joy of vacationing comes in the planning part of the vacation. So we make that a lot of fun.”

JOEY HASTY

A guest hurtles head-first through the *Navigator of the Sea*’s Riptide water slide and catches a view of the ocean.

> **"Everything we do is delivered by humans, and their acceptance really drives the success or failure…"**
>
> JOEY HASTY

Guests scale a rock climbing wall on *Navigator of the Seas*, one of the many on-deck activities guests can experience.

in a real environment."

A series of doors line the walkway, leading to full-scale staterooms. While some mockups in the lab use foam-core as a placeholder for furniture in the space, these models are complete with neatly-made beds and rolled towels.

However, rougher mock-ups can also be found in the lab. During a tour of the space, Hasty points out a podium made from cardboard, an early prototype of what later became the company's facial recognition security system.

"What you're looking at here is a cardboard mock-up...but [we were] still able to slide an iPad in here and use it right away. And so we're just testing shape and function," Hasty says. "There were hundreds of these sorts of prototypes before we landed on the sort of shapes that we were interested in. And then, we were able to add more and more fidelity."

To build trust and organizational support, Hasty brings leaders from the business units into the lab "so they're never surprised," he says. According to Hasty, his team also invites crew members and customers into the space to get their feedback as well. Soon after, the team seeks to get the prototype on board for further testing.

INNOVATION ON DECK

Prototype systems don't have to travel far; when Royal Caribbean's cruise ships dock in Miami, they're only about two miles away from the lab. Testing on board helps the team bridge the gap "between how innovators imagine a guest to perceive something, and then how it's really perceived," Hasty says.

According to Hasty, observing guests interact with prototypes helps designers get a better grip on vacationers' behaviors and needs. The technology can then be refined as needed.

The second thing they learn from testing is more about change management—how crew members will respond to something new.

"Everything we do is delivered by humans at the end of the day, and their acceptance...really drives the success or failure of a project," Hasty says. "In fact, the little bit we do fail at really ends up being an operational failure, more than a technology failure."

After running experiments with crew members, Hasty says his team collects additional feedback and notes on operational issues. According to Hasty, the innovation team then works with the digital manager for each vessel, who helps integrate the technology. They also train employees—a process that can range from a few days to a few weeks.

Even when a digital innovation works, not every cruise ship has the infrastructure for new technology. "We've got around 60 ships in our fleet, and so not everything that we do ends up... on all of them at the same time," Nakaya says. "The ships are at different levels of technological ability."

While some of the new experiences they create—like AR tours—place technology in users' hands, other digital elements are invisible.

"Most things are ambient, and...[it's] just part of the experience. So there's nothing to opt in to," Hasty says.

"Bring Me a Drink" serves as one example. Guests can press a button on their cell phone when on the ship or the company's private island, Hasty says, and have their drink of choice quickly delivered to their location from the closest bar.

When asked to share advice for other innovators, Hasty says, "Work to make the technology invisible. What I mean by that is, no one wants to use facial recognition—everyone just wants to get on board the ship... So whenever you can, really work to hide the technology so it just blends into your experience."

WHAT'S ON THE HORIZON

Nakaya is standing in the *Navigator of the Seas*' Royal Theater amidst the seats. Later, the rows will be filled with guests enjoying singers, dancers, and live music. But now, at 11 a.m., the room is empty. A projector plays a video featuring a highlight reel of families on vacation—riding the ship's water slides, clinking cocktail glasses, and dancing.

According to Nakaya, unused spaces like this one offer opportunities for the innovation team. One prototype in the pipeline: a "mixed reality" game to entertain vacationers.

"Real estate is at a premium on a cruise ship. How do we use it as best we can?" Nakaya says. "We've started experimenting with using this as one of the spaces within a mixed reality game that could take place all over the ship."

Nakaya describes the game as a "play experience that mixes [the] physical and digital." In the story, guests work to solve a mystery and unlock a physical puzzle box located somewhere on the ship. According to Nakaya, smartphones would act as a digital tool to investigate physical puzzle elements—allowing participants to unlock clues along their journey.

Hasty says that the innovation team continues to look for ways to make guest vacations even better—both in the digital realm and in real-world environments. "We're really pushing into bigger areas, and different opportunities," Hasty says. "I think we could be dreaming a lot bigger and crazier." ⬢

IS YOUR IDEA TOO NEW —OR TOO FAMILIAR?

Columbia Business School Professor Olivier Toubia contends that creative sparks fly at the intersection of novelty and familiarity

By Kaitlin Milliken

A SUCCESSFUL INNOVATION CREATES AN ELEGANT SOLUTION FOR A REAL-WORLD CUSTOMER PROBLEM,

says Olivier Toubia. But while that formula can sound simple, bridging the gap between people doing the work of innovation and actual consumers often isn't.

"What makes innovation fail often is the fact that the information about solutions and the information about needs [are] owned by different parties" in an organization, says Toubia, a Professor of Marketing at Columbia Business School.

Toubia teaches a course on customer-centric innovation. He is also the faculty director of Columbia's Eugene Lang Entrepreneurship Center. His research includes measuring customer preferences, commercializing research, and gamifying idea generation.

According to Toubia, success often accrues to companies that forge stronger links between their in-house experts and their customers.

"The manufacturer [or company] has the solution expertise. They know how to build stuff, they know what is feasible, they know the design parameters. So they have the tools," Toubia says. "And the consumers have the needs and the problems that they want to solve."

We sat down with Toubia to discuss the factors that cause failure, and why the best ideas strike the right balance between novelty and familiarity.

. . .

WHAT LEADS TO FAILURE

Just having a culture that allows people to take risks and take time to explore, [that's] something that is hard for larger companies that often focus on quarterly results. ...

There's usually a few different ways in which innovations can fail. Sometimes the issue can be that there's not enough novelty in the idea. It's not exciting enough. So it was doomed to fail from the beginning.

And then there could also be failures more in the design stage, in which...the package of features is not attractive. Maybe there's some flaws in the design, the quality, the interface. The product-market fit is not there. There could be failures in the launch phase. There are so many things that could go wrong. ... That's why it's helpful to have a well-structured process that tries to...reduce these mines as you work through this minefield.

If you're going to fail, you want to fail early and cheaply. And you want to focus your resources on the project that has the most potential. It's very helpful to partner with outside constituencies...[such as] users, consultants, partners, startups, universities. [Companies get] fresh ideas...by being exposed to the wide range of talent.

THE IMPORTANCE OF STAYING CLOSE TO THE CUSTOMER

If it were easy for consumers to express their needs to manufacturers, then there would be very few failures because every product would be...a solution to a well-defined, well-articulated need of a consumer.

The fundamental problem is kind of a translation problem between, "What is the problem we're trying to solve? And, "What are the tools we have to solve the problem?" Being customer-centric is appreciating... the fact that consumers have information that [companies] don't have, and trying to understand how to extract the needs that they may not be able to articulate. [Customer-centricity is about finding] different ways to try to understand what problems [companies] can solve...and then using our expertise as designers and manufacturers to find the best possible solution to these needs.

TOOLS FOR CUSTOMER-CENTRIC INNOVATION

Design thinking is a very popular framework. [So is] ethnographic research, observing consumers, trying to map their experience, their journey, and understand the pain points.

You can also ask consumers directly. "Customer discovery" is a very popular term, just talking to customers...[and] trying to understand their lives, their problems, and what may be interesting for them.

Photographs by **Julia Robbs**

[Companies can also view] consumers as co-creators…through open innovation and crowdsourcing. You ask consumers for ideas, for new products. Oftentimes, when you do that, the ideas themselves may not be valuable or feasible… because consumers don't have the solution expertise to design the best possible product. But when you…ask them for ideas, these ideas are going to be some expression of their needs… Maybe the solution that they come up with may not be the right one, but the problem that they're trying to solve is probably a problem that they have.

LEVERAGING LEAD CUSTOMERS IN DIFFERENT INDUSTRIES

Companies like 3M…[follow the] lead users approach…where you partner with users that may not be your users, but they're people that have developed solution expertise that could be relevant for you.

For example, there's an interesting case from 3M, [where the company] was trying to develop surgical drapes for operating room for the top US hospitals. [They] went to hospitals in developing countries to see how doctors there were able to fight infection with limited resources. And they went to veterinary hospitals to see how vets were able to fight infection in much harsher environments.

I did a project with Pepsi [where] they were trying to innovate for Baby Boomers, and they tried to look for people that have faced similar issues to Baby Boomers, but in a more extreme manner. … As you get older, you can't see as well, don't hear as well, don't move as well. So they went to people that have disabilities and tried to get insights from them as to how they addressed these disabilities, to see if there were ideas that they could then transfer to helping Baby Boomers in the retail environment.

GATHERING MORE IDEAS

[Start by] knowing exactly what you're looking for. If you know the problem you're trying to solve, and you're looking for solutions…maybe you want to go to experts [and] lead users.

If, on the other hand, you're trying to look for an opportunity, or a need…then maybe you want to look…at average consumers.

And then also, there's actually quite a bit of research on how you structure the actual task to get the most ideas out of whoever's going to give you ideas. Let's say you're trying to innovate for movie theaters. You could just ask people, "Okay, give me ideas for movie theaters." You could also ask people to give you ideas for the ticket purchase process, the in-theater experience, or the concessions service. [When] you [get more specific about] the problem, we find that this gives you more ideas.

NOVELTY AND FAMILIARITY: FINDING THE BALANCE

We draw on the theory that says that creativity comes from finding the right balance between novelty and familiarity. If an idea [has] no familiar base, it's going to be too weird… If it's only using very familiar combinations of topics, it's going to be not novel enough. So you basically need to find something novel, which at the same time is useful. [W]e've developed a tool that, given an ideation topic, is going to automatically scan the [submission] for content about this topic, and find… key words that are relevant to this topic, and see… whether it's a novel or a familiar combination.

If you're doing cooking, for example, egg and cheese would be a very familiar combination. Chicken and chocolate may be a more novel combination. So we establish this baseline network of words and their relation to each other. And then when we see a new idea we can extract [information about] how many of these [ideas] are novel? How many of them are familiar? And then we can weigh that against a benchmark we've developed that tells us what is the optimal balance between novelty and familiarity, and we can screen ideas that seem to have just the right amount of novelty.

[We found] that [machine learning] can help you pre-screen, say going from 1000 ideas to 100 ideas. You should still read these 100 ideas carefully, but…[machine learning] can eliminate ones that are low potential.

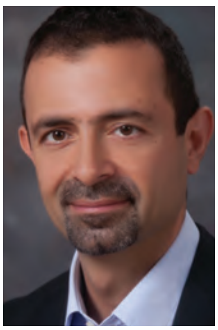
Our recommendation is to have some humans do the final stage. Because you want to really have an expert who understands the domain…the constraints of the design, [and the] problem. We don't think you should completely automate the process. But we think that this can really weed out the 90 percent of ideas that have no chance of being relevant, and then focus on the 10 percent that are more likely to be useful. ⬢

> **"If it were easy for consumers to express their needs to manufacturers, then there would be very few failures because every product would be…a solution to a well-defined, well-articulated need…"**

SPECIAL PARTNER CONTENT

HOW DO YOU TELL A GREAT INNOVATION SUCCESS STORY?

THE BIG QUESTIONS



BY LUDWIG MELIK
CEO, Planbox

EVERYONE LOVES A good story. Stories are a great way to inspire, engage, and share lessons learned, and this is especially true for companies that want to step up their innovation game. There are many stories of creativity and perseverance by lone inventors or small teams who beat all the odds and create extraordinary success stories.

Without stories, everything is just a report—a bunch of pluses and minuses. How your innovation success stories are framed and described creates differentiation, attracts attention, and helps promote your accomplishments. Sharing success stories will increase engagement, spark creativity, and result in higher visibility for your innovation activities and accomplishments.

Here are seven techniques to sharing a great innovation success story:

1. MAKE A MOVIE IN YOUR AUDIENCE'S HEAD

Telling a great story is like making a movie for your audience. Instead of long-winded paragraphs of text, develop your story as a set of action scenes. Set up the scene, and describe what was happening—the characters involved and their emotions, motivations, actions, and reactions.

2. USE CASUAL, EVERYDAY WORDS

No matter how complex the concept, tell the story in layman's terms. Use metaphors and simple visuals to describe the scene. Your audience will include business executives and non-techies, and if they do not understand your jargon, then you will lose their interest.

3. MAKE IT EMOTIONAL

One of the biggest mistakes storytellers make is leaving out people's emotions as the story unfolds. When you share emotions, people make deeper connections with you and the story, which also helps them to better remember the story's key takeaways. Captivating stories reveal how the main characters felt and what spurred them to action.

4. HIGHLIGHT A STRUGGLE

A story without some sort of conflict and adversity isn't very interesting. It could be about how your team had to beat the competition, overcome severe resource shortages, deal with major technological uncertainty, or persevere through major change resistance.

5. STICK TO THE ESSENTIALS AND KEEP IT SIMPLE

Not every story you tell has to be an epic adventure or contain exhilarating, heart-stopping action. Sometimes the most effective stories are a simple and sincere depiction of an event or accomplishment without any unnecessary details. No one will be interested in learning details other than those specifically related to their actions or results.

6. KNOW YOUR AUDIENCE

You should start writing every story by asking yourself who your main audience is and what message you want to share with them. Then, make sure every scene you illustrate and describe caters to their interests and what they care about.

7. DON'T SPOIL THE ENDING

The story should also have a clear beginning, middle, and ending. Don't confuse your audience by jumping from one topic to another or by creating a complicated timeline of events. Suspense and tension hold peoples' attention, and are essential to creating an emotional connection between you and your audience. If you have spoilers in the early parts of your story, then you may lose the audience's attention the very moment they start getting interested in the topic.

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The edison365 suite leverages Microsoft Office 365 to deliver the freedom to crowdsource ideas from employees, and the method to implement them. Combining innovative award-winning ideation and Portfolio Management modules, edison365 turns your good ideas into great business solutions. With edison365ideas, businesses can identify areas of focus, and crowdsource ideas from their employees to achieve specific, valuable problem-solving, while giving them a voice and platform to raise their ideas. Then, using edison365projects, the award-winning Microsoft PPM solution, businesses can seamlessly execute projects through an intuitive, sleek interface, to generate measurable results based on insight from every level of the organization.

Essential
Part of PA Consulting

Essentialdesign.com
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Essential is an innovation strategy & design consultancy. We work across healthcare, consumer, industrial and technology sectors, helping our clients create connected digital, physical, and service experiences. Our multi-disciplinary team of engineers, designers, strategists and researchers is on a mission to empower people through design. In late 2018, Essential became part of PA Consulting. The combination of our capabilities enables us to deliver a complete end to end innovation service to our partners.

HYPE SIMPLIFY INNOVATION

Hypeinnovation.com
@hypeinnovation

HYPE Innovation provides software and services for idea and innovation managers to use the collective intelligence of employees, customers, and partners. We help organizations to generate additional revenue, become more efficient, and empower and connect people. With HYPE, our clients spearhead the digital transformation of their company.

IDEO

Ideo.com
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IDEO is a global design company known for its human-centered, interdisciplinary approach. As early leaders in the practice of design thinking, we create positive impact through design by applying our creative skills and mindsets, and by teaching others to do the same. We help clients and customers around the world build the capacity and outcomes required to navigate today's complexity and lead their markets.

As problem solvers, we drive change, build new ventures, and design digital and tangible experiences for a broad range of business, social, and governmental sectors through co-creation with our clients. As teachers, we help individuals, teams, and organizations cultivate the confidence they need to step into the future with optimism and creativity.

INNOSIGHT

Innosight.com
@innosightteam

Innosight, the strategy and innovation business of global professional services firm Huron, helps organizations design and create the future, instead of being disrupted by it. The leading authority on disruptive innovation and strategic transformation, the firm collaborates with clients across a range of industries to identify new growth opportunities, build new ventures and capabilities, and accelerate organizational change.

Inovo
Own the Unknown

theinovogroup.com
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The Inovo Group is an innovation consulting firm that helps technology-driven companies succeed at strategic innovation. We guide clients as they create surprising and potentially disruptive innovations that use technology for differentiation and competitive advantage. As we work together, clients use our proven innovation process to discover and pursue opportunities, gain new competencies, and transform business models, organizations, and cultures.

innovationcast

Innovationcast.com
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If you are looking for assistance to create or re-imagine your innovation system, you can count on us.

Whether you are more focused on employee innovation or collaborating with external parties, we can help. We'll work together to quickly set up all the building blocks you need to make innovation happen: capturing, assessing, testing, developing, and implementing ideas. All supported by our end-to-end, award-winning digital platform.
We also provide services to help you establish all the activities you need to perform technology scouting, trend detection, and search for startups or other partners who can help fuel innovation at your company.

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Kalypso is a professional services firm helping clients discover, create, and make better products with digital. We provide consulting, digital, technology, business process management, and managed services across the innovation value chain. As industry practitioners, our work is hands-on and our knowledge is based in experience—and results. We maintain trusted and strategic relationships with many companies as a key partner in driving their future growth. We are the leaders behind your leaders.

KPMG

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KPMG LLP, the audit, tax and advisory firm, is the US member firm of KPMG International Cooperative ("KPMG International"). KPMG is a global network of professional services firms providing Audit, Tax, and Advisory services. We operate in 154 countries and territories and have 200,000 people working in member firms around the world.

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MassChallenge.org
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MassChallenge is a not-for-profit accelerator obsessed with helping entrepreneurs. We reward high-impact startups through a competition to win a portion of several million dollars in cash awards. To date, 1,211 MassChallenge alumni have raised over $2 billion in funding, generated approximately $900 million in revenue, and created over 65,000 total jobs.

MOVES THE NEEDLE

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Our mission is to transform organizations to continuously innovate by empowering people to discover and create new value for their customers. Co-founded by Brant Cooper, author of "The Lean Entrepreneur," Moves the Needle helps ignite entrepreneurial action, empowering employees to discover and create new value.

NASON GROUP

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The Nason Group provides consumer-centered innovation to help you meet people where they are. We help you think about consumer-centered innovation as a lifestyle vs. a job. Our approach contributes to the building of a culture supportive of keeping the consumer at the center of your business.

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Newry Corp is dedicated to helping companies grow. Our clients are innovation powerhouses with exceptional capabilities in R&D and product development, seeking a partner who will roll up their sleeves and work shoulder-to-shoulder to identify and pursue exciting new opportunities. We believe that addressing unmet needs is a powerful vector for success, and we are committed to helping our clients find and solve the world's most important problems.

PA

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We believe in the power of ingenuity to build a positive human future in a technology-driven world. As strategies, technologies, and innovation collide, we create opportunity from complexity. Our diverse teams of experts combine innovative thinking and breakthrough technologies to progress further, faster. Our clients adapt and transform, and together we achieve enduring results.

An innovation and transformation consultancy, we are over 2,800 specialists in consumer, defense and security, energy, and utilities, financial services, government, healthcare, life sciences, manufacturing, and transport, travel and logistics. We operate globally from offices across the Americas, Europe, the Nordics, and the Gulf.

planbox
ACCELERATE BUSINESS OUTCOMES

planbox.com
@planbox

Founded in 1999, Planbox is a pioneering provider of AI-Powered Agile Innovation Management software and services. An AI engine mines your data for insights while your community collaborates to discover, develop, and capitalize on the best ideas from employees, customers, partners, and suppliers.

PLANVIEW®

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Planview Spigit enables industry leaders to activate the collective intelligence of employees, partners, and customers to find the most valuable ideas and make the right decisions. Harness collective intelligence. Automate your innovation process. Uncover remarkable ideas from every part of your business. Create a culture of innovation. There's a bold new way of working. Planview makes it possible.

RTI | Innovation Advisors

RTI.org
@RTI_Intl

RTI Innovation Advisors provides strategic innovation consulting services, technology and market intelligence and research, and commercialization services to help our clients accelerate their ideas to market. With over 50 years of innovation experience, we have the expertise, global network, and capabilities to help any private sector company or government entity improve innovation outcomes. We meet our clients on any step of their innovation journey and help them succeed.

Startgrid

startgrid.com
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Startgrid is an innovation platform helping companies make their external innovation efforts more successful. From tracking business needs to scouting startups to discovering the best solutions, Startgrid makes it easy for teams to solve problems, share intelligence, and measure the impact of their efforts on the business.

SwitchPitch
GET DEALS DONE

switchpitch.com
@SwitchPitch

SwitchPitch is the leading Startup Relationship Management platform for innovation teams at Fortune 1000 companies. From identifying startups to relationship management, SwitchPitch gets innovation teams to ROI outcomes quickly and efficiently.

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techstars

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Techstars is a worldwide network of 10,000+ corporate, government, and academia partners, startups, and investors who accelerate innovation and transform industries. 1,600+ startups have gone through Techstars accelerator programs. 87.4 percent are active or have been acquired and have a market cap of more than $18 billion. In 2018, Techstars had 44 separate accelerator programs covering six continents and a wide swath of industry verticals. According to Harvard Business Review, Techstars is considered one of the top two accelerator programs in the world.

Wellspring
Knowledge in Sight

wellspring.com
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Wellspring is the world's leading provider of innovation management software and solutions for both corporations and universities. We help clients succeed in today's innovation economy by researching technology trends, finding innovation partners, identifying startups, commercializing inventions, and coordinating global R&D and innovation programs. Founded in 2003 as a spin-out of Carnegie Mellon University, Wellspring works with more than 500 organizations worldwide to support the continued development of the global Knowledge Supply Chain.

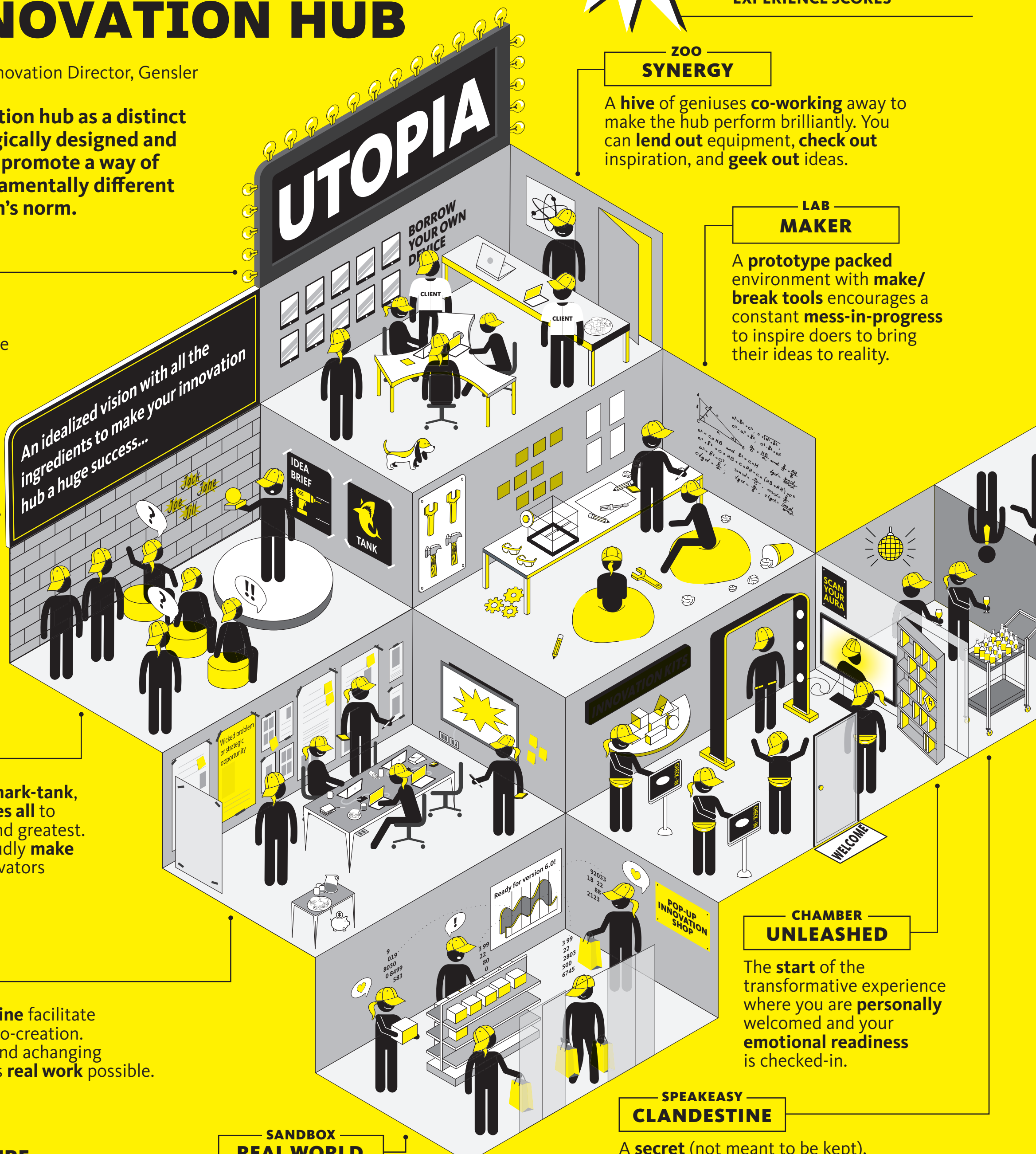
EVERYTHING YOU'D EVER WANT IN AN INNOVATION HUB

By Amanda Ramos | Innovation Director, Gensler

We define an innovation hub as a distinct environment strategically designed and actively nurtured to promote a way of working that is fundamentally different from an organization's norm.

24% HIGHER

WORKPLACES WITH INNOVATION HUBS DELIVER 16-24% HIGHER EFFECTIVENESS & EXPERIENCE SCORES[1]



TECHNOLOGY — SMART

Tech that is **integrated** and **intelligent** because it is designed to generate a **holistic** experience, including knowledge banks you need and will actually use.

ZOO — SYNERGY

A **hive** of geniuses **co-working** away to make the hub perform brilliantly. You can **lend out** equipment, **check out** inspiration, and **geek out** ideas.

LAB — MAKER

A **prototype packed** environment with **make/break tools** encourages a constant **mess-in-progress** to inspire doers to bring their ideas to reality.

LOCATION — INSULATION

An **off-site** address near your company's **mothership** (aka HQ) ensures things will be done differently here while still maintaining a **connection**.

PLATFORM — SHARED

Part **think-tank**, part **shark-tank**, this shared space **invites all** to hear about the latest and greatest. Those who survive proudly **make their mark** on the innovators wall of fame.

WAR ROOM — DISRUPTIVE

Four walls and **a deadline** facilitate intense and authentic co-creation. **Ergonomic furniture** and achanging **gallery-like wall** makes **real work** possible.

CHAMBER — UNLEASHED

The **start** of the transformative experience where you are **personally** welcomed and your **emotional readiness** is checked-in.

SPEAKEASY — CLANDESTINE

A **secret** (not meant to be kept), this **bar** and its traveling bar **carts** are integrated throughout to keep the conversation **fluid** and energized.

SANDBOX — REAL WORLD

A **pop-up shop** to test concepts with **real customers** leverages **data and insights** to **accelerate** the killing and launching of ideas.

A UTOPIAN CULTURE

Research shows that when companies create these types of settings, they often have a stronger culture of innovation, a more effective workplace, and a far more engaging employee experience. Innovation hubs are worth the investment and can have a lasting impact on the transformation of an organization — when done right. Based on learnings from architecting over 20 innovation hubs globally, we've seen many of these well-intended platforms hit the mark, while others miss it.

These utopian and dystopian archetypes respectively illustrate key do's and don'ts to consider when creating an innovation hub of your own. This utopia depicts a mash-up of elements we've seen work incredibly well, as well as a few extra bold ideas for those courageous enough to truly push their limits.

Know that building an environment touted for innovation is a great first step, but the hard work comes afterward; an innovation hub must be authentically and effectively activated to set the conditions for true disruption.

[1] *U.S. Workplace Survey 2019, Gensler Research Institute*

EVERYTHING YOU'D **NEVER** WANT IN AN INNOVATION HUB

By Amanda Ramos | Innovation Director, Gensler

2% WHATEVER

EVERYDAY AMENITIES, LIKE TYPICAL BREAK ROOMS AND LOUNGES, **PROVIDE ONLY 1-2%** MEANINGFUL IMPACT ON WORKPLACE EFFECTIVENESS & EXPERIENCE SCORES[1]

TECHNOLOGY
DUMB

Tech that is **tacked on** because a **vendor sold** you on the idea and convinced you to go **overboard** installing bits and bytes beyond your capability and consumption.

LOCATION
ISOLATION

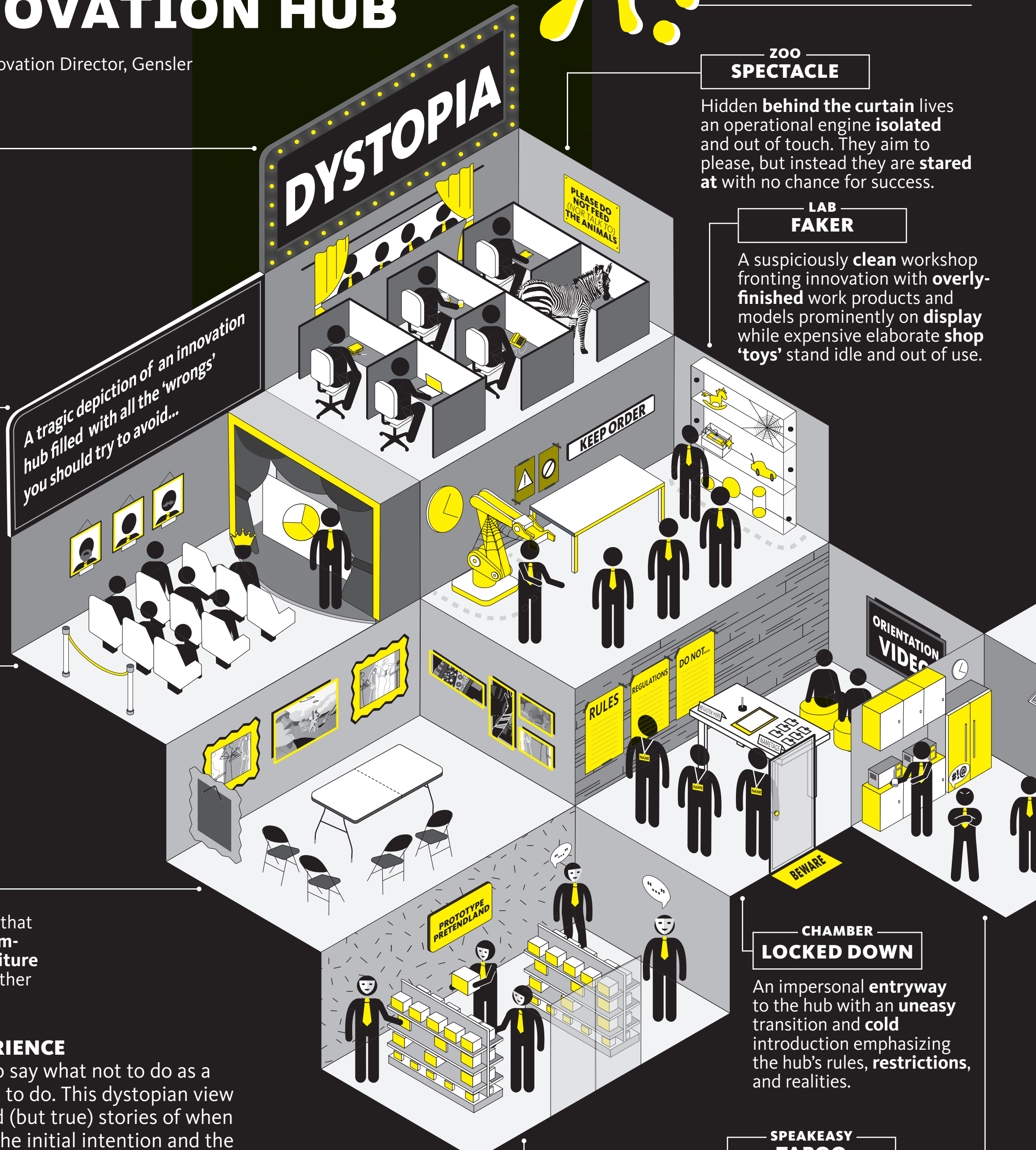
Moving **far off the beaten path** dramatically **lessens synergy** and potentially messages 'this is a place only for the **cool kids'.**

PLATFORM
STAGED

A **board room** for innovation theater where select **VIPs** are privileged to see innovation in its most formal and **lackluster** depiction.

WAR ROOM
DESTRUCTIVE

Rooms symbolic of action that **stand empty** with **museum-like walls** and **flimsy furniture** reveal the intention to neither work long nor hard.



ZOO
SPECTACLE

Hidden **behind the curtain** lives an operational engine **isolated** and out of touch. They aim to please, but instead they are **stared at** with no chance for success.

LAB
FAKER

A suspiciously **clean** workshop fronting innovation with **overly-finished** work products and models prominently on **display** while expensive elaborate **shop 'toys'** stand idle and out of use.

CHAMBER
LOCKED DOWN

An impersonal **entryway** to the hub with an **uneasy** transition and **cold** introduction emphasizing the hub's rules, **restrictions**, and realities.

SANDBOX
FICTIONAL WORLD

A staged environment with fake **actors** and contrived situations creates a **false sense of confidence** in avoidance of the inevitable **reality check.**

SPEAKEASY
TABOO

Break/café areas when **overly exposed** are ineffective in generating buzz and **deter** social interaction. They tend to be culturally **off limits** due to lack of leadership buy-in.

A DYSTOPIAN EXPERIENCE

Sometimes it's easier to say what not to do as a way of expressing what to do. This dystopian view is drawn from many sad (but true) stories of when a disconnect between the initial intention and the actual implementation causes an innovation hub to dramatically fail—and not in the good "fail fast" kind of way. Even worse, we've found that some innovation hubs fail because the organization never truly had the intention to change at all; clinging to old practices and ingrained beliefs can be a dangerous mistake that hinders progress and blocks an organization's innovation potential.

The biggest word of caution is BEWARE — you can have all the right ingredients in your hub, but the resulting experience can either go radically right or wretchedly wrong depending on how you facilitate the activity within it.

Credits: Art direction by Tatiana Gurovich; illustration by Joseph Navarro and Laura Hernandez; typography by Gina Shevenell and Nicole Stone; editing by Lis Russo; special thanks to the Gensler Hackathon Team, Innovation Leader, and all the clients who inspired this vision.

Disclaimer: *All percentages are based on real results from the Gensler 2019 Workplace Survey. However, the story, spaces, characters, and incidents portrayed in this illustration are fictitious. Any resemblance to reality is purely coincidental.*

INNOVATION LEADER
ISSUE Nº 10 — FALL 2019

FAILURE

What You Can Learn When Things Fall Apart

INSIDE: THE EPIC FAIL AWARDS, THE TRAGIC TALE OF JIBO THE ROBOT, AND 20 MISTAKES CORPORATE INNOVATORS MAKE

Table of Contents

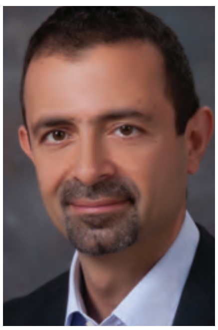
> "Failure *is* an option here. If things are not failing, you are not innovating enough."
>
> **ELON MUSK**

Inside

SPECIAL PARTNER CONTENT

HOW CAN FAILURES FUEL LEARNING?

THE BIG QUESTIONS



BY LUDWIG MELIK
CEO,Planbox

FAILURE IN SOME OF your innovation initiatives is, more often than not, inevitable. The lack of visibility into the ROI of innovation activities and the fact that today's duds can sometimes become tomorrow's commercial successes tells you everything you need to know about this problem. Innovation remains the most elusive activity for any company to get right, and the only one where many misfires are needed before one good shot gets through.

Couple this reality with quarterly obligations and the massive regulations companies need to comply with, and the result amounts to a perfect storm, forcing most companies to shortchange their future to meet their near-term obligations. You would not accept losing the majority of your clients before you figured out how to run your customer service operation, or alienate almost all of your employees before you learned how to manage your payroll system. Yet in innovation, the expectation is exactly that. However, failure is the necessary first step before you can make a crucial leap forward in the right direction. If you never try, you will never know.

In innovation, failure in not the exception, but rather the rule. As such, innovation should be viewed as the perpetual pursuit of learning. Think of innovation as being the school of life where experimenting, learning, and sharing are the pillars of the innovation management cycle that ensure a successful future for both yourself and those around you. However, it's not all doom and gloom; through the following five lenses, companies can assess the value created from every failure and use it as a learning opportunity to determine if, in fact, a failing grade can be upgraded to a satisfactory one.

1. LEARNING AND SHARING: Communicating lessons learned from a failure will help your organization find the optimal solution, and ensure others avoid repeating the same mistakes in the future.

2. EXPERIMENTING EXECUTION: An experiment must be defined and launched in a timely and cost-effective manner. Improving the experimentation velocity by refining your agility means you can carry out more experiments and accelerate learning. This is often the most underappreciated consideration—yet it impacts all the other lenses, as it increases your organization's overall ability to recover from failures.

3. FUTURE INNOVATION VALUE: Raising the original estimated value of an idea and pursuing higher innovation ambitions can produce more significant outcomes. The snowball effect is a major source of value creation, helping you identify new opportunities that grow market size or broaden the scope of your innovation activities.

4. CUSTOMER CHURN: Reducing any negative influence on your customer satisfaction level or avoiding any negative impact on customer allegiance are absolute musts. Brand loyalty is under serious threat as consumers constantly seek the latest, greatest, and cheapest. A culture of innovation within your organization will establish a long-lasting relationship with customers who follow the most innovative brands.

5. EMPLOYEE WELL-BEING: Your employees' health, work conditions, and productivity will greatly benefit from this work. Trying new things breathes new life into everyday activities. With every experiment, your workforce will build a stronger work ethic that encourages team members to make more valuable contributions. This mindshift is the most important transformation that is now occurring in organizations, as they gravitate from a reliance on protecting their core business to constantly thinking about how they can transform themselves to avoid getting disrupted.

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FALL 2019 ● ISSUE № 10

Getting Honest About Failure

YOU MAY HAVE NOTICED something a different about this issue of *Innovation Leader*. We flipped (pun intended) our traditional approach on its head to give you a look into two of the most talked about topics in corporate innovation: success and failure.

If you're reading this side first—the failure side—I'd love to know why! (Shoot me a note at the email below if you'd like to share.) Maybe you're just a glass-half-empty kind of person. Or maybe you love a good Fyre Festival-style flame-out.

Or perhaps you've come to the same conclusion that we have here at Innovation Leader: In the ruins of every failure, there are always lessons to be learned.

But in looking for stories for this half of the issue, we did struggle. We found that a lot of corporate innovators like to say, "We celebrate failure here," but few are eager to discuss it. That's what makes the stories we've brought you even more special. We hear from the former VP of Design at Jibo, a now-defunct robotics startup out of MIT; two former Target innovators who launched their own startup after enduring two shutdowns of two different corporate labs; and a Whirlpool VP who dissects both successful and not-so-successful product launches. We also worked with Gensler, the design and architecture firm, to create an illustrated guide to innovation hub "dystopias." (You can find that at the center of the magazine—where the failure section meets the success section.)

What all of these stories have in common is that they don't just focus on what went wrong. Each one offers concrete takeaways about how you might avoid or manage similar situations—or how you can more effectively celebrate ideas that don't pan out.

And hey, we're not perfect here at *Innovation Leader* either. We've killed plenty of stuff—like a Slack channel for members, an event designed especially for innovation consultants, and an early "alpha" version of our podcast. That last one helped us learn about podcast formats that work (and don't), and led to the launch of "Innovation Answered" in 2018.

Our biggest lesson: Always get input from you, our members, first.

What else do you want to see from us? What would help you deliver more impact in your organization? Drop me a note!

Kelsey Alpaio

Kelsey Alpaio, Managing Editor
kelsey@innovationleader.com

These are a few (failure-related) resources:

1. *Spectacular Failures* (podcast)
2. "Success, Failure, and the Drive to Keep Creating" (TED Talk video)
3. *Adapt: Why Success Always Starts with Failure* (book)
4. *Fyre: The Greatest Party That Never Happened* (documentary)
5. *Fyre Fraud* (documentary)
6. *Bad Blood: Secrets and Lies in a Silicon Valley Startup* (book)
7. *The Drop Out* (podcast)
8. "Don't Fail Fast—Fail Mindfully" (TED Talk video)
9. Fuckup Nights (event series)
10. *Into the Raging Sea* (book)
11. *Trapped Under the Sea* (book)
12. *The Disaster Artist* (movie)
13. "What Really Brought Down the 737 Max?" (article)
14. "What Went Wrong: The Demise of Toys R Us" (article + podcast)
15. *The Big Short: Inside the Doomsday Machine* (book)
16. "Sears: A Case Study in Business Failure" (article)
17. "GE Powered the American Century—Then It Burned Out" (article)
18. Museum of Bad Art (museum)
19. *Best Worst Movie* (documentary)
20. "'If This Works': The Secret to Avoiding Projects that Become Too Big to Fail" (article)
21. *Startup.com* (documentary)
22. *Apollo 13* (movie)
23. "Failure Shouldn't Come as a Surprise" (article)
24. *Art of Failure* (podcast)
25. The Museum of Failure (website)

The 20 Mistakes New Corporate Innovators Make

BY SCOTT KIRSNER

BEING TAPPED TO LEAD innovation inside a big, established organization is a tough assignment. That's true regardless of your level or department—whether you're a newly-minted Director of R&D, Head of Transformation, or Chief Digital Officer.

In June, we published an online list of nine of the most common mistakes that we see new corporate innovators make, and asked readers to share others that they'd observed—or perhaps made themselves. Numbers 10-20 on the list below were contributed by readers. (See the complete list, and add your own, at bit.ly/corp-inno-mistakes.)

1. Assume that because someone in the C-suite gave you the job, you don't need to forge alliances with colleagues up and down the org chart.

2. Run a high-profile innovation event right away, like a hackathon, "Shark Tank" pitch competition, or idea challenge. This often creates a level of excitement (and high expectations) that can't be sustained.

3. Put the leadership team on a plane to Silicon Valley to visit startup accelerators, incubators, venture capital firms, and the Google-plex. The innovation practices of the startup world, or companies with $100+ billion of cash on their balance sheet (like Google), are not readily applicable in your sprawling, risk-averse, decades-old organization.

4. Start collecting ideas from employees using an online idea platform—with no idea what you're going to do with them afterward.

5. Avoiding any metrics that show how you're creating business value. Even though it may be hard to assemble a metrics dashboard in the first few months, you need to prepare for the moment when someone says, "What exactly is that innovation group contributing?" (Usually around the 18-month mark.)

6. Assemble a team with no "new blood"—just company veterans and insiders.

7. Neglect to develop and execute an internal communications strategy that explains what the innovation team is doing; how it can help other parts of the business; and how people can get involved.

8. Biting off more than they can chew: hosting a speaker series; sponsoring a startup accelerator; conducting design thinking workshops; forging university partnerships; trying to do Horizon 1, 2, and 3 innovation projects; etc.

9. Spend the first year taking meetings with everyone, up and down the org chart, trying to convert them all into innovation supporters. (Yes, this conflicts with Item #1.) Not everyone wants to see you succeed, and substantive innovation often conflicts with long-established (and profitable) elements of the business.

10. Neglect to make your process and pipeline visible. While different innovations require

different approaches, and lots of innovation is confidential, appropriate transparency helps the organization absorb a new innovation team more readily. (Rachel Antalek, Antalek Strategic Innovation Partners)

11. Go outside without solid anchoring inside—i.e., emphasizing open innovation over internal innovation programs. (Eugene Ivanov, Mozilla)

12. Encourage employees to “take risks” and “be like an entrepreneur” in their existing roles (or as additional scope to their existing role), without potential upside or protection from downsides. (Hunter Ashmore, IndustrialML)

13. Over-invest in a new space. A great lab space can be an accelerator, helping attract the right talent and partners and fostering better collaboration, but if all you can show after a year in the role is an expensive real estate expansion project, people will question your priorities no matter how cool the environment turns out. (Kevin Bolen, KPMG)

14. Hire the wrong people to lead the innovation. Innovation is driven by a visionary entrepreneur. It is not a team sport, not a collection of equals, not a committee. Successful startups are not a group of smart people sitting around brainstorming ideas. They are led by an entrepreneur with a vision for how to solve an unmet need. (Don Dodge, formerly of Google)

15. Not having clearly-aligned strategic domains to be used as a filter for incoming ideas, or as a guide for dedicated, exploratory discovery work. Have these domains defined or at least vetted by the C-level... (Kevin de Caluwé, CREAX)

16. Do not engage customers, [or] build a revenue model and/or profitability contribution around an innovation portfolio. Whether your innovation objectives are 1 percent or 99 percent supporting the economics, you need to be additive to the business. (Stephen Goodman, MIT)

17. Underestimate the people side of a change. Changes come to life through the work and behaviors of individuals. (Eva Gaskova, formerly at MSD)

18. Lack of clear definitions of success for projects/products/efforts in the innovation portfolio, to enable redirection of resources from failures to those with strategic potential. (Bryan Parsons, EY)

19. Not taking advantage of how much can be learned from other sectors, other kinds of companies, others' failures. Innovation is fueled by intellectual curiosity and a constant desire to learn. (Amy Radin, Author, *The Change Maker's Playbook*)

20. Start with a technology in search of a problem, rather than vice versa. (David Bilas, Progressive Insurance) ⬢

Why Do Innovation Jobs End?

By Scott Kirsner, Editor

TO UNDERSTAND WHY innovation and R&D professionals move from one employer to another, we fielded a short survey in early 2019 that focused on just that question. We asked, "If you've changed employers at any point in the last 10 years, leaving an innovation/R&D/new ventures role for any other type of role (even outside innovation), what was the reason for your move?"

The majority of respondents (65 percent) said their move was voluntary. But 20 percent said that they were the victim of a layoff or elimination of their role. Eleven percent said the entire innovation lab or initiative was shut down, or their budget was eliminated. Four percent of respondents said there was a different reason. Those reasons included:

"Relocation."

"My prior company was acquired by my current company."

"While the entire innovation group was not shut down, the area I was focused [on], associated with employee capability development, was no longer supported due to leadership change."

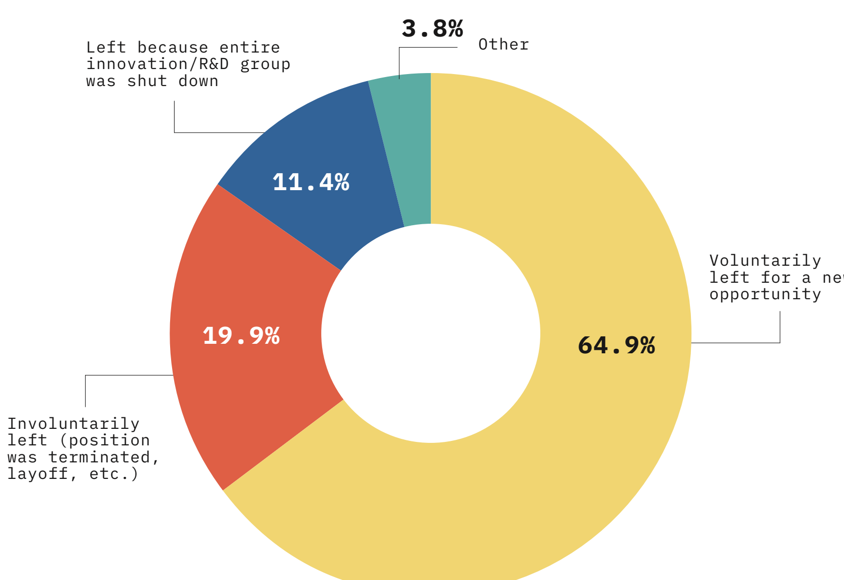
"Dysfunctional culture."

Innovation leaders sometimes see jobs come to an abrupt end, says Naomi Fried, "when their programs are cut because firms don't see them as delivering value, and budgets are tight. If innovation leaders can't demonstrate the relevance of their activities, they are at risk." Fried is a former innovation executive at Kaiser-Permanente and Boston Children's Hospital. She founded a consulting firm in 2016.

With the online survey, we received enough responses from three industries (financial services and insurance, technology, and consumer goods/consumer products) to break out the data from those industries. (Each constituted more than 10 percent of the overall responses.) Of note is that moves in financial services and insurance were slightly more likely to be voluntary (69 percent), while in consumer goods and consumer products, there were more involuntary moves (32 percent) as well as closures of labs or budget eliminations (16 percent). In tech, 15 percent of respondents said they'd been nudged from a job involuntarily, and 25 percent had dealt with group shutdowns or budget cuts.

Why do innovation professionals move from one employer to another?

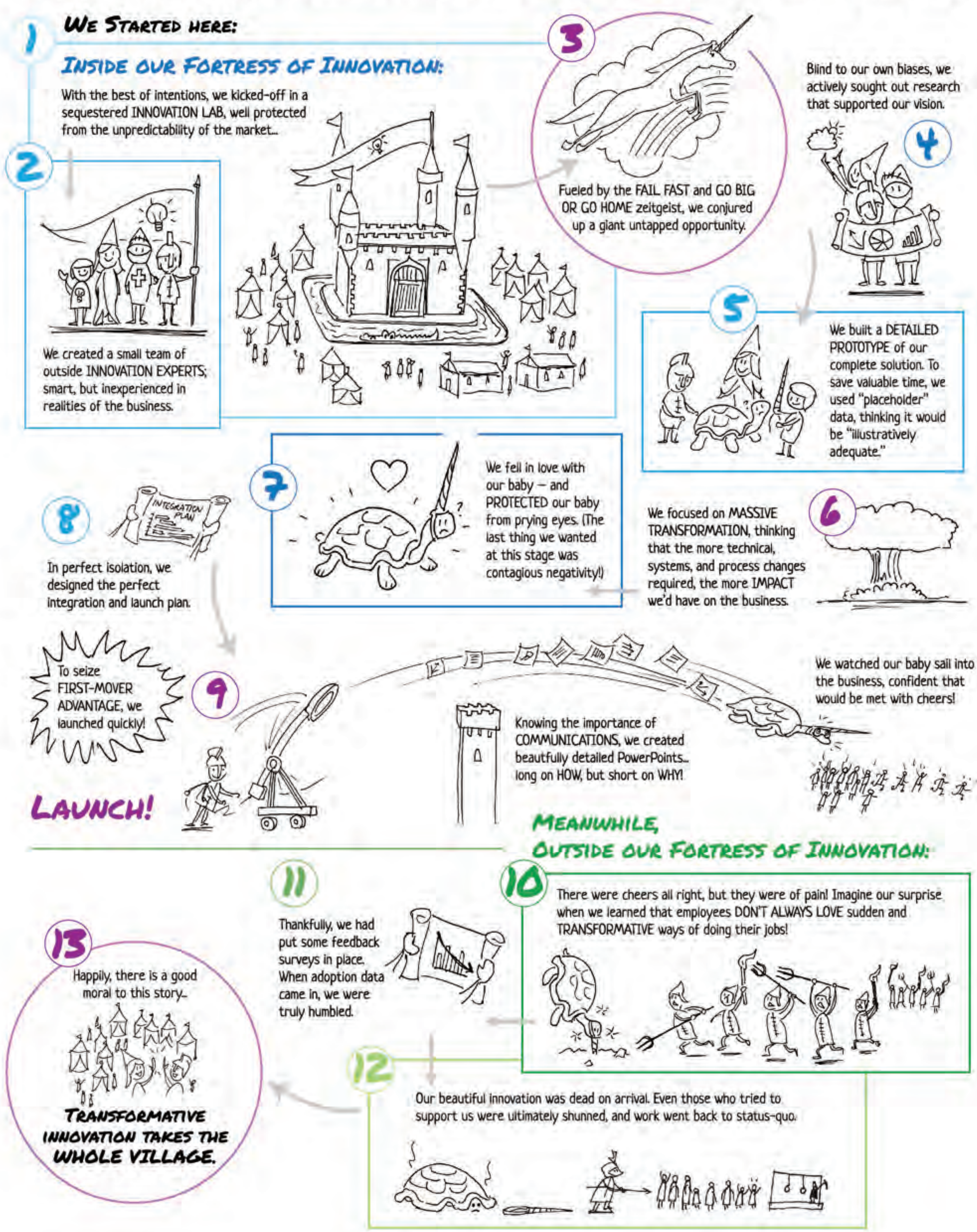
THE DATA AT RIGHT IS EXCERPTED FROM A LARGER REPORT ON JOB TENURE IN THE CORPORATE INNOVATION FIELD, AVAILABLE AT INNOVATIONLEADER.COM/TENURE-DATA.



BASED ON A TRUE STORY...

Failing Fast: An Illustrated Fable

I DRANK THE KOOL-AID, LIVED THE MEMES, AND TRIED TO DELIVER THE UNICORN **By Dan Roam**



Dan Roam is a best-selling author and the founder of The Napkin Academy (napkinacademy.com), an online visual-thinking training program.

What Can Go Wrong with Corporate Venture Capital Initiatives

Interview with Hunter Ashmore

Co-Founder, Industrialml, and Former Investment Principal, Boeing Horizonx

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Hunter Ashmore is co-founder of IndustrialML, a Boston-based enterprise software company. He was previously an investment principal at Boeing's HorizonX Ventures and a venture investment consultant to GE Ventures. Prior to those roles, he was director of business development at a venture-backed startup.

In an interview with *Innovation Leader*, he laid out nine things that can go wrong when companies decide to set up a corporate venture capital group. We spoke a few weeks after GE Ventures announced that it was looking to sell its entire portfolio of more than 100 startup investments.

1. If you're going to create a venture fund, you need to go all in. You need to put the time in upfront to figure out what the plan is. Don't figure it out after you launch the venture arm.

2. A corporate investor is typically at a company with a name that people know. It was incredible being at GE or Boeing making investments, because anyone would pick up the phone. The moment you make a few notable investments, your inbox blows up. At Boeing, for instance, any startup that has something that flies called you for investment. But you end up with a lot more noise on the inbound side than you would as a traditional venture capitalist. You need to be prepared to filter through it intelligently.

3. But you do want to be somewhat visible. You want to have a website that can be found when someone is searching. You want contact info on it, and you want to have a few profiles on LinkedIn explaining who's involved. ...Doing corporate venture in an under-the-radar way makes it harder.

4. It's easy to step on everyone's toes and irritate the company's subject matter experts by leaving them out of an investment that is in their domain. That said, there is a difference between being inclusive versus appeasing everyone. The latter is unrealistic to attain. There's a trade-off you have to make between autonomy and corporate politics. You need a clear understanding of how the organization works, and who the right people are

to have involved in screening investments.

5. That doesn't mean that you want the business units driving the investments. Yes, it can be good when a business unit brings you a startup that they're already working with, and it's relevant to what they're doing. The best investments, often, are startups [whose product is] going to end up in one of your products, or influencing a product or market. But you can end up with the tail wagging the dog—you have to be careful to avoid thinking something is a good deal just because the business unit people wanted to do it. A deal may look strategic, but that doesn't necessarily mean it's going to be beneficial. ...

6. You need the right mix of talent for a successful corporate venture team. Some companies have gotten it right, more by accident than by planning. You don't want 90 percent company insiders, or 90 percent outsiders. You don't want one voice or the other to be crushed. You need people with an understanding of how the organization works, and who the right people are to be engaging with. But you need enough external people who have done venture investments before. ...

7. Speed of action is often an issue. Traditional and corporate VCs often take longer to respond than startups would prefer. I will say that corporate VCs take longer when they need to determine strategic fit. The time required for this process is almost always underestimated by startups. It can take months, while financial VCs do not need this before they will issue a term sheet. The "soft no" and the closely related "death by a thousand follow-up questions" are the most frustrating things founders encounter when they are dealing with corporate VCs.

8. There is a tension between the corporate VC as an investor and the interests of the parent company. By that, I meant the corporate VC may have the best intentions when working with a startup, but they are still representatives of the company. One way this manifests is in the deal terms negotiation. Many corporate VCs have legal teams that push for conservative or protective terms. This is not because they are being predatory, but because it is their responsibility to protect the parent company. For the traditional VC firm, these terms can range from insignificant to, at worst, in conflict with their interests. The classic example is the right-of-first-refusal, a term that VCs dislike because it could present a hurdle to a potential exit through acquisition. To the corporate, they are often asking for this out of concern that a competitor would be able to snatch a strategic capability from under their noses. Even if an amicable agreement is reached on terms like these, it can drive up legal costs for everyone involved... Getting corporate legal and internal risk management teams on the same page early with what are considered common VC deal terms in the market will help avoid these headaches.

"You need the right mix of talent for a successful corporate venture team...You don't want 90 percent company insiders, or 90 percent outsiders. You don't want one voice or the other to be crushed."

9. Whatever a company considers its core product, the company is going to protect that. It's a little like an avocado. The moment it's overripe, everything outside the core is subject to change, but the core remains. It's not just corporate management changing, or the CEO leaving. It's the nature of innovation cycles in corporates. Maybe you realize that working with the types of startups you were investing in wasn't working, so you de-prioritize it. The investments may have mixed results, and people start questioning where it's going to go.

Corporates come at venture capital with a lot of hubris: "We're an innovative company. We ought to be able to do this." And you might end up with a very strong portfolio of investments, a cool list of companies—buy they're still going to have eight to 10 years before an exit occurs. That's a long time inside most organizations.

Why We Give Out an 'Epic Fail Award' to Employees

By Mike Proulx
CONTRIBUTING COLUMNIST
Chief Innovation Officer, Hill Holliday

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"Failure is not an option" is the official tagline for the 1995 motion picture Apollo 13. And while that's a non-negotiable mantra for the actual Apollo moon landing, you can bet there were dozens upon dozens of incremental failures leading up to that historic event. If you need recent proof, just recall that the SpaceX program has had its share of sensational failures, from rusty nuts triggering in-flight explosions to propulsion rockets blowing up just before takeoff.

The truth is, we all need to face failures when experimenting our way towards innovation successes. Even the best and most iconic brands fail (I'm looking at you Google Glass, Apple Newton, New Coke, and Amazon Fire Phone). What matters is how each of these brands learns from and reacts to their failures when designing and launching the next iteration of their products.

Five years ago, our agency Hill Holliday recognized that we needed to better welcome failure into our culture, in order to realize our vision of becoming one of the best creatively-driven modern marketing shops. Traditionally, we've done a lot as a company to celebrate individual and team successes, including our annual Jack Award—named after one of our founders, Jack Connors. This award honors a team whose ideas have had the greatest impact on our agency's business and reputation through teamwork that integrates multiple disciplines, both inside and outside the walls of our agency.

And while the Jack Award has traditionally recognized teams that take risks, innovate, and demonstrate an entrepreneurial spirit, it is ultimately based on an outcome of success. But what about all of the projects that start with the best of intentions, demonstrate a workhorse mentality, epitomize our "humble, hungry, human" culture...yet are complete and utter failures? That's why we introduced the annual Epic Fail Award in 2014. We wanted to cultivate the kind of guts and appetite for risk-taking that's required of true innovators.

Despite its awful-sounding name, this award has become something that Hill Holliday employees strive to win. Robert F. Kennedy once said, "Only those who dare to fail greatly can

ever achieve greatly." And that's exactly what we want to do at our agency: create work that's so great, people can't help but notice it. Often, that means failing in epic fashion during the creative and design process.

Among the past Epic Fail Award winners are a VR prototype that ended up making everyone who tried it sick to their stomach, as well as a fully-produced, ready-to-launch social video campaign that got pulled at the 11th hour. But here's the thing: in each of these instances the (epic) fail turned into a rousing success. That nausea-inducing VR prototype ended up becoming the first brand experience to use a motion-tracked Oculus Rift, and it ultimately won all sorts of industry awards. And that risky social video campaign not only eventually launched, but it was so well-received by audiences on Facebook that we ended up producing it for broadcast television. And the best news of all? Both of these projects went on to win the Jack Award the year after they were deemed Epic Fails.

And that's entirely the point. When people fear failure, they act safe. They rarely (if ever) take risks or stick their neck out for something they so passionately believe is the best thing to do. Low risk equals low reward. And when people act safe, they will only, at best, meet expectations. While that's fine if you want to confine yourself and your company to an existence within the status quo, it's not going to move the needle one bit if you actually want to disrupt, break through, or future-proof. You need to innovate.

Failure is not an option when you're landing on the moon. But when innovating, failure is not only an option that should be embraced; it must be an organizational imperative.

My First Big Failure

By Dan Seewald

CONTRIBUTING COLUMNIST
Founder + CEO of Deliberate Innovation
Former Head of Worldwide Innovation at Pfizer

The stories of dot-com swashbucklers had reached near-mythological proportions in my second year of business school at New York University. Students swapped tales of overnight startup sensations the way kids once traded baseball cards. And despite the fact that this was 2004 and the stock market was still rebounding from its crash, many of my peers still wanted to chase the startup dream. I was no different.

I was a full-time market researcher by day and a part-time entrepreneur by night. Over a period of three months, my co-founder and I spent countless late nights brainstorming and designing. The concept was simple, yet elegant: a technology platform that enabled local merchants to connect with local customers. A kind of Yelp before Yelp. With a 30-page business plan in hand, an expensive wireframe mock-up, and a rehearsed pitch deck, we ventured out into the New York merchant community to pitch. Only, it didn't go the way we planned.

Merchants were reluctant to take meetings with us. When they did, features we thought would woo them were received with complete ambivalence. We retreated and redrafted the concept. But after several months of retooling, we were still unsuccessful at convincing merchants to sign on. With our funds dwindling and our confidence shaken, I reluctantly abandoned the startup dream in exchange for my MBA diploma and a familiar, corporate role.

Fast-forward nearly a decade. I found myself in charge of constructing an internal innovation program with a focus on accelerating internal startup concepts. But before I embarked on the journey, I knew that I had to revisit my own startup experience and re-evaluate where it all went wrong. After all, if I couldn't honestly assess my own experience, how I could write a playbook for budding intrapreneurs? In doing so, four pieces of practical wisdom emerged that I would share as guiding principles for intrapreneurs.

DON'T FALL IN LOVE WITH YOUR IDEA

Love the process more than the idea. Otherwise, you will end up heartbroken. Most people believe that startup success is premised on a single flash of genius. But most great ideas are an evolution. Your initial concept is merely a commodity and should be treated as a creative muse. Where I went astray is that I believed so fervently in my concept, I was unwilling to compromise and pivot. When peers and customers critiqued the idea, I took it personally. I dismissed criticisms by reciting Henry Ford's famous quote: "If I asked customers what they wanted, they would have told me it was a faster horse." By falling in love with my idea, I stunted its growth. Years later, when I trained our internal startup champions, we put an emphasis on testing and learning rather than ideating. In fact, we tracked the number of iterations that a team produced and celebrated the teams that could show the greatest shift in their concepts based on a series of experiments.

LISTENING VERSUS PITCHING

When my partner and I set out to test our concept with customers, we spoke *at* them rather than *with* them. By doing so, we missed the most important part of the experience. Getting to "yes" is essential if you are a sales representative. But if you're an intrapreneur, your job should not be to sell, but rather to actively listen and learn. When our initial classes of intrapreneurs were trained, we put a significant emphasis on interviewing and applied empathy skills. Many organizations outsource these capabilities. But I've found that the ability to interview and listen, without becoming defensive, enables intrapreneurs to build products that truly delight customers. One example was a treasury team that was certain employees across the globe wouldn't understand or care about a complex rebate process. However, by listening to internal customers, they discovered that they not only understood the problem—but would eagerly volunteer to participate in collecting rebates.

MIXED THINKING STYLES ENHANCE TEAM PERFORMANCE

When I set out to find a business partner, I found myself looking for someone just like me. In the world of Myers-Briggs, the famous psychometric assessment of personality, I wanted a business partner who was an "ENTP," or an innovative leader. But what I quickly discovered is that having two people with very similar thinking styles created a tension and, in our case, introduced several blind spots that contributed to our undoing. Borrowing from this experience, I made it a priority to build balanced teams with a high degree of cognitive diversity. Our internal startup teams were designed with different thinking styles in mind. Team members explored other team member's thinking styles through game play and exercises. They learned to value what each team member brought to the table. But perhaps most importantly, we discovered that the most nimble teams were the ones that were most balanced in terms of thinking styles.

THE POWER OF SMALL

We started out too big. From the outset, our plan was to build a high-resolution prototype in order to test it with customers. When I presented our concept to customers, I ended up testing the *whole* idea rather than the riskiest parts of the idea, or the killer assumptions. When customers rejected the idea, it was very difficult to pinpoint the precise weaknesses. As a result, when we redrafted our concept, we were left to speculate on which changes were most important. We would have been much better served to have tested individual, risky assumptions and adapted as we went along rather than building the idea in its entirety.

With this wisdom, our intrapreneurial teams were encouraged to take a very different approach to their product development. Skip the survey. Leave the pitch behind. And in its place, design small, fast behavioral experiments that connect to the actions that you are trying to influence. One team that was proposing an app for pediatric patient education eschewed building out any technology, and instead tested the hypothesis that game play on an app could lead to more significant behavior change than patient brochures. Small behavioral tests like this provided rich insight and a step-wise approach that enabled many of the intrapreneurs to launch their internal startup concepts in small and disciplined ways.

Regardless of what people say, it is painful to fail. It took me nearly a decade to confront and accept my own first startup failure. But growth happens when we allow for the breakdowns to occur. Failure can be a powerful instrument for learning, as long as we don't sweep the experience under the rug. Today, I am not only teaching other people to be entrepreneurial, I am yet again chasing my own startup dream. By applying these principles to my pursuit, I plan to make my next story about a startup success. ⬢

COUNTER-INTELLIGENCE

Lessons from Whirlpool's WLabs

By Steven Melendez

Brett Dibkey knows what he shouldn't be doing at Whirlpool's WLabs: delivering incremental improvements to the refrigerator.

Instead, his 4-year-old incubator, located in Benton Harbor, Mich., is tasked with something a whole lot harder: creating new kinds of appliances in categories that aren't yet well-established. Like making beer at home, or "refreshing" clothes that have been worn once or twice.

Not everything they've launched has worked out perfectly. But Dibkey, a VP of Brand Marketing and Strategy at Whirlpool, opened up to share what they've learned so far.

Can you tell us about WLabs and some of the products you've developed?

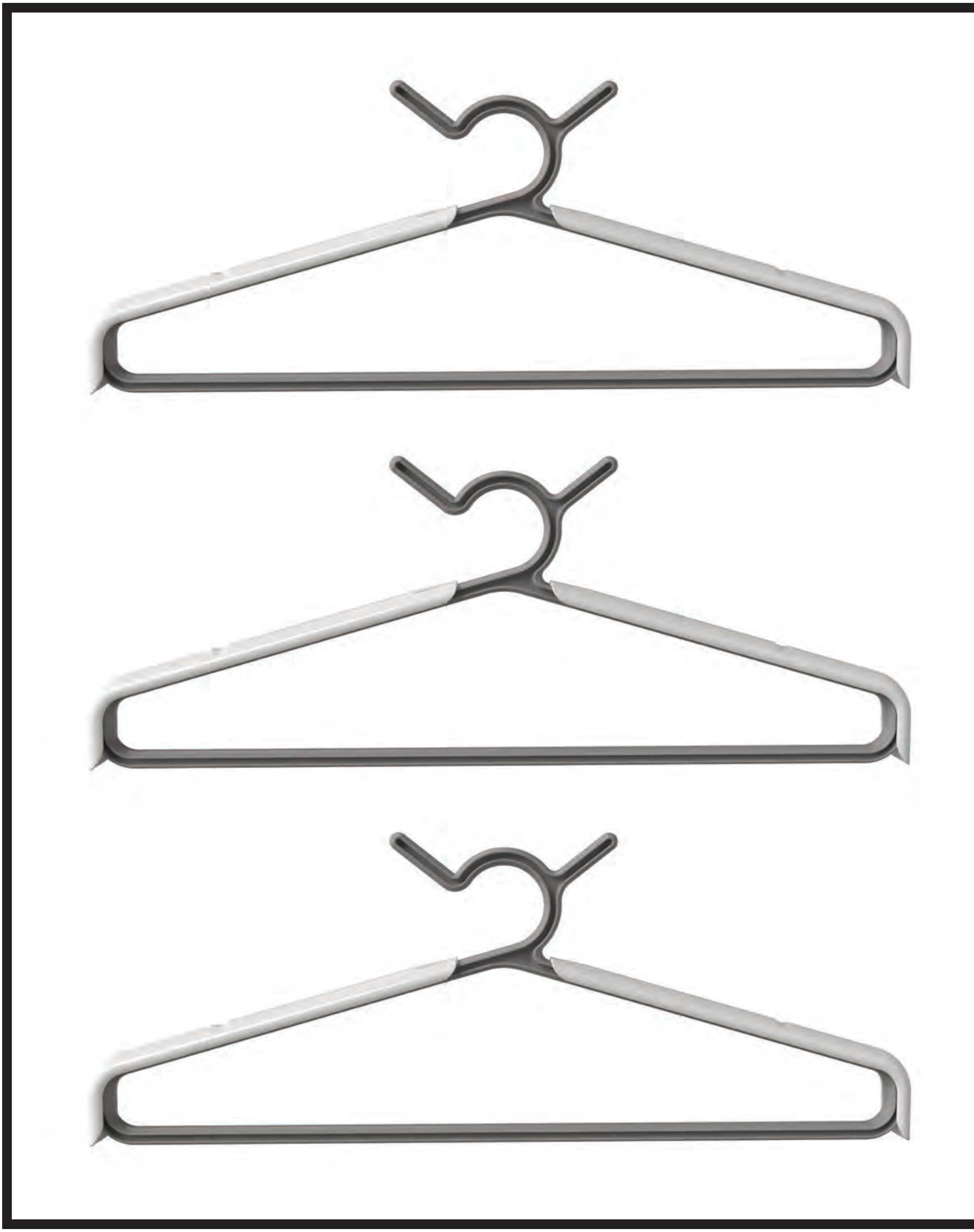
We're still relatively early in the journey. The organization is about 4 years old, so it's a relatively emergent group within the company.

One of our notable products is just shipping now, and the way we're going to market—through a presale on Indiegogo—is very different compared to most other products at Whirlpool. It's a food recycler called Zera. Basically, it's a product that recycles food and turns it into a soil amendment, kind of the equivalent of compost, within 24 hours. ...Managing food waste is a huge issue, particularly for major municipalities around the world. As food waste decomposes and sits in landfills, it creates methane gas, and methane has really high atmospheric warming potential. And generally speaking, consumers just feel guilty about wasting food that comes into their home.

Composting obviously is a way to address that need, but it's not well-adopted by many people, because it's messy. ...This product is intended to bring the habit of recycling food or composting food into the home in an ick-free, odorless way. We developed it in the labs a couple of years ago, went to the Consumer Electronics Show [in 2017], and introduced the product.

As we were preparing to launch, we discovered an engineering issue that needed to be addressed. We basically redesigned the product from the ground up and are now shipping, starting in late Q1. The folks that we sold to on Indiegogo all hung with us, so we sold out within a week the full allotment of the product. We think it's going to solve and address a real, meaningful

Whirlpool's Zera Food Recycler, priced at $1200, converts food waste into fertilizer faster than traditional composting.



"I think our approach—in terms of believing that we absolutely had the right solution, and scaling production and our go-to-market activities accordingly—was probably a bit off the mark."

Swash, launched in 2014 and priced at $500, was designed to remove wrinkles and refresh clothes. It was later discontinued.

consumer and societal problem.

Those are the types of products that I think are indicative of WLabs. We're really not trying to incrementally improve a refrigerator... We've got lots of people in...the organization focused on that every day. This group is really more oriented toward addressing bigger consumer problems, or delivering really compelling consumer solutions in spaces that have been unaddressed.

How does WLabs fit into the larger Whirlpool organization?

WLabs is a fairly small but dedicated group within Whirlpool. [Whirlpool doesn't publicly disclose the size of the WLabs team.] The resources are dedicated to WLabs, and don't generally work outside the group.

WLabs reports into the brand marketing organization, but has high visibility throughout the organization. The team will occasionally host "open houses" for other employees within Whirlpool to share projects they're working on. They also host a number of events to cultivate new ideas from the broader Whirlpool employee population.

In addition to hosting the WLabs team, The Garage also serves as an innovation center for the broader organization. So, innovation-focused meetings are often held in this space by teams from across the organization.

You mentioned using Indiegogo, which as you said is a bit of an unusual approach for a big consumer appliance company. How in general do you launch and promote Labs products, and how do you decide what's best for which product?

Honestly, like a lot of innovation and invention, it was born out of a failure. ...Several years ago, in conjunction with Procter & Gamble, we launched a fabric care product called Swash.

It was intended to be a fabric refresher. There was a habit within the US that consumers were re-wearing clothes more often. Twenty years ago, you couldn't find anyone that would be willing to admit that they re-wore clothes [without washing]. Today, it's a commonly-accepted practice and viewed as just a smart thing to do. There wasn't really a solution for refreshing clothes that had been worn before.

We, in conjunction with P&G, developed Swash, took it to market and honestly just didn't get the level of consumer adoption that we both expected. But we ramped up production considerably—Whirlpool likes making lots of things with low variation. ...We went to traditional retail to sell the product, and when we found that the consumer solution didn't reach critical mass from a market-adoption perspective, we had a lot of inventory... It was an experience that didn't go as we had anticipated.

As a result of that, we began to rethink the way we went to market with new-to-the-world products. I think the Zera example is a good one. Based on the Swash experience, we built micro-manufacturing capabilities, so rather than build products in the tens or even hundreds of thousands, we developed a capability to build product in the hundreds. The objective is to go to market with an early adopter community like [the one that] exists on Indiegogo, and really enroll that community in co-development of the products over time.

We're going to make a couple of thousand Zeras, get them in the hands of passionate early-adopter consumers...and ultimately work with them to improve the product as it evolves.

What do you think led to the Swash not being as successful as you anticipated?

It's a fairly big product—it's an upright product that you put a single garment into, so it has to accommodate an extra-large men's shirt. It's probably close to five feet tall, so it consumes a fair amount of space. We heard feedback from consumers that they just thought it was too big, and in some cases didn't fit into their lives.

As we were developing the product, we talked about this notion of "clothing purgatory" that a lot of people have in their closet. They wore a shirt—it's not quite clean, it's not quite dirty. It [just] goes on a hook in the closet... Swash was intended to help get the product out of purgatory. It would de-wrinkle [and] remove odors. It would get a non-stained garment that had been worn ready to wear again.

So, I think the consumer insight was good. I think our approach—in terms of believing that we absolutely had the right solution, and scaling production and our go-to-market activities accordingly—was probably a bit off the mark. In retrospect, we probably would have taken more of a Zera approach, where we would have invested in building a smaller number of these products and putting them in front of consumers, getting feedback and then, based on that, evolving the solution to meet the needs of the mass market.

That's what we're doing with Zera.

Have there been other products that have passed through the Indiegogo pipeline?

The other product that we had on the Indiegogo pipeline was a beer fermenter called Vessi. The origin of the product was an internal employee "Shark Tank"-type competition. A group of employees banded together and saw a gap in the home brewing process, particularly in the fermenting and dispensing step. Things tend to fall apart in fermenting home brews. There's a lot of friction and a lot that can go wrong, so we developed a solution to address that.

We went to market on Indiegogo. It did exceptionally well. It's actually a business that we recently sold—we no longer own Vessi, which we still see as a tremendous hit. It's just not a product with the kind of market potential that we thought ultimately Whirlpool would be the best owner for, so we decided to sell the business earlier this year.

Are there any that have evolved to become typical Whirlpool products?

To be honest, we haven't gotten there yet. ...The WLabs organization is almost 4 years old. Our development cycle for hardware that goes in consumer homes is two to three years, so we're still in the early stages of the journey.

We see a lot of promise in Zera. We think that is going to be a platform for further innovation and a mass-market opportunity. ...We're also in the process now of launching a Wi-Fi connected countertop oven that can detect food based on image recognition. It detects what you put in the oven and...can download the right algorithm to prepare, if it's a steak, the steak perfectly. We see a mass-market adoption opportunity for that, but we're still a couple of months away from even launching the minimum viable product under the WLabs brand.

How do you incorporate the feedback from Indiegogo as the products develop?

That's been an area that we've been very pleasantly surprised about. Even though we had a fairly notable delay in the launch of Zera, the early backers stuck with us.

More than 90 percent of the people that invested two years ago...waited for the product. We found that it's really important to provide updates and engagement. The folks that are backing our products tend to be very passionate and are not shy about sharing feedback about how to make the product or experience better. All of the comments that we receive from that community are read and responded to by people on the team, so it's not someone sitting in a call center somewhere—it's the engineers and the marketers actually working on the project. ...

After the fact, do you have a process for evaluating what went wrong and what went right and deciding how that's going to shape future projects?

We have a post-launch review process at given intervals, and [we] take a very structured approach in understanding what is consistent with our expectations and what is varying from our expectations. We define what our learning objectives are in a very structured way. Those can span everything from go-to-market, messaging, and what's moving the needle, to the in-home consumer experience. We...measure what we see, and whether our learning objectives are being met.

Now that Zera is getting in the hands of consumers, what's the next step?

The next step is really to engage...the folks that have [Zera] in the home, learn from their experiences, and incorporate that learning into the next generation of the product. That's our acute focus at the moment. ⬢

What you can learn from the short life and sudden death of the world's first social robot. By Blade Kotelly

POST-MORTEM

Jibo

Author Blade Kotelly is the former VP of Design at Jibo, and a Senior Lecturer at MIT. He's pictured in the front left, next to Jibo founder Cynthia Breazeal, on a company boat trip.

Jibo was a brilliant idea. It would be the world's first social robot, bringing to life years of academic research in the form of a product that would live in a consumer's home. It was an amazing invention, lovingly designed and carefully crafted by people passionate about the product and its persona. Nothing captured the imagination of millions of people the way that this little robot did. It landed on the cover of *Time* as one of the best inventions of 2017, the year it launched.

Despite this promise, Jibo the business failed after raising more than $80 million and delivering a few hundred robots to early customers. The servers were turned off in 2019, and Jibo bade a sad farewell to its owners. "Maybe someday," it said, "when robots are way more advanced than today and everyone has them in their homes, you can tell yours that I said hello."

Jibo was an invention, but I'd argue that it never actually became an innovation. It failed to create value for its employees, investors, and most of all, its customers. This its failure had little to do with poor product-market fit, and Jibo had plenty of advanced robotics inside. Instead, Jibo failed in its own special way, in ways that illustrate how other creative inventions also fail.

Above, Jibo on the cover of *Time* shortly after its October 2017 launch. At right, a 3D-printed prototype.

THE BEGINNING OF JIBO

When Jibo started, it was born from a great place: an MIT researcher had proven that people interact with physical robots in very special ways, and that same research and vision made investors believe there was a clear (albeit ambitious) path to creating the world's first social robot for the home.

The early team worked to create a prototype that showed how a physical robot, while remaining stationary on a desk and only articulating its body, could yield a magical experience that people wanted. And boy did they want it! The tiny team took on a CEO and pushed out a concept video on the crowdfunding site Indiegogo. Before they knew it, it was the most successful Indiegogo campaign ever. This proved that people wanted the fantasy of the social robot they saw in the video—even if they didn't *really* know what it was going to be like. The public's understanding was overwhelmingly grounded in robots from the movies and TV: Rosie the Robot Maid from The Jetsons, R2-D2 and C-3PO from Star Wars, TARS and CASE from Interstellar, and every other robot in between. However, unlike other pieces of personal technology for which people have good mental models, people didn't know what it meant to have a robot companion, because no one had *ever* owned a social robot.

I was the Vice President of Design at Jibo for two-and-a-half years, and my incredible internal (and extended) design team created everything from logos and packaging to movements, screen animations, speech interactions, touch screen interactions, hole patterns for the speakers, and more. Other teams believed that design would be critical to the product's eventual success in the market, and they worked tirelessly with us to give their very best. But their best didn't make up for the unique set of failures that we, as a company, made.

FOUR STRATEGIC FAILURES

Failure #1: Creating a Category Is Really Hard. This is where the heart of the problem really begins. Since there was no dominant design for what a *social* robot is supposed to be, and since no one knew how to successfully make one that lived with you at home—including the team that had the initial vision—there were few starting points to work from. This was the Wild West of human-machine design: no rules, no reference designs, no best practices. And instead of being developed in the well-funded R&D arm of a corporation, it was being built under the brutal pressure of a startup. We needed to hire our first employees, design everything, write all the code, manufacture complex hardware, ship it, and support it. It was a Sisyphean task with a classic innovation problem: first-mover *disadvantage*.

There's a good reason why most successful startups don't create new categories, but rather build on existing ones. Being a first-mover is much harder and riskier than being a fast-follower. Even one of the most innovative companies in the world, Apple, is generally a fast-follower (and sometimes it is a slow one.) Apple didn't invent the digital smartphone, the graphical user interface, the MP3 player, Bluetooth headphones, or the smart watch. It's not that they didn't bring incredible innovation to these product categories—but the categories at least existed prior to their entry. They could "reinvent the phone" because smartphones already existed. They could put 1,000 songs in your pocket because portable MP3 players were already on the market. Apple just figured out how to do them better. And when Apple was first to market, it often had rocky starts or outright fails, like the Newton MessagePad, which preceded the PalmPilot by four years. (If you've never used Newton MessagePad, I can tell you from personal experience that

"There's a good reason why most successful start-ups don't create new categories, but rather build on existing ones. Being a first-mover is much harder and riskier than being a fast-follower."

it was a feat of incredible design, and it included inventions that the iPhone still uses to this day.) And AppleTV is finally getting traction after a slow and prolonged deployment.

Solution: Create transformational innovations in an existing category, or expect that you'll need the horsepower and protection of a larger organization to weather the storm of uncertainty.

Failure #2: Creating a Shared Vision is Hard. As we grew the staff from 13 to more than 100, each new employee was incredibly committed to the concept and to helping reify the vision—as *they* understood it. Of course, not everyone understood the vision the same way. Some interpretations of what the product should do were incredibly specific and easy to render: "I want it to twerk," said one executive, and the next day Jibo was twerking to the song "Turn Down for What?" While nauseating for some of us, it was an important step because it was something tangible we could react to, experience, and discuss.

However, at other points, it was much harder for the teams to form an aligned vision. As the VP of Product once said to to me: "I believe Jibo is alive" Me: "Alive, alive? Or just like, makes you feel like it cares?" VP of Product: "Actually alive."

Not only did people have different beliefs about the vision, but they also differed on the specifics of what we should spend our limited time working on. Amazon had begun shipping its Alexa intelligent speaker in 2013, the year after Jibo was founded. Our product team said, "Amazon's Alexa has a timer, so we need a timer," while the design team said, "We should only create experiences that convey the social character." When we weren't able to effectively resolve these conflicts, small fissures widened into chasms, and we lost our ability to jointly agree on what the next sprints of work should be.

Snapchat sketches of Jibo sent to the author.

Solution: When teams disagree about their interpretation of the vision, be willing to:

1. Address issues, knowing that some of the right answers may mean delaying an already ridiculously tight schedule.

2. Ensure that the team members can handle lots of ambiguity.

3. Know that prototyping and externalizing the actual experience is the only way to inform a shared understanding.

Failure #3: We Lacked Courage and a Framework for Transformational Innovation. After leaving Jibo, I spent some time reflecting on the lessons I learned, and I developed a framework for creating transformational innovations that I call the Experience Centerline. It's a simple concept that refers to establishing the core of what makes the user experience of a product differentiated and valuable.

Elegant solutions to complex problems are incredibly difficult to create, because it means that a lot of time and effort must be spent defining the core of what the product needs to be without any of the extra embellishments (this is the Experience Centerline). In addition to that, you need the courage to stand by your beliefs—even when it's easier or desirable to hedge your bets by deviating from it. Startups face this precise challenge whenever early customers or even investors ask for features that aren't on the Experience Centerline. Do you stick to your guns with a messianic sense of purpose, or do you cave because of outside pressures and incentives?

When it became clear that Jibo's production schedule was slower than the executive team wanted—by a factor of three—and customers who plunked down $700 in the Indiegogo campaign and the company's venture capital backers were getting restless, the strategy changed from "Make the best possible product" to, "Ship it now, and we'll work on it when it's already in the field."

At that point, shipping the product was probably the only acceptable thing to the investors, customers, and the team. To be honest, it would have been much harder to pause the project, endure a massive round of layoffs, rework the experience with a smaller team, and spin things up again. But making hard choices is what often leads to great innovations.

Solution: If you don't spend enough time up front perfecting the core of the experience, no amount of tweaking later on will help you recover from the gaps left begind after abandoning the hard work of deeply understanding and creating the Experience Centerline.

Failure #4: Lack of Leadership Skills. It wasn't that we lacked leaders, or that we lacked leadership. In fact, we had a whole team of successful, experienced leaders in all parts of the company. But we did lack certain leadership *skills*.

I'm a Senior Lecturer at MIT, where I teach design thinking and innovation in the Gordon-MIT Engineering Leadership Program to undergraduates as well as professionals. We believe, and the research has shown, that teams benefit when all members have strong leadership skills—from the CEO all the way down to the most junior engineer. However, knowing *about* these skills doesn't necessarily mean they will be implemented. Paraphrasing a colleague of mine: just because you know *about* skiing, doesn't mean you can get on a mountain, strap boards to your feet, and ski.

There are a variety of leadership skills that we teach in the Gordon-MIT Engineering Leadership Program that could have helped, including advocacy, identifying the paradox, vision creation, self-awareness, and courage.

Those kinds of skills would have helped the team communicate more effectively and operate more cohesively, but there were more errors that exacerbated the problem.

FOUR TACTICAL ERRORS THAT COMPOUNDED THE PROBLEM

In addition to needing those leadership skills at various levels of the organization, we made four key tactical errors (so try to avoid this when you're in a high-pressure situation):

Error: We Made A Software Platform Before We Knew What It Needed To Do. That's maybe a little glib, because we thought we knew what it needed to do. But since we hadn't yet created a version of the product that worked and which we liked, we shouldn't have assumed we knew what interactions we should support, or the tools that developers would need at that time. We spent a lot of resources creating a robust software development kit (SDK) with the belief that a bunch of people outside the company, who hadn't spent any time developing a social robot before, would be able to create desirable add-on skills for Jibo—when we hadn't even solved this problem yet.

Lesson: Until you know what the experience should be like, don't expect that others who aren't living with the problem as deeply as you will be able to constructively address the problem.

Error: We Didn't Have a Method to Support Rapid Learning. The design team couldn't learn fast enough, because the hardware and SDK weren't yet working. In fact, we spent months using a Samsung phone taped to a model of the robot that designers moved manually, to try to get an understanding of how the robot might feel. If we created the ideal experience first, lived with it, and then tuned it up, we would have quickly learned the key areas we needed to focus on.

Lesson: Focusing on creating a single working solution may have made it seem like progress was slower—but it would have ultimately led to faster deployment.

Error: We Tried to Motivate the Team with Gloom And Doom. At a team meeting, an executive tried to motivate the team by telling everyone how little money and time we had before going bankrupt. Of course, that technique didn't help our already talented and highly-invested team be more creative or develop new technologies faster.

Lesson: What the team needed was clarity about the vision, a single point of advocacy for that vision, and the courage to stay the course without distraction.

Error: We Got Distracted by Assumed Competitive Pressures. Shortly after the initial Jibo team was hired, Amazon's Alexa launched, and we focused on their success, which was wrong and distracting. Unlike Alexa, Jibo didn't need features like a kitchen timer or a shopping list. A social robot has one job: to be social in a way that people want to live with.

Lesson: It's essential to differentiate between the kind of market signals that require you to change your strategy, versus market noise that you should ignore.

I left Jibo before the robot launched, because I realized that we wouldn't be able to deliver the Experience Centerline. We had over-invested in areas that pulled us off the course of discovering and learning what the core of the product needed to be. Prior to leaving, I put the names of everyone on the team on a metal plate inside the robot. If you take apart a Jibo, you'll see these signatures—just like on the first Macintosh. Our signatures became the physical testament to the one thing that we *were* aligned on: we were trying to create a glimpse of the future. ⬢

Greg Shewmaker (left) and Brent Overcash (opposite), co-founders of TeakOrigin, pictured in 2016 at Target's Food+Future innovation lab in Cambridge, Mass.

Staying Alive

A Project to Create a Handheld Food Quality Analyzer Survived Near-Death Experiences at Two Corporate Innovation Labs. Can It Find Its Way to Market at a Startup?

By Scott Kirsner

PHOTOGRAPHS BY KARA SWENSON & KRISTOF TOROK

It's rare that a project survives the death of the innovation lab that hatched it.

But an idea that was originally dubbed Project Tricorder, born five years ago in the Hong Kong offices of the multinational grocer Tesco, survived not one but two near-death experiences. The notion was to develop a handheld scanner that could analyze the freshness of a piece of fruit or fish, much the same way that the Tricorder in *Star Trek* could analyze the health of living things.

Two former Tesco employees, Greg Shewmaker and Brent Overcash, took the idea with them when they joined Target in 2015, and continued to develop it under a new name: Illuminate. But when the Minneapolis retailer curtailed much of its innovation investment in 2017, the food analyzer was once again an orphan.

Shewmaker and Overcash weren't ready to shelve it and move on to something else. They had met with investors who might be willing to provide capital. They had met with a potential partner—the lab equipment maker PerkinElmer—that might provide other support.

As spring turned to summer in 2017, Shewmaker and Overcash wondered if they might be able to turn Illuminate into a standalone venture. Could a pair of intrapreneurs succeed as entrepreneurs?

SHIFTING FOOD ANALYSIS FROM ART TO SCIENCE

Even at a high-end sushi restaurant, as much as 60 percent of the "tuna" you order is actually some other fish, says Overcash. And "extra virgin olive oil" may be blended with other kinds of less-expensive oils, like safflower or chestnut. The average apple you pluck out of a grocery store bin has about half the nutritional value that the United States Department of Agriculture standards say it should have.

"We think you deserve to know that," Shewmaker says. But there are limitations in the way most grocers sample the food items moving through their supply chain. Quality control often consists of cutting open a piece of fruit to smell or taste it, or using a device called a refractometer to measure its sugar content—what's called a Brix test. After spending time in various grocery distribution centers watching a single sample stand for the quality of a palette-load of produce, Shewmaker says he concluded that "it's a total art." What if you could develop a technology that could make it more of a science—and allow grocers to test more of what was coming into their stores?

When Shewmaker and Overcash initially began developing the concept, they were running a group in Hong Kong called Tesco Advanced Product, an innovation lab far away from corporate headquarters in the UK.

"We could partner directly with a giant manufacturing base in Asia," Shewmaker says. "We could move at Asia speed, versus London speed." One of the group's projects was creating an inexpensive tablet computer called the Hudl that Tesco sold through its 6,800 locations. Tesco sold several million Hudls, and the next project for Tesco Advanced Product was supposed to be a smartphone. Shewmaker and Overcash were exploring ways to make it "sexy and exciting beyond just the standard Android device." One possibility they tossed around was building some kind of food-analyzing technology into the phone, or a phone case, so that consumers could run their own quick scan on a peach or persimmon while in a Tesco store.

"It was a concept—just videos and PowerPoint decks—at that point," says Overcash. They were starting to make the pitch for funding, but they hadn't started to develop the underlying technology that would be required.

Tesco's executive team seemed supportive. But suddenly, in September 2014, the company revealed it had overstated its profits in the first half of that year by more than $300 million. Tesco's stock lost almost half its value in the wake of the revelations, and several executives were fired. Britain's Financial Conduct Authority launched an investigation. The Tesco Advanced Product group didn't get shut down abruptly, Shewmaker says, but rather "faded away, with the team leaving to pursue other things, and the organization focusing on damage control and core ops."

THE TARGET ERA

As Tesco was grappling with the accounting scandal, a recruiter had come to Shewmaker with an opportunity: join Target as an entrepreneur-in-residence, as part of a new program that was being launched in 2015 to help the company incubate new ideas. He decided to take the job, and move to Minneapolis. He'd be working closely with Target's Chief Strategy and Innovation Officer, Casey Carl. And he'd have access to an initial "seed fund" of $1 million.

"Rather than go and dabble with the million bucks—take some Post-it Notes, build some cardboard prototypes," Shewmaker says, he opted to

Employees of TeakOrigin work in lab space provided by PerkinElmer, a maker of lab instruments.

"go all in" on continuing to pursue the germ of the Project Tricorder idea. He found an engineering firm in Florida that focused on building measurement instruments, Ocean Insight, and tasked it with building a prototype of the food analyzer. The goal was to have something to demonstrate to Target's board of directors within three months.

Eleven weeks later, Shewmaker had a working prototype. He showed how it could assess the quality and authenticity of meat, apples, and wine. "It was sci-fi happening on the top floor of Target headquarters," he says. In a complicated grocery supply chain like Target's, executives felt it might help them pinpoint where problems were occurring, and make sure high-quality food was ending up on shelves. The project had been rebranded from Project Tricorder to Illuminate.

The finished Illuminate device, they posited, would be something that could be used in Target, and sold to others throughout the food supply chain. "As an entrepreneur-in-residence, the idea was to create a business that could be separate, and test it inside of Target," Shewmaker says. "They'd get first dibs, but it would be released to the world eventually."

The demo in the fall of 2015, Shewmaker says, helped unlock more funding. "It was the genesis," he says, of a bigger initiative at Target called Food+Future, which involved collaborations with the design firm IDEO and MIT's Media Lab. They set up a basement innovation lab in Cambridge, Mass., just a few blocks from the edge of the MIT campus and the local IDEO office. Overcash moved from Hong Kong to the Boston area. The lab was home not just to the Illuminate effort, but several other projects—some being developed by MIT researchers and students, and some proposed by entrepreneurs that had come to Target-sponsored events focused on three key themes: understanding your food, accessing better food, and trusting your food.

Shewmaker and Overcash now had access to Target stores and warehouses, where company staffers would test various versions of the Illuminate technology. One device, about the size of a microwave oven and dubbed the "Super Bench," was built to compare the accuracy of spectrometers available at different price points. (A spectrometer uses light to determine the chemical composition of an item—it can be used to determine whether a 14-carat ring is actually 14 carats, or whether a piece of tuna is actually tuna.) Inside it were a $50,000 spectrometer, and also one that cost just $300. That let them compare the quality of data they were getting from each one.

"We wanted to prove we could do one million scans" of food items in real-world environments, Overcash says. As they progressed toward that goal, they were also realizing that there was no "gold standard data" to compare food items to. What was the chemical make-up of a perfect pear, or a ready-to-eat banana? A lot of the data they wanted was in disparate nutritional databases. Much of it was very old, and based on a small sample sizes. Some of the data was simply "unusable with modern-day technology," Shewmaker says. He and Overcash were slowly realizing that there was no one building a "common source" of data about food—a reference not unlike a pricing book for antique collectors, or a field guide for birders.

But before they could assemble that kind of dataset, or turn their bigger devices into finished

An early prototype of the food analyzer was dubbed the "Super Bench."

handheld "ray guns" that could be deployed broadly, there were worrisome signs in the company's core business. Target had a challenging holiday season in 2016, with sales and store visits dropping. "Overall, the season simply was not up to our expectations," Target CEO Brian Cornell said, in an interview on the company's website. The company lowered its profit forecasts.

By February 2017, Target's hometown newspaper, the Minneapolis *Star-Tribune* was reporting that a Store of the Future project was being shelved. By April 2017, the company's Chief Strategy and Innovation Officer, Casey Carl, was on the way out. By May, Shewmaker got the news that his group wasn't going to survive.

"It was baby and bathwater," he says. "It was about focusing on the core, and investing in the stores." Shewmaker says he "understood it with my corporate hat on. It was the right decision for them… But I was disappointed."

The same day that Shewmaker and Overcash got the news, they "immediately shifted gears," Overcash recalls. "We were thinking, how do we survive after the fact?"

FINDING A NEW HOME

Almost all of the staffers at the Food+Future lab in Cambridge scattered after the news came. Shewmaker says he didn't want to make false promises about whether they might be able to find a new source of funding, and "I wanted everyone to make sure they were focused on themselves first."

One of the companies that Shewmaker had encountered through Target's sponsorship of the MIT Media Lab was LKK Health Products Group, a Hong Kong-based food ingredient company. Their executive team had visited the Food+Future lab. "They'd seen the demo many times," Shewmaker says. "I called them up, and they basically said, 'We're in.' It was a one-phone-call pitch, and we were off and running." Shewmaker says that the investing division of LKK, Happiness Capital, agreed to put $2 million into a new entity that would keep developing the Illuminate concept.

Target wanted to see the project survive, Shewmaker says. Their sole stipulation: just don't keep calling it Illuminate. They were "worried about the association," he says. "If this thing is wildly successful, they look really stupid because they killed innovation. Or if we do something dumb, and are a failure," that could also reflect badly on the retailer. But Shewmaker says they were generally supportive.

The new name that Shewmaker chose: TeakOrigin. "Brent and I were scrambling to set the company up, and trying to think of a name," he explains. Shewmaker owns a house in Woodstock, Vermont, and TeakOrigin is intended to be a synonym (teak being a kind of wood, stock being a place of origin).

"I thought the name was dumb, but it stuck," he says.

Overcash had had some early conversations with PerkinElmer, a maker of lab instruments—including spectrometers and other analytical devices. When it came time to try to set up Illuminate as its own venture, he got back in touch. "We needed lab space," Overcash says, "and they had some empty, brand new lab space" in the first floor of PerkinElmer headquarters in the Boston suburbs. The company offered TeakOrigin the lab space for free—plus some of its high-end lab instruments—without asking for equity or rent in return. The larger company hoped that the startup would help test some of the new equipment it was making, and perhaps collaborate on some new, lower-cost instruments especially geared to the food industry.

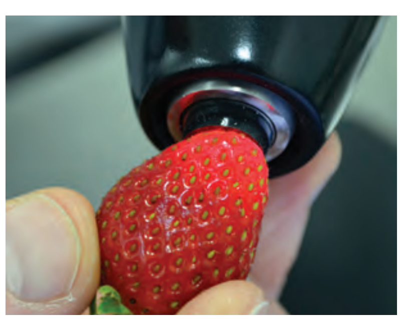
Just three employees—Shewmaker, Overcash, and Chief Scientist Ellen Miseo—made the leap from Target, and the Illuminate era, to TeakOrigin.

FROM HARDWARE TO SOFTWARE

While at Target, Shewmaker and Overcash had spent much of their time—and budget—building proof-of-concept devices. But as a newly-independent company, they started to shift their focus from hardware to software. Other companies, they'd observed, were beginning to produce inexpensive spectrometers. There was even one for sale on the crowdfunding site Kickstarter, for $300.

There were also companies trying to apply artificial intelligence to the problem of analyzing food: just look at enough oranges, and eventually the software will learn the characteristics of a perfect orange. But he and Overcash felt that there was still a need for a "common source of data—otherwise these AIs and devices will never work in the real world," Shewmaker says.

Gathering that data became TeakOrigin's sole focus. One of its datasets describes the sort of "Platonic ideal" of different kinds of food, starting with popular items like apples, bananas, avocados, and grapes. Another dataset assembles data collected from the field—the aisles of major grocery chains—so that grocers can see where they stand relative to competitors. An early test analyzed strawberries and found that Walmart was offering the top quality berries, and Costco was bringing up the rear. "Walmart could go out and say, 'We're giving you the same quality, at a lower price, than everyone else,'" Shewmaker says.



TeakOrigin's software can give fruit like strawberries numerical scores for criteria like antioxidants, Vitamin C, moisture, and citric acid.

At a countertop in the company's lab, Dan Accetta, a data scientist at TeakOrigin, is wielding a $1500 hand-held scanner made by a Taiwanese company called InnoSpectra, connected by Bluetooth to a laptop. The subject of scrutiny this morning is an appetizing-looking Fuji apple. In 15 seconds, the scanner takes several hundred scans of the apple, and sends them to be interpreted on the laptop using TeakOrigin's software and database. The score? This apple is a 7, on a scale of 1-10. It gets decent marks for vitamin C, but for a Fuji, it's kind of low on antioxidants.

Accetta is one of nine employees at TeakOrigin. The company has raised just over $5 million in funding from investors. Its plan is to launch what Shewmaker calls the Food Quality Index in November of 2019—a way for one retailer to compare the quality of its produce to competitors. Then, in January of 2020, the company will be having its official "coming out party," he says, as part of the National Retail Federation's annual trade show in New York.

LIFE AT A STARTUP

Sitting at a table in a Spartan café area in the PerkinElmer headquarters building, Shewmaker reflects on the differences between hustling to make a startup successful, and getting a new venture going inside a more established company.

"Starting a company is the dumbest possible business model you could dream of," he says. "You have no resources, and no scale. The best place to do something new would be inside a massive organization with all those resources, but culturally, it's very hard to do."

One key difference, Overcash interjects, is that as a venture capital-funded startup, "we're better able to control and predict our destiny. In Target, you could walk in, and it's over one day. We can at least see it's coming, because we control our own money. With these corporate innovation initiatives, you don't control your own destiny. You're a budget code."

Thinking back on the Target experience, Shewmaker muses that perhaps he should've spent more time at company headquarters in Minneapolis, "managing those expectations and relationships."

Would it have made a difference? Probably not, he admits.

These days, Shewmaker doesn't have to worry as much about optics or executive expectations inside a multi-billion company. But he faces a different set of pressures: build a useful product, generate revenue, and stay alive long enough to deliver a positive return to his investors. ⬢

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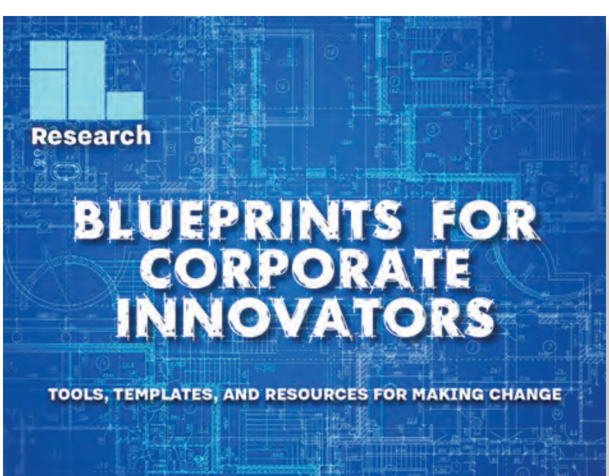


LEARNING FROM FAILURE

NYU professor Ari Ginsberg on gazelles, elephants, and why it's important to build a company culture that talks about successes—and failures

By Kaitlin Milliken

WHEN ARI GINSBERG DISCUSSES THE BUSINESS ECOSYSTEM, IT CAN SOUND LIKE HE'S NARRATING AN EPISODE OF THE NATURE SHOW *PLANET EARTH*.

Ginsberg, a Professor of Entrepreneurship and Management at New York University's Stern School of Business, talks about young startups as field mice—tiny players in the ecosystem.

But the startups "that really grow and make a huge impact—the Microsofts, the Googles, and so on—they become gazelles," he says.

In addition to field mice and gazelles, there are also lumbering elephants: businesses that become slower and less fleet-footed as they gain scale.

That's when inertia becomes an issue, Ginsberg says. "They become very, very good at what they do... at milking their strengths versus moving on."

Ginsberg focuses on entrepreneurial investments made by large companies, and how innovation ecosystems take shape, among other topics. In 2000, he introduced a master's degree focused on entrepreneurship and innovation. He is also the former head of NYU's Berkley Center for Entrepreneurship and Innovation.

We sat down with Ginsberg to discuss different approaches to innovation, celebrating failed ideas, and creating a more risk-tolerant corporate culture.

. . .

EXPLOITING VERSUS EXPLORING

When you have startups, usually you find they have some kind of S-curve [of growth] going on.

But so many [more established] companies disappear from the Fortune 500. Companies that were once great can disappear, because they're not able to do that second S-curve. These new companies come along, and basically, they come up with radical innovations and then take the customers away. So the challenge for these large corporations is, how do you continue to make money off the strengths that you've developed, but at the same time pay attention to the need for renewal and innovation so that you don't disappear—so that you remain competitive?

On the one hand, you want to exploit. That's what organizations tend to do when they get bigger, they tend to exploit their strengths. They focus on operational efficiency...meaning routine. The more you get into a routine, you have stability. But then you miss out on the exploration. And if you do that, then you lose the future, and you may disappear. [Companies neeed to balance] those two activities, and create ambidexterity, where you can do both.

In addition to that, employees themselves may have good ideas, but...if [companies] don't encourage employees to come forward with ideas, the employee is going to say, "Why should I do that? My boss is going to say, 'It's not in your job description. Go back into your work.' Not only that, but even if they let me [and] say, 'Fine, go ahead and take the risk,' if I fail, there goes my career. Why should I take the risk?" So organizations have to develop a culture. And that's another way of being...ambidextrous with respect to innovation.

THE RIGHT WAY TO FAIL

The generally-accepted wisdom...is that you want to encourage and even celebrate failure—but with discretion. The reason for that is because if you punish failure, you're not going to get to breakthrough innovation. There are CEOs that have a very strong opinion on this. A quote from James Quincey, who is the CEO of Coca-Cola, [says], "If you're not making mistakes, you're not

Photographs by **Julia Robbs**

trying hard enough."

If an entrepreneur comes along and says, "I had a company, but it failed," that's not necessarily a basis for [a prospective investor to say], "Well, we're not going to invest." Because very often the key question is, did you learn? Failure is okay if there is learning involved. Then you have the right cost-benefit.

If an entrepreneur comes along and says, "I failed, but it really wasn't my fault. This happened, that happened," they're less likely to get support. But if they say, "I learned a lot from that. I learned that I needed to do a certain type of research. I needed to ask different kinds of questions to validate my customer value proposition, etc." Then the investor says, "Now we actually have someone who has got a higher level of consciousness and is more likely not to repeat these kinds of mistakes. They're not a novice anymore."

Especially when you're trying to do breakthrough innovation, you're aiming at complicated solutions that haven't been tested before. So you have to be prepared for failure.

There's also this expression of "fail fast and fail early." One of the reasons that failure is important is because, if you're gonna [fail]... do it early when [there are fewer] consequences. The worst thing to do is invest a lot in something and have it fail. You have to figure out a way where the cost of failure is lower.

"If you punish failure, you're not going to get to breakthrough innovation."

CREATING THE 'FAILING IDEAS HALL OF FAME'

Some companies like Google, Inuit, and others...have rituals, where they celebrate failure. They also have what they call kill meetings. This is the [venture capital] attitude. You don't celebrate failure for failure's sake, and you don't criticize failure just to criticize it. It's more about analyzing.

So there are companies...that create the "Failed Ideas Hall of Fame." Something that basically says, "Alright, we're going to...memorialize these failures." But why? Not to embarrass people, but as a way of saying, "We encourage that, but we also encourage the learning part."

[It's useful to ask] questions like, did the project remain true to its goals? Could it have been prevented? Was there enough research and consultation?

This is also where leadership is extremely important... [The leaders are] the ones who...create a reward system, and help institutionalize the importance of learning from failure...

EASING FAILURE ANXIETY & CHANGING THE CULTURE

There are different ways of going about emphasizing the importance of taking risks and accepting failure. One is this structural way where you basically isolate [the innovation division].

What you can do is have your unit that's doing this kind of innovation somewhere else...managed separately. The skeptics are elsewhere. So maybe it's not for [the skeptics], right? They don't necessarily need to be part of that.

The idea [that] everyone should become an agent of change or an agent of entrepreneurship, you're now talking about changing the culture, and one of the things we've learned about changing the culture is that it's very difficult to [do] unless you develop a reward system for encouraging [innovation].

So for example, you could have a reward system that says, "Okay, I realize you're in whatever area—you're in accounting, you're in this, or that. But every week, I want you to come up with...an idea that could perhaps improve what you're doing." So you're rewarded for that, when the time comes for getting evaluated. You don't simply get told, "Don't worry, you won't get fired." But you actually create some form of recognition or award.

If you want employees to buy into [the idea that failure is acceptable]...they also need to feel confident that they have the capability [to take risks]. ... But that's not enough—they need to be motivated.

TALK ABOUT THE FAILURES—AND THE SUCCESSES

Best practice suggests [that you ought to] not just discuss the failures. Also discuss the successes. When you look at companies like Coke, Netflix, Amazon, Domino's, they have developed these best practices.

[There] has actually been research...comparing groups of innovators. In one group, both successes and failures were discussed. In the other [group, only] failures were discussed. And it turned out that afterwards, there was a greater improvement, fewer mistakes, and more innovative behavior in the group where both failures and successes were discussed. ⬢

Why Things Fail

(And What You Can Learn from It) BY JOSH BERNOFF

TOLSTOY OBSERVED, "All happy families are alike; each unhappy family is unhappy in its own way." So, too, with the stories of failed innovation, which are all unhappy in their own ways.

Innovation enthusiasts love stories of success—we want to hear how Steve Jobs saved Apple and how Reed Hastings pivoted Netflix from distributing DVDs to streaming entertainment. These were bold innovators, catching the technology wave to deliver just what their markets wanted. All successes sound like that.

But failure, in its Tolstoy-esque way, has diverse causes. In 20 years as a technology analyst at Forrester Research, I got pitched as many ideas as any venture capitalist, both from established companies and from startups. Nearly all failed. What went wrong?

The most common reason: bad timing. Why aren't we all carrying around the original personal digital assistant, the PalmPilot? Because '90s consumers and businesspeople weren't willing to add a clunky device to their purses and pockets whose main purpose was to nag you to get stuff done. By the time Apple launched the iPhone in 2007, mobile phones were common and touch-screens were more capable; as a result, consumers were ready to embrace additional capability in their devices. If your innovation requires a complete shift in behavior, rather than an evolutionary modification, it may be too soon for it to succeed.

If an idea is fundamentally valuable, bad timing may be curable; you just have to keep at it. Microsoft's Windows 1.0 was a total flop, the original Amazon Kindle was close to unusable, and the first Apple TV sold poorly. In all these cases, the companies persisted, improving usability and waiting for the market, the content, and the technology to catch up to the company's vision. Microsoft, Amazon, and Apple could afford to keep investing over a period of years; most companies don't have the fortitude to do that.

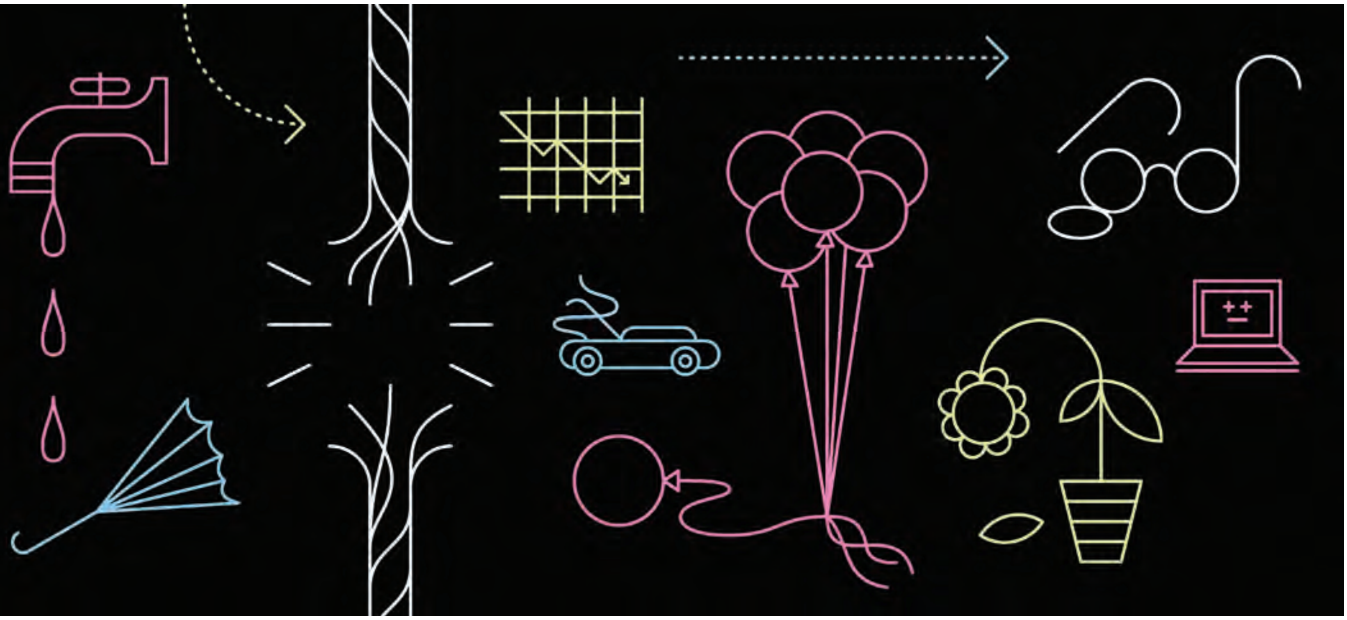
Launching too late is just as bad as launching too soon. Copycat products that enter crowded markets with dominant players tend to go nowhere. This is why you're not using a Zune (Microsoft's iPod competitor) or Windows Phone (a product launched in 2010 that won't even be supported after December).

Must-have content can cure the too-late curse, though. The streaming service Disney+ is entering a space crowded with Netflix, Hulu, and Amazon Prime Video. But with content from Disney, Marvel, The Muppets, Star Wars, and Fox—and a three-years-for-the-price-of-two offer—it will find a slot in the consumer streaming market.

Even companies with good timing can get tripped up by corporate politics. It's a major reason that big companies often get sideswiped by startups—especially when it comes to innovations that threaten their core businesses. For example, facing competition from Napster, the major labels in the music industry actually attempted to create their own digital downloading system to combat file sharing, but it was so hobbled by copyright protection that nobody wanted to use it. As the entrepreneur and business leader Enzo Torresi once said, "The reason that God was able to create the world in seven days is that he didn't have to worry about the installed base."

Escaping corporate politics requires a cultural

Illustration by **Greg Mably**



and organizational shift. As Charlene Li writes in her forthcoming book *The Disruption Mindset*, "For most incumbent organizations, there's just one problem: Your familiar profitable existing customers… 'No, no,' executives say. 'It's much better and safer to stay with what you know.'" Unfortunately, the growth you are pursuing is going to come from future customers, and targeting them is likely to cause some challenging interactions with your existing markets and management priorities.

Innovation is especially difficult in industries with rigid structures. For example, despite billions of dollars of investment, the grocery delivery startup Webvan failed in 2001. It attempted to go around the massively complex food distribution system in the US and create its own food warehouses, an effort that was simply too expensive to succeed. The much-hyped Segway vehicle allowed you to zip around town, but it was too slow to be safe in the street and too bulky and annoying to ride on the sidewalk; the transportation infrastructure rejected it like a foreign body. This is also why successful innovation in the healthcare industry tends to be limited to new drugs and devices that fit existing industry structures; the network of regulations, insurers, and health care providers resists structural disruption. You can brute-force your way past regulatory challenges as Airbnb and Uber did, but you'll be spending a lot of investors' money on lawyers and lobbying, —as Uber experienced in cities like London and Vancouver.

Sometimes companies become enamored of technology, creating products that solve a problem people don't actually have. The Juicero, a $400 internet-connected juicing machine, squeezed its proprietary, expensive pouches of fruit into…well, the same kind of fruit juices a health nut could easily make with any run-of-the-mill kitchen juicer. And Google Glass was a pricey set of eyeglasses that put a version of the Web in front of your eyeballs—other than creepily recording others and making you look like a goofball, it mostly did what your mobile phone already did just fine.

If you can't deal with failure, you likely haven't got the fortitude to reside in your company's innovation suite. But reviewing all these patterns of failures suggests a few strategies you can use to maximize your chance of not appearing in my next article about missteps and screw-ups.

First, if your innovation starts with a technological advance, focus on functionality, rather than how to persuade consumers it's worthwhile. Who is the target audience? What problem do they have? Can you make their lives faster, cheaper, or safer? And how much do they need to change to gain those benefits? Lots of effort combined with obscure benefits is a sure path to failure. The best products extend tools we already use, like smartphones, cars, and web browsers.

Second, analyze your timing carefully. If the surrounding tech isn't ready, consider a delay, a limited launch, or a strategy that ramps up the marketing in version two or version three.

And finally, subvert industry structures at your own risk. A product that short-circuits existing retail channels or replaces cumbersome multi-step processes is great. One that runs afoul of regulations and doesn't take advantage of existing supply chains is a lot less likely to take off.