

INTEGRATIVE CASE 10.0

Cisco Systems: Evolution of Structure

The evolution of Cisco from a university campus computer networking solution devised by the husband/wife Stanford team of Len Bosack and Sandy Lerner to a global technology leader has been a dynamic process. The speed of technological innovation means that managers are already talking about the “next new thing” during the launch of each new product or service. Parallel with the rapid technological evolution at Cisco have been the changes in organizational structure necessary to meet the management and decision-making needs of the corporate giant.

Growth

Faced with the challenge of devising a system allowing Stanford computer networks to talk to each other, Bosack and Lerner created a multiprotocol router to break through the communication barriers. The perceived need by many organizations for increasingly sophisticated routers and related products led to the founding of the Silicon Valley hi-tech powerhouse Cisco in 1984. As a start-up company, Cisco had a vision, eight employees, and a host of financial challenges. The early days were financed by credit cards, home mortgages, and periods when payrolls were delayed, but in 1986, Cisco shipped its first router. The company turned to a venture capitalist, Sequoia Capital, which moved Cisco toward financial stability, but founders Bosack and Lerner were forced out and replaced with new management. Cisco quickly became established as a viable business and, armed with a growing reputation in the industry, went public in 1990.

A leader in the development of routers, Cisco faced new challenges with the emergence of competitors for rapid, less-expensive technology. Facing the threat of losing high-profile customers and industry leadership, Cisco management took a bold move in its innovation strategy through the acquisition of small innovative companies such as Crescendo Communication, a company that had attracted the attention of major customers including Boeing.

Cisco was selective in its acquisitions, focusing on small start-up companies that were working on a great product that could be moved from development into production within 6 to 12 months. The company's goal was to *purchase the future* by acquiring the engineers who were working on the *next generation* of products

and services. Therefore, the retention of employees was critical to a successful acquisition. For its part of the deal, Cisco could offer the start-up the power of Cisco's financial resources, manufacturing, and distribution channels. Cisco's reputation for finding and bringing into the fold the best of the smaller companies reminded admirers and critics alike of *the Borg*, the notorious alien being from Star Trek fame that absorbed species as it expanded across the universe.

As Cisco expanded into wireless devices for home (Linksys) and business, data center switching systems, networking equipment, communications gear, and network security apparatus, visionary John Chambers was brought in as CEO. One of a generation of gurus who championed the power and practical solutions of technology, Chambers expanded the company into advanced technologies including digital voice and data, web-conferencing, and more diverse security products. By 2000, Cisco had attained a brief designation as the world's most valuable company.

Cisco 1

During the early period that would later become designated as Cisco 1, the organization had created a three-division organization structure. The three self-contained product divisions were each focused on a distinct customer segment: Service Products (such as AT&T), Enterprises (usually multinational corporations), and Small to Mid-Size Commercial Companies. Each of the three divisions had its own engineering, manufacturing, and marketing functions. Goals were established by each division's managers to develop products and services customized to address the specific and changing needs within that customer group.

With corporate headquarters in San Jose and a dominance of U.S. sales, Cisco found that it could minimize costs with a move toward outsourcing manufacturing to contract manufacturers from within each of the divisions. Cisco had, in effect, a structure wherein managers were rewarded for the performance of their own division. Flexibility and coordination occurred across the functional departments within each division, but there was little collaboration across the three divisions. This decentralized structure seemed to work fine in a prosperous and rapidly growing company.

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What a difference a year can make. In 2001, one year after a brief designation as the world's most valuable company, a sharp economic downturn hit Cisco and other companies in the high-tech industry. The techno bubble of the 1990s had burst. Across Silicon Valley, tech stocks tumbled, layoffs proliferated, and companies struggled to adjust and survive. At the same time, increasing product complexity and technical advancement within the field pushed management at Cisco to reconsider whether the existing divisional organizational structure was sufficient to carry the company into the future.

Cisco 2

Reviewing the three-division structure, Chambers and his management team detected serious overlap in the work of functional departments across the product divisions. One glaring example was the overlap of engineering groups in each of the three divisions who were all working on similar products without knowing it. This was a huge excess of engineering talent focused on relatively straightforward new products. The lack of communication across the three divisions created a lack of awareness and cooperation necessary for finding shared solutions, avoiding repetition, and speeding the process time required to introduce a new product. Likewise, the complete independence and separation of each division resulted in a glut of separate vendors and suppliers for the divisions in addition to the duplication of employees working on similar projects—all of which added to company costs.

In order to address the need for efficient use of resources while trying to meet the need for new products and geographic expansion, the company moved toward a functional structure. Changes came swiftly in the move to streamline operations and bring costs down. Between 2001 and 2006, the company moved through the reorganization, designated Cisco 2, cutting the work force by 8,000 employees, reducing the number of vendors (1,500 to 200) and suppliers (600 to 95), and trimming outsourced manufacturing from 13 major plants to 4. The company's costs as well as overlap were further cut as the major functions of sales, accounting, and engineering were combined into single large centralized groups that reported to headquarters. The three separate and autonomous divisions were gone. The huge engineering staff was broken down into 11 functional groups that reflected the core technologies on which they worked, resulting in added efficiency and reduced overlap.

Cisco 2 provided senior management of each function much vertical control over the work of their engineers, sales people, etc. Top managers could set goals and expect to achieve those goals, along with performance bonuses, because of direct control over their functional departments and the projects on which employees worked. Cisco became much more efficient with fewer people needed within each function, but it was also becoming more hierarchical and

encountered new coordination problems because each functional department became more like a separate silo, with people focused on their own function's goals and projects with little concern for the needs of other groups.

Cisco 3

By 2006, expanded globalization and product lines and the continued need and movement toward horizontal collaboration brought further structural evolution, called Cisco 3. The new structure added 12 business councils at the senior level, one for each key customer segment. Each council was composed of approximately 14 executive VPs and senior VPs—roughly one from each major function. The intention of the new structure was to instill a culture of collaboration that would provide better horizontal coordination across functions. The business councils worked at the policy level, involving representatives from each function to select and coordinate new programs and speed products to market in their segment.

Beneath the business council level, 47 boards were created, to align cross-functional teams below the vice president level. Each board consisted of about 14 people and included one VP or senior VP. Board members would collaborate across functions to implement the new product decisions from the councils.

Beneath the boards, temporary working groups were created of up to 10 people each as needed to execute the details of new product and project implementation in the short term. Having three levels of matrix-type horizontal relationships built into Cisco's structure was viewed as a better way to address a complex environment characterized by uncertainty and rapid change by providing the internal teamwork, coordination, and information-sharing needed for continuous innovation.

The 21st century tech giant's structural evolution brought difficult cultural adjustments. While growth and performance targets remained, emphasis was now placed on collaboration to find solutions for customer needs by involving people from other functions. Executive compensation changed from achieving one's own department's goals to achieving cooperation with other departments, and bonuses for some senior executives, as Chambers admits, "went poof." With managers no longer dependent solely on hitting targets within a tightly controlled function, the organization experienced initial executive resistance to giving up control, to sharing information and resources, and to joint decision making. The new focus for performance evaluation was on peer review ratings based on successful teamwork. Chambers estimated a loss of approximately 20 percent of top management who "couldn't make the transition" to collaborative work, including the development chief, the senior VP for routers and service provider networks, and

the mergers and acquisitions chief. But the new structure eventually fell into place as its benefits became apparent, and Cisco successfully rode out the loss of key managers.

The structure continued to evolve and streamline as Cisco evolved. Five years later, in 2011, the number of business councils had been reduced to 3 and the number of boards to 15. This was sufficient to make collaborative decisions on key new products for customer segments. Over time Cisco's top management saw the need to reduce the number of business councils from 12 to 9 and then to 3. Cisco also slashed the number of internal boards and working groups because managers grumbled about the staggering number of boards and council meetings taking up their time.

Simultaneously, Cisco planned to further strengthen the coordination across functions and departments by tapping into social media. Since 2006, the company execs have utilized TelePresence, a system of lifelike videoconferencing to connect customers and colleagues around the globe. Today, with the introduction of *Ciscopedia*, the organization is allowing a greater level of information sharing and consultation between employees and among members of the remaining business councils and boards. Employees use social media, blogs, video, and bookmarking to post ideas, coordinate teams, share information, and avoid duplication across departments, product lines, and geographic areas.

Further Developments

Despite the constant structural evolution, by early 2011, Cisco was suffering through a fourth consecutive quarter of shrinking profits, with its stock price down 35 percent over a four-year period. Nervous investors watched Hewlett-Packard's rapid rise to number 2 in global shared networking and grumbled as they also watched a three-year drop in Cisco's core areas (10 percent in routers and 11 percent in edge connecting markets). They pointed consistently to what they saw as Cisco's "reckless ventures" and complained that the boards were proving to be little more than "rubber stamps" for the CEO's wishes.

In April 2011, Chambers released an internal memo, admitting mistakes resulting in "employee confusion, disappointment among investors, and the loss of credibility in the market place." He called for a refocus on the core networking business, insisting Cisco's strategy was "sound." The problems, he said, were with "operational execution," with lack of accountability, slow decision making, and the inability to react to surprises. "We know we have to change," Chambers said.

With yet another structural change, five board committees covering Acquisitions, Audits, Compensation and Management Development, Finances, and

Nominations/Governance were created. The problem of accountability was also addressed by a Code of Conduct, monitored by the ethics office. The goal was to become the customers' *most trusted* business and technology advisor. But flexibility and the *need for speed* in anticipating and capturing market transitions was equally important. The implementation of 29 performance measures was seen as a way to clarify department and team goals and keep teams focused and on track. With vision and strategy clarified, functional leaders were empowered to implement additional changes.

In October 2012, Cisco was expanding the roles and responsibilities of a number of key executives including Gary B. Moore, who was promoted to president and COO and heralded Cisco's latest moves as proof that the changes made were successfully advancing both accountability and operational discipline.

But with rapid, looming changes in networking software, by May 2014, Chambers was warning of a "brutal, brutal consolidation of the IT industry," predicting that when the smoke cleared, only two or three of the major players would remain standing." With all of its structural changes, will Cisco be one of those? Does Cisco have it right this time?

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