

1986

How Effectively Are We Managing Innovation?

Stanley J. Baran

Bryant University, sbaran@bryant.edu

Peter Zadan

John H. Vanston

Follow this and additional works at: https://digitalcommons.bryant.edu/comm_jou



Part of the [Other Communication Commons](#)

Recommended Citation

Baran, Stanley J.; Zadan, Peter; and Vanston, John H., "How Effectively Are We Managing Innovation?" (1986). *Communication Journal Articles*. Paper 13.

https://digitalcommons.bryant.edu/comm_jou/13

HOW EFFECTIVELY ARE WE MANAGING INNOVATION?

Stanley Baran, Peter Zandan and John H. Vanston

Technical professionals surveyed at 30 "Fortune 100" companies feel they are more interested in innovation than their employers are.

Innovation is "in fashion" for American companies. For example, Transamerica's television and magazine ads tell us it is in the business of insurance, finance, manufacturing, transportation, and innovation. Hewlett-Packard "focuses on innovation." Pontiac's Fiero is "innovation at work," and True 100s cigarettes are simply promoted as "innovation."

This push for innovation has been well received and accepted by a corporate America that readily understands the contemporary economic environment—one characterized by rapid change, technological development, and keen competition. Indeed, for companies operating in dynamic business environments, they must innovate to remain competitive. For this reason, corporations have been willing to commit greater financial and physical resources to research and development activities. This commitment to R&D stems from the belief that innovation does not just happen; it needs to be supported and managed to flourish.

Surprisingly, though, the professional and scholarly literature on innovation offers little evidence evaluating how organizations succeed or fail at managing innovation. If we assume that people, not "the system," develop new products and new market strategies, we should expect that management scientists would have thoroughly documented employees' attitudes toward innovation, the success of their superiors' experience in fostering positive attitudes toward innovation, and how those employees perceive their superiors' efforts and intent.

In the absence of empirical evidence, managers and

other corporate executives have come to depend on a collection of intuitive and anecdotal knowledge. For example, the popular notion is that younger workers tend to be more innovative than their older counterparts and that those newer to an organization are more innovative than those with longer tenure. It is believed that those lower on the managerial ladder are more innovative than those higher up, those in high technology organizations have an innovation advantage over people in "smoke stack" industries, and so on. This is not to say that the professional literature is devoid of well-reasoned observation and speculation. Numerous authors have eloquently emphasized the significance and effects of "corporate environment" on workers' ability to perform innovatively (1). Yet, the attitudes of those working in those environments and under those designs, for the most part, have gone largely unexamined.

The Innovation Assessment Survey

Designed to assess the "environment for innovation" in order to facilitate innovation improvement, an innovation assessment survey was administered to 249 managers and other technical professionals employed in the R&D and technical planning departments of more than 30 "Fortune 100" companies. They had been with their current companies for an average of 11-15 years, were, on the average, between 36 and 40 years old, and the majority were second and third level managers. Data from the instrument, a self-administered questionnaire, were collected over an eight-month period spanning 1983 and 1984.

The survey defined innovation as "seeking new or better work methods, products, processes, or services." Respondents were asked how important "thinking innovatively and devoting time to innovative projects" was to their superiors' evaluation of their job performance, their personal satisfaction on the job, their status among their peers, their potential for advancement, the demands of their job, and the continuing success of their organization. In addition, four items were included that asked respondents to judge how often they were encouraged and/or discouraged to innovate. A number of open-ended questions asked for suggestions on how to "improve the level of innovative processes and products" and for the respondents' impressions of their organizations' strengths and weaknesses in encouraging innovation. Finally, a series of demographic items examined length

Stanley Baran is a professor in the College of Communication at the University of Texas at Austin where he teaches his department's research and statistics courses. He has written over 40 scholarly articles and three books, including *Mass Communication and Everyday Life*, which earned him the Broadcast Preceptor Award for Excellence in Literature of Communication. He received his doctorate from the University of Massachusetts in Amherst. Peter Zandan is an adjunct professor in the College of Communication at the University of Texas at Austin. He received M.B.A. and Ph.D. degrees from the University of Texas at Austin. John Vanston is president of Technology Futures, Inc. a consulting, research, education firm specializing in effective management of technological innovation and technology forecasting. Vanston was formerly deputy director of the Center for Energy Studies at the University of Texas and a faculty member of the Mechanical Engineering Department. He is a graduate of the U.S. Military Academy, Columbia University, and the University of Texas at Austin.

of tenure with the organization, time spent in the current job, as well as age, management level, and company type.

What We Found

An examination of mean scores for the items dealing with the importance of innovation clearly demonstrates that the respondents personally value innovation more than they felt it was valued in their organizations. Means for the questions, "How important are thinking innovatively and devoting time to innovative projects in your personal job satisfaction" and "in the continuing success of your organization" were 4.3 and 4.2 respectively, out of a possible score of 5. This is what might be expected in today's innovation-conscious corporations. But, what one might not foresee is the relatively low value that these same respondents see others in their environment placing on innovation. The importance of innovation to their superiors' evaluation of their job performance ($x = 3.5$), their status among their peers ($x = 3.4$), their potential for advancement ($x = 3.4$), and the demands of their jobs ($x = 3.5$) are all lower than their own estimation of innovation's worth. *This implies that corporations are not doing a particularly good job of taking advantage of their employees' innovative fervor.* Employees find innovation personally satisfying and important to their companies' futures, but see themselves as "islands of innovation," with neither their bosses nor their peers recognizing their efforts. They see their organizations as unwilling to build innovation into the advancement timetable or into the specific demands of particular job assignments. Organizations may not be satisfying or meeting the potential for innovation that their employees seem to possess.

Responses to the questions about communication may hold some explanation. When asked how often they are "explicitly encouraged to approach (their) job responsibilities innovatively," only one-third of the respondents said frequently or always, while nearly the same number responded never or rarely. The mean response was 3.0, or "sometimes." Implicit encouragement was experienced somewhat more frequently ($x = 3.2$). Thirty percent of the respondents said that they were frequently encouraged toward innovation. This not only lends empirical support to the argument that informal communication is as important, if not more so, than formal communication; it may also help explain why employees' (at least as they see it) place more importance on innovation than do their organizations. The implicit channels may be stoking the fires to a greater degree than the more visible official channels, leading to a belief that the organization is less interested in innovation.

Discouragement of Innovation

This pattern is clearly visible when examining the discouragement of innovation. While only 48 percent of the sample said that they were frequently explicitly encouraged (none said always), 36 percent said that

The firms that seemed most successful in the realm of innovation were those with a relatively high degree of internal competition to achieve and a willingness to experiment with and reward innovation.

they were frequently implicitly discouraged from innovation (again, no one said always).

Responses to the open-ended questions helped highlight this phenomenon. Answers were analyzed in terms of their emphasis—that is, did they stress communication, organizational, educational, managerial, policy, or environmental concerns. The following table lists the number of times each concern was raised in response to the questions "What do you think is your firm's greatest asset in encouraging innovation?" and "What do you think is its greatest inhibitor?" It demonstrates that when environmental and organizational factors are good, they are seen as important assets to a firm's innovation potential. When these factors are bad, they are seen as major inhibitors (along with management). What should be obvious here is that these employees see these organizational and environmental problems as a responsibility of management, and consider the eradication of these problems as desirable.

	Greatest Strength for Encouraging Innovation	Greatest Weakness for Encouraging Innovation
Communication	7%	7%
Organization	18%	26%
Education	8%	1%
Management	12%	22%
Policy	6%	8%
Environment	24%	16%

In spite of the common assumptions about demographic indicators of innovation that were mentioned earlier, only two variables—managerial level and length of time with the firm—showed any relationship with attitudes toward innovation. In fact, while statistically significant, these relationships were relatively weak. Managerial level was positively related to the importance of innovation in personal satisfaction and to the importance of innovation in the demands of their jobs. This seems reasonable in as much as the challenge of a particular position would be expected to increase with its height on the organizational ladder. Length of tenure with a firm was negatively related to the frequency of implicit encouragement toward innovation. The longer individuals were with their current organizations, the

less frequently they experienced implicit encouragement. This may be due to the fact that their organizations were paying less attention to them as innovators.

What this demographic/innovation attitude relationship signifies is that organizational design and environment are keys to fostering innovation. This view is borne out in the company-by-company analysis of the data. Although there was no pattern suggesting that certain industries were better managers of innovation than others, individual companies did show unique "innovation profiles" that varied considerably from the picture drawn from this aggregate data. Specific corporate culture or climate is important for innovation. The firms that seemed most successful in the realm of innovation were those with a relatively high degree of internal competition to achieve and a willingness to experiment with and reward innovation. They offered their people a sense of personal involvement in innovative activities, and made them feel appreciated

for their efforts. **They are companies that have made best use of informal channels to communicate about, reinforce, and reward innovation.**

Returning to this study's overall data, however, it appears that management has generally not done as well as it would like in the realm of innovation. Business and government leaders, as well as the popular and professional press, have all expressed how important it is for companies to strongly support innovation. The managerial challenge is to translate that desire to innovate into an organizational environment. Our survey results, however, suggest that top management's stated commitment to innovation has yet to be successfully infused into organization structure and environment. □

Reference

1. See for literature review, Abbey, Augustus, *Technological Innovation: The R&D Work Environment*, Ann Arbor: UMI Research Press, 1982.

Reprints

LIVING CASE HISTORIES OF INNOVATION

Twelve case histories, originally published in RESEARCH MANAGEMENT, are now available in this paperback book. To order, please use the form on inside back cover of this issue.

The Impact of Industrial Innovation on the Economic and Social Welfare of the United States
Available Light Movies—An Individual Inventor Made it Happen
Fiber Tip Porous Pens—A Two-Prong Attack Produced a Reliable Process and Product
Optical Waveguide—Matrix Management Met Complex Technical and Commercial Problems
Fluorochemicals—Their Development Molded a New Product Philosophy
Cycle-Safe Bottle—When Planning and R&D Were Not Enough
Anaerobic Adhesives—A Solution that Found a Problem
Cyanoacrylate Adhesives—A Day of Serendipity, A Decade of Hard Work
High Fructose Corn Syrup—A Case History of Innovation
Laser Processing—From Development to Application
How the LP Record was Developed—or the Case of the Missing Fuzz
Six New Products—What Made Them Successful?
Key Factors and Events in the Innovation Process

Price \$10