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The Profession of IT A Map for Innovation

Innovation is less elusive with the right navigational map.

IN HIS BOOK *Seven Habits*, Stephen Covey tells the story of a salesman who traveled to Chicago to close an important deal.¹ His host sent him a snippet of a downtown map and a business card. When he arrived, he located the address on the map and found his way there. To his surprise, the business had no offices in that building. He called his host, who said, “C’mon, it’s not that difficult to find our address. Try harder.” So the salesman redoubled his efforts to locate the business by looking at alternate addresses that could be lost to typos. He visited those places: still, no luck. In exasperation, he called his host again. Now his host, obviously annoyed at the delay, berated him and asked him to adopt a better attitude or it would not be worth visiting. The salesman tried again with a more upbeat attitude about the goodness of the pending deal, but he still could not locate the office. By this time, the intended start time of the meeting was long past. In anger and frustration, he returned to the airport and went home. After he calmed down, he called his host again to try to reschedule. His host said, “I’m so glad you called. I inadvertently sent you a Detroit map instead of a Chicago

map. No wonder you could not find us.” Covey’s moral: No amount of trying harder or attitude adjustment will get you to your destination if you have the wrong map.

Many who seek innovation feel stuck, like that hapless salesman. Their maps are books that tell them how to form startups, get new product lines going in their organizations, or defeat change-resistant bureaucracies.³ Executives, managers, and working professionals have tried the guidelines advocated in these books. They followed the steps, tried harder, and adjusted their attitudes. Yet, innovation eluded them. Business surveys confirm this, finding that approximately 95% of innovation projects fail.²

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There has been no shortage of effort to increase the rate of successful innovations, including leadership development, management training, creativity boosting, hackathons, design thinking, and crowdsourcing. Hackathons and design thinking are popular today. Although these approaches can significantly reduce the cost of generating proposed solutions to problems, they seem not to have made much of a dent in the overall rate of adoption.⁵

What if the common mental maps about how innovation works are like Covey’s Detroit map—descriptions of the wrong territory? What would a proper map for innovation look like?

What Is the Right Map?

Our way of thinking about innovation is dominated by a “pipeline” concept. It is a form of factory assembly line inherited from the industrial age. It tells us that ideas for problem solutions are input to a pipeline, whose successive stages refine them into products ready for “transition.” Transition (short for “technology transition”) means a hand-off to another organization (such as a military program of record) or an offer made to a target group of potential customers.



With that map, “getting more innovation” means to get more stuff through the pipeline. This can be done by generating more ideas for input, prototyping them faster, and testing sooner to weed out the poor ones. It also entails optimizing each stage—for example, with workflow or time-and-motion studies—to reduce the transit time to transition.

This map does not reliably lead to innovation. Transition, as defined here, is a poor substitute for what we really want—adoption. Achieving transition does not guarantee adoption. It is akin to throwing a product over the fence and hoping that someone will pick it up. Moreover, many innovations do not begin with ideas or inventions that “flow” through stages. They seem to arise spontaneously in response to fast changes in a fluid world that is laced with surprises and contingencies, clouded with complexities, and umbraged with uncertainties. Tighter management and greater discipline are unable to overcome these issues because there is nothing in the plan to deal with them.

So what might be a better way of thinking?

Human Ecosystems

Today we are trying to innovate in human ecosystems, not factories.

A human ecosystem is a space of conversations. Conversations can be as small as two persons talking or as large as a world community (thanks, Internet). To get innovation in this space, we need a map that shows the essential conversations that must take place to produce adoption of an innovation. We also need a better definition of innovation as it appears in human ecosystems, where conversations and practices are knitted together.

More than a decade ago, my colleagues and I researched this prob-

Today we are trying to innovate in human ecosystems, not factories.

lem.² We found these factors in common over a wide range of innovations:

- ▶ Innovations are always manifested as changes of practice in a community.
- ▶ Innovations emerge. They are not “produced.”
- ▶ Emergence happens because individuals take the lead to bring about changes that matter in their communities.
- ▶ Successful innovators have a skill set, a set of eight conversations in which they engage to produce the commitments that drive the actions to make the changes.
- ▶ We can teach the skills and those who learn them are more successful—often significantly more—at bringing forth innovations.

Thus, in human ecosystems: *innovation is emergence of new practice in communities*. Innovation leaders are more like gardeners who grow new practices than production managers who try to control to a plan.

This definition makes no distinction between technological and social innovations. All innovations are social, and some are enabled by technology. The technology is not the innovation; the practices it enables are the innovation.

“I am human... just like you.”

For the first time, the AI had asserted its claim on humanity.

At that moment, the AI and I had become one...

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The Map

The accompanying figure is a map for emergence of innovation in a community. The center of the map is an event we call the awakening, which is the moment that someone realizes that there is a problem or breakdown to resolve. That person, joined by others, engages in conversations (blue bubbles) that foster new practices to resolve the breakdown. The dashed circle represents an expanding “frontier of adoption” that gradually envelops more members of the community into the new practice. The awakening is like a stone hitting the surface of a lake and the frontier like the widening ripple generated by the stone.

The five conversations that expand the frontier of adoption are explained here.

Sensing. This is a practice of deep listening. You give voice to a deep concern in your community. Concern means an issue that people care about and draws their attention, time, and resources. Common sources of concerns are breakdowns, disharmonies, threats, and opportunities. Two warnings: First, the concern may be unarticulated; your job is to bring it forth and give it a voice. Second, it is all too easy for your imagination to smother your listening. You substitute your own conception of a concern for that of the community—you focus on your “concern for them” instead of “their concern.” The danger in this is that they do not share your concern and thus anything you offer will not seem relevant. Having given voice to a concern, you declare you want to do something about it and you set out to generate a movement to make it happen.

Envisioning. This is a practice of storytelling. You build a story of a future in which the concern has been taken care

You will have to master the skill of coping with resistance.

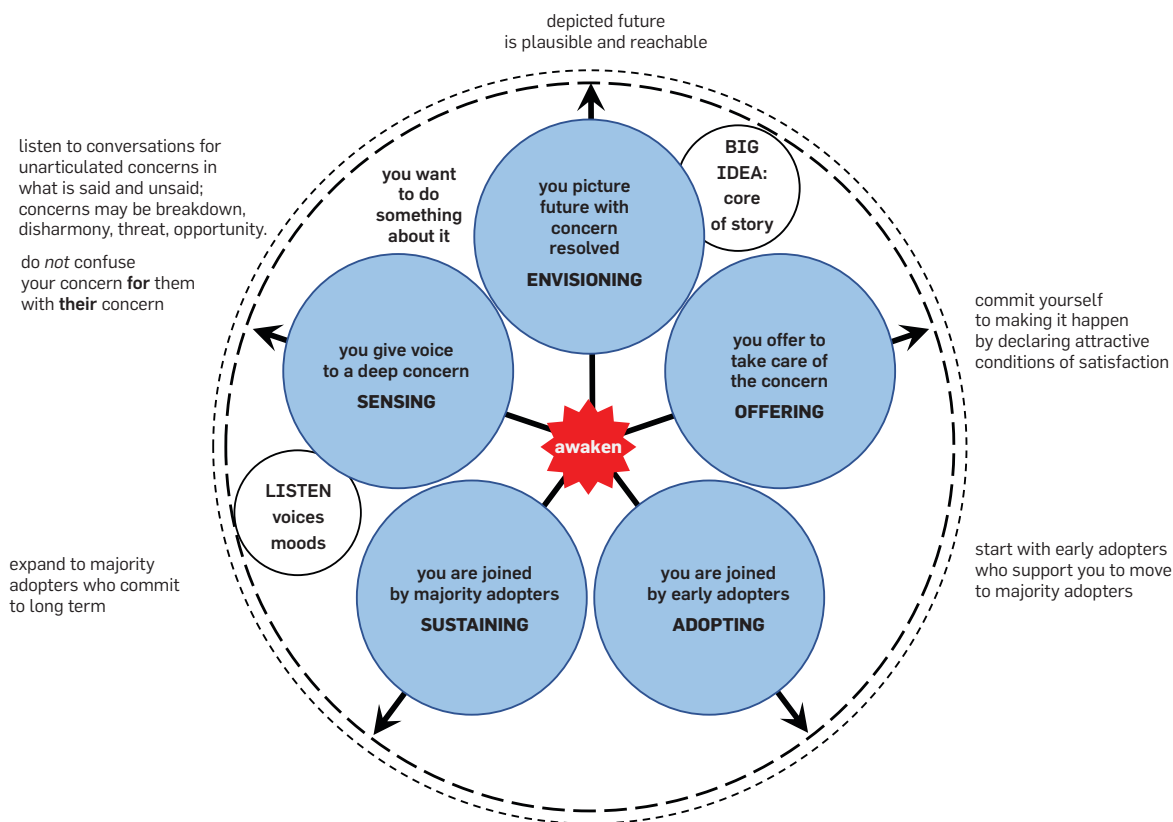
of. Your story is plausible in the possibility of resolution. In addition, your story shows the future is reachable via credible paths from the current situation to the desired future. A warning: Many of us are acclimated to the “research paper,” a form common in academic papers, government reports, and company progress reports. Research papers make the path to the results look simple and linear—“we started with the problem statement, formulated an approach, implemented it, tested and validated it, and arrived at a solution.” The object of a research paper is to present and explain a result, not to get it adopted. Many of us were brought up on a diet of research papers—term papers, theses, and technical reports—and do not know how to tell a real-life story that shows how someone can overcome obstacles while aiming to take care of a concern. Innovation is usually complex and nonlinear. Research papers seldom discuss the many dead-ends encountered, what was learned from them, and all the contingencies that had to be navigated.

Offering. This is a practice of making attractive offers to your community. An offer is a conditional promise to take care of a concern. The promise will be attractive when it addresses the concern and the plausible ways it can be resolved. Because you are almost always assisted by a team, an organization, supply chains, and more, an implicit part of your offer is to coordinate all this in fulfilling the offer. In addition, an offer of a technology will be more attractive if you can show a prototype that demonstrates the core idea of your innovation is feasible and worth developing.

Adopting. This is a practice of appealing to the early adopters in your community—eliciting commitments to join the new practice on a trial basis.⁴ Early adopters are generally eager to try out new things and, when they like the new things, they become voices that entreat the more risk-averse majority to join.

Sustaining. This is a practice of appealing to the majority of adopters in your community. Majority adopters tend to be more conservative and risk-averse. They want assurances that the technology is reliable, stable, well tested, and available from multiple sources. They want help and technical

A map for emergence of innovation in a community.



support while they learn the technology and when it breaks. They listen to early adopters' experiences.

For both early and majority adoption, you are likely to encounter resistance, typically from people whose power or status in the community is threatened by the new practice. They can resist passively by ignoring you or actively block you by using their social power and resources. You will have to master the skill of coping with resistance.


Like all maps, this is a navigational guide. It is not a step-by-step procedure to attain adoption. It focuses on the essential conversations that generate the commitments needed to bring forth the new practice. The process is nonlinear. Sensing, envisioning, offering, adopting, and sustaining are not sequential; they proceed in parallel. There is superficial linearity in that sensing is the first action after an awakening—giving a voice to the concern being brought into awareness. That can be followed by a story of a future where the concern is taken

care of, then by an offer to take care of it, and finally the mobilization of the community to adopt. But, in truth, the innovation leader is engaging in all these conversations together and might be seen as iterating from one to another. For example, if the awakening is a sharp external event such as an earthquake or hurricane, most everyone immediately senses the need for new practices and the leaders begin immediately offering new practices for recovery. They will return later to sensing and envisioning as the situation stabilizes and new contingencies arise. A more mundane example of nonlinearity appears when the leader's offer is declined and the leader returns to sensing and envisioning as part of a search for a better offer.

The map also alerts us to the need to start conversations when something is missing and stick with them until the results are produced.

Conclusion

When our goal is to produce products in quantity, the production pipeline

is the better model. When our goal is adoption of new practices that integrate use of products into the habits and routines of the community, the conversation space is the better model. We sometimes need both, when an innovation based on a product needs to be scaled up for a large and growing community. 

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