

Making All the Right Connections: The Strategic Leadership of Top Executives in High-Tech Organizations

JOHN J. SOSIK DON I. JUNG YAIR BERSON
SHELLEY D. DIONNE KIMBERLY S. JAUSSI

Our world is a technology-driven world. Everyday the business press bombards us with information on new technologies, and on how these technologies help organizations become more efficient and profitable. Clearly, organizations cannot sustain their competitive advantage and utilize their full potential if they are not leveraging the newest technology to achieve their strategic goals in today's business environment. Technology systems that support business operations serve as pervasive strategic assets, because they transfer one of the most important commodities in today's organization: information and knowledge. Employees, customers, partners, and suppliers also represent important strategic assets because they provide the ideas and relationships that result in success. These people must use technology systems to accelerate the dissemination of information and development of strategic knowledge in line with the organizational strategy.

The technology-driven world is creating completely new ways for top executives to formulate strategies, facilitate work and business relationships, and create value for stakeholders. The trends pose new challenges for executive leaders, who must leverage technology to enable and empower their followers to successfully execute the organizational strategy. Some executive leaders, such as Jeffery

Skilling of Enron Corp. or Bernie Ebbers of WorldCom Inc., knowingly or unknowingly disconnect their people, and in so doing, disconnect their organizations from being successful. Others, like Jeff Bezos of Amazon.com, Inc., Meg Whitman of eBay Inc. or Steve Ballmer of Microsoft Corp., work each and every day to make the connections that are critical to being agile and adaptive in today's rapidly changing markets. In this article, we show that to fully connect people and technology systems requires top executives to display outstanding strategic leadership that focuses on both strategy *and* people.

The strategic leadership processes we describe below are based on the results of our interviews with 75 top executives of 65 organizations operating within five major industry groups (finance, information technology, life sciences, manufacturing, and services). All of these organizations use technology as a strategic source of competitive advantage. Key leadership lessons derived from our interviews are summarized below.

WHAT IS STRATEGIC LEADERSHIP AND WHY IS IT IMPORTANT?

In recent years the attention of leadership scholars has shifted to top executives who

can exert a strong influence on the strategy and performance of organizations. The phrase “strategic leadership” emerged from work on strategic management and consists of: (1) determining strategic direction; (2) exploring and maintaining unique core competencies; (3) developing human capital; (4) sustaining an effective organizational culture; (5) emphasizing ethical practices; and (6) establishing balanced organizational controls. These components of strategic leadership focus primarily on actual strategy formulation. While formulating strategy is a critical part of a top executive’s strategic leadership role, it has been the focus of a great deal of research that looks at how leaders formulate strategy and whether or not they make sound strategic decisions.

In our view, *strategic leadership* is a series of processes that determine the degree to which organizations are effective in making fundamentally sound connections between people, technology, work processes and business opportunities aimed at adding economic, social, and intellectual capital for shareholders, society and employees. Understanding strategic leadership involves spotlighting *what effective top leaders actually do* in order to produce a strategy-focused organization. Outstanding strategic leaders are those executives who display key behaviors that enable the organization to effectively execute its strategy. In essence, they are “strategy-focused leaders.”

In this article, we examine several of the typical aspects of strategic leadership, and add several other critical behavioral aspects such as focusing on the core message and strategy; disseminating the strategy in the organization; developing and sensitizing employees to strategic issues; integrating the right people, technology and strategy; building ownership and trust; and reinforcing the core message and strategy by linking shared leadership, organizational culture and key performance indicators.

By engaging in these processes, executives can succeed in creating organizations capable of effectively implementing strategic plans and adapting to the turbulent organi-

zational environment. We have found that this broader set of processes can create an organization capable of effectively implementing strategy to yield increases in intellectual, social and economic capital.

The Importance of Strategic Leadership

How do today’s most successful technology-driven organizations sustain their competitive advantage? A glance through business periodicals provides answers for this question and illustrates reasons why issues of strategic leadership are important. For example, a variety of complex business models such as “business-to-business,” “business-to-consumer,” and “business-to-all,” have fundamentally changed the way executives must develop and lead their organization’s strategy. Executives at Samsung are rethinking the way they deliver products and services throughout the world, using a “business-to-all” strategy. General Electric Co. has used the personal and professional networks of its employees to provide ideas for new corporate initiatives, to select outstanding talent, and to train associates regarding “GE-isms.” At Microsoft, Bill Gates and Steve Ballmer have integrated the ideas of customers into their strategic planning by continuously collecting suggestions for system improvements and desired products and services. Customers are now partners in Microsoft’s strategic leadership system. These examples demonstrate how the effective strategies initiated by top executives fundamentally change the way they operate their business, appropriately position themselves in the market, and improve quality of products and services that lead to positive business outcomes.

A recent study of executive members of the Conference Board reported that 40% of all information technology (IT) development projects are cancelled before completion *and* that the primary factor accounting for their failure is *a lack of strategic leadership*. A separate study found an inverse relationship between the amount of money spent on IT projects and

their success rates, with projects costing less than \$750,000 achieving a lackluster 55% success rate, and projects costing between \$5 and \$10 million achieving a woefully dismal 7% success rate. These failures are largely due to a failure in strategic leadership.

In 2002, Jorma Ollila, chief executive officer (CEO) of Nokia, rolled out 30 new products (e.g., camera-phones) and licensed Nokia's software to other phone-makers to produce greater than expected profits, estimated at \$3.4 billion. Nextel Communications' CEO Timothy M. Donahue also yielded stellar profits by introducing Direct-Connect, which provides walkie-talkie-like wireless connections. Strategic leadership plays a central role in these initiatives because both CEOs first envisioned a successful outcome, and then strategically created the connections between customers, product development and delivery, which eventually added significant profits for their organizations.

These examples describe organizations that operate in technology-driven contexts. They face a rapidly changing, highly volatile environment with disruptive and destructive changes. Their environments are more dynamic (their technical, economic and social factors are ever-changing), diverse (they engage in different markets), risky, and buoyant (their markets and market emergence grow rapidly) than those for other organizations. They also are more technologically sophisticated, endure stiffer competition, and undergo higher degrees of cyclical fluctuations in their business than other types of organizations. What kind of leadership behavior and processes must executives of these organizations use to spur performance excellence in these conditions?

A MODEL OF STRATEGIC LEADERSHIP IN TECHNOLOGY-DRIVEN ORGANIZATIONS

One potential way to view strategic leadership of technology-driven organizations is as

a system. All systems have resources, constraints, boundaries and components that need to be improved and those that ought to be retired and discarded. The strategic leadership system is composed of inputs or resources fed into the system, processes within the system, and outputs or outcomes of the system that require the attention of top executives.

Strategic Leadership Inputs

A set of inputs provides the foundations for the processes and outcomes of the strategic leadership system. Executive leaders exercise strategic leadership when they assess these inputs and determine how they can best fit them into a sound, relevant and integrated strategy that aims to achieve key organizational outcomes.

The executive leader. Executives who display high levels of strategic leadership possess traits such as decisiveness, self-awareness and cognitive complexity. Executives who are able to take decisive action in a crisis demonstrate that they can formulate and execute an effective organizational strategy. Carly Fiorina's decision to re-invent Hewlett-Packard Co. initially met resistance from family shareholders, but has reaped \$3.5 billion in cost savings. Executives who are self-aware of their leadership behaviors and how they affect followers are more effective than those who underestimate or overestimate their leadership behavior. A lack of self-awareness is a common source of executive career derailment as experienced by CEOs such as Gerry Dicamillo of Polaroid Corp., Jill Barad of Mattel Inc. and Desi Desimone of 3M Company. Executives who possess a high level of cognitive complexity are adept at obtaining, storing, retrieving, categorizing and using new information and integrating a variety of perspectives into strategic solutions that blend technology, people and ideas. For example, Steve Jobs has created a strategy with the iTunes Music Store to grow Apple Computer Inc.'s market share by positioning itself as a

quality provider of the audio/visual computer media products and services.

Employees. Employees bring their own set of knowledge, skills and abilities which influence the strategic leadership system. The executives we interviewed identified several key attributes they look for when selecting employees. Among them are self-motivation, problem solving skills, self-awareness, effective communications, and a broad and deep knowledge of technology. These attributes are important because they enable employees to interact with each other and with customers, suppliers and business partners and in the process form the relationships for conducting profitable business. According to Jeffrey Immelt, CEO of General Electric, the quality of business relationships enhances profitability because it attracts customers to products and services, employees to career opportunities, investors to securities, and suppliers to opportunities to leverage successful supply chains. In other words, employees represent the linchpins in each of these business relationships that hold together the complex networks for conducting business in global economic market system. Immelt's sentiments are shared by software giant SAS Institute's James Goodnight, president and CEO, who considers "investment in people [to be] essential to SAS Institute business success."

Trends. A third input into the strategic leadership system is the collection of existing and emerging trends within particular industries. Executive leaders are often described as being responsible for interpreting events and defining reality for followers. As a result, they frame the way followers experience events so that followers can make sense out of their personal and strategic situation. These events emerge out of the business market or environment which serves as the context for strategic leadership and is ripe with various organizational opportunities and threats. Executive leaders must be particularly astute in recognizing these opportunities and threats so that stra-

tegies can be created and adapted in a manner that is responsive to the market. For example, Michael Dell launched Dell Computer Company from his dorm room at the University of Texas. Today his company is the world's number-one computer maker thanks to his customer focus.

Organizations are not always required to passively wait to react or adapt to the changing environment. The executives of the more successful organizations we examined take a more *proactive* approach by actually changing the nature of their environments to help create their founders' vision. For example, consider the Vanguard Group, the world's largest pure no-load mutual fund company. Jack Bogle started Vanguard in 1975 because he felt that shareholders were not well served by the standard practice in the mutual fund industry, where funds are burdened by fund management companies seeking profits through their servicing of the funds. His dream, dubbed the "Vanguard Experiment," was that its shareholder would create their own management company to provide – at cost – the administrative services they needed. Today, Vanguard is considered by industry experts as a trend-setter and technology leader in employing e-business strategies and building solid relationships to meet the growing needs of investors.

Business opportunities. Trends often create business opportunities for executives who are adept and responsive enough to recognize and react to them. Sergey Brin and Larry Page recognized the potential of the Internet and converted an idea from a paper they wrote while pursuing their Ph.D. at Stanford University into the company we know today as Google. Such leaders frequently conduct examinations of the external events posing opportunities or threats to their organizations. The typical focal points of such assessments include competition, technology, regulatory activity, customer preferences, pricing trends, and the economy. Based on results of our executive interviews, we suggest that an internal assessment of performance be made on at least a quarterly basis,

using metrics that are linked to specific customer, internal process, human resource-related, and financial objectives.

Technology and information. Technology constitutes one form of *structural capital*, which represents the tools and infrastructure that supports the human capital (people), including physical systems used to transmit intellectual capital (ideas and knowledge). Developments in science and technology are continually creating more white collar and technical jobs, changing the way we perform our jobs, altering social roles and norms for a knowledge-based society where opportunity knocks for organizations willing to integrate human and structural capital.

Various technology-driven companies we studied – ranging from IT firms, such as Qualcomm to investment firms, such as Barclays Global Investors – are using Internet-based systems to connect with key stakeholders to gain the advantage on their competitors. Life sciences companies, such as UCB Pharma and Lancaster Radiology Associates, are exploring new ways to jump-start collaboration and communication among the users of their state-of-the-art products and services. Executives must monitor the development of new technologies and view them as potential sources of competitive advantage. According to Jon Boscia, CEO of the Lincoln Financial Group, “a CEO must study the ways competitors use technology to expand their businesses.”

Financial resources. Another essential input to the strategic leadership system is the set of financial resources employed by organizations to fund their operations. A healthy cash flow is required for supporting research and development (R&D) initiatives, buying fixed assets such as the latest technology, and developing intangible assets such as patents and copyrights to protect the organization’s intellectual capital. Michael Moritz of Sequoia Capital has demonstrated how the successful funding of ventures such as Yahoo and Paypal is an important part of the strategic leadership equation.

Partners. Due to the collaborative nature of conducting business in technology industries, executive leaders are recognizing customers, suppliers and even former competitors as inputs for forming profitable partnerships. For example, consider the new approach that Chrysler took to build a new car based on strategic networks. Over the course of its 75-year history, Chrysler has built all of its models independently. However, Chrysler developed its new “Crossfire” sport car based on strategic partnerships with Mercedes, Mitsubishi, and outsider suppliers in order to reduce both development and production time. This new approach has allowed Chrysler to develop a new car in just 24 months of R&D at a modest cost of \$280 million. Although Chrysler faces challenges in coordinating the engineering and manufacturing processes, this example demonstrates the benefits that can be gained from strategic networking and partnering.

Strategic Leadership Processes

Our work has uncovered an interesting set of behavioral and related processes that focus on an executive’s ability to envision a strategy for taking the raw inputs provided by their environments (e.g., people, technology, ideas, opportunities) and then to weave them into an integrated pattern or system of social, technical and intellectual resources that ultimately produce dramatically higher levels of organizational success factors. As discussed in the following section, these processes and behaviors range from envisioning or dreaming about successful outcomes to fine-tuning their vision and strategy to attain their organization’s success.

Recognizing and initiating trends. To dream about success, executives first must recognize and initiate trends. Trend recognition and initiation involves strategic networking and partnering, external monitoring and scenario planning. Networking and partnering with customers, suppliers, industry partners and even competitors provides information regarding the wide range of events and

trends that are likely to influence an executive's organization. This information is essential for realizing where the organization currently is, and creating a vision of where it needs to go strategically in the future. Lindsay Owen-Jones, CEO of Maybelline International, has integrated global marketing information into his strategy, leading to domination of the Chinese cosmetics market. According to Jones, success is based upon "the ability to dream rather than just plan."

Executives need to engage in environmental monitoring or scanning of key factors to assess the strengths, weaknesses, opportunities and threats that define their organizations' current and future positions. These factors include markets, economic conditions, demographics, technology, international politics, and socio-cultural trends. Scenario planning involves using the organization's best conceptual thinkers to test the feasibility of alternative dreams of success against the certainties and unwieldy uncertainties of future environments.

Royal Dutch/Shell Group has successfully used scenario planning to deal with trends, uncertainty and troublesome events including oil crises during the 1970s. Supplemented with computer simulations of multiple scenarios, planners presented a series of scenarios to senior Shell executives. One scenario envisioned the emergence of OPEC and the rising price of oil as unstoppable driving forces that would dominate the global system for many years to come. (How right they were!) In response, Shell executives reexamined the assumptions underlying their strategy and reconsidered the implications of OPEC and supply and demand for oil. When OPEC announced its oil embargoes, Shell handled the oil crises better than its competitors and advanced from eighth to second in its industry. Shell's initial success with scenario planning prompted it to use scenario planning for the last 30 years. Shell currently produces three scenarios each year as part of its strategic planning process.

Focusing on the core message and strategy. Focusing on the core message and strat-

egy involves crafting and inspiring commitment to a vision and core message. Many contemporary executive leaders, such as Richard Branson of the Virgin Group or Warren Buffett of Berkshire Hathaway Inc., create and provide a vision of an appealing future to inspire themselves and their followers to carry on despite challenging economic conditions. Visions provide meaning for followers so that they can make sense out of the current circumstances and imagine how things can be better in the future. Warren Buffett's vision of reciprocal capitalism is effective because he delivers it in a simple, plainspoken and authentic manner that, along with his strategic brilliance, has turned his company into the most successful investment company in history.

Like Buffett, many of the executives we interviewed crafted their visions into what we call the *core message*, a simple yet informative communication about an idealized goal that the leader wants the organization to achieve in the future. Such a core message is illustrated in the vision of using computers as communication and entertainment devices espoused by Steve Jobs, CEO of Apple Computer.

The importance of crafting a core message that simplifies the vision for organizational stakeholders was noted by the CEO of a major telecommunications company:

I believe that organizations, regardless of their size, have to have a vision, and this is also connected to inspiration. A manager has to inspire the workers. The employees have to know what the organization's vision is and the values associated with it. Every employee should know the values and should have it even physically on his or her desk. I believe each manager should be very much involved in instilling inspiration.

Inspiring excitement and commitment to the vision and to challenging projects fosters the persistence, motivation, and self-confidence required for outstanding employee

and group performance. Commitment is an important motivational force that drives the extra effort needed to see projects through to their successful completion. Commitment can be built through inspirational leadership that adds significant meaning to tasks, links employee's self-images to the successful completion of tasks, and shows how contributing toward the greater good may be morally uplifting. Under such leadership, employees' routine tasks and mundane work processes become an important mission that they have to accomplish under any circumstances for the good of the organization. For example, Herb Kelleher, often former CEO of Southwest Airlines Co., describes how commitment can be created by making work a meaningful and fun activity.

Kelleher's core message has helped Southwest to create a fun and supportive organization that has consistently reaped profits for the last 30 years in the turbulent airline industry.

Selecting and developing people in line with the strategy. To adjust the right pattern, executives must select and develop people in line with the strategy and integrate the right people and technology to support the strategic plan. In fact, several human resource (HR) executives we interviewed indicated a more proactive and strategy-oriented role they played in recent years. The most effective leaders accelerate their associates' development into leaders. They view their employees as key strategic assets required to achieve organizational objectives stated in their strategic plans.

A vice president of strategic business planning for a defense firm held the perspective that views people as strategic assets or investments:

You need to succeed in business with people and not fixate on their cost. That kind of success will lead companies to choose you because they'll notice that people around you go with you. Both results and cohesion matter together to them and to me.

Since employees provide the knowledge, skills and abilities (KSAs) required to attain these objectives, it is essential for executive leaders to systematically review their human resource requirements to ensure that the required human resources, with necessary KSAs, are available when and where they are need. When these requirements are not met, strategy-focused leaders must go through selection processes that match potential employees' personality and skills with the job requirements and organizational culture.

A recent study co-sponsored by the American Society for Training and Development and Society for Human Resource Management was conducted to see how organizations use employee growth and career development initiatives to attract, retain and develop workers. The study identified Dow Chemical Company, Edward Jones, Great Plains, LensCrafters, Sears, Roebuck & Co., Southwest Airlines, and South African Breweries as "exemplary practice firms" that have structures, policies and practices in place to support human resource efforts to attract and develop employees. They also have job position competencies to provide employees with an understanding of the KSAs they need for career advancement. These organizations commit significant resources (money, technology, development opportunities, people support) to employee selection and development processes. To support these efforts, they focus on communicating their strategy, mission, and vision to potential employees in order to find people who will be a good fit for their organizations.

Even when requirements are met, executive leaders must continually nurture their employees to higher levels of KSAs through mentoring, delegation, and learning programs. For example, Procter & Gamble Co. CEO Alan G. Lafley has introduced a dramatic culture shift by transforming the executive cafeteria on the top floor of its Cincinnati headquarters into a new training center that will develop the KSAs of employees from P&G's global operations. According to Lafley, "I have made a lot of symbolic,

very physical changes so people can understand we are in the business of leading change.”

Integrating the right people and technology. Consider the ways rapid development in IT is creating fundamental changes in the work processes in organizations. With advances in information and telecommunication technologies, more employers are offering flexible work arrangements for their employees, such as telework. However, integrating the right people and technology involves team-building, team-leadership and aligning social and technology systems. Today’s technology allows executives to form virtual teams despite geographic, cultural, temporal and social distances. Promoting collaboration within and between teams is essential in today’s business environment, given that nearly half of all U.S.-based organizations use teams as a basic building block for performing work. Teams are used not only to harness the collective knowledge, skills and abilities of employees for solving complex problems, but also to form alliances with customers, suppliers and former competitors in joint-ventures.

Given the highly complicated nature of today’s job requirements, developing and maintaining high performing teams is one of the most strategically important responsibilities that executives must carry out successfully. The importance of this function was noted by Joseph Deitch, CEO of Commonwealth Financial Network, a leading investment brokerage firm. Deitch considers attracting top-notch talent, training them to work in teams, and building passion and engagement through teams to be the key to his company’s success.

Properly fitting social and technology systems in organizations is a major strategic leadership challenge that has produced poor results so far. Numerous IT implementation projects have failed due to a poor fit between the technology’s design intent/purpose and the organization’s existing culture. In the video *e-Leadership: Here, There and Virtually Everywhere*, Bruce J. Avolio argues that when

an organization’s social system has a deeply engrained culture of mistrust, individualism or a police-state mentality, the adoption of connective/collaborative technology – like Intranets and groupware – may elicit dysfunctional reactions from individuals. Users are likely to react to the introduction of new technology in ways that are inconsistent with the spirit of the technology, perhaps commenting that “the technology is used to monitor our mistakes, not help us work together.” They are also likely to misappropriate or use the technology in a way that is not faithful to the intentions of the developers, perhaps rationalizing “I will release only my most essential data to my colleagues, but I’ll be very selective in what information I share.”

More successful development, assimilation, and adoption of technology system into the firmly entrenched social systems of organizations, with their longstanding cultures, reward systems, trust issues, and reporting structures, requires executives to recognize an important issue. They need to pay close attention to the congruence between how the technologies are intended to be used by their designers and the traditional ways of conducting work embedded in the social system. For example, executives at Greencastle Associates Consulting and Greymatter Inc. use an intention-based strategy for systems integration that considers people, work practices and their customer’s definition of success. Greencastle’s President Celwyn Evans told us:

We always try to link people, processes, technology and strategy. We focus on the fulfilling the customer’s definition of success by serving customers first and foremost and adapting to the situation as need be. We take our values very seriously. Another way of saying that is intent. So it’s not just about the objective in terms of time, dollars, quality, and specifications. There’s another component that is often missed and that is the leader’s intent. . .

Creating ownership and trust. To weave the fabric of success, executives must create not only financial but also emotional/psychological ownership based on mutual trust and respect. They do this by role modeling high levels of morality, work ethics and performance. They also do it by sincerely conveying the goals as well as the challenges their organizations are facing. In effect, they translate and communicate their analysis of the business environment and their consequent strategic decisions to employees in the organization. This role of leaders as buffers becomes critical in technology-dependent environments, where high uncertainty could harm employees' functioning. It is in these environments that emotional/psychological bonding is so critical.

According to Pulte Homes Inc. executive Bill Rieser, trust enables his company to provide excellent customer service and technology-driven advanced construction processes:

When you deal with selling a product such as a home, in our industry, we have to build trust. The customer has to trust us to do the job that they want us to do. And we have to trust each other that we are going to—as a team—be supportive of each other and our business. So honesty and trust go together. Integrity and conducting our business with a high level of morality are the things we want to do.

Supporting innovation and learning. Weaving the fabric of success also involves actively supporting organizational innovation and encouraging self-learning processes. Learning and innovation have become ubiquitous competitive tools in today's economy. They represent intellectual capital resources that are vital for technology-driven organizations that wish to be strategically focused. These organizations are relentless in their pursuit of continuous process improvement and adaptation to the forces of change. They are driven by the quest to create or preserve a competitive advantage.

To move these initiatives forward, executives are championing innovation, building communities of practice, and deploying advanced information technology in their organizations. These initiatives forge their connections with customers, suppliers and business partners. For example, Lee Krane-fuss of Barclays Global Investors told us: "I wanted to create an environment where people felt safe to speak up and challenge me! I didn't want to be the only driver of discussion. I wanted people to think outside the norm and solve problems creatively. I wanted to create an environment where people could make decisions without being second-guessed." His perspective is in line with Peter Drucker, who has noted that innovation will be *the* core competency of the 21st century.

Successful companies initiate technological change, grow more rapidly, and utilize change for growth. More than other companies, those that rely on technology cannot survive without innovative products and services. Such companies also compete in a global environment, unlimited by geography, which provides them with many more opportunities for innovation and boundary-less learning. In these companies, many of the leaders we interviewed noted that the creative people they employ are the source of innovation for their companies. In addition to inspiring the will of their people to succeed, these leaders hold themselves responsible for developing the intellect and knowledge acquired by their employees—collectively known as intellectual capital.

The ability to extract excellence in innovation from the organization's intellectual capital was highlighted by Karen Borda, co-founder of the biotech firm CB Technologies:

I do this [achieve innovation] by setting up different teams and creating a little bit of competition. I assemble people from different levels and say 'you will make a presentation next week' to tell company what needs to

be done—create! Review pressure sparks innovation.

Executives who display outstanding strategic leadership manage creativity and innovation using the transformational leadership component of intellectual stimulation to continually challenge and stretch their followers' "mental machinery" in line with their strategic objectives. They also manage mistakes, in the sense that they accept appropriate levels of miscues as long as learning is achieved along the way. In doing so, they avoid creating "no-mistakes" cultures that can snuff out innovation. An executive we interviewed from General Electric described it this way: "Basically I look at all problems as opportunities. I try to look at the glass half full as opposed to half empty . . . if there were no problems there would be no opportunities and therefore no inventions." In other words, outstanding strategic leadership provides followers with the infrastructure necessary for creativity and harnesses technology to foster learning and innovation in their organizations. These outcomes are of critical importance for contemporary organizations.

Reinforcing the core message and strategy. Most of the executive leaders we interviewed realized that it is not enough to pontificate an inspiring core message and develop a brilliant strategic plan. The organizational values that underlie the core message and the skilful execution of the strategic plan must be socialized and reinforced to followers through a strong organizational culture. *Organizational culture* describes the norms, values and work practices shared by leaders and followers of an organization. The values, norms and expectations underlying a strong culture can substitute for external management controls aimed at followers' compliance and create effective "internal controls" aimed at followers' identification seen in highly empowered workforces.

Consider 3M Company, an organization known for its highly innovative organizational culture. 3M's culture teaches its

employees to approach their work in the most creative ways possible. The creative way 3M employees get things done has led to various innovative products. For example, a 3M scientist once spilled chemicals on her tennis shoe—and came up with Scotchgard! This example illustrates that a positive and strong culture makes an organization not only a desirable place to work, but also a more innovative and effective place to work. In essence, culture becomes a strategic asset.

Refocusing the shape of future success. As executives of technology-driven organizations diversify their products and services through global operations, they are challenged as never before to continually refocus their organizational strategies by fine-tuning the connections between people, technology and strategy. This process can lead to more fully developed stocks of social, financial, intellectual and structural capital. Executives must adjust their strategies to make their organization more effective in the current business and technological environment and to take charge of their future more proactively. They use connectivity concepts to align people, business partnerships, and value-added processes to achieve strategic performance goals via performance measurement systems and the distribution of leadership within and between organizations in their strategic networks.

Economist John Mason describes the power of *connectivity* that executive leaders can use to produce beneficial outcomes of strategic leadership:

Information generators thrive in an environment of networks because information is largely useless in isolation. Information becomes more valuable as more people have access to it. Metcalf's Law is usually given as the justification for this claim: the value of a network increases by the square of the number of members in the network. It seems that when more people share information, dia-

logue increases, more ideas are generated, productivity rises, and most of those involved seem to benefit. In networks, people treat each other as peers, and this gives individuals the opportunity to make their contributions as equals rather than as subordinates ... This can create a tremendous *bottom-up* effect that seems to be a characteristic of very innovative communities.

These types of aligned and integrated communities called *strategic networks* support the distribution of leadership functions within and between organizations and are created by executive leaders through the processes described above.

To illustrate, consider former Delaware State Senator Bob Still, who is now chief operating officer (COO) of Lancaster Radiology Associates (LRA). When Still first joined LRA, he found himself challenged by the need to continually build consensus among LRA's 27 physician owners, who are linked via a network of radiology practices, regarding the refocusing of LRA's strategy and vision in clinical practice. Revitalizing the organization's culture and LRA's associates' professional views to be consistent with marketplace realities is what Still does best to keep LRA a highly successful and competitive organization. Still's other major responsibility involves building and maintaining strong connections and lasting relationships based on loyalty and trust with LRA's business partners, employees and patients. This important role requires the sharing of information. Whether it's with patients, hospitals, staff or other constituents, Still is responsible for negotiating with them, motivating them according to LRA's business strategy, and establishing the information links between people, technology and strategy required for LRA's success.

As organizations like LRA increasingly take advantage of technological connectivity within and between organizational stake-

holders, the connections that executive leaders are capable of making between people, technologies and ideas are expected to grow exponentially. These connections will allow for more opportunities for achieving the outcomes of strategic leadership.

Strategic Leadership Outcomes

Outstanding financial performance. The primary performance outcome of strategic leadership is outstanding financial performance—a healthy bottom line and cash flow that exceed the expectations of the board and the shareholders. Indeed, earnings and cash are the life blood of any organization. They are particularly important for technology-driven organizations which have extremely high levels of investment in research and development, which require substantial cash outlays. Without healthy earnings and a positive cash flow sustained over time, there can be no core message, no development of human capital, no intellectual capital, or no structural capital. In other words, there can be no strategic leadership. Increases in these forms of capital ultimately enhance the market value of the organization's stock and build reputational capital (the goodwill or market premium investors are willing to pay above and beyond book value of net assets). The importance of reputational capital to outstanding financial performance was highlighted by Anthony Tebutt, president of UCB Pharma:

Whatever you want, we have the capability even though we're small, we have the talent, we have the know-how, the people who can pull it off. Our reputation and our name is growing. It takes time, it takes time to develop a name and a reputation but it is growing. We have a good reputation out there. The doctors who know us, who deal with us, they know we're not a front company and they enjoy working with us. And I think our heart is recognized ... that we're professionals.

Customer satisfaction. Many of the executives we interviewed were able to achieve much more than mere customer satisfaction. They were able to create a consistent and strong sense of *excitement* for their customers by “WOWing” them. At the large telecommunications firm in our sample, its vice president of customer service told us that WOWing the customer is so important that he has made it the vision for his organization. His core message is plain and simple: customer care. Specifically, “Deliver it on time, make sure it doesn’t break, and if it does fix it fast!” His organization constantly strives for 100% reliability. He also works with operation teams to determine responsibilities, but since he works in customer service, his goals are aimed at achieving complete reliability and satisfaction. If these goals are achieved, customers will continue to buy from his company.

Expanded knowledge bases. The strategic networks of employees, customers, suppliers and business partners can potentially generate continuing streams of ideas, innovations and opportunities. Supported by state-of-the-art technologies such as peer-to-peer, pervasive and mobile computing, executive leaders work to connect nodes within their strategic networks so that communicating and processing will become truly ubiquitous. As more and more executives connect their people within and between organizations, integrated communications and processing will eventually pervade all industries and society. This has the potential to promote dramatically higher levels of organizational effectiveness.

At a large fiber optics manufacturer, expanded knowledge bases are developed by getting all employees to be honest about their opinions and to bring them forward in a constructive way, even if they do not agree with the current strategy. Simply put, this company thirsts for its people’s ideas and uses information sharing sessions, brainstorming, and employee focus groups to learn more about its industry. Management wants employees’ views on how to do things differently because that makes for a much

more healthy and innovative organization. According to the company’s CEO, “In quality terms, we need everybody’s ideas, we just got to have them, or we will not succeed.”

Integrated communications with stakeholders. Integrated communications with organizational stakeholders were evident at several organizations we studied through their individualized relationships with their customers, business partners and suppliers. These relationships are connected via a business grid environment so that computing can be done more efficiently and communication can be direct and effective. At Architectural Concepts, connectivity has also led to integrated communications with stakeholders. Bruce Weinstieger, a partner at this design firm, was particularly proud of this organizational outcome, which is important for sustaining a culture of total quality management:

I think what our clients like about us is that they know they can get in touch with one of the partners at any time. The concept here is ‘partners’ and we make ourselves available to them. Yes, there are always staff members involved. They’re on every project and we have to have staff here as well. But it is important to us to maintain that client contact for TQM.

Continuous process/people improvements (CPPI). This strategy-focused leadership outcome was evident at many of the organizations we studied—in particular, the manufacturing organizations where inspirational leadership was pervasive and quite effective in providing meaning for their CPPI cultures. Celwyn Evans of Greencastle Consulting Associates has taken the best of kaizan, Malcolm Baldrige and Total Quality Management, and other quality philosophies and incorporated them into a values-based organization derived from a military model.

Bill Rieser of Pulte Homes also exemplifies an executive leader who has provided meaning for his associates regarding the CPPI and

quality culture at his organization. Rieser would like his customers to recognize the innate quality of his product—that their home is a Pulte home. As a result, customers have a high level of satisfaction based on a great product, and Pulte has a reputation in the market place that its brand represents quality.

Shared leadership. One of the most important outcomes of outstanding strategic leadership is a culture of shared leadership. A culture of shared leadership is created by the developmental, intellectually stimulating, empowering and socialization processes described above. *Shared leadership* means that the organization, as a whole, shares and participates fully in the leadership tasks of the organization. If empowered organizational members have the authority, self-efficacy and knowledge of the leadership tasks, they can accomplish much of the leadership formerly delegated to the middle or top managers. The essence of this outcome is a shift from leadership “of” the team or organization to leadership “by” the team or organization.

Shared leadership pervaded the cultures of many of the organizations we studied. However, it was particularly evident at Greencastle Consulting Associates, which uses self-directed project management teams to monitor the strategic situation and execute the organization’s strategy. In describing the shared leadership at Greencastle, Celwyn Evans told us:

I primarily work with the senior management consultants as part of my leadership team, and they don’t need a whole lot of development, because they are, very accomplished in coming to Greencastle. So, I’m more kind of ensuring they’re aligning with how Greencastle operates. Are they utilizing the various enablers that we’ve put into play? So I see my role more as a mentor, or a coach, or a facilitator. It’s the facilitation of an empowered and developed group of associates that

enables executives to reap the benefits of shared leadership as their organizations evolve over time.

RECOMMENDATIONS AND CONCLUSION

The model of strategic leadership in technology-driven organizations presented in this article suggests several practical recommendations for leaders. Whether you are an executive leader or a student or business leader who is not yet in a strategic leadership situation (but will be in the future), it is important to keep in mind the mnemonic **C I LEAD** as a summary of lessons learned from the executives in our study:

- **Connect.** Build personal and professional networks founded on trust and reputation. Remember that to maximize the outputs of the strategic leadership system requires a strong and wide network of social and technological resources that are a good fit with the organization’s culture and strategy. Solid connections can build financial and reputational capital.

- **Inspire.** Emphasize ideals and meaning of the organization’s values and work with an appealing core message. Have passion for your work and your people. An inspirational approach gets people excited about their work, fosters team unity, and instills a sense of hope and faith in the future. This can motivate associates to overcome crises or challenges common in technology-driven industries.

- **Look.** Constantly scan the business environment for trends and potential connections with customers, partners, and employees. External awareness offers a “heads up” to spotting opportunities and can provide organizations with a competitive edge. Be self-aware of your leadership style and how it affects the organization. Such internal awareness, when coupled with self-regulation of your behavior, represents aspects of “emotional intelligence,” which has been linked to leadership effectiveness. It also can promote the type of positive organiza-

tional culture and company image and reputation that is a “priceless” intangible asset.

- *Execute.* Follow through on strategy-implementation and make sure things get done. This point is critical given the results of a *Fortune* magazine study indicating that 70% of the CEOs who failed in their jobs suffered from bad execution of their corporate strategy. For one reason or another, they simply failed to get things done. To gauge the progress being made toward attaining the mission, track critical performance measures from the financial, customer, internal process, and learning and development perspectives using balanced scorecards. You will then be well prepared to create cultures that promote high performance linked to your mission and core message.

- *Adapt.* Challenge, adapt and reorganize frequently. Strategic leaders need to constantly create, experiment, innovate and share what is learned among associates. If you take such a proactive approach by strategically connecting people, processes, technologies, ideas to key performance targets, you may have less to fear from the challenges that the hyper-turbulent information-based economy throws at you.

- *Develop.* Hire people smarter than you, develop and connect (with) them. Build a shared leadership and learning culture that engenders trust, communication, and accountability to internal and external customers. Doing so can help you to sustain a culture that values learning and to build an organization that can adapt to the competitive environment. Always remember that strategic leadership must focus on both your strategy *and* your people.

We hope that our discussion of strategic leadership helps you to understand how to put executive leadership into practice to achieve your long-term strategic goals. The lessons summarized in this article can provide you with a solid foundation for understanding strategic leadership as it relates to your organization. Applying these principles can guide your quest to make all the right connections to achieve success for your technology-driven organization.



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SELECTED BIBLIOGRAPHY

Details on the leadership lessons derived from the executives we interviewed are provided in our book *The Dream Weavers: Strategy-Focused Leadership in Technology-Driven Organizations* (Greenwich, CT: Information Age Publishing, 2004), from which many of this article's examples are excerpted by permission of Information Age Publishing. In this book, we include dozens of stories and narratives from executive leaders to offer readers an in-depth look at what constitutes outstanding strategic leadership.

Leadership models grounding this project's research include B.J. Avolio & B.M. Bass' *Developing Potential across a Full Range of Leadership: Cases on Transactional and Transformational Leadership* (Mahwah, NJ: Lawrence Erlbaum Associates, 2002), and J.A. Conger and R.N. Kanungo's *Charismatic Lea-*

dership in Organizations (Thousand Oaks, CA: Sage, 1998). Additionally, a key reference for the intersection of strategic and transformational leadership is M.L. Tushman and C.A. O'Reilly's *Winning through Innovation* (Cambridge, MA: Harvard Business School Press, 1997).

Articles and books on strategic leadership are too numerous to cite here. An interesting perspective on strategic leadership, however, is found in the book *The Art and Science of Strategic Leadership* by M. Freedman and B.B. Tregoe (New York: McGraw Hill, 2003). We also recommend *Strategic Leadership: Top Executives and Their Effects on Organizations* by S. Finkelstein and D. Hambrick (Minneapolis/St. Paul: West, 1996). Both of these books provide thorough reviews of the state of strategic leadership research.

John J. Sosik (Ph.D., State University of New York at Binghamton) is an associate professor of management and organization at The Pennsylvania State University, Great Valley School of Graduate Professional Studies, located in suburban Philadelphia (Tel.: +1 610 648 3254; e-mail: JJS20@PSU.EDU).

Don (Dongil) Jung (Ph.D., State University of New York at Binghamton) is a professor of management at San Diego State University (Tel.: +1 619 594 0208; e-mail: DONJUNG@PSU.EDU).

Yair Berson (Ph.D., State University of New York at Binghamton) is an assistant professor of management in the Institute for Technology and Enterprise at Polytechnic University, located in New York City (University of Haifa, Haifa 31905, Israel. Tel.: +972 4 8249387; e-mail: yberson@construct.haifa.ac.il).

Shelley D. Dionne (Ph.D., State University of New York at Binghamton) and **Kimberly S. Jaussi** (Ph.D., University of Southern California) are associate and assistant professors of organizational behavior and leadership in the School of Management at SUNY, Binghamton and fellows in the Center for Leadership Studies (Tel.: +1 607 777 6557; e-mail: SDIONNE@BINGHAMTON.EDU, KJAUSSI@BINGHAMTON.EDU).

Strategic Leadership:- According to Rowe, strategic leadership means the capability of influencing others through a series of decisions taken for organizational and operational longevities. It also focuses on maintaining the short-run financial stability (Rowe, 2001). 5. The controlling disposition is high in leaders and low in their followers, who want maximum control. They have an excessive desire for order and control. The Role Of Top-Level Managers:- Top management is a vital organizational resource because of formulating and implementing strategies; therefore, it is important for organizations to hire highly skilled top management. Three factors determine a leader's strategic decision: 1. External environmental sources. 2. Organizational characteristics. The Times Higher Education 2010 listed him among the top scholars in economics, finance and management based on the number of highly cited articles he has authored. He is a fellow in the Academy of Management, the Strategic Management Society and the Academy of International Business. He has received honorary doctorates (Doctor Honoris Causa) from the Universidad Carlos III de Madrid and from Jonkoping University. He also served as president and served on the Executive Committee of Board of Directors of the Strategic Management Society. Difficult to read, the sentence structure of Strategic Management: Competitiveness and Globalization makes the book an impenetrable fortress fit only for those who have the strength of will to squeeze water from this stone. Strategic Leadership book. Read reviews from world's largest community for readers. A thorough, in-depth treatment of strategic leadership that highlight... Strategic Leadership is part of the Wests Strategic Management Series edited by Michael A. Hitt, R. Duane Ireland, and Robert E. Hoskisson, authors of Strategic Management: Competitiveness and Globalization, 2nd. ...more. Get A Copy. Amazon. efficient leaders perform the common tasks in the strategy making and executing process. It is the duty of leadership to relate the strategy process with the vision. It should develop a culture of learning by providing a clear set of values for the organization. Values demonstrate the behavior of the organization and lead the organization towards right. Both vision and strategies should reflect these values. Once the leader understands the importance of values the process of strategy formulation and implementation becomes easy.