



Reducing Barriers to Workforce Innovation

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MEASURABLE PROCESSES FOR FOSTERING INVENTIVE thinking are needed to get things done. The origin of innovation, from the Latin *innovationem*—*in novo*—is to renew, essentially the action taken to fix or replace something. A contemporary definition by computer scientist and author Peter J. Denning has said that “innovation is the adoption of a new practice in a community.”

Innovation requires that people, as change agents, accept or reject the modification. Indifference or resistance to change may stifle innovation without explicit leadership intervention. Just as an organization applies risk management techniques to minimize potential negative consequences, so, too, an organizational framework is needed to maximize potential positive change. Without a supportive structure and assessment measure, leaders can only intuitively infer their organizations’ commitment or impediment to innovation. An innovation index indicates an organization’s culture for encouraging, evaluating, processing and approving ideas for new or improved business products, services, processes and programs.

Innovation, typically associated with advances in technology, has become the new normal in the business community. Commercial businesses operate in a highly competitive market environment that rewards good product and service differentiation with consumer revenue. Commercial businesses in a competitive market embrace innovation to improve efficiency and productivity by lowering production costs and to create new, better and less expensive products for consumers.

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Governmental organizations also have customers but, by contrast, exist to serve the public and do not compete for profit. Generally, government agency missions are oriented toward accomplishing national laws and policies through administrative processes and regulatory compliance. Within the federal public sector, the innovation imperative may stem from national interests competing with other countries in areas such as defense security, energy sufficiency and food independence. To address these strategic challenges the Congressional Budget Office in 2014 reported: “The federal government influences innovation through two broad channels: spending and tax policies, and the legal and regulatory systems.” Federal laboratories, programs and grants support foundational research and development of new technologies at the frontiers of science and engineering. Federal agencies also provide public services directly to citizens, businesses and other organizations, in which the customer experience is becoming more demanding in the digital era of e-government.

Both commercial and government enterprises have goals of improving safety, responsiveness, satisfaction, efficiency, productivity, effectiveness and cost savings. The difference is the translation from goals to implementation—the desire and the ability to remain agile to allow adaptive changes necessary to improve the business model and customer service in the Information Age. Organizations that desire to remain viable encourage innovation. Implementing new and potentially disruptive practices requires leadership approval of the vision, tolerance for initiative uncertainty and commitment to transformation. The leader establishes the organizational culture that embraces the opportunity for innovation and calculated risk taking, while the line of business directors encourage commitment and facilitate change, as noted in 2012 by Harvard Business School Professor John Kotter. Leaders place great confidence in managers to oversee the day-to-day business and trust their judgement. As noted in a Prosci Change Management report, “...engagement with and support from middle management as a top contributor to change management success. In a separate study with 575 change leaders, 84 percent of participants ranked manager and supervisor involvement in change initiatives as ‘extremely important’ or ‘very important’ to the success of their project.”

Innovation Intervention

There are two fundamental reasons why there is so little actual innovation within organizations: (1) implementing innovation is not easy, and (2) an innovation environment is not an imperative. The former reason is a challenge as the path from good idea to successful process replacement is risky, demanding and barrier-prone. The latter reason is attributable to whether leaders and managers foster an innovative culture, which is a prerequisite for innovation opportunity. The challenge is not identifying and executing innovative concepts, but failing to overcome the inertia that status quo is good enough. Lack of innovation is found in organizations with passive/defensive cultures identified with behavioral characteristics including conformity, rigidity, lack of team member accountability and initiative, interaction that will not threaten their security, and with “fit in and meet expectations.” Employees adjust to whether organizational culture is receptive to thinking outside the box or just fulfilling the daily requirements.

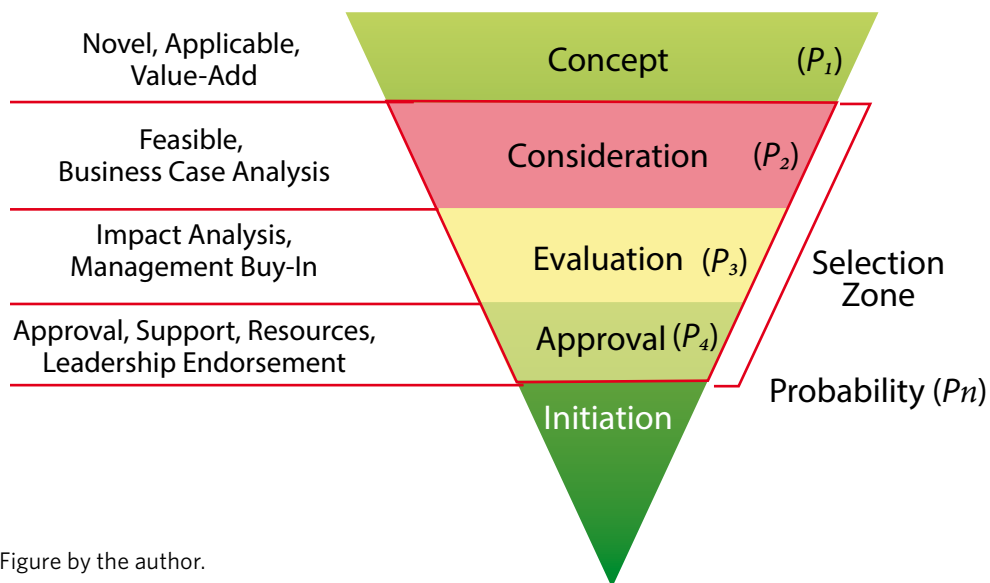
Konosuke Matsushita recognized the significance of an innovative and creative workplace environment. Matsushita, an orphan raised in poverty, was an entrepreneur who started a business with three employees and about \$50, based on an electric light socket he designed. Last year, Matsushita’s Panasonic Corp. employed about 330,000 people in 580 subsidiary companies with revenue of approximately \$74.5 billion. Matsushita stated, “You [U.S. businesses] firmly believe that sound management means executives on one side and workers on the other, on one side men who think and on the other side men who can only work. For you, management is the art of smoothly transferring the executives’ ideas to the workers’ hands.” Matsushita relied on his employees for innovation, instilling a culture in which employee proposals receive impartial management evaluation and leadership adjudication.

Innovation Process

Managers are particularly important to innovation effectiveness in their intermediary role between senior leaders and employees, and their administration of the people who work for them. Managers receive ideas, consider merit and determine whether to continue developing the proposals. The management staff responsible for executing daily operations are the stakeholders whose buy-in is key to

move an idea from concept to implementation. Every organization experiences internal competition for influence and resources to attain success. Innovation represents change, with the intention of improving or replacing certain processes. Change may be disruptive, perhaps with actual or perceived winners and losers. Managers especially have a stake in the outcome, not the least of which is that they risk having a failure that could affect their careers.

Figure 1. Innovation Stages



As stated by Bruce D. Fischer and Matthew Rohde in a 2013 article in the *American Journal of Management*: "Resistance to innovation by management generally occurs in two ways. It may be in the resistance to ideas and their approval, or it may be through resistance to the implementation of approved ideas. Resistance to the introduction of ideas may not be detected, as the ideas will be deterred before they have a chance to blossom. Resistance to implementation or ineptitude in the management of change will eventually become evident in a low percentage of successful implementations." Whatever the rationale, managers filter ideas and worthy proposals may be screened out. A consistent and formal process with benchmark indicators is useful to overcome the deterrence that may inhibit an organization's innovation effectiveness.

Figure by the author.

Employees who are familiar with the organization's business processes and who use the tools to perform their jobs are excellent sources for identifying potential improvements. Whether the proposed change is small or large, the way in which management facilitates the contribution may determine whether there is an early success or failure. The ad hoc approach of an office suggestion box or informal conversations with supervisors are not enough to engage employees. An evidence-based practice removes personal bias that could undermine the evaluation process. A formal idea solicitation and evaluation policy provides uniform procedures and instills confidence that leadership is responsive to change. The procedures should encompass four basic stages as depicted in Figure 1, leading up to project initiation that would then apply program management criteria. The stages are:

- Concept: an initial idea to improve an existing process or product.
- Consideration: business case analysis of feasibility, cost and likelihood of success.

- Evaluation: determining the merits of an enterprise investment decision.
- Approval: decision to commit resources and appoint responsibilities.
- Initiation: creating a project.

Proceeding through the process, from idea conception to approval, the probability of initiating a proposal diminishes and is particularly susceptible in the selection zone that has historically relied on the subjective inclination of management. The International Organization for Standardization (ISO) is developing management standards of terminology, tools, methods and interactions between relevant parties to enable innovation (ISO TC 279). Establishing and adhering to innovation process standards will ensure that idea fruition is not dependent on personal predilections. Also, having an innovation index will provide a quantitative indicator to identify strengths and weaknesses at each process stage. With recurring use, the index data will more accurately tell the story of the organizational innovation performance.

Innovation Index—Measuring Innovation Culture

An organization may tacitly support—or, at a minimum, not stifle—innovation. But applying organizational indicators will enable performance assessment and drive change. Tsutomu Harada last year wrote that "innovation probability should be the unit of analysis in the face of uncertainty." Research indicates that the oldest firms tend to exhibit lower innovative probabilities, and larger firms by virtue of size increase the probability of innovation. Consistent historical data do not yet exist to benchmark the innovation probabilities within the selection

Table 1. Innovation Index Example

Process Stage	Crowdsource Tournament Data	Probability (P) Index
Concept	65 ideas submitted by 55 participants from a population of 527	$P_1 = (65/527) * 100 = 12.3\%$
*Consideration	65 ideas refined to 22 by research team eliminating ideas not actionable	$P_2 = (22/527) * 100 = 4.2\%$
*Evaluation	6 ideas selected by expert committee for further refinement and development	$P_3 = (6/527) * 100 = 1.1\%$
*Approval	1 idea of 6 ranked highest both by expert committee and by 85 representatives from the 527 crowdsource population	$P_4 = (1/527) * 100 = 0.2\%$

* Within the selection zone.

Table by the author.

zone. Examining an innovation engagement technique will illustrate the value of the probability index concept. The example links effective management action to outcome on maximizing innovation probability.

Crowdsourcing is a proactive idea-generation strategy to inexpensively and efficiently solicit employee contributions to improve or solve organizational issues, an approach that may increase participation compared to passive ideation. The use of motivating activities such as crowdsourcing increase the probability that innovation will occur, as opposed to focusing solely on maintaining established business processes. Kira Furuici and Isabel Seidel have said that, in conducting crowdsourcing, offering the targeted audience an incentive will affect the response rate. One organization reported crowdsourcing response rates (P_1) between 5 percent and 12.3 percent, the latter based on an innovation crowdsourcing tournament to solicit ideas from clinicians about how to enhance the use of evidence-based practices within a large public behavioral health system (Rebecca E. Stewart, et al., in *Implementation Science*, 2019). Analyzing the Stewart, et al., crowdsourcing project as an innovation process example offers insight into the selection zone probabilities as listed in Table 1. For this particular structured event, the probabilities exhibit the level of workforce engagement and the subsequent management adjudication.

When measuring indicators are adopted, over time as more data are collected, the probabilities would more accurately reflect specified characteristics of the organization’s innovation culture. Resistance to ideas, consideration and approval leading to implementation will be evident in low probability index ratings. While there is no assurance that procedures and indicators would maximize innovation, a formal governance foundation supported by empirical data will provide open and fair consideration. Examining the influence from corporate

entrepreneurship and intrapreneurship on white-collar workers’ employee innovation behavior, Bjorn Willy Amo of Nord University in Bode, Norway, in 2006 reported that “There was a substantial (0.64) and highly correlated ($p < 0.01$) relationship between the organization’s desire for employee innovation behavior and the employee innovation behavior.” The approval rate of innovation projects is a call to action by commitment of resources, important for demonstrating more than perfunctory policy. The following basic quantified expressions are lag metrics to evaluate a culture of soliciting, formally reviewing and approving innovation projects.

- Consideration = $P_2 = (\# \text{ qualified ideas} / \# \text{ employees})$ per year
- Evaluation = $P_3 = (\# \text{ feasible ideas} / \# \text{ employees})$ per year
- Approval = $P_4 = (\# \text{ approved ideas} / \# \text{ employees})$ per year

Conclusions and Recommendations

An organizational innovation framework improves the opportunity for maximizing positive change from ad hoc to a systematic approach for success. Innovative index probabilities provide an objective measurement of an organization’s innovation culture. To begin determining if innovation is meaningful within organizations, I recommend the following actions:

- Create procedures for each process stage from concept to approval.
- Identify five organizations that have a history of innovation or that have successfully implemented innovation projects; collect probability data for each process stage.
- Implement a 12-month pilot test at five organizations using the procedures and concurrently at five control organizations with no procedures. Collect probability data at all test organizations to determine if the procedures demonstrate improved ideation rate.

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