



## BALANCING IN A CORPORATE STORM: BOEING'S QUANTUM SHIFT LEARNING TEAM

BY CAROLINE FU

**I**n 1994, Boeing's CEO Phil Condit published an attention-getting article in the company's internal management publication. In it, he challenged employees to shake off complacency and transform the successful aerospace company from top to bottom. He opined, "If they [companies] survive this entrepreneurial phase, they begin to mature. . . . Once a company matures, it begins the death process, which is what Boeing is now experiencing. Now, there are only about three ways to go once this death process has begun. The first is to die—the company just goes away. . . . The next is to get deep enough into a crisis state that it becomes apparent that if something isn't done, the company will die. . . . The third way—and one that has rarely been chosen—is to dismantle the bureaucracy and change the entire organization while the company is still on top" ("What It Will Take to Fulfill Our Vision," *Manager*). Condit's bold statement moved the company to pursue the third route.

As one way to support this large-scale change effort, Boeing launched The Quantum Shift Learning (QSL) team, a pilot group of five full-time learning organization practitioners with backgrounds in engineering/science and an appreciation for the "softer sciences" that focus on interpersonal dynamics. QSL's initial charge was to help information technology (IT) organizations within the company to think differently and to tackle the root causes of issues, using the tools of systems thinking and system dynamics. This approach required a "quantum" shift in thinking for people used to linear, analytical methods of problem-solving. The goal was eventually to disseminate learnings from the pilot program to the larger corporate culture.

### Building Capacity for Change

Because change is often perceived as threatening, we based our approach on frameworks that members of the IT groups would be familiar with: SEI-CMM (the Software Engineering Institute's Capability and Maturity Model), which is used to ensure the quality of software, and the corollary P-CMM (People Capability and Maturity Model), which is used to evaluate software-engineering organizations' readiness to achieve high levels of performance (see "The Spiral of Capacity-Building").

QSL began by introducing the concepts of organizational learning ("know-about") to senior management, who then cascaded them down to the technical staff. We started holding monthly "Systems Thinking as a Language for Action and Learning" workshops. We later added open-space dialogue circles, café conversations, and causal loop diagram practice for work groups ranging from 50 to 80 people. These initial efforts helped people delve beneath events and patterns to the structural level.

The QSL team itself modeled Peter Senge's five disciplines of organizational learning by approaching issues systemically. We began with group off-sites to create our shared vision. When conflicts cropped up among members of the team, we revealed our perspectives and assumptions, reflected, then acted to resolve the issues and share our learnings.

We also worked to maintain a sense of balance in the face of change. We realized that we could either let fear of the unknown overwhelm us or courageously embrace change. We chose to let go of beliefs that no longer served us and welcomed new possibilities. We also came to accept

that our emotions work like a pendulum; even if we approach change as a source of new energy, we inevitably have moments when the pendulum swings over to the side of doubt. In those times, the key is to find ways to counteract the fear and swing the pendulum back toward the more positive side. Using this approach, although we experienced momentary setbacks, we were able to remain balanced and productive over the long term.

After learning to experience balance ourselves, we were able to help other groups to detect polarities in how they perceived problems. We helped them direct energy to finding more balanced solutions to problems rather than just either-or answers. People began to break free from knee-jerk reactions to challenges and see new possibilities. For example, during some dialogue sessions, we noticed people shift from blaming leaders for project difficulties to assuming some accountability for the situation themselves—a more balanced perspective. When the workers recognized how their own actions had contributed to the problem, they felt empowered to help design a solution.

With each group, after a couple of months we moved to "know-how," the second stage of capacity-building. People developed "know-how" by using the tools of systems thinking on a daily basis to handle adversity. After drawing causal loop diagrams, exploring the mental models behind certain decisions, and designing possible interventions, groups began to take actions toward achieving their desired objectives. Many teams found ways to respond to "fires" systemically instead of reacting powerlessly.

Once we believed that the use of systems thinking tools was well estab-

lished within the IT organizations, we moved to the third stage of capacity-building: helping teams to propagate their learning within the company. With encouragement from top management, groups began to share their “victories” in applying systems thinking within IT and beyond. During this phase, we learned that a team’s ability to adopt the concepts and practices of systems thinking hinges on many different variables, including the manager’s support of the change effort, cultural norms, and people’s perceptions. We were able to work past most of the “stumbling blocks” through patience and persistence.

### Navigating Through a New Culture

At this time, company mergers and new acquisitions changed the environment in which Boeing as a whole was operating. We on the QSL team found that we needed to learn some new skills to cope—and to help others cope—with the turmoil arising from both the ongoing internal change effort and external pressures. We turned to the concepts of chaos theory to help guide us through the brewing corporate storm.

A workshop called “A Taste of Quantum Leadership,” which presented ways to apply chaos and complexity theory to organizational life, really shifted some managers’ thinking about how to act in a changing environment. The team discussed how “The Cycle of Dissipative Structures” might serve as a tool to guide us through the ups and downs of the change process (see “Corporate Evolution and the Chaos Advantage,” V10N10). This framework is derived from the work of Nobel Prize-winning chemist Ilya Prigogine on the development of living systems. It shows that the way in which organizations handle energy—in the form of input from their environment—influences whether they thrive or collapse in the face of change. A balanced system—one that perceives challenges as opportunities and maintains open paths of communication—is more likely to thrive than one that rigidly seeks to control its environ-

ment. When a system disintegrates, its energy is dissipated and lost; when it successfully incorporates new input, it evolves to a higher form of complexity and is better able to fulfill its purpose. This approach was consistent with our emphasis on balance and how we approached challenges.

Our understanding of how complex systems work served the QSL team well when restructuring within Boeing threatened the group’s very existence. Because QSL played a support role for a line organization, some perceived it as not directly contributing to the company’s bottom line. The team’s fate became painfully uncertain. We considered disbanding the group, knowing that the individuals on the team could find other positions within the company. But our strong belief in the value of the work and our knowledge that QSL’s energy would be lost if we split up encouraged us to stay together. We realized that by choosing to focus our energy on new opportunities rather than succumbing to fear, we could possibly take a “quantum leap” in our ability to support the change process at Boeing.

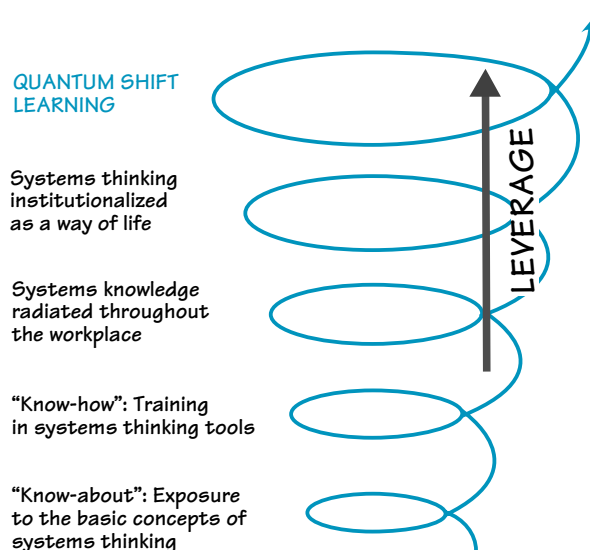
Ultimately, our faith in finding balance and our belief in our collec-

tive ability to contribute to the greater whole paid off. By stressing our intentions and goals for the company, we convinced the managers of the companywide training organization to give us a home within a learning innovations group. In our new capacity, we are bringing systems thinking to corporate initiatives to improve quality and efficiency, and are helping the company as a whole to become more competitive in the aerospace market. We are working hard to achieve the fourth stage of capacity-building—making systems thinking a way of life in Boeing.

Peter Senge says building a learning organization is like tending a garden. QSL tended a small garden in IT; now we have the opportunity to grow a forest. We have seen firsthand that, to make systems thinking a way of life, people must learn the art of finding balance in a corporate storm. ■

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## THE SPIRAL OF CAPACITY BUILDING



QSL began by introducing the concepts of organizational learning (“know-about”). People developed “know-how” by using the tools of systems thinking on a daily basis to handle adversity. Once we believed that the use of systems thinking tools was well established, we moved to the third stage: helping teams to propagate their learning within the company. We are working to achieve the fourth stage—making systems thinking a way of life in the workforce.