

DELL COMPUTER CORPORATION: A MODEL FOR INNOVATION

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Dell Computer Corporation is not the largest personal computer company but it is the fastest growing. In 1997 Dell's unit sales rose 67% over the previous year, compared to a 25% increase for its nearest competitor, Compaq. Dell's accomplishments in 1998 include:

- Return on invested capital was 192.5%
- Stock price has shown a 79.9% return on investment
- Makes each machine to order for each customer
- Since 1997 has reduced inventory from 11 days to 6 days
- Streamlined production to pass on savings to customers

The Direct Business Model

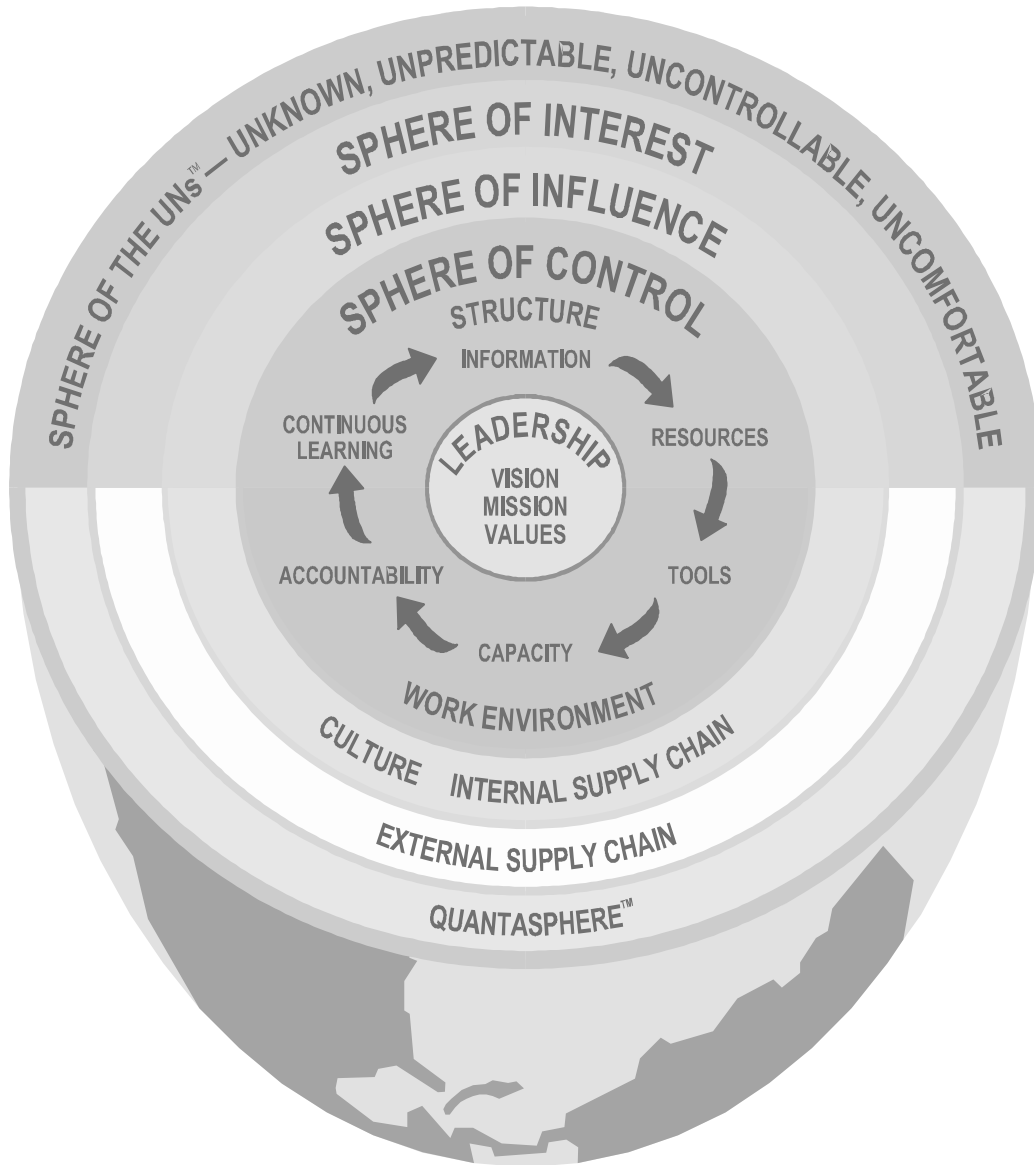
Through the direct business model Dell has eliminated the reseller's markup as well as the risks associated with large inventories of parts and finished goods. Dell frequently receives parts just hours or even minutes before assembling a PC to fill a customer's order. The company currently maintains 6 days of inventory compared to 11 days in November 1997. (A typical competitor has 58 days of inventory). Since the prices of computer components are constantly going down, it makes sense to avoid buying large inventories of stock that could be purchased at a later date for less. And since computer components also go out of date quickly, this avoids antiquated stock. This, in turn, improves profitability and allows Dell to sell its products for a lower price to the customer.

Most business analysts attribute Dell Computer Corporation's success to the direct business model. However, a model alone does not guarantee success. In this paper I will demonstrate how Dell's internal communications, employee, customer and supplier relationships, as well as a finely-tuned awareness of future trends and technology have contributed substantially to the company's efficiency and effectiveness in the marketplace. Its youth as a corporation also has been a factor. Younger companies, just like young trees, can bend with the winds of change more easily than companies that are set in their ways. This information will be presented through the use of a new business model for the innovative enterprise called the Quantum Model™.

Introduction to Quantum™ Model

By definition, Quantum means large and significant. In physics the quantum field theory refers to the interaction between separate physical systems. We chose the name Quantum for our new model because it emphasizes the need for an organization to recognize the importance of its internal interactions as well as the impact of the environment beyond the organization itself. We call these interactions quantum dynamics.

The basis of the Quantum Model recognizes that at the core of any organization are its stated vision, mission, and values that provide the focus for the enterprise. Control over destiny wanes the further one gets from the core, through the expanding layers which are called the Sphere of Control, the Sphere of Influence, the Sphere of Interest, and the Sphere of the UNs™ (Unknown, Unpredictable, Uncontrollable, Uncomfortable). *Figure 1* illustrates this relationship.



The Quantum™ Model

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Figure 1

Leadership is the key element to an organization's success. The leaders must continually keep the company's vision of success in focus, translating it through a strategic plan with effectively aligned actions. This vision must be presented to, and accepted by, its stakeholders. The plan must recognize that change is constant and that continuous environmental feedback is needed to revise the strategic plan on an ongoing basis.

Beyond the core, an organization's work environment and structure are the areas that offer the greatest potential to control the decisions, events, and resources that affect them. This is the Sphere of Control, in which an organization can drive performance improvements.

The Sphere of Influence represents the corporate culture and internal supply chain that can be influenced, but not controlled, by the Sphere of Control.

The Sphere of Interest lies outside the direct control of the organization, but has an effect on the operation of the organization. The external supply chain of materials and labor, product demand, and competition are examples of the factors that influence the success of an organization, yet are often beyond its immediate control.

The Sphere of the UNs™ or Quantasphere will always exist and greatly influence all organizations. These external developments are the changing conditions any organization must accept as the challenges to its existence. Natural disasters, computer viruses, governmental regulatory changes, and unfortunate accidents to key people are examples of unpredictable phenomena, which can drastically affect an organization. Successful organizations will be those who have a very large, influential internal core. This strong core allows them to strengthen and expand their Sphere of Control so the threats from the uncontrollable areas in the Spheres of

Influence and Interest and the Sphere of the

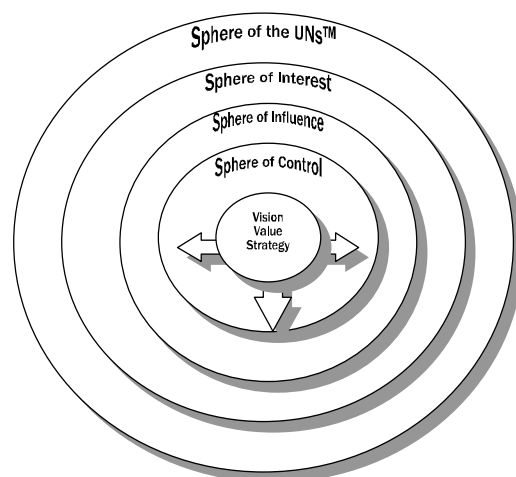


Figure 2.1:
A small core and Sphere of Control results in a larger Sphere of Unknowns

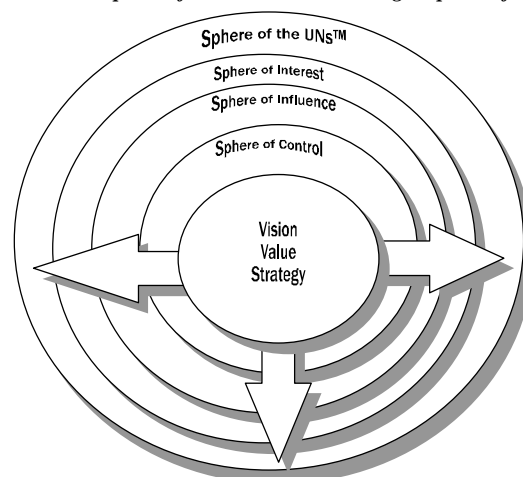


Figure 2.2:
A larger core expands the Sphere of Control and lessens the Sphere of Unknowns

UNs™ are diminished. A weak, reactive organization functions as illustrated in *Figure 2-1*, while a strong proactive organization is illustrated by *Figure 2-2*. In the second illustration you can see how the Core and Sphere of Control have expanded to partially overlap the other layers.

By developing a strong core and expanding its Sphere of Control to the maximum extent possible, an organization is able to not only remain competitive but also to maintain its defenses in order to anticipate and react to external forces.

A Case Study: Applying the Quantum Model to Dell Computer Corporation

Leadership: The core of the model

Starting with the core of the model, Dell's vision, mission, and values are clearly defined and posted on the company web site. Dell's focus is being "first to volume, not first to market." In other words, their priority is to be innovative in mass production and sales of computers, not necessarily to be innovative in the technology itself. The company has developed strong relationships with its customers and suppliers that allow it to leverage information gained to develop insight into the marketplace and the future needs of customers which aids in strategic planning and forecasting.

Furthermore, according to Dell Spokesperson, Michele Glaze, "Dell has a strong executive staff whose members truly articulate the vision, mission, and values of the organization in their communications and every day work. Consequently, employees embrace the vision, mission, and values as well as the direct business model that propelled the company's success." However, no matter how well planned the business strategy may be, the real key to success is effective execution of the strategy through the remaining layers of the Quantum Model.

The Sphere of Control

Information: The strategic planning process and all of Dell's internal business processes are driven by information—lots of it. Specially trained employees receive over 50,000 customer calls daily. They then document and organize the customers' comments and distribute this information to all managers to be used in short- and long-term planning.

Michael Dell personally devotes 40% of his time with customers to further build relationships and to gather first hand information. He searches the web daily, scanning chat rooms and bulletin boards frequented by industry insiders and computer users. This allows him to recognize market trends and discover reactions to Dell's products as well as its competitors'.

Dell has concentrated on developing effective internal operations to support the business,

closely monitoring inventories, payables, receivables, and cash flow from operations and overall growth of the company's sales.

The company considers "massive communication" to be one of its keys to success. In providing information to employees, Dell uses every available form of communication. Employees are not kept in the dark about even sensitive matters. "We treat our employees like adults, avoiding the attitude of 'We'd better not tell them this because it might upset them'" explained one company executive.

Employees can access additional information through the company's Internet and Intranet web sites such as information about benefits. Through the company's self-service human resources site, employees can even sign up for specific benefits or change their benefit options via the Intranet.

Resources: Recruiting and maintaining highly qualified personnel is a challenge faced by nearly all industries in today's economy. Due to Dell's highly visible success the problem of recruitment has been minimized, but it is still a challenge to hire the right person in the first place—one who is qualified and that will fit into the culture. To assure that employees stay with the company, it offers excellent benefits. Dell is constantly striving to create a fun environment, one that is friendly and open and yet offers opportunities for challenge and growth. The culture at Dell is to seek out who has the skill set that will most likely meet the customer's needs rather than offering opportunities based on seniority or position. This gives everyone a truly equal opportunity for challenging assignments and advancement.

Tools: Today's technology allows for integration of information internally and between the company and its customers and suppliers. The company shares design databases and methodologies with supplier-partners, often resulting in dramatically decreased time to market. Tools and techniques such as mass customization, cross-functional teams, empowerment, statistical process

control, unique business processes, just-in-time manufacturing, quality improvement, and the latest technology are combined in a unique way to provide a tightly coordinated supply chain and to assure efficient operations.

Capacity: The direct business model and unique customer and supplier relationships allow Dell to replenish the inventory it needs on short notice. The supplier's engineers become part of Dell's design teams and are treated like they are part of the company. The company works out long-term, high-volume agreements with suppliers that guarantee Dell will get their components and parts even when there is more demand than supply.

Accountability: Accountability is supported through a performance management system that is tied to corporate goals and competencies. Competencies emphasized throughout the organization include customer focus, setting priorities, problem solving, organizational agility, and building effective teams. Most of these are common to other organizations. However, there are two additional competencies that are unique to Dell: learning on the fly (at the speed of Dell) and dealing with ambiguity.

By checking the company web page employees can determine how well the company and the employee's department are doing in relation to established goals. From this they can evaluate their own performance based on results.

Ninety percent of employees participate in a plan that allows them to purchase company stock at 15% discount for personal investment and investment in 401K retirement plans. This gives each Dell employee a very personal stake in the company's success.

On-the-spot awards for recognition of outstanding performance are used to further reinforce performance.

Finally, compensation for the management team and key contractors has been designed to assure accountability for achieving the corporation's objectives.

Continuous Learning: Dell sees education as a direct investment in the future of the company and as a competitive weapon. Dell University is designed to be a center of innovation itself. It delivers custom-configured education to employees just as Dell delivers custom computers to its customers.

Dell University's goal is to have 75% non-classroom training solutions by the end of 1999 and 95% non-classroom solutions by the end of the year 2000. Using cutting edge technologies such as on-line training, CD ROM delivery options, and web-based educational tools, the system is designed for self-paced learning that allows employees to learn as they work. Michael Dell wrote in the Dell University's annual report: "Our goal is 'stealth learning'—education that is so seamlessly incorporated into our work that we don't even realize we are learning." An extensive course catalog is available on line, providing training on topics such as operations, finance, management, customer service, technology, ethics, sales skills, and project management.

Dell's culture of a learning organization is reinforced through the concept of "massive communication" and the negative consequences (not being well regarded) if a manager develops and executes ideas in isolation. These concepts reinforce the need to share learnings and capabilities from all of its regions for maximum innovation while simultaneously creating a continuous learning organization. They also try to capture information when mistakes are made and share that information with suppliers to prevent similar problems in the future. However, the company is working toward a more comprehensive knowledge management system.

Work Environment: Dell is a very flat organization with little bureaucracy to slow it down. An open office environment encourages free-flowing information and a friendly atmosphere. Most employees would describe it as a fun place to work. Employees are

empowered to pull together a cross-functional team with the individuals he or she feels would be best to work on a specific project or problem.

Structure: While Dell has 25,000 + employees worldwide, it is also a virtual organization with 10,000 contracted technicians in the field servicing Dell's products. What makes the virtual structure so unique is that the technicians and other outsource partners and suppliers are so very closely integrated that customers think they are employees of Dell. They refer to this unique structure as virtual integration. The relationships with suppliers and customers are so closely woven that the various companies involved are virtually integrated.

The structure of the company is based on customer segmentation. For example, large customers are divided into large companies, midsize companies and government and education. The government and education segment is further broken down into federal, state and local, and education. This structure allows close relationships and deeper understanding of the customers' needs. The structure is very flexible, changing over time to finer cuts of customer segmentation. Much like cloud formations, you look at it in one formation, but a short time later the formation has changed. If the company decides to change the structure, such as breaking up specific market segmentation, Human Resources immediately begins working with the individual employees affected to determine how their skills and desires might best fit into the new configuration.

The Sphere of Influence

Culture is reinforced through orientation programs and training videos for new employees. Internal newsletters report the company's measures of success and reinforce the vision, mission, and objectives of the firm. One of the most unique qualities of Dell Computer Corporation is their ability to integrate the internal and external supply

chains. They have molded the company with partners that are treated as if they are inside the company. This molds the Spheres of Influence and Interest in a unique manner, allowing the organization's Sphere of Control to enlarge further.

The Sphere of Interest

Dell's approach to business requires very close working relationships with as few suppliers as possible in order to maintain low inventories. Without effective working relationships, Dell could risk out of stock situations. This would undermine their entire system of quick delivery to the customer and increase costs associated with the need for higher inventories.

Dell has developed equally effective relationships with customers, providing personalized and customized services and obtaining direct input from consumers on their needs. This input is communicated to other areas of the company to provide invaluable information in planning and developing future products that meet or exceed the needs of the marketplace. This is a major competitive advantage and is a reason why it's so difficult to compete with Dell.

Dell works so closely with customers that they become intimately involved in planning each customer's computer system needs. They even develop secure, customized intranet sites called Premier Pages to give customers direct access to technical and purchasing information.

Platinum Councils are held every 6 to 9 months for Dell's largest customers. All senior executives participate and the ratio is about one Dell person for each customer. In these meetings Dell's senior technicians discuss trends in technology and other issues such as when it's better to lease and/or buy. These meetings are designed to help the customer anticipate and be ready for future developments. An ongoing record of issues discussed is maintained and reviewed. The

feedback received helps shape the creation of Dell's brands.

The Sphere of the UNS

What does the future hold for Dell Computer Corporation? Of course, no one knows for sure. Competition has already heated up as other companies, such as Gateway, seek to emulate the build-to-order model that Dell has developed. Supply problems could emerge, as current suppliers are unable to meet the demands placed on them by Dell's increasing growth. Or perhaps certain suppliers may merge or be bought out and the new owners may decide they do not find it profitable to accommodate Dell's build-to-order process.

Dell has a definite competitive advantage in its close relations with customers and suppliers. Through its deep understanding of customers' needs, the company not only accurately accesses current and future needs, but also can help shape or even create the future.

Dell Computer Corporation must maintain its relations with suppliers and customers and maintain efficient internal operations. While doing so, they must keep an eye out for their competitors and the many unknowns in today's world in order to continue to grow and thrive.

Summary

In today's rapidly changing world the need to be aware of events both internal and external to one's industry is essential in order to innovate and to react quickly when necessary. The Quantum Model emphasizes the importance of clear values and direction combined with efficient internal operations and flexibility. This allows an organization to exert maximum control while developing the foresight necessary to deal with external forces.

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ABOUT THE AUTHOR

Diane Hanson, President of Creative Resource Development, has over 25 years of experience in management, consulting, and training. She has been a top ranked sales manager with Ayerst Laboratories (Now Wyeth-Ayerst). Her prior experience as a manager has been invaluable in her work as a consultant in helping organizations achieve their goals.

She is a recognized authority on teams, teamwork, and organizational change having several articles published in *Business Philadelphia*, *The Quality Observer*, and *Performance Improvement*. She also is a writer and serves on the Editorial Board of *Today's Team*, a international publication for team members, facilitators, and team coaches.

After receiving her BS degree from Cornell University, Diane graduated with distinction from the University of Pennsylvania with her MS in Organizational Dynamics. She is listed in *Who's Who in Finance and Industry*.

She has been a guest lecturer at the graduate schools of the University of Pennsylvania, Drexel University, Penn State Great Valley, and Temple University's Executive MBA Program. Her most recent projects have involved organizations wishing to improve teamwork, develop leaders, or achieve world class customer service standards.