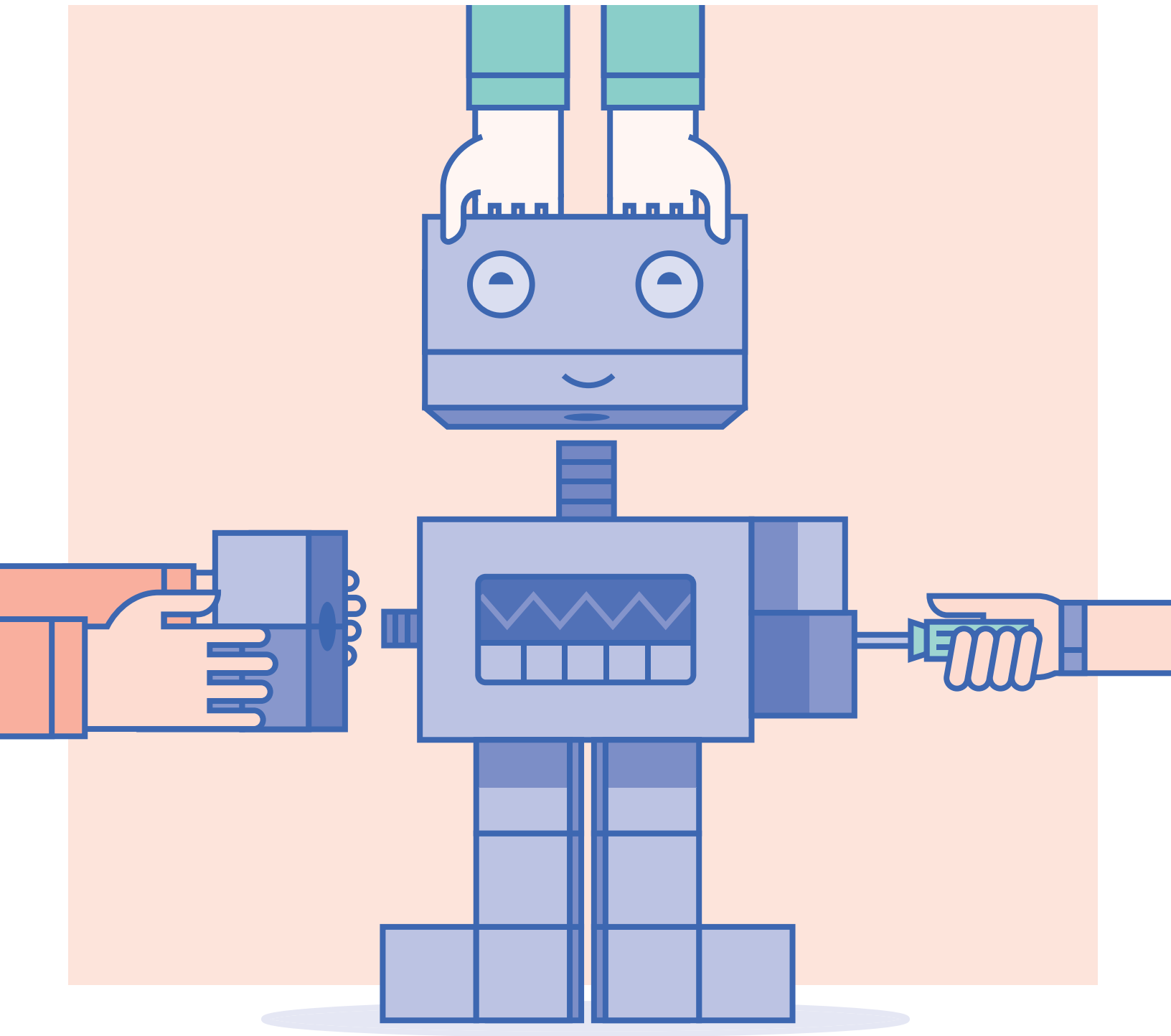


“Producing” a Successful Innovation Program for Your Organization





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Consumers vs. Producers of Innovation

The healthcare industry is facing unprecedented challenges to improve quality and access to care while lowering its costs. These challenges intensify the need for innovation and the adoption of new solutions.

Unlike in other industries, traditional marketplace competition is not the main driver of innovation in healthcare. While other industries compete against one another on a regional, national, or global level, competition among healthcare organizations is local and oftentimes, hyperlocal. This environment breeds organizations who by and large are consumers rather than producers of innovation.

Healthcare organizations need to embrace digital health technologies, but the process of assessing and selecting best-fit solutions at scale is challenging, time consuming, and often haphazard; these struggles in creating a successful program for external innovation provide little incentive for organizations to take the additional step in producing innovations of their own. As healthcare becomes more digital, building innovation competency as a bare minimum is no longer sufficient. Organizations need to completely align their strategic, operational, and economic models under the core pillar of innovation.

Healthbox has observed the many ways in which different organizations take on the position of innovation consumers, producers, and in some cases, a hybrid of the two.

Organizations that *consume* innovation search for solutions on the market that solve their specific problems. In the last year, digital health funding reached \$5.8B, a \$1.4B jump from 2016, as more organizations entered the innovation consumer realm.¹ As of 2017, 325,000 health-oriented applications are available to consumers.² On the other hand, organizations that *produce* innovation develop internal programs to address their pain points. In 2017, Becker’s Hospital Review recognized 58 hospitals with innovation programs.³ Out of the over 2000 hospital systems in the US, this number leaves a significant opportunity to build new innovation programs across all hospitals, not just in brand-name healthcare organizations. Innovation, both consumed externally and produced internally, is becoming a priority for healthcare organizations around the country.

In this report, we will delve deeper into the two sides of the innovation coin, and how a balance of both can serve to significantly benefit an organization’s innovation strategy.

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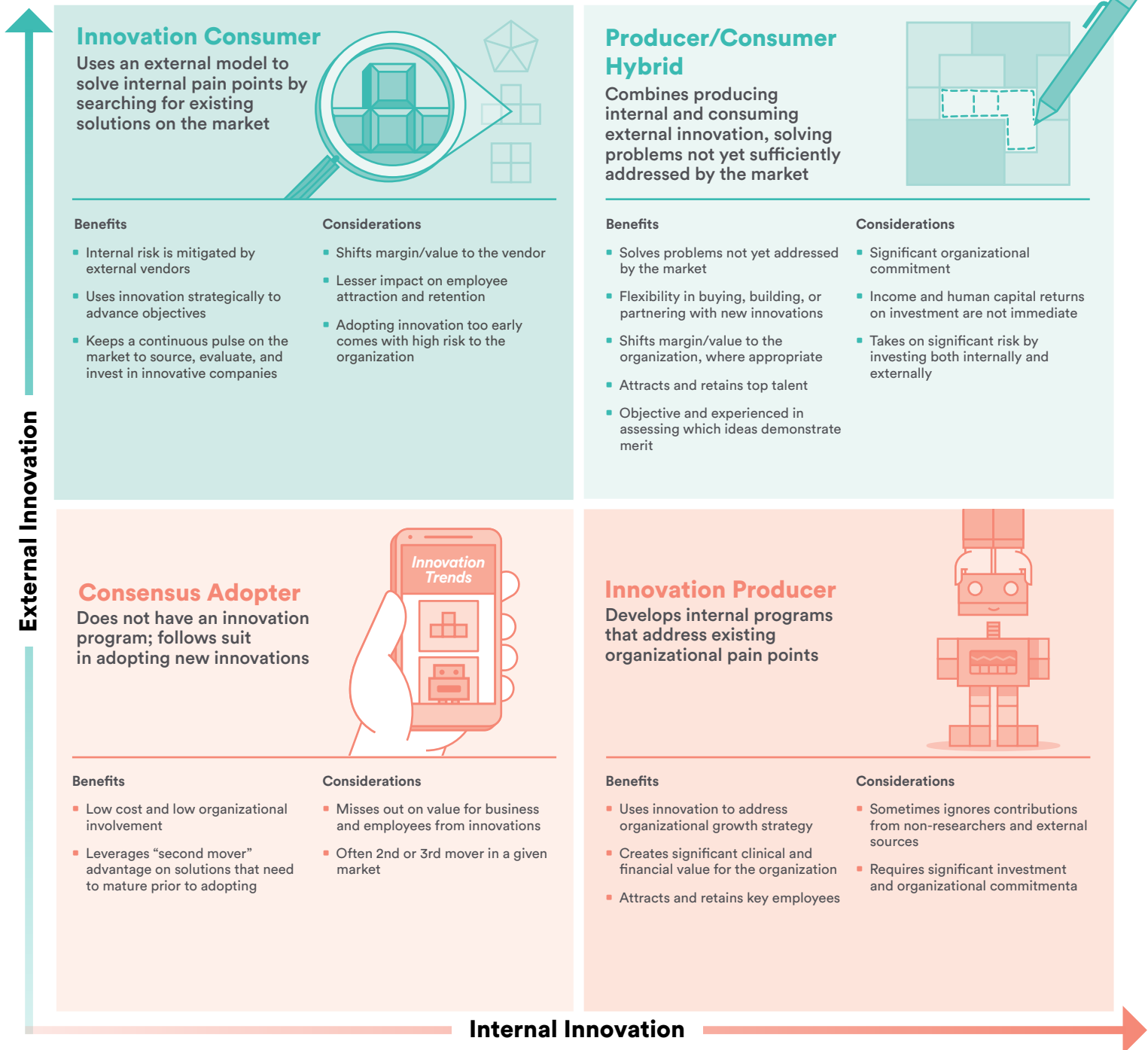
¹ <https://www.healthcare-informatics.com/news-item/patient-engagement/rock-health-digital-health-venture-funding-reached-6b-2017> (<https://tinyurl.com/y7bwq6t8>)

² <https://research2guidance.com/product/mhealth-economics-2017-current-status-and-future-trends-in-mobile-health/> (<https://tinyurl.com/y9vsk8bc>)

³ <https://www.beckershospitalreview.com/lists/58-hospitals-and-health-systems-with-innovation-programs.html> (<https://tinyurl.com/yalmvys6>)

Depending on an organization’s priorities and willingness to take on risk, innovation programs may differ in several key areas. Consider the following graphic, outlining four different types of organizations, each with a varying level of involvement in innovation. While not every organization will fit perfectly within the boundaries of these categories and an innovation program that works for one organization may not work equally as well for another, the following are key considerations that all organizations should keep in mind when choosing to develop an innovation program in any form.

Innovation Program Approaches: Benefits and Considerations



Producing Innovation for a Competitive Edge

Producing innovation is as of yet a nascent and under-analyzed approach to innovation, but it is also one that continues to expand and generate significant value for an organization's overall growth strategy and positioning in the greater marketplace. For additional details on the upside of being a consumer of innovation, please see the companion report, "Improving Innovation Consumption at Your Organization."

Employing Workforce Creativity

Producers of innovation develop internal programs that engage their employees, which can provide a unique competitive edge. Healthcare employees are often extremely skilled at diagnosing organizational problems, as they are close to, or even directly experiencing, those problems. Employees are also skilled at understanding the nuance around implementation and change management and can thus more effectively and efficiently incorporate a solution into their organization's specific workflows and culture. Furthermore, for those solutions developed with commercial viability, there is an opportunity to generate additional revenue streams for the organization (and often the employee inventors as well).

Return on Investment: Income vs. Human Capital

Depending on an organization's priorities and willingness to take on risk, internal innovation programs differ in several key areas, including structure, size of investment, type of employees engaged, focus area, duration, and more. Innovation programs also differ in how they measure return on investment (ROI) over time, generally falling into two categories: income (diversification and growth) and human capital (recruitment and retention).

Income ROI is a measure of how much net income is ultimately generated by the ideas produced. A seemingly straightforward measure, most organizations take a "long-game" or two-pronged approach to measuring this type of ROI. The reason is that many internal projects may not generate additional income from commercialization at the outset (in fact, for some projects it may take several years). While not generating clear monetary returns in the near-term, however, organizations often measure success through the lens of the quadruple aim: reduction in costs, better outcomes, and improved provider and patient experience.

Community health systems are a prime example of this approach. They compete on all aspects of the quadruple aim and invest resources into employee-led solutions which outperform others in those categories. These processes and tools may later transform into commercial solutions that are scalable and generate additional income for the organization.

Human Capital ROI is a measure of how well the innovation program recruits, engages/develops, and retains employees. Attracting and retaining the best employees is a priority for organizations. One way to boost long-term employee satisfaction is to create an environment that is conducive to innovation, such as by formalizing a program(s) to build entrepreneurial competencies and refine innovative ideas. With this ROI focus, an organization's primary goal is creating a workforce/culture that is skilled and excited about innovation in healthcare and the workplace.

Academic medical centers (AMCs), as opposed to community health systems, are a prime example of this approach. AMCs have not been historically known for patient experience, provider experience, or cost management; rather, they take pride in quality of specialty care and provider workforce training. They offer physicians, nurses, and other clinicians an outlet to produce innovation through research, attracting and retaining top talent in the process.

Key Considerations to Execute a Successful Program

It has become apparent, even at this early stage of adoption, that an innovation program that works for one organization may not work equally as well for another. Healthbox has found that no matter the differences across programs, there do in fact exist several similarities, or four key factors that produce a successful initiative.

#1: Clearly Define an Innovation Intent

Innovation programs should be guided by an “intent” or a clear articulation of why the organization is devoting resources to the strategy (beyond the common generality “we must innovate to stay ahead of competitors”). For example, an organization may want to develop novel internal processes for improving care delivery, while others may seek to produce new products or services that could scale across and outside the institution to bring in revenue. More often than not, organizations also choose to narrow their innovation intent to focus on a certain clinical specialty or to solve a specific problem.

Trinity Health, for instance, launched an “Innovation Challenge” in 2016 aimed at helping to identify, fund, and implement ideas focused on reducing readmission rates and improving care for patients who are dually eligible for Medicare and Medicaid. The winners of this challenge suggested ideas ranging from using predictive analytics to address the complex challenges faced by the dual-eligible population and an intervention program for home healthcare to a new care model that shifted patient evaluation and management services from the healthcare setting to the home.

Clearly articulating the goal of the challenge, Trinity Health inspired its employees to produce targeted and meaningful ideas “specifically designed to help us better serve some of the most vulnerable patients in our communities in a compassionate and transformative way,” says Anna Marie Butrie, Vice President, Innovation Program and Services for Trinity Health.

In addition, and among other innovation strategies, Trinity Health developed three innovation facilities across locations in Connecticut, Illinois, and Michigan. These innovation facilities are collaborative spaces available for use by employees and students to continuously assist in turning innovative ideas into reality, establishing a clearly intentioned self-reinforcing culture of innovation within the organization.

#2: Establish and Track Metrics (While Being Open to Fluidity)

Measuring innovation in healthcare, and most industries for that matter, can be nebulous with its varying definitions and expectations. However, establishing performance metrics for an innovation program is critical for success. These metrics will likely be (and should be!) fine-tuned as the program evolves to best reinforce the program’s innovation intent. And more pragmatically, metrics are often modified because it can take considerably more time to accumulate innovation data.

One way to think about measuring an innovation program is through what goes into the innovation process (i.e, inputs) and what should come out of it (i.e, outputs). Inputs can be thought about as how the organization wants to fuel innovation, or what’s accomplished internally to help hit targets. Outputs can be thought about as the ultimate results an organization wants to achieve with the program, either from an organizational or commercial perspective.

Innovation Program Metrics	
INPUT METRICS	OUTPUT METRICS
<ul style="list-style-type: none"> • # of ideas shared, diversity of ideas shared • # of pilots • # of filed patents • # of employees engaged • Diversity of employees engaged • % of leadership dedicated to innovation mentorship • % of employees trained to be "innovators" 	<p>ORGANIZATIONAL YIELD</p> <ul style="list-style-type: none"> • Cost reduction/avoidance (i.e., reduced readmissions/LOS, # of safety incidents avoided, etc.) • Improved patient satisfaction • Improved employee satisfaction and retention <p>COMMERCIAL YIELD</p> <ul style="list-style-type: none"> • # of companies formed, # of companies sold • # of customers / partnerships • Revenue from new products or services • Royalty or licensing revenue from intellectual property

There is no one set of standards when it comes to measuring the success of one innovation program over another. Cleveland Clinic Innovations, for instance, measures the success of its program by the number of patents issued and companies spun out of the organization, with financial returns on the backburner as a longer-term measure of returns. Kaiser Permanente, on the other hand, measures its ROI traditionally by examining the ratio of investment to returns on each innovation they produce. All in all, no matter the metric being used, it is important to clearly and transparently articulate organizational goals in measuring metrics for success when developing any innovation program.

#3: Cast a Wide Net to Educate and Inspire

An innovation program will only be successful if employees are educated about the initiative and inspired to participate. Organizations can educate and inspire by effectively communicating the program's intent, the value it will generate, and how it works. This may be through emails, articles in newsletters, announcements during staff meetings, promotional videos, fliers, screensaver campaigns, workshops, etc. Whatever the method(s) of dissemination, the ultimate goal should be to reach as many employees as possible in order for the innovation program to be "built in" to the broader organizational culture, rather than loosely "bolted on."

Cambia Health Solutions provides an excellent example of how to effectively leverage a program and recreate its core to build innovation into the organization's DNA. Self-described as a "100-year-old startup", in the last eight years, Cambia shifted gears, becoming a total health solutions company which leverages both the internal and external in creating innovation by crowdsourcing ideas from its employees and using a dedicated investment team to pull digital health solutions from outside the organization.

Cambia Health Solutions' Chief Innovation Officer, Mohan Nair, is a strong proponent of innovation. Speaking with him, it is clear that he is passionate about creating and sustaining change within the organization and across healthcare. "We know from history that many an external innovation dies within an internal environment," says Mr. Nair, "[You have to] till the soil of the internal so that you can feed the external."

In building an internal culture of innovation, Cambia first focused on creating the right environment to foster innovation within the organization. Once they clearly defined an innovation intent and created metrics for success, they began to create awareness, putting together an innovation team, bringing in coaches, building relationships, and executing on prototypes. By putting an initial focus on delivering results, employee awareness and engagement in the organization's innovation program skyrocketed. Now, nearly one-third of Cambia's employees are actively involved in innovation; over 1,200 ideas have been generated; five new companies have been created; \$171M in new revenue has been generated; and 84 percent of employees feel that Cambia encourages innovation, as opposed to 34% when they started.

#4: Balance the Strategy with an External Lens

At Healthbox, we believe that organizations should take a dual-approach to innovation- by activating the entrepreneurial spirit from inside their four walls, as well as embracing the power of disruptive thinking from the outside. A 360-degree view is what drives consistent innovation processes with consistent results.

An example of an organization that embodies this dual inside/outside principle is Intermountain Healthcare. A few years ago, Intermountain recognized that its frontline clinicians and other employees are extremely skilled at diagnosing organizational pain points. However, when it came to the next step of successfully growing a solution, employees lacked the deep business acumen, understanding of the broader market, and time/resources to do so. In 2013, Intermountain filled this innovation gap by partnering with Healthbox to launch the Foundry Program. Now in its fourth year, the Foundry enables the organization to put business rigor around commercially viable, employee-led inventions by analyzing key market trends, competitive solutions, and other opportunities or risks for advancement.

“ A key part of the Foundry”, says Jeremy Porter, Director of Intermountain Innovations, is “understanding that there [are] other organizations and patients out there that can benefit from some of the innovations that we’re creating internally.”

The approach is unique, as many of these market insights come directly from the Intermountain Innovation Fund, through which Healthbox serves as the general partner of, to source, evaluate, and invest in innovative startup companies. By having a continual pulse on the market through the Fund, the Foundry is provided with the necessary objectivity and a process to determine which employee-led ideas demonstrate merit to be supported by organizational resources, and which do not.

Conclusion

No matter the approach taken, healthcare organizations need to be realistic and intentional when it comes to producing an internal innovation program- realistic by acknowledging these pursuits may require long time horizons and willingness to take on risk; and intentional by ensuring that the initiative aligns with their overarching strategy, is continuously communicated and measured, and is balanced with a market-oriented perspective.

Innovation, whether as a producer, consumer, or both (i.e., hybrid), in healthcare is undoubtedly on an upward spiral and organizations are well positioned with many of the core assets for a successful program, including:

- Innovative ideas;
- Access to key end users and data/analytics;
- Test environments to deploy solutions and iterate; as well as
- Insights for validation, such as the ability to conduct studies on the efficacy of solutions and access to peer networks to validate the market and willingness to pay.

In order to truly leverage innovation as a tactic, however, it's critical to acknowledge that these assets alone will not be enough for a healthcare organization to succeed. The driving force behind any successful innovation approach is a culture that mimics the startup environment, or one that is relentlessly focused on solving problems and that is willing to fail and fall quickly, all the while learning along the way.

For healthcare organizations embarking on the entrepreneurial journey and working to reinvent themselves, the path may be challenging, but when executed thoughtfully, can pay long-term dividends and ensure achievement of the quadruple aim.



About Healthbox

Healthbox is a healthcare innovation services firm that leading organizations trust with decisions on when and how to build, buy, or partner. Founded in 2010, we were the first to combine investing experience and consulting services in a way that is strategic, objective, and actionable for providers, payors, and others across the industry. Our unique perspective and expertise drives innovation from inside organizations and out to produce lasting impact with our partners. We are proud to work with healthcare leaders who share our passion for building, harnessing, and advancing solutions to empower the reinvention of healthcare.