How to Build a Sustainable and Humming Innovation Engine

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Many healthcare organizations have or are creating innovation units. However, the results are not always as expected. That is, these innovation units are often cost centers that do not contribute to the organization's goals or bottom line. We propose a simple five-step process to provide structure to the innovation process that will reduce the number of projects in the pipeline, align the ongoing efforts with the strategy, and increase the number of next-generation and breakthrough projects. We provide an example of an education program that enables the formation of teams and the vetting of concepts, and outline a workshop to get organizations started with building a sustainable and humming innovation engine.

KEY WORDS: Innovation process; innovation engine; strategy; education; workshop.

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We start our innovation initiatives in healthcare with the best intentions. Then life gets in the way and intentions fail to produce results. How focused is your attention on transforming ideas to solutions? Ask yourself the following questions:

- How many projects and initiatives are we managing at the same time?
- Given the current portfolio of activities, will we achieve our goals?
- Do we have sufficient funds to support all the ongoing activities?
- Are we jettisoning activities that are consuming resources, but not contributing to our goals?
- Do we adequately incentivize our staff and clinicians to help achieve the organization's goals?
- Do we provide a clear path to bring ideas to practice? How long does that take?
- What are the bottlenecks in the process?
- What more can we do to support our innovators?

Having many ongoing innovation activities, going in many directions, without any being accomplished or terminated in a timely fashion—all are symptoms of a failing innovation process. Too many projects in the pipeline means everything is underfunded,[1] making innovation a frustrating process for everyone involved. Rigorous project selection seems as if it should be an easy solution, but, in practice, that turns out to be more complex—in part, because of misunderstandings of what innovation entails. Let us, therefore, start by debunking some persistent innovation myths.[2]

INNOVATION MYTHS

Innovation Comes from Epiphanies

Innovation is *never* the result of an out-of-the-blue epiphany. Without years of hard work and study, the overflowing of Archimedes's bathtub would have been an annoyance, not a scientific breakthrough. As Thomas Edison said, "Genius is one percent inspiration and ninety-nine percent perspiration."

The Best Ideas Win

Predicting which ideas will succeed is impossible. Ideas at the early stages are like rough diamonds; they need cutting and polishing. Moreover, the idea alone does not determine success. Teams drive success. As Ed Catwell of Pixar said, "If you give a good idea to a mediocre team, they will screw it up. If you give a mediocre idea to a brilliant team, they will either fix it or throw it away and come up with something better."[3] Especially in healthcare, with as many chiefs as specialty areas, one person alone does not know enough about the various interconnecting pieces of medicine and of the organization to know which idea will be a winner.

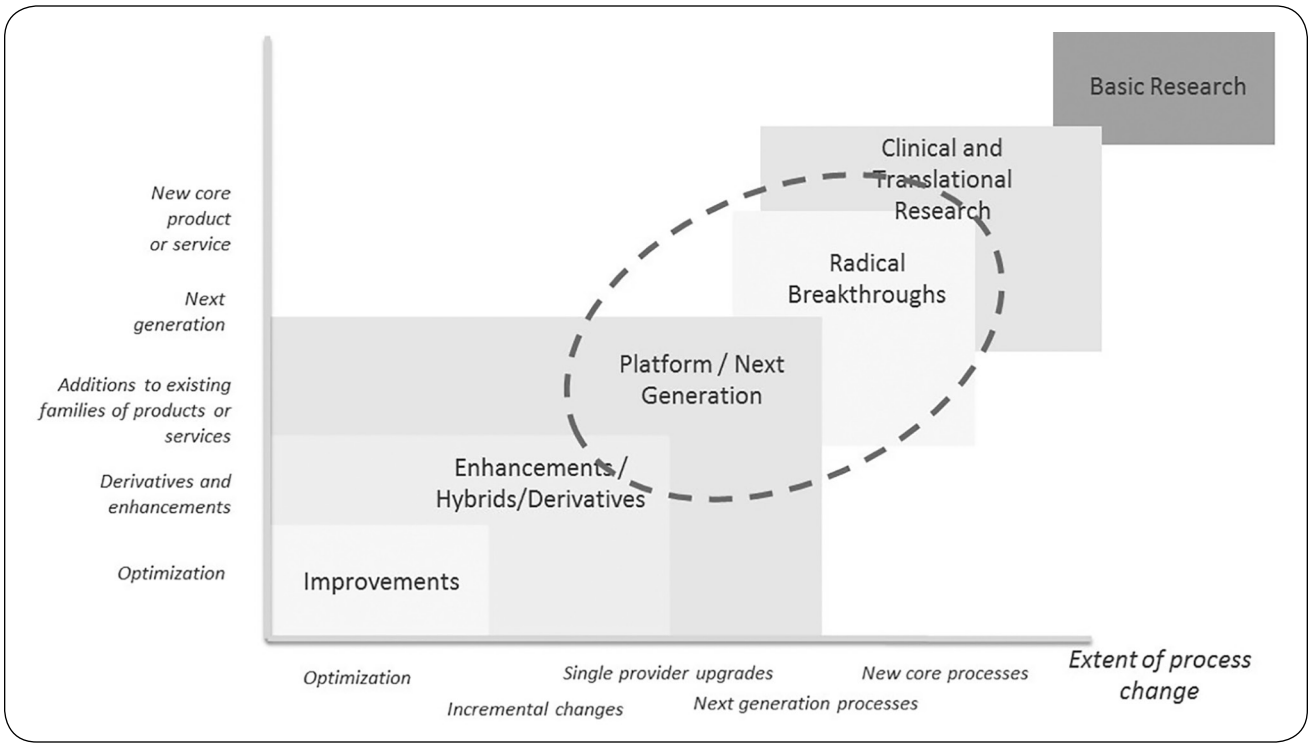

Figure 1. Innovation project spectrum.

Innovation Comes from a History of Success

When we think of innovation, we think of successes, such as iPhones, airplanes, and microwave ovens. Few realize that most of these successes resulted from earlier failures. About 1 out of 1000 (0.1%) rough ideas becomes a commercial success.[4]

Innovation Comes From Love for New Ideas

New ideas intrigue people. However, if implementing one means more work while risking their careers, don't expect anyone to enthusiastically participate in the process.

There Is No Process for Innovation

Many believe innovation is a creative process that gets stifled when trying to enforce structure. The reverse is true. Years of new product management research have proven that the more structured the process, the shorter development times and the less time and effort are wasted on the least promising endeavors,[5-7] freeing up time and resources for the promising ones. When innovation is an *ad hoc* process—as in many healthcare organizations—the process is inconsistent, takes longer than necessary, and is thus unnecessarily frustrating for those who try to bring ideas to practice.

Having a structured innovation process is a necessity to ensure that less promising initiatives are identified and terminated when it becomes apparent they are not ready for the next step, so the scarce resources that are available can be used to ensure that the desired outcomes are achieved. Once a structure is in place, select your innovation projects on parameters other than the idea alone, such as, for example, teamwork quality.

Structure will also help to define different types of innovations, which is important because different projects require different approaches and have different potential (Figure 1). Next-generation and breakthrough projects combine relatively high yields with low risks.[8] These projects are underrepresented in the innovation portfolio of healthcare organizations. They are challenging to execute, because clinicians with an in-depth understanding of how the complicated workflows will be affected have to champion these projects.

BUILDING A SUSTAINABLE INNOVATION ENGINE

We propose a simple five-step process to provide structure that will reduce the number of projects, align the ongoing efforts with the strategy, and increase the number of next-generation and breakthrough projects that will make your innovation engine sustainable.

1. **Articulate the strategic goals of the organization together with your clinicians.** Provide guidance to the clinicians engaged in the innovation process as to the key areas for focus. Rather than starting 100 projects

Innovations in Telemedicine Course

In July 2016, 14 participants started a six-week online Innovations in Telemedicine summer course from George Washington University, facilitated by an online education and support platform.

The participants were all busy professionals; four were practicing clinicians.

Teams are the key to success when bringing ideas to practice. Forming and working in such multidisciplinary innovation teams is often troublesome and time-consuming. It is stressful to select suitable teammates, challenging to find common ground, and difficult to make all pull their weight in a process already fraught with uncertainty. The platform therefore also facilitated team formation.

For the first assignment, participants submitted 10 or more telemedicine ideas. Next, we invited the participants to create projects around predefined telemedicine needs. The software matched each project with ideas and potentially interested team members.

During this project team formation phase, six projects were initiated, with 36 invitations sent to 14 participants. Most had multiple projects to choose from. Within one week, everyone joined a team, each of which consisted of at least three team members with different backgrounds (healthcare, health policy, business, and engineering). The teams were built around common interests and intrinsic motivation to address a particular problem within the telemedicine realm.

The teams would later be qualified by several participants as the "best team I ever worked in."

Weekly progress reports kept the teams on task. They also enabled the teams to strengthen weak areas.

By the end of six weeks, four testable concepts were presented, with each concept substantiated by data. Two of the four teams concluded, based on the data gathered and the insights learned, that further pursing their concept would not be worth the time and effort.

The platform also provided insights in team learning, a factor that helps to predict the likelihood of success for the continuing teams.

Perhaps most importantly, by streamlining the ideation process the participants saved time, while aligned tasks and motivated team members helped them to be successful in exploring their innovation endeavors.

executed by each of 100 physicians that cover 100 different directions, focus your innovation efforts toward the same objective: for example, being the leader in telemedicine services. Let interested physicians figure out together how to meet these goals.[9]

2. **Define the process your professionals have to follow to transform ideas into reality.** Next, create a process to bring ideas to reality. Hansen and Birkinshaw[10] explain that the innovation process is a value chain, with the weakest link determining the overall outcome. If you are excellent at idea generation, but weak in implementation, your innovations will not have a chance to benefit the organization.
3. **Build an educating innovation unit to support the innovation process.** Teach clinicians and staff the process that will enable them to bring ideas to practice. Healthcare organizations can learn from the entrepreneurial community how to guide and support a broad range of complex innovation projects, and narrow these down effectively. No one tells entrepreneurs to start or quit their start-up; intrinsic motivation drives their behavior. Accelerators are effective in terms of time to market and profitability, when they provide education, connections, and support for start-ups.[11] The innovation unit should take on the same educate-and-connect function as accelerator programs, but within the walls of the healthcare organization, to guide busy clinicians through the innovation process and help them make the assessment whether their ideas is actually worth pursuing further.
4. **Track and trace the performance of the innovation activities.** Innovation activities are intended to accomplish strategic goals. It is difficult to hold innovation units accountable for the success of innovation projects, because success cannot be predicted, and the execution is not under their control. Instead, hold them accountable for ensuring sufficient projects are initiated, unsuccessful endeavors are stopped, and fully supported projects are executed quickly. In other words, the innovation units should track and be held accountable for the innovation portfolio and for ensuring the sum of activities is sustainable and enables the organization to achieve its strategic goals.
5. **Offer incentives for desired behavior.** Innovation will rarely be as urgent as the daily activities that occupy healthcare professionals. Without incentives, innovation activities are easily delayed or forgotten. With a process and an innovation unit in place, use incentives to encourage clinicians to participate in the process, contribute to the organization's strategic goals, quit unpromising projects, and share successes with the rest of the organization.

INITIATE A ONE-DAY WORKSHOP TO GET STARTED

We know the five steps just described take time to establish. Building a sustainable innovation process and support structure does not happen overnight. Start building the engine with a workshop, to make sure leadership understands why a structured process is needed, what innovation capabilities need to be strengthened, and how that will be done.

Outline for Workshop for Getting Started with Building a Sustainable Innovation Engine

1. Welcome
2. Outline of the strategic goals
3. Brainstorm about all the ongoing activities and projects of the past two years that were related to achieving these strategic goals. Include formal, informal, failed, unfinished, and successful initiatives.
4. Map all the ongoing initiatives on a portfolio grid.
5. Identify the areas where there are too many and where there are too few initiatives.

— Break —

6. Discuss the results of the Healthcare Innovation Management Scan.
7. Create small breakout groups to discuss how to improve the organization's weakest innovation capabilities:
   - — Define the two to four weakest capabilities and create breakout groups for each.
   - — Select four to six representative initiatives identified under #3 to derive lessons learned and success factors.
   - — Discuss lessons learned and success factors, as identified in preceding step.
   - — Define what needs to be done to strengthen the capability and to enable promising initiatives to succeed, while quickly eliminating less promising ones.

— Break —

8. Share outcomes with group.

— Break —

9. Wrap up: in which a pilot project is formulated to start building toward a sustainable and humming innovation engine:
   - — Define the goals of the pilot (e.g., create alignment, develop innovation process, develop education and support program, design incentives).
   - — Assign teams to execute the pilot(s).
   - — Define the resources the pilot(s) will receive.
   - — Discuss the results the pilot(s) are to deliver, including the check-in frequency.
10. Adjourn

The sidebar "Outline for Workshop for Getting Started with Building a Sustainable Innovation Engine" presents a proposal for a one-day workshop. In preparation for the workshop, take the Healthcare Innovation Management Scan, developed by one of the authors in collaboration with the Institute for Healthcare Improvement, and available at www.organizing4innovation.com/innovation-management-scan-for-health-care-organizations/.

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