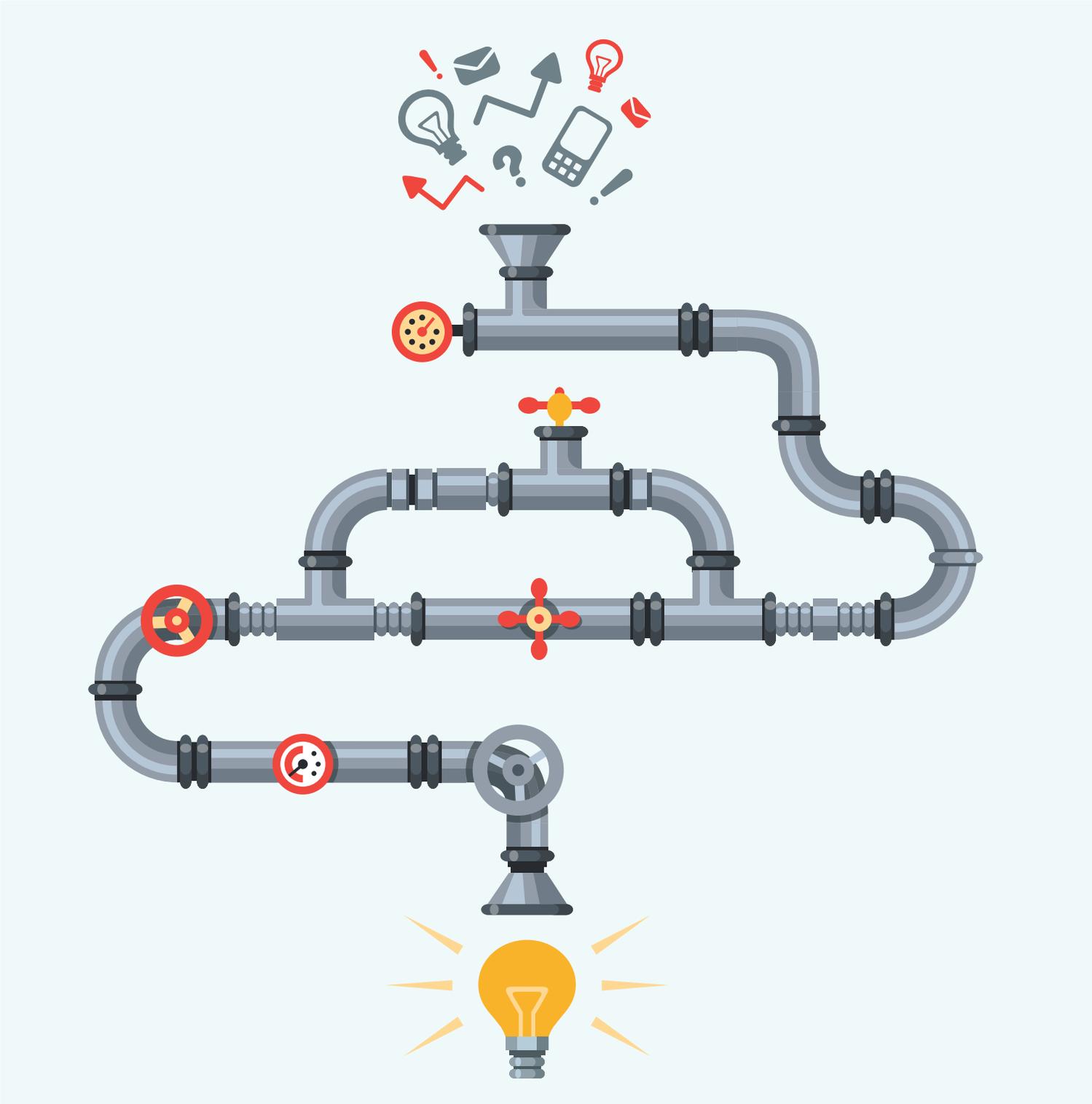


# Improving Your Odds at Positive Disruption

By Jeremy Utley and Perry Klebahn



“Is my organization designed to deliver innovation?” This is a question every HR leader must ask in an age of widespread disruption.

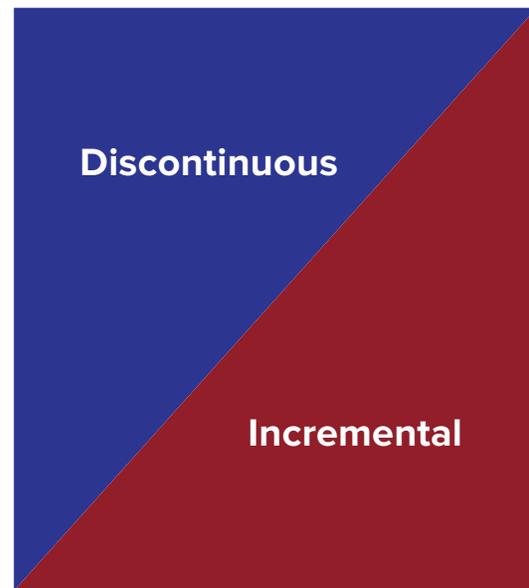
We might suggest a slightly different question: “How does my organization manage innovation?” Our experience leading executive programs at Stanford’s d.school for the last 10 years says that, in many cases, there’s a singular answer to that question. And that’s a problem. This article is about the managerial challenges of innovation and the specific techniques we have developed to help managers in established organizations increase the odds of discovering disruptive innovation.

When you think of innovation, what products and services come to mind? Chances are, if you ask 10 different people, you’ll get 10 different answers. But are all innovations created equal? Is the Fireworks Oreo the same *type* of innovation as Airbnb? No offense to Nabisco intended but nobody imagines for a second that this delicious snack is the same *type* of innovation as Airbnb, even though it likely entailed considerable research and development and lots of brand negotiations before launch. They’re both “innovations,” but that word can refer to drastically different *types* of concepts. And therein lies the challenge of talking about “innovation” in organizations: The word is so broad and all-encompassing that it means many different things to many different people, and this creates confusion for leaders and for the employees responsible for delivering innovative products and services.

Types of innovation lie on a spectrum, but generally speaking, they fall into one of two categories: disruptive or incremental. And generally speaking, while large firms are responsible for the vast majority of incremental innovation, they often find themselves at the wrong end of disruptive innovation. Why don’t large firms deliver more disruptive innovations from their internal innovation efforts? That’s a question that our colleague at Stanford, Charles O’Reilly, has spent quite a bit of time considering.

His fundamental conclusion is that, while 70 percent of senior leaders list innovation as a major concern due to the threat of disruption,<sup>1</sup> the reasons so much disruptive innovation happens outside of large firms is because those leaders have not understood the need to manage disruptive innovation efforts fundamentally differently from how they manage their day-to-day business operations. Those day-to-day operations include managing incremental improvements to existing products and services, which the organization also calls “innovation.” Hence the challenge.

Yet the price of confusion is great. We often see organizations celebrate incremental innovations as if they are disruptions (Consider the last innovation effort you celebrated: Was it really disruptive?) or manage what they call disruptive efforts just like they manage the rest of their day-to-day work (Consider the last innovation effort you commissioned: Were they resourced any differently than regular day-to-day operations? Are there different expectations around their pace, deliverables, incentives, etc.?). Both of these phenomena are problematic, but especially the latter, as it leads many organizations to essentially neglect (or worse, *undermine* existing) disruptive innovation efforts altogether, despite the fact that it is primarily the disruptive endeavors that seek to address



O’Reilly

the existential threats to the business. Such existential threats have been well-documented in the book *Adaptive Space* by Michael Arena.

The experience of Blockbuster is a cautionary tale for any incumbent in an established market: Despite dominating the market for at-home movie consumption, and delivering robust incremental innovations under a widely hailed retail guru CEO, they were disrupted by an upstart (Netflix) within a very short time. Netflix, on the other hand, has established a successful drumbeat of continuous discovery that enabled it to not only successful transition from its original DVD-by-mail model, but also to shock the industry by transitioning yet again to create original content. Unlike Blockbuster, Netflix has demonstrated the ability to positively disrupt itself, enabling it to become a dominant player not only in the at-home movie business, but in the broader entertainment industry. Blockbuster’s problem was that they didn’t realize they needed to be in a different business altogether until it was far too late. They tried to make transitions, but their early determination to stick with a legacy strategy kept them from pursuing the kind of innovations which would have increased the likelihood of survival in a new world.

Because such confusion is so widespread among large, established firms that occupy “incumbent” positions in established marketplaces, O’Reilly has described the need for what he calls an “ambidextrous organization,” which is marked by an ability to not only *execute* on existing capabilities, markets, and resources, but also to *explore* the development of new capabilities, markets, and resources.<sup>2</sup>

O’Reilly has identified three distinct capabilities that must be mastered in order for large companies to drive disruptive innovation through exploration: idea generation, concept incubation, and concept scaling. Our positions at Stanford have given us a unique perspective on what it takes to nurture these capabilities and deliver disruptive innovations and where organizations routinely fall short.

Our observation is that most leaders dramatically under-

estimate the size of the funnel needed to ultimately deliver a breakthrough innovation. We have discovered that leveraging a *portfolio approach* to any innovation effort can drastically improve the effort's likelihood of ultimate success. Using this approach requires that an organization focus more energy on discovery-oriented activities such as empathetically engaging customers, exploring analogies, assembling cross-functional teams, and spending time outside of the office building.

### Leading Where There Are No Guarantees

Part of the challenge with disruptive innovation is that it is largely a numbers game. Unlike incremental efforts, which are generally well-understood, and fairly certain in terms of their risks and returns, disruptive innovation is much more like venture capital investing: There's very low certainty that any one *particular* concept will succeed, but across a portfolio, you can have a fairly high degree of confidence that *something* will succeed. Our colleague, Bob Sutton, conducted a longitudinal study of IDEO, the world-renowned design and innovation consultancy. His findings tell quite a story—for the firm to deliver two to three “moderate commercial successes” at the end of a push for new disruptive concepts, they had to begin with roughly 4,000 ideas.

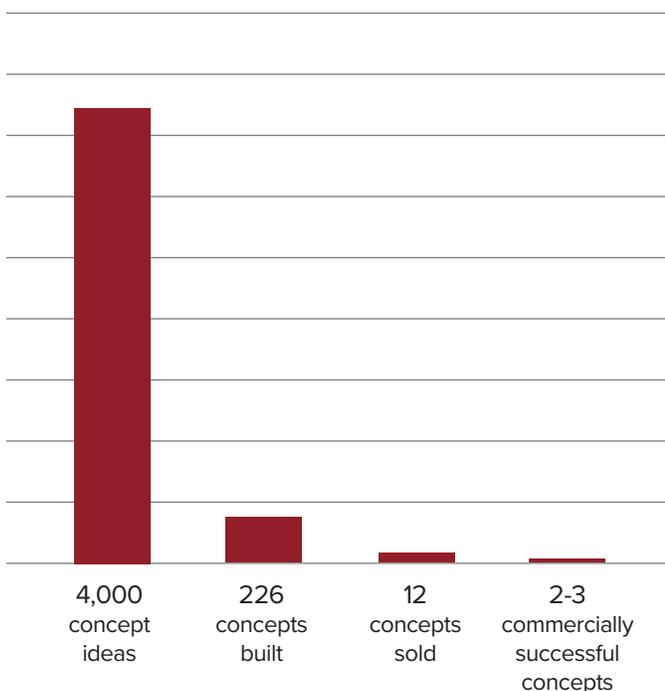
From those 4,000 initial ideas, they narrowed down and developed 226 (approximately 6 percent) into tangible prototypes. Of those 226 prototypes, 12 (approximately 5 percent) went on to gain some type of traction with customers. Of those 12, two or three went on to become what Sutton deemed “moderate commercial successes.” Each step in that progression might seem intuitive, but take a step back. That means that more than 99.9 percent of the ideas that the team began with

were not worth moving forward!

Any rational manager should shudder at the thought of a 99.9 percent failure rate, yet that's exactly what a leader seeking to disrupt should expect—especially from an early portfolio of exploration. The challenge is that very few leaders think in terms of a portfolio. In fact, we have found that the concept of a portfolio isn't in the vocabulary of very many leaders. When many of the leaders we have observed sense a challenge, they scope a project, commission a team to tackle it, and expect the team to deliver *the single right answer*. They do that because it has often worked! In routine operations, and even in incremental innovation pursuits, that's a very well-established strategy. But disruptive innovation work is much less certain than that, and successful leaders have learned that deploying *many* concepts in parallel is a critical part of ultimately

Our observation is that most leaders dramatically underestimate the size of the funnel needed to ultimately deliver a breakthrough innovation.

#### GENERATION-INCUBATION-SCALING FUNNEL<sup>3</sup>



arriving at a game-changing offering. Commissioning many exploratory missions simultaneously is the best way to foster *discovery*. There's solid research to back this up,<sup>4</sup> and we'll offer an example to show how this works in practice.

One of the primary benefits of a portfolio approach is that managers don't over-invest in any single idea until it proves viable. A 99.9 percent failure rate is actually not a problem when you're moving quickly, rapidly cycling through concepts, and preserving a willingness to pursue only the concepts that actually prove objectively viable, regardless of preconceived opinions and entrenched perspectives. Positive disruption requires speed, agility, flexibility, and iteration; these characteristics dramatically improve the odds of the otherwise statistically unlikely event occurring.

### Case Study: Delta Dental

Delta Dental of California is one of the largest dental insurance companies in the United States. Casey Harlin, Vice President, Customer Experience and Digital Channels, attended one of our three-day design thinking programs in 2017. We stayed in touch with Harlin and invited him and Delta Dental of California to be a project partner in our leadership course at the d.school, appropriately called “Leading Disruptive Innovation,” in 2018.

When Harlin and his partner, Liz Black, Strategy and Business Development at Delta Dental, joined the program, they had framed up a challenge around the uninsured dental population of the United States. As a nonprofit 501C (4), they are concerned that millions of Americans don't have dental insurance, which they perceived to be a public health crisis.

In the class, we paired them up with Andy and Andrey, two graduate students with deep experience in the design-thinking methodology. Andy and Andrey helped the team empathetically engage millennials, a particularly uninsured subset of the broader population. The class challenges each team to reframe their problem according to what they learn about real people in the world. But of course, we don't allow teams to generate only one new frame on the problem—they come to the first design review with three distinct (and often divergent) “points of view” on what the real problem to be solved for users is.

As part of the design review, we host brutally honest “POV assessment sessions” to help teams sharpen their focus. We have found that sharing early potential directions (not even concepts; simply frames on the problem itself) is an excellent safeguard against teams wasting precious time early in the idea-generation process. We have also discovered that the wisdom of the crowd is actually quite profound when it comes to determining which problems resonate on a human-emotional level. We have observed that the teams that “own” a space are often most challenged to see opportunities as clearly as outsiders, and so hosting public sessions where teams assess one another's work helps keep everyone honest and the quality of work high.

We once had a very telling experience where eight functionally diverse teams were working on a particular challenge for the organization, primarily as a vehicle for training in idea generation methodology. After the 40 outsiders had generated eight potentially disruptive directions, we brought the team who was responsible for the project area in as a jury of sorts, and they unanimously chose what was—at least in the objective opinion of the participants—the worst idea of the lot. The shock was palpable as the 40 outside participants realized that the five actual product owners unanimously chose the idea that the other 40 were least excited about. Our simple explanation for this phenomenon is that product owners typically prefer implementable ideas that dovetail nicely with their existing paradigms and priorities. True disruptions are often the function of an unexpected reframe, and incumbent teams often struggle with adjusting to a new frame, as it calls into question their existing work streams, and frankly requires not only fresh thinking, but also fresh legs, to truly capitalize upon.

As the early “data” from the class shook out in that first assessment session, the Delta Dental of California team was originally ranked in the lowest quartile of the class. But this early assessment gave the team critical data that they needed to triangulate on what was truly worth pursuing, and buried in the midst of their points of view, there were a couple of kernels of inspiration that the class believed could be refined to push Delta Dental of California's thinking in a new direction.

One of the provocative reframes that the team generated was that the problem they were trying to solve—of reducing the rate of uninsurance—isn't actually about *health* to their users; it was about *vanity*. They learned that, while the millennials they engaged weren't particularly concerned about

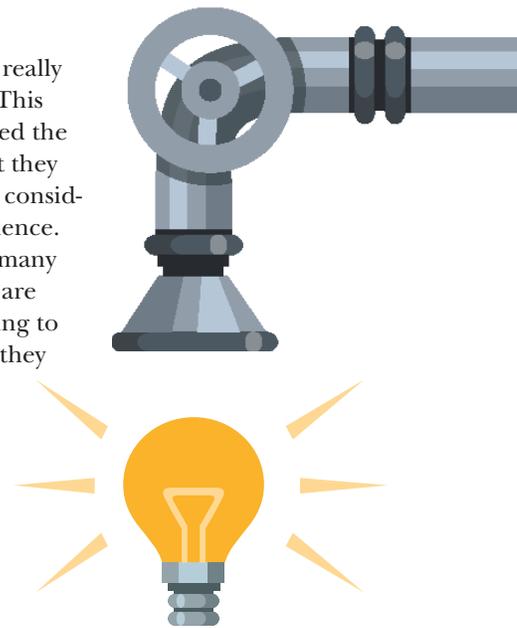
their oral health, they did really care about looking great. This provocative reframe spurred the team to imagine ideas that they had previously never even considered. That is not a coincidence.

We have observed that many times teams in large firms are stuck because they are trying to solve the wrong problem; they take a problem as given, in the way that their organization has historically defined it, and end up spinning their wheels or launching products and services that don't resonate with the end consumer. But innovation teams that seek to engage potential customers in a radically empathetic manner are able to reframe the problem in their users' language from their users' perspective, which often spurs much more disruptive ideation. What was different here and something we see organizations fall short on is the focus on finding an insight about a user that is truly a new and disruptive perspective. Harlin and Black sought to understand millennials, and when they did, they uncovered an insight about vanity that had nothing to do with their dental insurance *business*; but everything to do with the *user* they were designing for. This is the big shift that allows for a breakthrough.

We would be remiss not to mention that the health-to-vanity reframe wasn't the only direction that they explored. In the course of their early idea generation work in this class, the Delta Dental of California team created several radical points of view that would have led in many different directions. They also generated a large portfolio of concepts associated with each of these directions, all of which were *equally likely* to succeed or fail. This is critical for innovation leaders to remember.

Successful discovery is almost always a function of iteration, experimentation, and diverging into many different directions. Breakthrough insights can often lead to disruptive outputs, and those insights are developed through these non-linear, often paradoxical, paths of exploration. All too often we see innovation stories told in retrospect, as if the team driving the work knew what the right question and right answer were from the outset. Delta Dental of California took a more iterative approach. While they may have had a better process for discovering what a positively disruptive direction might be, they applied a test-and-learn approach to discover an unexpected, breakthrough solution.

Towards the middle of the course, Harlin, Black, Andy, and Andrey conceived a concept they called Dazzle Bar. The idea behind Dazzle Bar was that it would be a retail space that would provide teeth whitening services for



people concerned with their oral appearance, and would also, as part of that service, provide basic tooth cleaning and evaluation services that address the uninsured crisis. Expanding access to oral health care is at the core of the company's mission. There were some early indications from experiments in the class that there was a market for such a service. We urged the team to launch the service to see whether folks would show up. But in keeping with the portfolio approach, it wasn't the only product they launched. They actually launched a portfolio of solutions aimed at addressing the vanity angle of their users' need, and the parallel launch approach created data that helped them know which ideas were worth resourcing further.

### Every Challenge Is an Opportunity to Experiment

Even since converging the portfolio and narrowing their focus to refining the Dazzle concept, the experimental attitude that a portfolio approach engenders has paid enormous dividends in mitigating key risks to the concept's viability. One of the early risks facing the Dazzle Bar concept was that they had a very high attrition rate. For every 30 people who signed up for the service online, only three showed up. This obviously posed huge challenges to staffing and revenue projections. So they deployed a simple experiment: charge a nominal fee to reserve your place. Just like that, the attrition rate dropped to four out of every 30 *not* showing up.

This story is far from over with Dazzle Bar. The team is still facing many legitimate risks and is also having to navigate the natural obstacles of operating within the constraints of a regulated industry. The organization is very proud of and excited about Dazzle Bar—especially because it came from the company's very first foray into leveraging a portfolio approach to innovation—but that can ironically cloud clear thinking about advancing the concept further. This simultaneous desire to do something new and the impulse to force new things to move at the same old pace is something we have seen time and again.

This illustrates the reality facing the leaders responsible for designing organizations seeking to deliver disruptive innovation: For an incubation capability to “work” for an internal team, it can't just protect them from the harsh market environment; it also has to shield the team from harmful organizational dynamics as well. As one senior leader at Delta mentioned, “I feel like I'm a gardener, and I'm a gladiator. I'm a gardener because I'm trying to nurture this plant and keep it alive, and then I'm a gladiator towards all of the people hovering, trying to take leaf samples, measure soil moisture levels, etc. I'm having to defend this nascent plant from a barrage of ideas all meant to make it ‘even better.’”

### Working at a Different Pace

One of the early pieces of feedback that we got from the Delta Dental of California team is that we were challenging them to move much faster than a typical project timeline. But that is one of the most important things that a dis-

ruptive innovation team can do early on: not to spend so much time in deliberation, planning, and meetings, but rather take rapid actions that generate more discoveries, from which they can make better decisions. If you know that you have to go from 0 to 4,000 ideas, then you can't afford to spend too much time on any one concept early in the development process. It can feel frantic but preserving multiple options and even multiple problem statements in the beginning is critical to ultimate success.

### Principles for Managing a Portfolio

**Emphasize the portfolio as the output.** From the very beginning, the team should be clear that no one particular output is the “winner” or even the goal, but that creating a diverse portfolio of concepts will increase the likelihood of the team achieving a breakthrough solution. Regardless of who owns which project, it's critical to celebrate the portfolio as they key output, not the disruptive idea that emerges at the end. Each direction is equally likely to yield a fruitful direction, and so scrappy exploration of many diverse direc-

Emphasize the portfolio as the output. From the very beginning, the team should be clear that no one particular output is the “winner” or even the goal, but that creating a diverse portfolio of concepts will increase the likelihood of the team achieving a breakthrough solution.

tions is what should be rewarded and measured.

**Enlist a diverse cohort of collaborators.** Radical new directions are often the result of unexpected combinations, and savvy HR leaders leverage diverse perspectives to increase the likelihood of such combinations. Consider defining diversity beyond functional lines to engage different ethnicities, genders, industry perspectives, and levels of seniority in the organization.

**Enforce a portfolio mindset on the team.** Ask teams to bring at least three potential concept ideas to early meetings, rather than one.

**Leverage considered selection criteria.** When a team is selecting concepts to bring forward into prototyping, leverage considered selection criteria that the whole team can use to advance multiple concepts. Without selection criteria, a team will naturally gravitate towards the implicit value of ease of implementation and likelihood of success; this leads teams to choose only the “low-hanging fruit” and leave lots of more disruptive, seemingly riskier, concepts on the cutting-room floor. Try selecting multiple concepts that fit various criteria like, “Most likely to disrupt our industry,” “What

## HOW TO REFRAME

Instead of avoiding emotions, be willing to dig into them. Leave the office and go see customers *in their environment*, not yours. Talk to your customers about how they *felt* throughout a specific recent journey through your product or service—and make sure they stay specific, rather than using generalities. Don't interrupt them. Pay special attention to the highs and lows of their experience, as well as any sharp changes in experience. Ask them to elaborate on emotional cues that you might otherwise avoid or assume you can already define. And then come back and *wonder* about what's behind what they told you. Don't deduce, but infer, the unspoken, unmet needs and motivations driving them as a person. Don't wonder about your organization, or about your product, or about your industry, or about people in general, but about them. Channel your inner psychotherapist.

And every once in a while, when you dig underneath a particular surprising moment or observation, you'll find yourself saying, "I wonder if this means she..." and you'll say something that causes you to see the opportunity before your organization in an entirely new way. This is best done with a couple of collaborators who are willing to *imagine* and *wonder* with you, without bias or judgment.

a start-up would do," "The long shot," or even mix things up by having non-team members contribute to idea selection. Make sure that, in total, the portfolio covers a broad range of users, markets, and need statements.

**Limit experiments to ridiculously low-resource constraints** (i.e., less than 24 hours, less than \$100, etc.). This forces scrappiness, focus, and out-of-the-box thinking. Every experiment should be executed with minimal time and effort. Reward speed of learning, not ultimate success.

**Use parallel testing.** Require teams to launch radically

The odds of launching a disruptive innovation are exceedingly low. Innovative leaders bend the odds in their favor by leveraging a portfolio approach.

distinct "competing offers," and measure them against each other according to predetermined metrics.

**Identify clear, customer-focused metrics.** Evaluate the portfolio against a narrow, specific customer need (such as, how well does each concept solve the *reframed* problem).

Concepts are best compared against a *single* desired customer impact.

**Establish a rhythm of assessment.** We use an established calendar of bi-weekly design reviews so that teams know what's due and when. Each design review should give each team a chance to headline their progress and learning, and must incorporate all participants' assessment of the entire portfolio. This approach provides an opportunity to adjust resourcing and highlight opportunities for collaboration. And don't just assess the concepts. The cohort should also be constantly considering: "What are our experiments collectively teaching us about the problem we are trying to solve?"

**Don't be afraid to deselect concepts.** It's critical to not waste time on concepts that don't contribute to the cohorts learning. Flushing concepts early and composting learnings is critical to the health of the portfolio.

## Conclusion

What we have observed is that there is no shortage of effort being expended in developing idea generation capability in organizations, but much of that capability is being deployed in a linear or sequential manner. Instead, we believe leaders should approach early concept generation by commissioning a portfolio and hosting early, honest feedback sessions to assess early directions that are emerging. This style requires teams to work quickly, iterate enthusiastically, maintain a laser-focus on refining customer insights through scrappy experiments, and judge early success in terms of speed of learning, rather than by conventional metrics and institutional thinking.

The odds of launching a disruptive innovation are exceedingly low. Innovative leaders bend the odds in their favor by leveraging a portfolio approach to innovation management, commissioning the exploration of many directions, launching experiments related to diverse concepts, and managing their teams differently from the outset of new projects. This is one of the best ways to foster discovery and fill the "funnel" required to ultimately deliver a disruptive innovation. ■■

**Jeremy Utley, MBA**, is Adjunct Professor of Mechanical Engineering and Director of Executive Education at Stanford University's Hasso Plattner Institute of Design. He can be reached at jutley@stanford.edu.

**Perry Klebahn, ME**, is an Adjunct Professor of Mechanical Engineering and Director of Executive Education at Stanford University's Hasso Plattner Institute of Design. He can be reached at perryk@stanford.edu.

## References

- <sup>1</sup> "Leadership and Innovation," by Barsh, Capozzi, & Davidson, McKinsey Quarterly, 2008
- <sup>2</sup> O'Reilly, C.A., & Tushman, M.L. (2016). *Lead and Disrupt*. Redwood City: Stanford Business Books.
- <sup>3</sup> Sutton, R.I. (2000). *Weird Ideas That Work*. New York: Free Press.
- <sup>4</sup> "Parallel Prototyping Leaders to Better Design Results," by Dow, Glassco, Kass, M.Schwarz, D.Schwarz, Klemmer, ACM, 2010