

Chapter 4 Fostering the Courage to Innovate

The Innovation Superhighway is not only a physical infrastructure, albeit technical and electronic. It is human—a function of insight, interaction and imagination resident in the minds, hearts and hands of people around the globe.

—Debra M. Amidon, *The Innovation Superhighway: Harnessing Intellectual Capital for Prosperity*

Bob Perkins was a marvelous innovator, as evidenced in his approach to problem after problem. When the new Control Data needed a Hol-lerith punched card reader for its first computers, Perk put that need together with a technology resource other computer engineers might not have considered. He later recalled: “I went down to Chicago, stuck my head into what was left of an old player piano company, and learned how to do a real cheap pneumatic reader.” Ideas and innovations arise from people’s special connections with the world around them.

New businesses are innovative almost by definition: They come into existence as a result of an innovative idea, a new product, a new service, or a new marketing concept. If innovation is indeed the wellspring of

new businesses, why do innovation capabilities so often seem to fade and become lost? Is this somehow an inevitable consequence of success, growth, and maturation, the organizational equivalent of biological aging in human beings? Do most businesses, like most people, simply lose their childlike curiosity, inquisitiveness, and sense of experimentation as they grow and mature, becoming increasingly sedate and risk-averse? Are the endless prescriptions for innovation nothing more than a futile search for an illusive fountain of youth?

Organizations are as organic in their nature as the individuals who constitute them. Business organizations can be regenerative if they have the ability to support ongoing innovation. The seeds of regeneration are sown in the earliest stages of the organization's existence and have four key attributes: acute awareness, excellent skills, inspired motivation, and a supportive infrastructure.¹ If that characterization seems obvious, all the better. Still, it is that very obviousness which misleads people. Moreover, the four attributes are interdependent and form the requisite composite for personal and organizational growth and renewal. Three attributes—awareness, competence, and inspiration—relate to personal qualities that can be nurtured, shaped, and honed through experience. I discuss these next. The fourth, a supportive infrastructure, is a purely exogenous factor supplied by the corporation—it is enabling. It allows the capacities of people to develop and find expression. I consider infrastructure in the following chapter.

AWARENESS

Awareness is the necessary underpinning of innovative creation and it is something much more profound than simply knowing about the currently available methods and technologies. Awareness involves a *correlative* ability to understand how various tools and concepts can be best brought to bear on the problem at hand. We think of people with this correlative ability as being “intuitive.” Awareness is Bob Perkins, his head inside a player piano, thinking about a punch card reader. It is an ability to connect the seemingly disparate events in our lives, or as Yogi Berra might have put it, “Unless you are looking for something, you usually won't find it.”

Bob Lillestrand was an innovator who was acutely aware of how to use the laws and theories of physics and mathematics to solve problems such as celestial navigation. He is no less the innovator because he didn't generate theories of his own; his gift was the power of observation and a keen ability to build on existing knowledge by combining it in unique ways.

Without question the semiconductor ranks among those inventions with the most far-reaching consequences in human history. As an innovator, Seymour Cray was aware of the possibilities the semiconductor offered, and so he was able to perceive geometric configurations of them that would result in the highest performance computers. Both Bob and Seymour are powerful examples of awareness. Both were driven by a feeling for, and a deep-seated caring about, problems that needed to be solved and, in turn, were intensely attentive to technologies they might find useful. Innovators can find solutions only when they are looking for them. In people such as Bob and Seymour, there is an innate curiosity about problem solving that heightened their awareness of the possibilities for problem resolution.

It is a considerable leap, however, from a few innovative individuals to an organization that is similarly attuned. In nearly every organization one may find a Bob Lillestrand or Seymour Cray. That does not make the company highly innovative. It is a corporate culture of awareness that is the basic building block of creative energy.

This characteristic of awareness can also be thought of as “caring curiosity.” It can, like other traits or skills, be learned, and, with practice, it can be honed to rewarding sharpness. Most of us will never design a supercomputer or figure out how to navigate space vehicles. But each of us can know the satisfaction of innovation, of devising a novel solution to the oft-felt dilemma, “There’s gotta be a better way.” Mostly we learn this skill through experience and practice. That’s not surprising. What is surprising is how few organizations know how to challenge employees and give them the opportunity to learn and practice that skill. *Of all managerial inanities none is more regrettable than to deprive people of the opportunity to learn and exercise caring curiosity—the single most important skill to corporate health and renewal.*

Control Data was one exception. The seed of the company’s “awareness” culture was planted long before the company was formed, on a farm in Nebraska. In the 1930s, farmers throughout the Midwest were hit with two extraordinary problems—the Depression and the Dust Bowl, an extended period of drought. On the Norris family farm, both money and cattle feed were in short supply. Young Bill Norris, then an engineering student at the University of Nebraska, remembered that in his teens he had observed the cows picking out green thistles from the fresh hay they had been fed. There was Russian thistle tumbleweed aplenty on the farm. It was generally considered a nuisance, but Bill harvested as much of it as he could find. The neighboring farmers thought he was crazy, but it worked; the thistle nourished the cattle and kept the Norris farm