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GE's Two-Decade Transformation: Jack Welch's Leadership

On September 7, 2001, Jack Welch stepped down as CEO of General Electric. The sense of pride he felt about the company's performance during the previous two decades seemed justified judging by the many accolades GE was receiving. For the third consecutive year, it had not only been named *Fortune's* "Most Admired Company in the United States," but also *Financial Times'* "Most Admired Company in the World." And, on the eve of his retirement, *Fortune* had named Welch "Manager of the Century" in recognition of his personal contribution to GE's outstanding 20 year record.

Yet while the mood at GE's 2001 annual meeting had clearly been upbeat, some shareholders wondered whether anyone could sustain the blistering pace of change and growth characteristic of the Welch era. And specifically, many worried if any successor could generate the 23% per annum total shareholder return Welch had delivered in his two decades leading GE. It would be a tough act to follow. (See **Exhibit 1** for financial summary of Welch's era at GE.)

The GE Heritage

Founded in 1878 by Thomas Edison, General Electric grew from its early focus on the generation, distribution, and use of electric power to become, a hundred years later, one of the world's leading diversified industrial companies. A century later, in addition to its core businesses in power generation, household appliances, and lighting, the company was also engaged in businesses as diverse as aircraft engines, medical systems, and diesel locomotives.

Long regarded as a bellwether of American management practices, GE was constantly undergoing change. In the 1930s, it was a model of the era's highly centralized, tightly controlled corporate form. By the 1950s, GE had delegated responsibility to hundreds of department managers, leading a trend towards greater decentralization. But a subsequent period of "profitless growth" in the 1960s caused the company to strengthen its corporate staffs and develop sophisticated strategic planning systems. Again, GE found itself at the leading edge of management practice.

When Reg Jones, Welch's predecessor, became CEO in 1973, he inherited the company that had just completed a major reorganization. Overlaying its 10 groups, 46 divisions, and 190 departments

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Research Associate Meg Wozny prepared this case under the supervision of Professor Christopher A. Bartlett. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

were 43 strategic business units designed to support the strategic planning that was so central to GE's management process. Jones raised strategic planning to an art form, and GE again became the benchmark for hundreds of companies that imitated its SBU-based structure and its sophisticated planning processes. Soon, however, Jones was unable to keep up with reviewing and approving the massive volumes of information generated by 43 strategic plans. Explaining that "the review burden had to be carried on more shoulders," in 1977 he capped GE's departments, divisions, groups, and SBUs with a new organizational layer of "sectors," representing macrobusiness agglomerations such as consumer products, power systems, or technical products.

In addition to his focus on strategic planning, Jones spent a great deal of time on government relations, becoming the country's leading business statesman. During the 1970s, he was voted CEO of the Year three times by his peers, with one leading business journal dubbing him CEO of the Decade in 1979. When he retired in 1981, *The Wall Street Journal* proclaimed Jones a "management legend," adding that by handing the reins to Welch, GE had "replaced a legend with a live wire."

Welch's Early Priorities: GE's Restructuring

When the 45-year-old Welch became CEO in April 1981, the U.S. economy was in a recession. High interest rates and a strong dollar exacerbated the problem, resulting in the country's highest unemployment rates since the Depression. To leverage performance in GE's diverse portfolio of businesses, the new CEO challenged each to be "better than the best" and set in motion a series of changes that were to radically restructure the company over the next five years.

#1 or #2: Fix, Sell, or Close

Soon after taking charge, Welch set the standard for each business to become the #1 or #2 competitor in its industry—or to disengage. Asked whether this simple notion represented GE's strategy, Welch responded, "You can't set an overall theme or a single strategy for a corporation as broad as GE." By 1983, however, Welch had elaborated this general "#1 or #2" objective into a "three circle concept" of his vision for GE. (See **Exhibit 2**.) Businesses were categorized as core (with the priority of "reinvesting in productivity and quality"), high-technology (challenged to "stay on the leading edge" by investing in R&D), and services (required to "add outstanding people and make contiguous acquisitions"). To a question about what he hoped to build at GE, Welch replied:

> A decade from now, I would like General Electric to be perceived as a unique, high-spirited, entrepreneurial enterprise . . . the most profitable, highly diversified company on earth, with world quality leadership in every one of its product lines.[1]

But as GE managers struggled to build #1 or #2 positions in a recessionary environment and under attack from global—often Japanese—competitors, Welch's admonition to "fix, sell, or close" uncompetitive businesses frequently led to the latter options. Scores of businesses were sold, including central air-conditioning, housewares, coal mining, and, eventually, even GE's well-known consumer electronics business. Between 1981 and 1990, GE freed up over $11 billion of capital by selling off more than 200 businesses, which had accounted for 25% of 1980 sales. In that same time frame, the company made over 370 acquisitions, investing more than $21 billion in such major purchases as Westinghouse's lighting business, Employers Reinsurance, RCA, Kidder Peabody, and Thomson/CGR, the French medical imaging company. (See **Exhibit 3**.)

Internally, Welch's insistence that GE become more "lean and agile" resulted in a highly disciplined destaffing process aimed at all large headquarters groups, including a highly symbolic 50% reduction in the 200-person strategic planning staff. Welch described his motivation:

> We don't need the questioners and checkers, the nitpickers who bog down the process. . . . Today, each staff person has to ask, "How do I add value? How do I make people on the line more effective and competitive?"[2]

As he continued to chip away at bureaucracy, Welch next scrapped GE's laborious strategic planning system—and with it, the remaining corporate planning staff. He replaced it with "real time planning" built around a five-page strategy playbook, which Welch and his 14 key business heads discussed in shirtsleeves sessions "unencumbered by staff." Each business's playbook provided simple one-page answers to five questions concerning current market dynamics, the competitors' key recent activities, the GE business response, the greatest competitive threat over the next three years, and the GE business's planned response.

The budgeting process was equally radically redefined. Rather than documenting internally focused comparisons with past performance, results were now evaluated against external competitively based criteria: Do sales show increases in market share, for example? Do margins indicate a cost advantage compared with competition?

In 1985, Welch eliminated the sector level, previously the powerful center of strategic control. (See **Exhibits 4a** and **4b**.) By reducing the number of hierarchical levels from nine to as few as four, Welch ensured that all businesses reported directly to him. He said:

> We used to have department managers, sector managers, subsector managers, unit managers, supervisors. We're driving those titles out… We used to go from the CEO to sectors to groups to businesses. Now we go from the CEO to businesses. There is nothing else. Zero.[3]

Through downsizing, destaffing, and delayering, GE eliminated 59,290 salaried and 64,160 hourly positions between 1981 and 1988; divestiture eliminated an additional 122,700. Even when offset by the acquisitions, the number of employees at GE declined from 404,000 in 1980 to 330,000 by 1984 and 292,000 by 1989. Between 1981 and 1985, revenues increased modestly from $27.2 billion to $29.2 billion, but operating profits rose dramatically from $1.6 billion to $2.4 billion. This set the base for strong increases in both sales and earnings in the second half of the decade (see **Exhibit 5**).

This drastic restructuring in the early- and mid-1980s earned Welch the nickname "Neutron Jack," a term that gained currency even among GE managers when the CEO replaced 12 of his 14 business heads in August 1986. Welch's new "varsity team" consisted of managers with a strong commitment to the new management values, a willingness to break with the old GE culture, and most of all, an ability to take charge and bring about change. Despite his great dislike for a nickname he felt he did not deserve, Welch kept pushing the organization for more change. The further into the restructuring he got, the more convinced he became of the need for bold action:

> For me, the idea is to shun the incremental and go for the leap… How does an institution know when the pace is about right? I hope you won't think I'm being melodramatic if I say that the institution ought to stretch itself, ought to reach, to the point where it almost comes unglued… Remember the theory that a manager should have no more than 6 or 7 direct reports? I say the right number is closer to 10 or 15.[4]

The Late 1980s: Second Stage of the Rocket

By the late 1980s, most of GE's business restructuring was complete, but the organization was still reeling from culture shock and management exhaustion. Welch was as eager as anyone in GE to move past the "Neutron-Jack" stage and begin rebuilding the company on its more solid foundations.

The "Software" Initiatives: Work-Out and Best Practices

Years after launching GE's massive restructuring effort, Welch concluded, "By mid-1988 the hardware was basically in place. We liked our businesses. Now it was time to focus on the organization's software." He also acknowledged that his priorities were shifting: "A company can boost productivity by restructuring, removing bureaucracy and downsizing, but it cannot sustain high productivity without cultural change."

In 1989, Welch articulated the management style he hoped to make GE's norm—an approach based on openness, candor, and facing reality. Simultaneously, he refined the core elements of the organizational culture he wanted to create—one characterized by speed, simplicity, and self-confidence.[a] Over the next few years, he launched two closely linked initiatives—dubbed Work-Out and Best Practices—aimed at creating the desired culture and management approach.

In late 1988, during one of Welch's regular visits to teach in the company's Management Development Institute, he engaged a group of GE managers in a particularly outspoken session about the difficulty they were having implementing change back at their operations. In a subsequent discussion with James Baughman, GE's director of management development, Welch wondered how to replicate this type of honest, energetic interaction throughout the company. His objective was to create the culture of a small company—a place where all felt engaged and everyone had voice. Together, they developed the idea of a forum where employees could not only speak their minds about how their business might be run more effectively, but also get immediate responses to their ideas and proposals. By the time their helicopter touched down at GE's headquarters, Welch and Baughman had sketched out a major change initiative they called "Work-Out"—a process designed to get unnecessary bureaucratic work out of the system while providing a forum in which employees and their bosses could work out new ways of dealing with each other.

At Welch's request, Baughman formed a small implementation team and, with the help of two dozen outside consultants, led the company-wide program rollout. Assigned to one of GE's businesses, each consultant facilitated a series of off-site meetings patterned after the open-forum style of New England town meetings. Groups of 40 to 100 employees were invited to share views about their business and how it might be improved. The three-day sessions usually began with a talk by the unit boss, who presented a challenge and a broad agenda. Then, the boss was asked to leave, allowing employees aided by facilitators to list their problems, debate solutions, and prepare presentations. On the final day, the bosses returned and were asked to listen to their employees' analyses and recommendations. The rules of the process required managers to make instant, on-the-

[a] Interestingly, Welch's first attempts at articulating and communicating GE's new cultural values were awkward. For example, in 1986 he defined 10 desirable cultural "attitudes and policies" which few in GE could remember, let alone practice. Furthermore, he communicated his new organizational model as the GE Business Engine, a concept that many found depersonalizing since it seemed to depict people as inputs into a financial machine. Gradually, Welch became more comfortable articulating cultural values which he continued to refine into what he termed "GE's social architecture." Eventually his concept of The Business Engine evolved to become The Human Engine.

spot decisions about each proposal, in front of everyone to 80% of proposals. If the manager needed more information, he or she had to charter a team to get it by an agreed-upon decision date.

Armand Lauzon, a manager at a GE Aircraft Engine factory, described to *Fortune* how he felt as his employees presented him with their suggestions in a room where they had carefully arranged the seating so his boss was behind him. "I was wringing wet within half an hour," he said. "They had 108 proposals; I had about a minute to say yes or no to each one. And I couldn't make eye contact with my boss without turning around, which would show everyone in the room I was chickenshit." In total, Lauzon supported all but eight of the 108 proposals.

By mid-1992, over 200,000 GE employees—over two-thirds of the workforce—had participated in Work-Out, although the exact number was hard to determine, since Welch insisted that none of the meetings be documented. "You're just going to end up with more bureaucracy," he said. What was clear, however, was that productivity increases, which had been growing at an average annual rate of 2% between 1981 and 1987, doubled to a 4% annual rate between 1988 and 1992.[b]

As Work-Out was getting started, Welch's relentless pursuit of ideas to increase productivity resulted in the birth of a related movement called Best Practices. In the summer of 1988, Welch gave Michael Frazier of GE's Business Development department a simple challenge: How can we learn from other companies that are achieving higher productivity growth than GE? Frazier selected nine companies, including Ford, Hewlett Packard, Xerox, and Toshiba, with different best practices to study. In addition to specific tools and practices, Frazier's team also identified several characteristics common to the successful companies: they focused more on developing effective processes than controlling individual activities; customer satisfaction was their main gauge of performance; they treated their suppliers as partners; and they emphasized the need for a constant stream of high-quality new products designed for efficient manufacturing.

On reviewing Frazier's report, Welch became an instant convert and committed to a major new training program to introduce Best Practices thinking throughout the organization, integrating it into the ongoing agenda of Work-Out teams. As a result of the Best Practices program, many GE managers began to realize they were managing and measuring the wrong things. (Said one, "We should have focused more on *how* things get done than on just *what* got done.") Subsequently, several units began radically revising their whole work approach. For example, the head of the corporate audit staff explained: "When I started 10 years ago, the first thing I did was count the $5,000 in the petty cash box. Today, we look at the $5 million in inventory on the floor, searching for process improvements that will bring it down."

Going Global

During the early- and mid-1980s, internationalization had remained a back-burner issue at GE, but strong advocates of globalization such as Paolo Fresco, the Italian-born president of GE Europe, understood why Welch had to concentrate his early efforts on the rationalization of the U.S. operations. "It's very difficult to jump into the world arena if you don't have a solid base at home," said Fresco, "but once the solid base was created, we really took the jump."

The first rumblings of the emerging globalization priority came in Welch's challenges to his Corporate Executive Council meetings during 1986. Reflecting his own early experience in GE

[b] In GE, productivity was defined by the following calculation: Productivity = Real Revenue (net of price increases)/Real Costs (net of inflationary increases).

Plastics, he did not try to impose a corporate globalization strategy, preferring to let each business take responsibility for implementing a plan appropriate to its particular needs:

> When I was 29 years old I bought land in Holland and built the plants there. That was "my land" for "my business." I was never interested in the global GE, just the global Plastics business. The idea of a company being global is nonsense. Businesses are global, not companies.[5]

This did not mean, however, that Welch was uninvolved in his business managers' globalization plans. In 1987, he focused their attention by raising the bar on GE's well-known performance standard: from now on, "#1 or #2" was to be evaluated on *world* market position. As if to underline his seriousness, a few months later he announced a major deal with Thomson S.A., in which GE agreed to exchange its struggling consumer electronics business for the large French electronics company's medical imaging business, a business in which GE had a leading global position.

To provide continuing momentum to the internationalization effort, in 1989 Welch appointed Paolo Fresco as head of International Operations and in 1992 made him a vice-chairman and member of his four-man corporate executive office. Fresco, a key negotiator on the Thomson swap, continued to broker numerous international deals: a joint venture with German-based Robert Bosch, a partnership with Toshiba, and the acquisition of Sovac, the French consumer credit company. As Eastern Europe opened, he initiated a major thrust into the former Communist bloc, spearheaded by the purchase of a majority share in the Hungarian lighting company, Tungsram. Fresco became the locator and champion of new opportunities. "I fill vacuums," he said. "All these assignments are temporary—once they are complete, I get out of the way."

Like subsequent strategic initiatives, globalization was not a one-time effort, but an ongoing theme that Welch doggedly pursued over the years. Taking advantage of Europe's economic downturn, GE invested $17.5 billion in the region between 1989 and 1995, half on new plants and facilities and half to finance 50 or so acquisitions. Then, in 1995, after the Mexican peso collapsed, the company again saw the economic uncertainty as a great buying opportunity. Within six months GE had acquired 16 companies, positioning it to participate in the country's surprisingly rapid recovery. And as Asia slipped into crisis in 1997-1998, Welch urged his managers to view it as a buying opportunity rather than a problem. In Japan alone the company spent $15 billion on acquisitions in six months.

By 1998, international revenues were $42.8 billion, almost double the level just five years earlier. The company expected to do almost half its business outside the United States by 2000, compared with only 20% in 1985, the year before the first international push. More important, global revenues were growing at almost three times the rate of domestic sales. (See **Exhibit 6**).

Developing Leaders

While the global thrust and the new cultural initiatives were being implemented, Welch was also focusing on the huge task of realigning the skill sets—and, more important, the mindsets—of the company's 290,000 employees with GE's new strategic and organizational imperatives. Amidst the grumbling of those who felt overworked in the new demanding environment and the residual distrust left over from the layoffs of the 1980s, he recognized his challenge was nothing short of redefining the implicit contract that GE had with its employees:

> Like many other large companies in the U.S., Europe and Japan, GE has had an implicit psychological contract based on perceived lifetime employment. This produced a paternal, feudal, fuzzy kind of loyalty. That kind of loyalty tends to focus people inward. But in today's environment, people's emotional energy must be focused outward on a competitive world… The new psychological contract, if there is such a thing, is that jobs at GE are the best in the world for people willing to compete. We have the best training and development resources and an environment committed to providing opportunities for personal and professional growth.[6]

Like all GE managers, Welch grew up in an organization deeply committed to developing its people. He wanted to harness that tradition and use it to translate his broad cultural changes down to the individual level. This would mean adapting GE's well-established human resource systems to his goals. For example, for as long as he could remember, the company's top executives had committed substantial amounts of time to the rigorous management appraisal, development, and succession planning reviews known as Session C. He began using this process to help achieve his objectives, predictably adding his own intense personal style to its implementation.

Starting in April and lasting through May each year, Welch and three of his senior executives visited each of his businesses to review the progress of the company's top 3,000 executives. Welch kept particularly close tabs on the upper 500, all of whom had been appointed with his personal approval. In these multi-day meetings, Welch wanted to be exposed to high-potential managers presenting results on major projects. In an exhaustive 10- to 12-hour review in each business, Welch asked the top executive to identify the future leaders, outline planned training and development plans, and detail succession plans for all key jobs. The exercise reflected his strong belief that good people were GE's key assets and had to be managed as a company resource. "I own the people," he told his business heads. "You just rent them."

As these reviews rolled out through GE, all professional-level employees expected honest feedback about where they were professionally, reasonable expectations about future positions they could hold, and the specific skills required to get there. Managers at every level used these discussions as the basis for coaching and developing their staff. (As a role model, Welch estimated he spent at least 70% of his time on people issues, most of that teaching and developing others.)

A strong believer in incentives, Welch also radically overhauled GE's compensation package. From a system driven by narrow-range increases in base salary supplemented by bonuses based on one's business performance, he implemented a model in which stock options became the primary component of management compensation. He expanded the number of options recipients from 300 to 30,000 and began making much more aggressive bonus awards and options allocations strongly tied to the individual's performance on the current program priority (globalization, for example, or best practices initiatives).

Through all of these human resource tools and processes, Welch's major effort was increasingly focused on creating an environment in which people could be their best. Entering the 1990s, he described his objective for GE in these terms:

> Ten years from now, we want magazines to write about GE as a place where people have the freedom to be creative, a place that brings out the best in everybody. An open, fair place where people have a sense that what they do matters, and where that sense of accomplishment is rewarded in the pocketbook and the soul. That will be our report card.

A key institution that Welch harnessed to bring about this cultural change was GE's Crotonville management development facility. Welch wanted to convert Crotonville from its management training focus and its role as a reward or a consolation prize for those who missed out on a promotion to a powerful engine of change in his transformation effort. In the mid-1980s, when he was cutting costs almost everywhere else, he spent $45 million on new buildings and improvements at Crotonville. He also hired some experienced academics—Jim Baughman from Harvard and Noel Tichy from Michigan—to revolutionize Crotonville's activities.

Under Welch's direct control and with his personal involvement, Crotonville's priority became to develop a generation of leaders aligned to GE's new vision and cultural norms. Increasingly, it evolved from a training center to a place where teams of managers worked together on real priority issues and decided on results-oriented action. And this led to the gradual replacement of outside faculty by GE insiders acting as discussion leaders. Leading the change was Welch, who twice a month traveled to Crotonville to teach and interact with GE employees. ("Haven't missed a session yet," he boasted in the late 1990s.) (See **Exhibit 7**.) It was during one of these sessions that the idea for Work-Out emerged, and it was at Crotonville that many of the Best Practices sessions were held.

Despite all the individual development and the corporate initiatives, not all managers were able to achieve Welch's ideal leadership profile. (See **Exhibit 8**.) Of greatest concern to the CEO were those who seemed unwilling or unable to embrace the open, participative values he was espousing. In 1991, he addressed the problem and the seriousness of its consequences:

> In our view, leaders, whether on the shop floor or at the top of our businesses, can be characterized in at least four ways. The first is one who delivers on commitments—financial or otherwise—and shares the values of our company. His or her future is an easy call. Onward and upward. The second type of leader is one who does not meet commitments and does not share our values. Not as pleasant a call, but equally easy. The third is one who misses commitments but shares the values. He or she usually get a second chance, preferably in a different environment.
>
> Then there's the fourth type—the most difficult for many of us to deal with. That leader delivers on commitments, makes all the numbers, but doesn't share the values we must have. This is the individual who typically forces performance out of people rather than inspires it: the autocrat, the big shot, the tyrant. Too often all of us have looked the other way and tolerated these "Type 4" managers because "they always deliver"—at least in the short term. [7]

To reinforce his intention to identify and weed out Type 4 managers, Welch began rating GE top-level managers not only on their performance against quantifiable targets but also on the extent to which they "lived" GE values. Subsequently, many of GE's 500 officers started using a similar two-dimensional grid to evaluate and coach their own direct reports. And when coaching failed, Welch was prepared to take action on the type 4s. "People are removed for having the wrong values," he insisted. "We don't even talk about the numbers."

To back up this commitment to the new leadership criteria, a few years later GE introduced a 360° feedback process. Every employee was graded by his or her manager, peers and all subordinates on a 1 to 5 scale in areas such as teambuilding, quality focus, and vision. Welch described it as a powerful tool for detecting and changing those who "smile up and kick down." Tied into the evaluation process and linked to the Session C human resource planning exercise, the 360° feedback became the means for identifying training needs, coaching opportunities, and, eventually, career planning—whether that be up, sideways, or out.

Into the 1990s: The Third Wave

Entering the 1990s, Welch felt that GE's new foundation had been laid. Despite the slowdown in the industrial sector in the first few years of the new decade, he was committed to the task of rebuilding the company at an even more urgent pace. The new initiatives rolled on.

Boundaryless Behavior

Moving beyond the earlier initiatives aimed at strengthening GE's individual businesses, Welch began to focus on creating what he called "integrated diversity." He articulated his vision for GE in the 1990s as a "boundaryless" company, one characterized by an "open, anti-parochial environment, friendly toward the seeking and sharing of new ideas, regardless of their origins"—in many ways an institutionalization of the openness "Work-Out" had initiated and "best practices" transfers had reinforced. Describing his barrier-free vision for GE, Welch wrote:

> The boundaryless company we envision will remove the barriers among engineering, manufacturing, marketing, sales, and customer service; it will recognize no distinctions between domestic and foreign operations—we'll be as comfortable doing business in Budapest and Seoul as we are in Louisville and Schenectady. A boundaryless organization will ignore or erase group labels such as "management," "salaried" or "hourly," which get in the way of people working together.[8]

One of Welch's most repeated stories of how best practices could be leveraged by boundaryless behavior described how managers from Canadian GE identified a small New Zealand appliance maker, Fisher & Paykel, producing a broad range of products very efficiently in its small, low-volume plant. When the Canadians used the flexible job-shop techniques to increase productivity in their high-volume factory, the U.S. appliance business became interested. More than 200 managers and employees from the Louisville plant went to Montreal to study the accomplishments, and soon a Quick Response program had cut the U.S. production cycle in half and reduced inventory costs by 20%. Not surprisingly, GE's Appliance Park in Louisville became a "must see" destination for many other businesses, and within a year, the program had been adapted for businesses as diverse as locomotives and jet engines.

The CEO gave the abstract concept of boundarylessness teeth not only by repeating such success stories but also by emphasizing that there was no place at GE for the adherents of the old culture: "We take people who aren't boundaryless out of jobs. . . If you're turf-oriented, self-centered, don't share with people and aren't searching for ideas, you don't belong here," he said. He also changed the criteria for bonuses and options awards to reward idea-seeking and sharing, not just idea creation. Five years later, Welch had a list of boundarylessness success stories:

> We quickly began to learn from each other: productivity solutions from Lighting; "quick response" asset management from Appliances; transaction effectiveness from GE Capital; cost-reduction techniques from Aircraft Engines; and global account management from Plastics.[9]

One of the most impressive examples of the way ideas and expertise spread throughout GE was the company's "integration model." Developed on the lessons drawn from literally hundreds of post-acquisition reviews, the model guided the actions of managers in any part of the company responsible for integrating a newly acquired operation: from taking control of the accounts to realigning the organization, and from identifying and removing "blockers" to implementing GE tools and programs. By the late 1990s, GE's integration programs were completed in about 100 days.

Stretch: Achieving the Impossible

To reinforce his rising managerial expectations, in the early 1990s Welch made a new assault on GE's cultural norms. He introduced the notion of "stretch" to set performance targets and described it as "using dreams to set business targets, with no real idea of how to get there."[10] His objective was to change the way targets were set and performance was measured by creating an atmosphere that asked of everyone, "How good can you be?"

Stretch targets did not replace traditional forecasting and objective-setting processes. Managers still had to hit basic targets—adjusted to recognize the world as it turned out to be, not some rigid plan negotiated a year earlier. But during the budget cycle they were also required to set higher, "stretch" goals for their businesses. While managers were not held accountable for these goals, those who achieved them were rewarded with substantial bonuses or stock options. Said Welch: "Rigorous budgeting alone is nonsense. I think in terms of . . . what is the best you can do. You soon begin to see what comes out of a trusting, open environment."

Within a year of introducing the concept of stretch, Welch was reporting progress:

> We used to timidly nudge the peanut along, setting goals of moving from, say, 4.73 in inventory turns to 4.91, or from 8.53% operating margin to 8.92%; and then indulge in time-consuming high-level, bureaucratic negotiations to move the number a few hundredths one way or the other. . . We don't do that anymore. In a boundaryless organization with a bias for speed, decimal points are a bore. They inspire or challenge no one, capture no imaginations. We're aiming at 10 inventory turns, at 15% operating margins.[11]

By the mid-1990s, stretch goals were an established part of GE's culture. A senior executive explained: "People like problem solving. They want to go to that next level. That's becoming a bigger driver for the company than Work-Out." But the introduction of stretch targets did not come without implementation difficulties. According to Steve Kerr, the head of Crotonville, "You absolutely have to honor the don't-punish-failure concept; stretch targets become a disaster without that." Unless properly managed, he explained, stretch could easily degenerate into a justification for forcing people to work 60-hour weeks to achieve impossible goals. "It's not the number per se, especially because it's a made-up number. It's the process you're trying to stimulate. You're trying to get people to think of fundamentally better ways of performing their work."[12]

In early 1996, Welch acknowledged that GE did not meet two of its four-year corporate stretch targets: to increase operating margins from their 1991 level of 10% to 15% by 1995, and inventory turns from 5 to 10 times. However, after decades of single-digit operating margins and inventory turns of 4 or 5, GE did achieve an operating margin of 14.4% and inventory turns of almost 7 in 1995. "In stretching for these 'impossible' targets," said Welch, "we learned to do things faster than we would have going after 'doable' goals, and we have enough confidence now to set new stretch targets of at least 16% operating margin and more than 10 turns by 1998."[13]

Service Businesses

In 1994, Welch launched a new strategic initiative designed to reinforce one of his earliest goals: to reduce GE's dependence on its traditional industrial products. In the early 1980s, he had initiated the initial tilt towards service businesses through the acquisition of financial service companies such as Employers Reinsurance and Kidder, Peabody. "Nearly 60% of GE's profits now comes from services," said Welch in 1995. "Up from 16.4% in 1980. I wish it were 80%."[14]

To fulfill that wish, Welch began moving to the next stage—a push for product services. During his annual strategic reviews with senior managers, Welch began to challenge his managers "to participate in more of the food chain." While customers would always need high-quality hardware, Welch argued that GE's future challenge would be to offset slowing growth for its products by supplementing them with added-value services. Describing it as one of "the biggest growth opportunities in [GE's] history," he named a cadre of rising executives to focus on the issue. At the same time, he asked Vice Chairman Paolo Fresco to set up a Services Council through which top managers could exchange ideas.

Soon, all GE's businesses were exploring new service-based growth opportunities. The medical business, for example, developed a concept called "In Site." This involved placing diagnostic sensors and communications capability into their installed base of CT scanners, MRI equipment, and other GE medical devices. The system linked the equipment directly to GE's on-line service center, continuously diagnosing its operating condition in real time. Soon, GE was offering its remote diagnostics and other services to all medical equipment—including non-GE products.

Like other internal "best practice" service examples, the "In Site" story was shared in the Services Council, and soon online diagnostic technology was being transferred to other GE businesses. In Aircraft Engines, critical operating parameters of GE jet engines were monitored by GE Service experts while the engines were in flight, providing the company with a major value-added benefit for its customers. The same-real time diagnostic concepts were also applied in GE's power systems business, and other businesses had plans to develop remote diagnostic capability as well.

According to Welch, the opportunity for growth in product services was unlimited. With an advantage unique in the world—an installed base of some 9,000 GE commercial jet engines, 10,000 turbines, 13,000 locomotives, and 84,000 major pieces of medical diagnostic imaging equipment—he felt GE had an incredibly strong platform on which to build. Commented Lewis Edelheit, GE's senior VP for Corporate Research and Development:

> A few years ago, businesses were seen as a pyramid, with the base as the product and the other elements—services, manufacturing processes and information—resting on that base. We are now looking at turning the pyramid upside down. The product will become just one piece of the picture—the tip of that inverted pyramid. The biggest growth opportunities may come from providing services to the customer: providing the customer with ways to become more productive—and with information so valuable the customer will pay for it.[15]

By 1996, GE had built an $8 billion equipment services business, which was growing much faster than the underlying product businesses. Equally important, in Welch's view, it was changing internal mindsets from selling products to "helping our customers to win." GE's product services were to be aimed at making customers' existing assets—power plants, locomotives, airplanes, factories, hospital equipment and the like—more productive. Yet while GE was helping its customers reduce their capital outlays, its managers were also shifting demand from low-margin products to their newer high-profit services with margins almost twice the company average.

This initiative led to a new round of acquisitions. In 1997 alone, GE made 20 service-related acquisitions and joint ventures, including a $1.5 billion acquisition of a jet engine service business and the $600 million purchase of a global power generation equipment service company. GE's radical business shift over two decades led Welch to claim, "We have changed the very nature of what we do for a living. Today, services account for two-thirds of our revenues." (See **Exhibit 9**.)

Closing Out the Decade: Raising the Bar

As he entered the last half of the decade, Welch was aware that he would reach GE's mandatory retirement age in 2001. Yet his commitment to keep building GE was undiminished, despite critics who continued to question if the company could keep adding value to such a highly diversified business portfolio. In the 1995 Annual Report, he tackled the issue head on:

> The hottest trend in business is the rush toward breaking up multi-business companies. The obvious question to GE, the world's largest multi-business company, was, "When are you going to do it?" The short answer is that we're not. . . . We are a company intent on getting bigger, not smaller. Our only answer to the trendy question "What do you intend to spin off?" is "Cash—and lots of it."

Despite hospitalization for triple bypass surgery in 1995, he showed no signs of slowing down. Indeed, many felt he gained new energy in his post-operative state as the pressure for performance and new initiatives continued.

Six Sigma Quality Initiative

When a 1995 company survey showed that GE employees were dissatisfied with the quality of its products and processes, Welch met with Lawrence Bossidy, an old friend who had left GE in 1991 to become CEO of AlliedSignal Inc. Welch learned how the Six Sigma quality program Bossidy had borrowed from Motorola Inc. had helped AlliedSignal dramatically improve quality, lower costs, and increase productivity. Immediately, he invited Bossidy to GE's next Corporate Executive Council meeting. His presentation of the AlliedSignal program won universal rave reviews.

After the meeting, Welch asked Gary Reiner, vice president for Business Development, to lead a quality initiative for GE. Reiner undertook a detailed study of the impact of quality programs at companies like Motorola and AlliedSignal. His analysis concluded that GE was operating at error rates ten thousand times the Six Sigma quality level of 3.4 defects per million operations. Furthermore, he estimated that the gap was costing the company between $8 billion and $12 billion a year in inefficiencies and lost productivity. On the basis of Reiner's findings, at GE's 1996 annual gathering of its 500 top managers in Boca Raton, Welch announced a goal of reaching Six Sigma quality levels company-wide by the year 2000, describing the program as "the biggest opportunity for growth, increased profitability, and individual employee satisfaction in the history of our company."

Like all initiatives announced in Boca (services, globalization, etc.), Six Sigma quality was more than a slogan: it was a well-developed program, with a detailed plan for its implementation. Furthermore, it would be monitored throughout the year in a carefully linked series of management meetings that Welch started to refer to as GE's "operating system"—the series of planning, resource allocation, review, and communication meetings that were at the heart of its management process. The Boca initiative announcement was followed up by a first progress report at the two-day March CEC meeting; then in the April Session C reviews, Welch would check how key human resources had been deployed against the target; the July strategic review sessions would review the impact of the initiative on each business's three-year outlook; October's Officers Meeting tracked progress and showcased best practice; and the November operating plan reviews would fold the impact into the following year's forecasts. (See **Exhibit 10**.) Said Welch, "We are relentless."

Six Sigma participation was not optional, and Welch tied 40% of bonus to an individual's Six Sigma objectives. To provide managers the skills, Reiner designed a massive training of thousands of managers to create a cadre of "Green Belts," "Black Belts," and "Master Black Belts" in Six Sigma quality. "Green Belt" training took about four weeks, followed by implementation of a five-month project aimed at improving quality. Black Belts required six weeks of instruction in statistics, data analysis, and other Six Sigma tools which prepared the candidate to undertake three major quality projects that resulted in measurable performance increases. Master Black Belts—full-time Six Sigma instructors—mentored the Black Belt candidates through the two-year process.

At the January 1998 Boca Raton meeting, speakers from across the company and around the world presented Six Sigma best practice and achievements. Managers from Medical Systems described how Six Sigma designs produced a tenfold increase in the life of CT scanner x-ray tubes; the railcar leasing business described a 62% reduction in turnaround time at its repair shops, making it two to three times faster than its nearest rival; and a team from the plastics business described how the Six Sigma process added 300 million pounds of new capacity, equivalent to a "free plant." In all, 30,000 Six Sigma projects had been initiated in the prior year.

At the April 1999 Annual Meeting, Welch announced that in the first two years of Six Sigma, GE had invested $500 million to train the entire professional workforce of 85,000. In addition, 5,000 managers had been appointed to work on the program full-time as Black Belts and Master Black Belts, leading Welch to claim "they have begun to change the DNA of GE to one whose central strand is quality." Returns of $750 million over the investment exceeded expectations, and the company was forecasting additional returns of $1.5 billion in 1999 (**Exhibit 11**). Clearly delighted by the program, Welch stated, "In nearly four decades with GE, I have never seen a company initiative move so willingly and so rapidly in pursuit of a big idea."

"A Players" with "Four E's"

The closer he got to his planned retirement date, the more Welch seemed to focus on the quality of the organization he would leave to his successor. While he felt he had assembled a first-class team of leaders at the top of the company, he wanted to continue upgrading quality deep in the organization. This implied not only raising the bar on new hires but also weeding out those who did not meet GE's high standards. Modifying his earlier language of four management types, he began describing GE as a company that wanted only "A Players"—individuals with vision, leadership, energy, and courage. He described what he was trying to achieve:

> The GE leader sees this company for what it truly is: the largest petri dish of business innovation in the world. We have roughly 350 business segments. We see them as 350 laboratories whose ideas are there to be shared, learned, and spread as fast as we can. The leader sees that sharing and spreading near the top of his or her responsibilities.

"A Players" were characterized by what Welch described as the 4E's—energy ("excited by ideas and attracted to turbulence because of the opportunity it brings"), ability to energize others ("infecting everyone with their enthusiasm for an idea and having everyone dreaming the same big dreams"), edge ("the ability to make tough calls") and execution ("the consistent ability to turn vision into results").

To meet the company's need for exceptional leadership talent, Welch insisted that GE move to phase three of its globalization initiative. Beyond focusing on global markets and global sources—the earlier two phases of globalization—he urged his managers to expand their efforts in "globalizing the

intellect of the company." At the same time, he urged his top management group to take strong action to upgrade the quality of their existing employees:

> We're an A-plus company. We want only A players. We can get anyone we want. Shame on any of you who aren't facing into your less-than-the-best. Take care of your best. Reward them. Promote them. Pay them well. Give them a lot of [stock] options and don't spend all that time trying to work plans to get Cs to be Bs. Move them on out early. It's a contribution.[16]

To help clarify those decisions, the company implemented a performance appraisal system that required every manager to rank each of his or her employees into one of five categories based on his or her long-term performance—the "top" 10% as 1s, the "strong" 15% as 2s, the "highly valued" 50% as 3s, the "borderline" 15% as 4s, and the "least effective" 10% as 5s.[c] Every group, even a 10-person team, had to be ranked on this so-called "vitality curve." All 1s and most 2s received stock options but anyone rated a 5 had to go. Welch elaborated on the need to weed out poor performers: "With the 5s it's clear as a bell. I think they know it, and you know it. It's better for everyone. They go on to a new place, a new life, a new start." At the other end of the scale, Welch expected managers to take action on their top performers to develop them: "You send your top 10 on and see how many of them get into the top 10 of the whole business."

Welch knew that the nurturing and continuously upgrading the quality of management was one of the main keys to GE's success. He felt that the talent he amassed over 18 years—especially at the senior management levels—was of a significantly higher quality than in past years. "I've got all A players in the Corporate Council. It wasn't like that before. I'm really pleased about that," he said.

Toward Retirement: One More Initiative

Just when the organization felt Welch had put his final stamp on GE, at the 1999 Operating Managers' Meeting in Boca, the 64-year-old CEO introduced his fourth strategic initiative—e-business.[d] Describing the impact of the Internet as "the biggest change I have ever seen," he launched a program he described as "*destroyyourbusiness.com*." Within two months each unit had a full-time *dyb.com* team focused on the challenge of redefining its business model before someone else did. "Change means opportunity," he told them. "And this is our greatest opportunity yet."

Yet Welch also knew that GE was late to the Internet party. As he acknowledged in his address to shareholders three months after the Boca meeting, "Big companies like us were frightened by the unfamiliarity of the technology. We thought this was mysterious, Nobel Prize stuff, the province of the wild-eyed and purple haired." But the more he explored the Internet and talked to people about it, the more Welch came to believe that, through processes like Six Sigma, GE had done the really hard work of building the assets needed to support e-business—like strong brands, top ranked product reliability, great fulfillment capability, and excellent service quality. "It's much harder for a

[c] Eventually, the five categories were reduced to three—the top 20%, the high-performance 70%, and the bottom 10%. The practice of counseling out the bottom 10% continued under the philosophy of "improve or move."

[d] The three earlier ones were globalization, services, and Six Sigma. For more detail on the implementation of GE's strategic initiatives across its business see "GE's Digital Revolution: Redefining the E in GE" (9-302-001).

dot com startup to challenge us when they don't have the fundamentals down," he said. "They're popcorn stands without a real business or operating capabilities."

As the organization cranked up to push the new initiative through the monthly schedule of reviews that GE operating system required, Welch was impressed by early results from the *dyb.com* teams. "Digitizing the company and developing e-business models is easier—not harder—than we ever imagined," he said. But others were more sanguine. Said David Mark, a partner at McKinsey and Co., "It's going to take a decade for this to play out. I don't think it's a simple transition." If Mark was correct, building GE's e-business would be a long-term challenge for Welch's successor.

Exhibit 1 Selected Financial Data: General Electric and Consolidated Affiliates ($ millions)

	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990	1986	1981
Revenues	$129,853	$111,630	$100,469	$90,840	$79,179	$70,028	$60,109	$55,701	$53,051	$51,283	$49,696	$36,725	$27,240
Earnings from continuing operations	12,735	10,717	9,296	8,203	7,280	6,573	5,915	4,184	4,137	3,943	3,920	3,689	NA
Loss from discontinued operations	--	--	-	-	-	-	-1,189	993	588	492	383	NA	NA
Net earnings	12,735	10,717	9,296	8,203	7,280	6,573	4,726	4,315	4,725	2,636	4,303	2,492	1,652
Dividends declared	5,647	4,786	4,081	3,535	3,138	2,838	2,546	2,229	1,985	1,808	1,696	1,081	715
Earned on average share owners' equity	27.5%	26.8%	25.7%	25.0%	24.0%	23.5%	18.1%	17.5%	20.9%	12.2%	20.2%	17.3%	19.1%
Per share													
Net earnings	3.87	3.27	2.84	2.50	2.20	1.95	1.38	3.03	2.75	2.55	2.42	2.73	NA
Net earnings—diluted	3.81	3.21	2.80	2.46	2.16	1.93	1.37	2.52	2.75	1.51	2.42	NA	NA
Dividends declared	1.71	1.47	1.25	1.08	0.95	0.845	0.745	1.31	1.16	1.04	0.96	1.18	NA
Stock price range (1)	41.7-60	32-53.2	23.9-34.4	16.3-25.1	11.7-17.5	8.4-11.1	7.6-9.1	6.8-8.9	6.1-7.3	4.5-6.5	4.2-6.2	2.8-3.7	1.1-1.5
Total assets of continuing operations	437,006	405,200	335,935	304,012	272,402	228,035	185,871	251,506	192,876	166,508	152,000	84,818	20,942
Long-term borrowings	82,132	71,427	59,663	46,603	49,245	51,027	36,979	28,194	25,298	22,602	20,886	100,001	1,059
Shares outstanding—average (in thousands)	3,299,037	3,277,826	3,268,998	3,274,692	3,307,394	3,367,624	3,417,476	1,707,979	1,714,396	1,737,863	1,775,104	912,594	227,528
Employees at year end													
United States	168,000	167,000	163,000	165,000	155,000	150,000	156,000	157,000	168,000	173,000	183,000	302,000	NA
Other countries	145,000	143,000	130,000	111,000	84,000	72,000	60,000	59,000	58,000	62,000	62,000	71,000	NA
Discontinued operations (primarily U.S.)	--	--	-	-	-	-	5,000	6,000	42,000	49,000	53,000	NA	NA
Total employees	313,000	310,000	293,000	276,000	239,000	222,000	221,000	222,000	268,000	284,000	298,000	373,000	404,000

Source: Datastream and Capital IQ.

(1) Price unadjusted for four 2-for-1 stock splits during the period.

Exhibit 2 The Three-Circle Vision' for GE, 1982

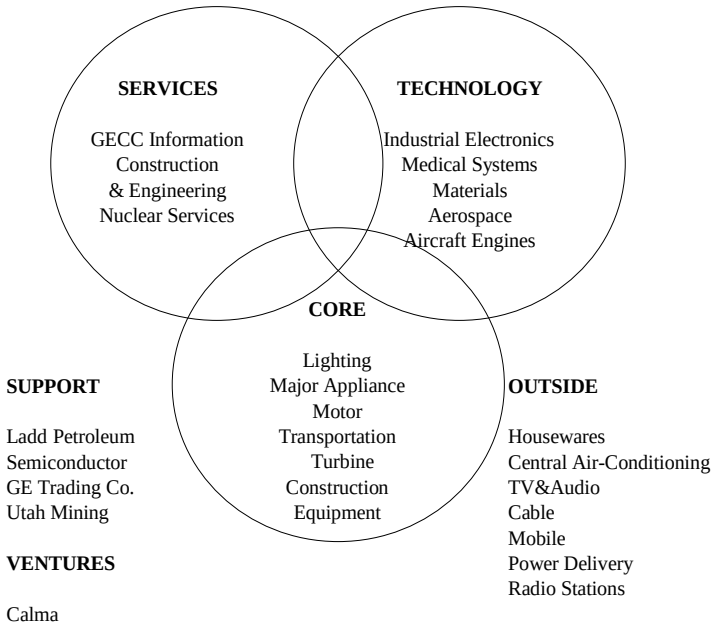


Exhibit 3 Changes in the GE Business Portfolio

MAJOR ACQUISITIONS ($21Billion Total)	**MAJOR DIVESTITURES** ($11 Billion Total)
• Calma (CAD/CAM equipment) • Intersil (semiconductors) • Employers Reinsurance Corp. • Decimus (computer leasing) • RCA (NBC Television, aerospace, electronics) • Kidder, Peabody (investment banking) • Polaris (aircraft leasing) • Genstar (container leasing) • Thomson/CGR (medical equipment) • Gelco (portable building leasing) • Borg-Warner Chemicals (plastics) • Montgomery Ward Credit (credit cards) • Roper (appliances) • Penske Leasing (truck leasing) • Financial Guaranty Insurance Co. • Thungsram (light bulbs) • Burton Group Financial Services • Travelers Mortgage (mortgage services) • Thorn Lighting (light bulbs) • Financial News Network (cable network) • Chase Manhattan Leasing • Itel Containers (container leasing) • Harrods/House of Fraser Credit Cards	• Central Air Conditioning • Pathfinder Mines • Broadcasting Properties (non-RCA TV & radio stations) • Utah International (mining) • Housewares (small appliances) • Family Financial Services • RCA Records • Nacolah Life Insurance (RCA's) • Coronet Carpets (RCA's) • Consumer Electronics (TV sets) • Carboloy (industrial cutting tools) • NBC Radio Networks • Roper Outdoor Lawn Equipment • GE Solid State (semiconductors) • Calma (CAD/CAM equipment) • RCA Globcomm international telex) • Ladd Petroleum (oil exploration & refining) • RCA Columbia Home Video • Auto Auctions (auctions of used cars)

Source: *The Business Engine*.

Exhibit 4a GE Organization in 1981

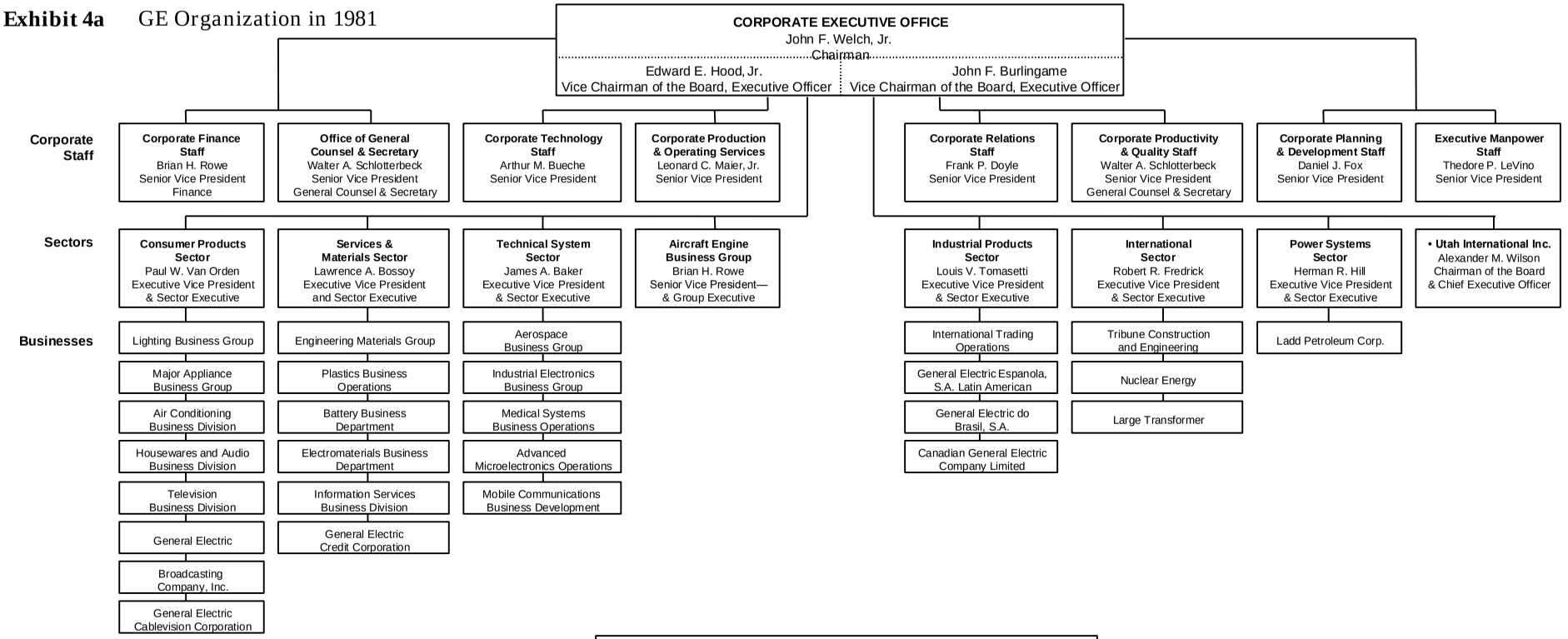


Exhibit 4b GE Organization in 1992

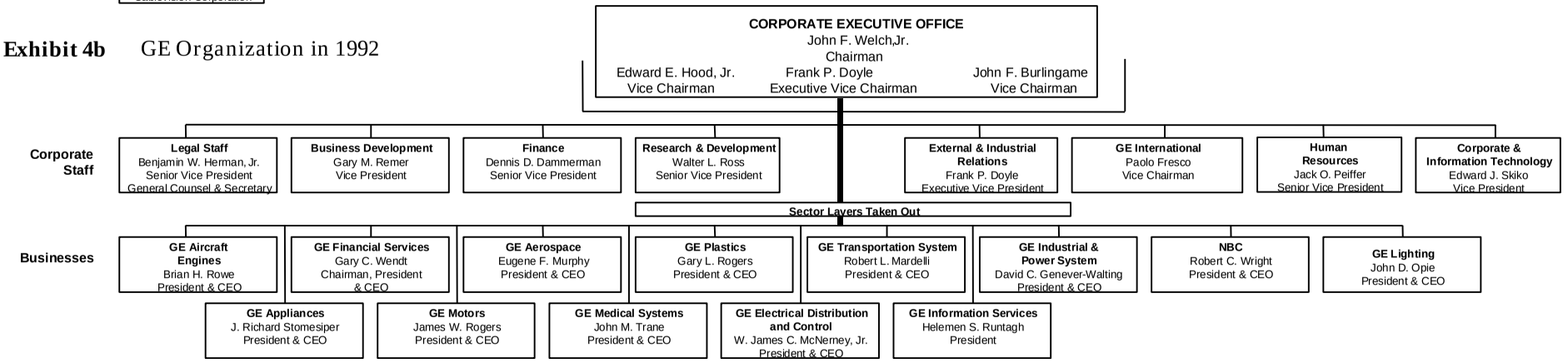


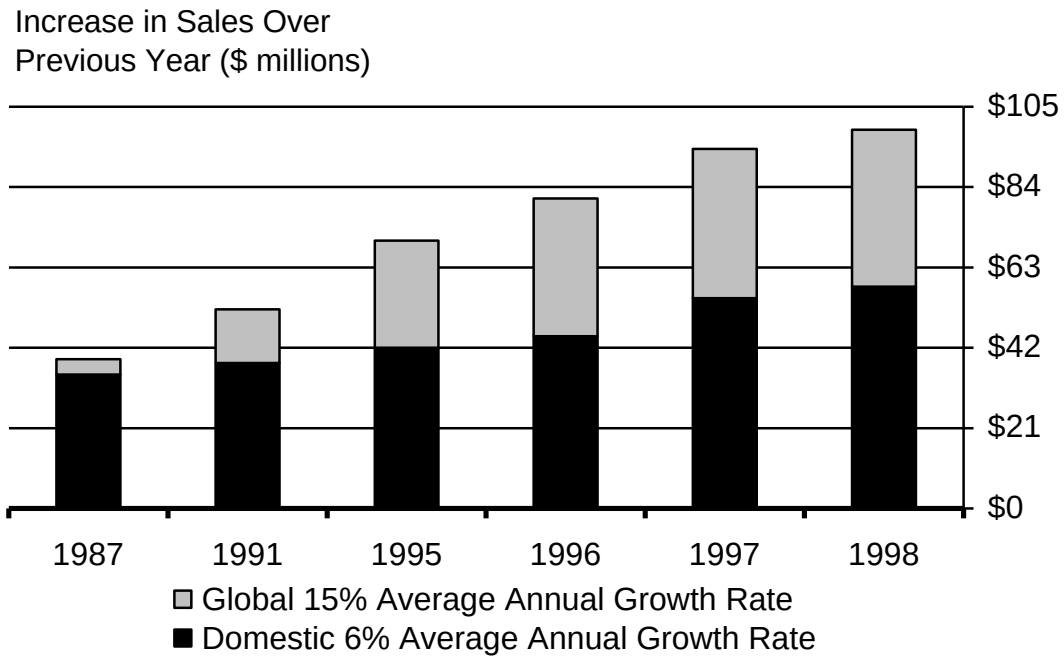
Exhibit 5 General Electric's Performance in Three Eras

(millions of dollars)

	Borch		Jones		Welch		
	1961	1970	1971	1980	1981	1990	2000
Sales	4,666.6	8,726.7	9,557.0	24,950.0	27,240.0	52,619.0	129,853.0
Operating profit	431.8	548.9	737.0	2,243.0	2,447.0	6,616.0	19,630.0
Net earnings	238.4	328.5	510.0	1,514.0	1,652.0	4,303.0	12,735.0
ROS	5.1%	3.8%	5.3%	6.1%	6.1%	8.2%	9.8%
ROE	14.8%	12.6%	17.2%	19.5%	18.1%	19.8%	28.7%
Stock market capitalization	6,283.7	7,026.7	10,870.5	12,173.4	13,073.4	50,344.9	389,442.9
S&P 500 Stock Price Index--Composite	65.7	83.0	97.9	119.4	126.4	330.2	1,365.3
Employees	279,547	396,583	402,000	366,000	404,000	298,000	313,000
U.S GNP ($ billion)	523.0	982.0	1,063.0	2,626.0	2,708.0	5,524.5	9,276.4

Source: GE Annual Reports, Survey of Current Business, Datastream.

Exhibit 6 Growth through Globalization



Source: GE Annual Report, 1998.

Exhibit 7 Welch at GE's Crotonville Center

A typical note Welch sent to 30 participants to prepare for his session of GE's Executive Development Course (EDC):

Dear EDC Participants,

I'm looking forward to an exciting time with you tomorrow. I've included here a few thoughts for you to think about prior to our session:

As a group—

Situation: Tomorrow you are appointed CEO of GE.

- What would you do in first 30 days?
- Do you have a current "vision" of what to do?
- How would you go about developing one?
- Present your best shot at a vision.
- How would you go about "selling" the vision?
- What foundations would you build on?
- What current practices would you jettison?

Individually—

1. Please be prepared to describe a leadership dilemma that you have faced in the past 12 months, i.e., plant closing, work transfer, HR, buy or sell a business, etc.
2. Think about what you would recommend to accelerate the Quality drive across the company.
3. I'll be talking about "A, B & C" players. What are your thoughts on just what makes up such a player?
4. I'll also be talking about energy/energizing/edge as key characteristics of today's leaders. Do you agree? Would you broaden this? How?

I'm looking forward to a fun time, and I know I'll leave a lot smarter than when I arrived.

—Jack

Source: *The Leadership Engine*.

Exhibit 8 GE Leadership Capabilities

- Create a clear, simple, reality-based, customer-focused vision and are able to communicate it straightforwardly to all constituencies.
- Understand accountability and commitment and are decisive . . . set and meet aggressive targets . . . always with unyielding integrity.
- Have the self-confidence to empower others and behave in a boundaryless fashion… believe in and are committed to Work-Out as a means of empowerment . . . be open to ideas from anywhere.
- Have a passion for excellence . . . hate bureaucracy and all the nonsense that comes with it.
- Have, or have the capacity to develop global brains and global sensitivity and are comfortable building diverse global teams.
- Stimulate and relish change . . . are not frightened or paralyzed by it. See change as opportunity, not just a threat.
- Have enormous energy and the ability to energize and invigorate others. Understand speed as a competitive advantage and see the total organizational benefits that can be derived from a focus on speed.

Source: 1992 Annual Report.

Exhibit 9 Growth in GE's Service Businesses

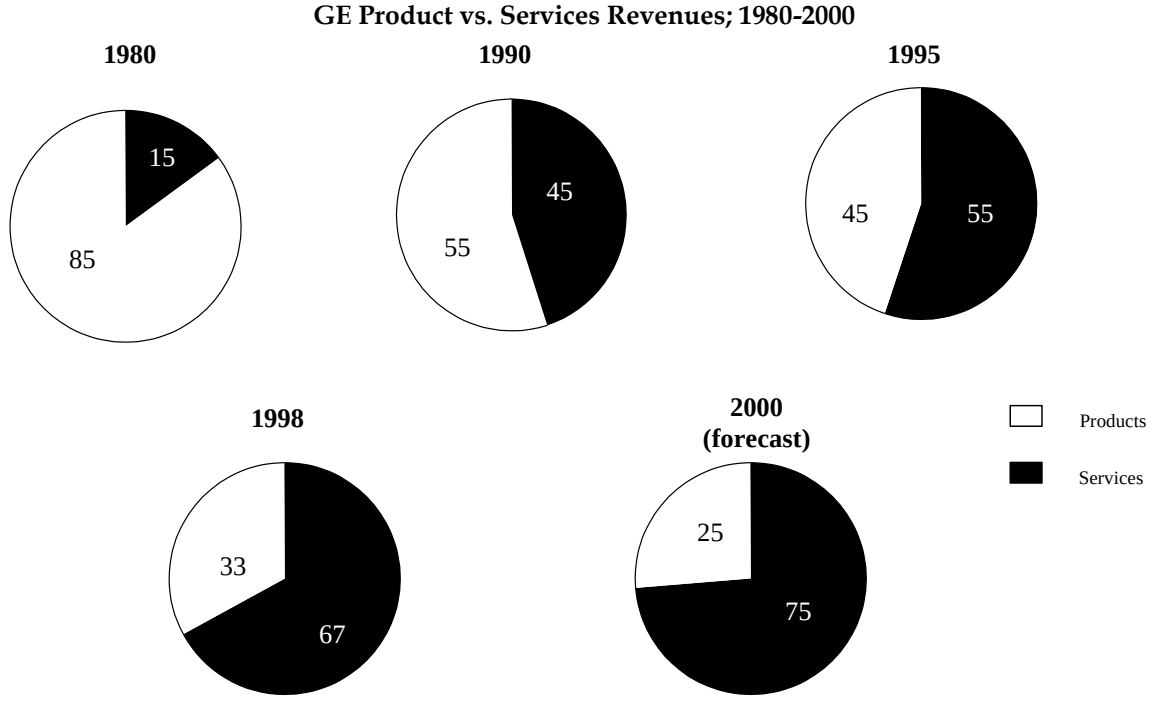
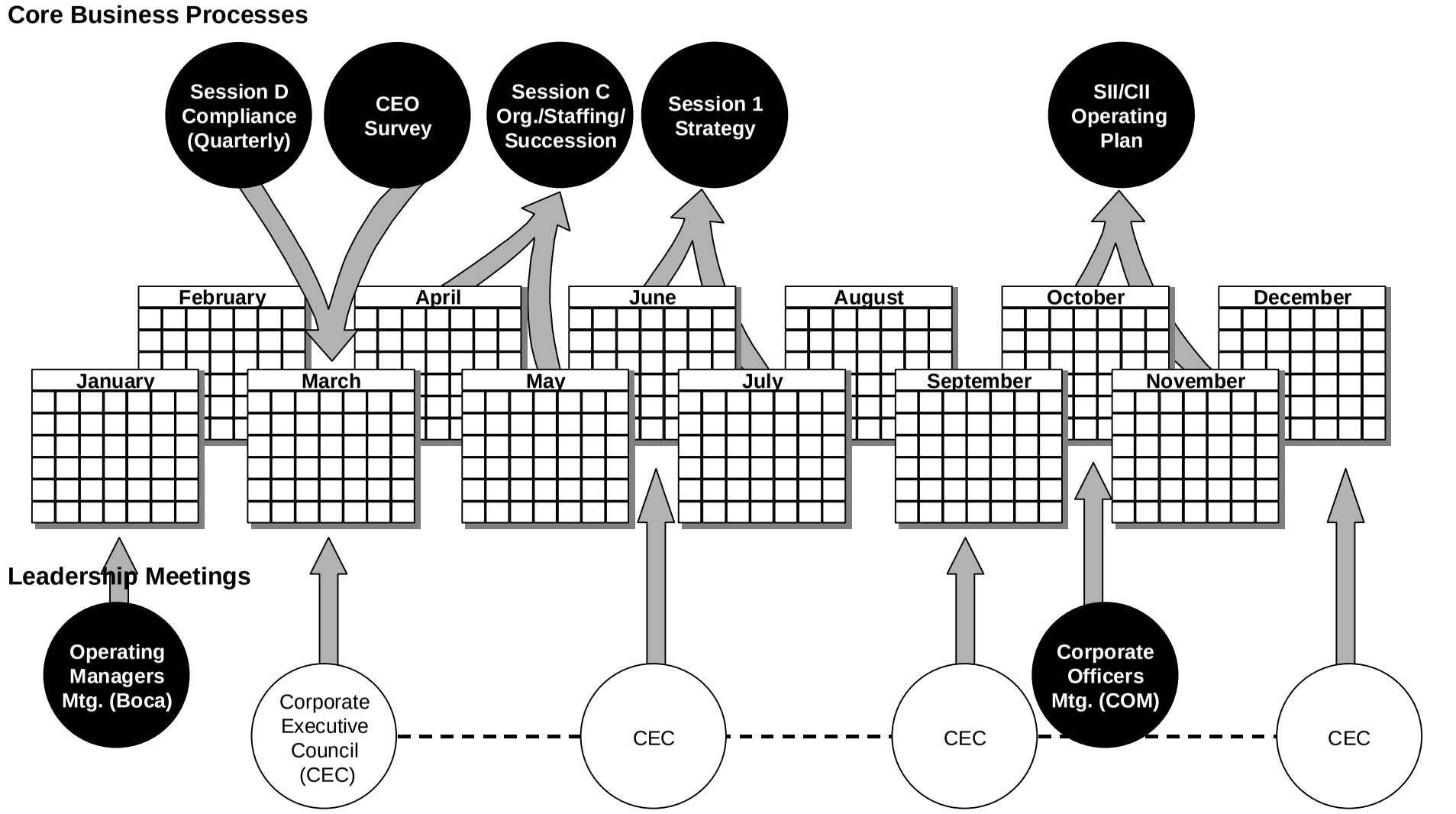
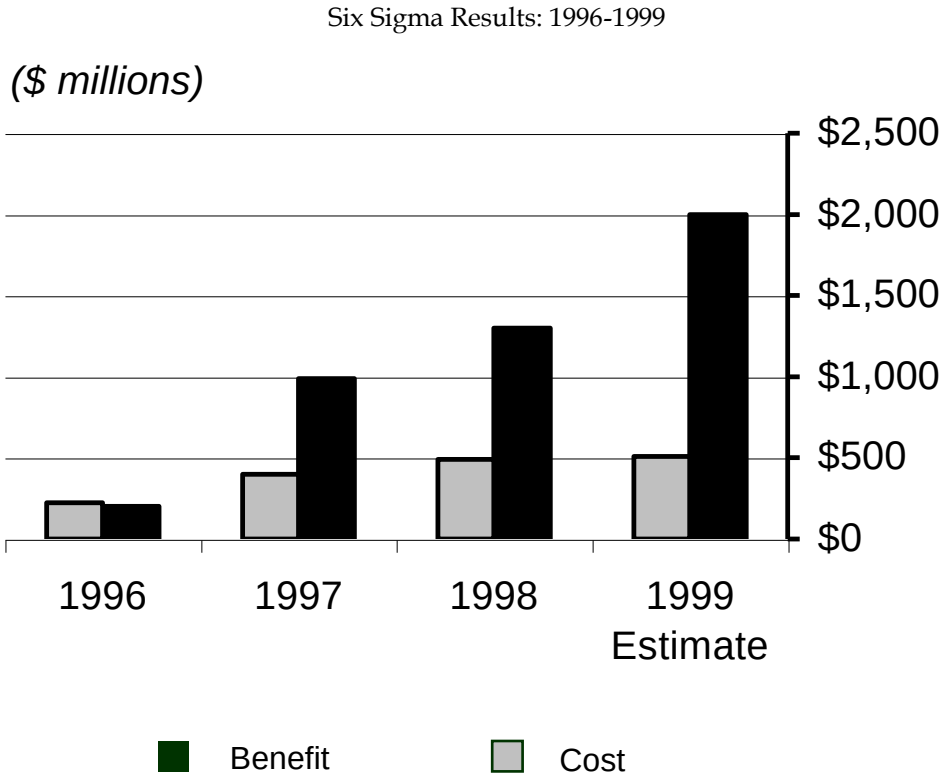


Exhibit 10 The GE Management System



Management System Drives Resource Allocation (People and $) and Accelerates Consistent Best Practice Implementation

Exhibit 11 Costs and Benefits of GE's Six Sigma Program



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