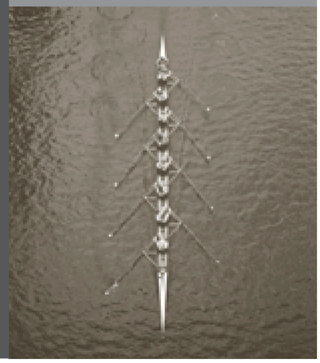
case 17

Jack Welch and the General Electric Management System



On September 1, 2001 Jack Welch retired from the General Electric Company (GE) after almost 21 years as CEO. During this time GE's revenues had risen from $25 billion to $130 billion and its market capitalization from $13 billion to over $400 billion. This was not a case of corporate turnaround: Welch had inherited a highly successful company that had been led by Reg Jones – one of the most admired corporate executives of his generation. During his two decades at the helm of GE, Welch became the best-known CEO on the planet. His faced graced the front covers of *Business Week* and *Fortune* 12 times. In 2001, *Fortune* magazine named GE as America's "most admired company" for the fifth year in succession, and the *Financial Times* identified GE as the "world's most respected company" for the fourth consecutive year. According to University of Michigan management professor, Noel Tichy, "The two greatest corporate leaders of this century are Alfred Sloan of General Motors (GM) and Jack Welch of GE. And Welch would be the greater of the two because he set a new, contemporary paradigm for the corporation that is the model for the 21st century."

He also built a sizable personal fortune for himself. At the time of his retirement, his personal fortune was estimated to be in the vicinity of $1 billion. His retirement agreement provided an annual pension of more than $9 million a year and a host of benefits that included the use of GE's corporate jets, a box at the Metropolitan Opera, and prime tickets for the world's major tennis tournaments.

Does Jack Welch deserve either the acclaim he has received as one of the foremost business leaders of the 20th century, or the vast personal fortune that GE has bestowed upon him? And what can other companies and corporate CEOs learn from his example? To answer these questions we must investigate the way in which he managed GE during 1981–2001, and the extent to which GE's

TABLE 17.1 GE's profitability under different chief executives

CEO	Average annual pre-tax ROE (%)
Charles A. Coffin, 1913–22	14.52
Gerald Swope/Owen Young, 1922–39	12.63
Charles E. Wilson, 1940–50	46.72
Ralph J. Cordiner, 1950–63	40.49
Fred J. Borch, 1964–72	27.52
Reginald H. Jones, 1973–81	29.70
John F. Welch, 1981–2001	25.81

The dates given for each CEO are for the financial years that correspond most closely to each CEO's tenure.

SOURCE: WWW.GE.COM

outstanding growth and stock market performance over this period can be attributed to the management system he created.

General Electric Company

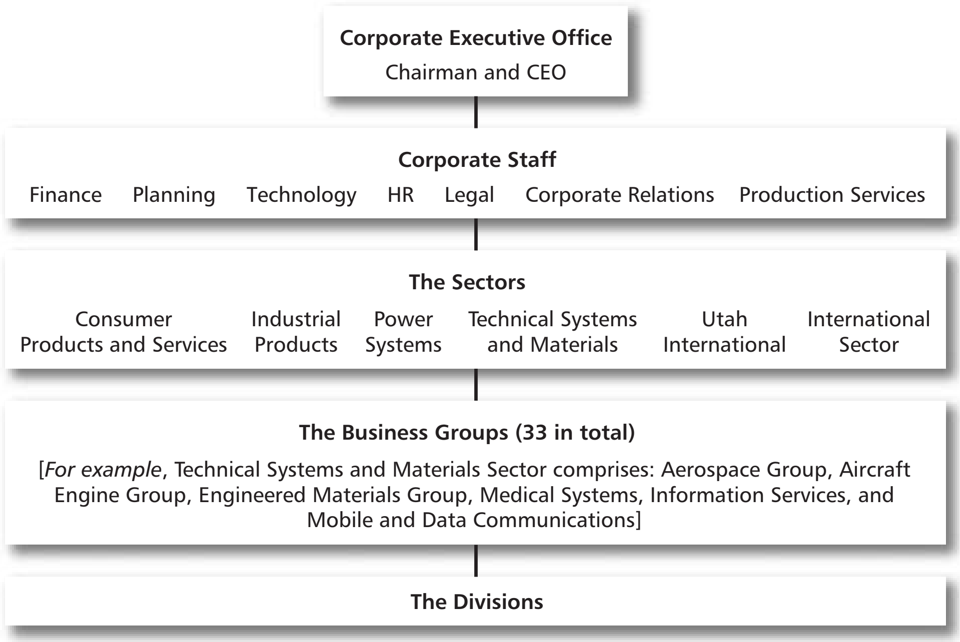
The GE in which Jack Welch spent his entire career from 1960 to 2001 was widely regarded as one of the world's most successful companies of the 20th century. It is the only company to have remained a member of the Dow Jones industrial index since the index was created in 1896. Throughout its history, it has been associated with near-continuous growth and above-average profitability. Table 17.1 shows GE's profitability under successive CEOs.

GE was founded in 1892 from the merger of Thomas Edison's Electric Light Company with the Thomas Houston Company. Its business was based on exploiting Edison's patents relating to electricity generation and distribution, light bulbs, and electric motors. Throughout the 20th century, GE was not only one of the world's biggest industrial corporations, it was also "a model of management – a laboratory studied by business schools and raided by other companies seeking skilled executives."[1] Under the leadership of Welch's predecessor, Reg Jones, GE had established a system of corporate management that had become a model for many of the world's leading companies.

As well as being one of the world's biggest companies, GE was also one of the world's most diverse. Its 33 business groups covered a vast spectrum of industry, from consumer appliances to coal mining. Figure 17.1 shows GE's organization and major sectors in 1981.

By 1981, such highly diversified industrial corporations were coming under increasing pressure from the stock market. The conglomerates that had flourished during the 1970s – Hanson, ITT, Seagrams, Philips, General Mills, and United Technologies – were being encouraged to spin-off parts of their empires, or even completely dismantle. The stock market's disdain for highly diversified companies was manifest in the "conglomerate discount," which resulted in their earnings being capitalized at lower multiples than for single-business companies.

FIGURE 17.1 GE's organization structure, 1981



SOURCE: BASED ON INFORMATION IN GENERAL ELECTRIC 10-K REPORT, 1980.

Jack Welch and GE's Performance Culture

Welch had had a stellar career as head of GE Plastics, head of Components and Materials, head of Medical Systems, and finally head of the Consumer Products and Services sector. Yet, his selection for the top spot at GE was a surprise to most outsiders – he was viewed as a maverick with a short fuse and disdainful of GE's elaborate bureaucracy. John Cornell, a Paine Webber analyst, reported: "The word inside the company is that he's chomping at the bit to go crazy once he takes over."[2]

The fundamental feature of Welch's management style was his unremitting drive for performance. Welch's role in restructuring GE's business portfolio and redesigning its organizational structure and management systems will be described in subsequent sections, but underlying these contributions was his reshaping of GE's culture around his own values and beliefs. During his two decades at the top, Welch remade GE in his own image. The culture and management style that he had fostered were reflections of his own personality and belief system. Welch attributes these to two formative influences: his mother and ice hockey. Welch credits his mother with nurturing self-confidence, determination, and strong values:

> *I was an only child. My parents were about 40 when they had me . . . It was my mother who trained me, taught me the facts of life. She wanted me to be independent. Control your own destiny – she always had that idea. Saw reality. No mincing words. Whenever I got out of line she would whack me one; but always positive, always constructive, always uplifting. And I was just nuts about her.*

He credits ice hockey with developing competitive spirit, confrontation, and camaraderie. His ideas about the value of "constructive conflict" in management were informed by his experiences in ice hockey: "Hockey is the kind of game where people bang you up against the boards and then go out and have a drink with you."

From the outset, Welch set lofty goals for GE: in 1981, as the newly appointed chairman and chief executive, he outlined his vision:

A decade from now, I would like General Electric to be perceived as a unique, high-spirited, entrepreneurial enterprise . . . a company known around the world for its unmatched level of excellence. I want General Electric to be the most profitable, highly diversified company on earth, with world-quality leadership in every one of its product lines.

For 20 years, Welch continually pushed his subordinates for more. In the early days he continually reiterated his goal of creating a company that was "better than the best." This meant not just imposing "stretch goals" on business-level managers, but encouraging GE's employees – at all levels – to embrace ambitious targets for themselves:

Shun the incremental and go for the leap. Most bureaucracies – and ours is no exception – unfortunately think in incremental terms rather than in terms of fundamental change. They think incrementally primarily because they think internally. Changing the culture – opening it up to the quantum change – means constantly asking not how fast am I going, how well am I doing versus how well I did a year or two before, but rather, how fast and how well am I doing versus the world outside. Are we moving faster, are we doing better against that external standard?

Stretch means using dreams to set business targets – with no real idea of how to get there . . . We certainly didn't have a clue how we were going to get to ten inventory turns [a year] when we set that target. But we're getting there, and as soon as we become sure we can do it – it's time for another stretch.[3]

Achieving superior performance required grappling with reality. Welch viewed corporate bureaucracy as cloaking the realities of business life. His career at GE was a continuing war on bureaucratic practices. Formality, elaborate PowerPoint presentations, complex strategic plans, were ways in which managers avoided reality and avoided coming to grips with painful decisions. Welch favored confronting reality, acknowledging disagreement, and reconciling conflict through open argument. "Constructive conflict" was his key tool. Welch would force his managers to defend their views, even if that meant getting into shouting-match arguments. "Jack will chase you around the room, throwing arguments and objections at you," said one executive. "Then you fight back until he lets you do what you want, and it's clear you'll do everything you can to make it work."

He spelled out his management philosophy in an interview with *Harvard Business Review*:

Good business leaders create a vision, articulate the vision, passionately own the vision, and relentlessly drive it to completion. Above all else, though, good leaders are open. They go up, down, and around their organization to reach people. They don't stick to the established channels. They're informal. They're straight with people. They make a religion out of being accessible. They never get bored telling their story.

Real communication takes countless hours of eyeball to eyeball, back and forth. It means more listening than talking. It's not pronouncements on a videotape; it's not announcements in a newspaper. It is human beings coming to see and accept things through a constant interactive process aimed at consensus. And it must be absolutely relentless. That's a real challenge for us. There's still not enough candor in this company.

I mean facing reality, seeing the world as it is rather than as you wish it were. We've seen over and over again that businesses facing market downturns, tougher competition, and more demanding customers inevitably make forecasts that are much too optimistic. This means they don't take advantage of the opportunities change usually offers. Change in the marketplace isn't something to fear; it's an enormous opportunity to shuffle the deck, to replay the game. Candid managers – leaders – don't get paralyzed about the "fragility" of the organization. They tell people the truth. That doesn't scare them because they realize their people know the truth anyway.

We've had managers at GE who couldn't change, who kept telling us to leave them alone. They wanted to sit back, to keep things the way they were. And that's just what they did – until they and most of their staffs had to go. That's the lousy part of this job . . . The point is, what determines our destiny is not the hand you're dealt; it's how you play the hand. And the best way to play your hand is to face reality – see the world the way it is – and act accordingly.

For a large organization to be effective, it must be simple. For a large organization to be simple, its people must have self-confidence and intellectual self-assurance. Insecure managers create complexity. Frightened, nervous managers use thick, convoluted planning books and busy slides filled with everything they've known since childhood. Real leaders don't need clutter. People must have the self-confidence to be clear, precise, to be sure that every person in their organization – highest to lowest – understands what the business is trying to achieve. But it's not easy. You can't believe how hard it is for people to be simple, how much they fear being simple. They worry that if they're simple, people will think they're simpleminded. In reality, of course, it's just the reverse. Clear, tough-minded people are the most simple.[4]

By the end of the 1980s, Welch summarized his management beliefs in the slogan "Speed, Simplicity, Self-Confidence":

> *We found in the 1980s that becoming faster is tied to becoming simpler. Our businesses, with tens of thousands of employees, will not respond to visions that have sub-paragraphs and footnotes. If we're not simple, we can't be fast . . . and if we're not fast, we can't win. Simplicity, to an engineer, means clean, functional, winning designs; no bells or whistles. In marketing, it might manifest itself as clear, unencumbered proposals. For manufacturing people, it would produce a logical process that makes sense to every individual on the line. And on an individual, interpersonal level, it would take the form of plain-speaking directness, honesty.*
>
> *But just as surely as speed flows from simplicity, simplicity is grounded in self-confidence. Self-confidence does not grow in someone who is just another appendage on the bureaucracy; whose authority rests on little more than a title. People who are freed from the confines of their box on the organization chart, whose status rests on real-world achievement – those are the people who develop the self-confidence to be simple, to share every bit of information available to them, to listen to those above, below and around them and then move boldly.*

But a company can't distribute self-confidence. What it can do – what we must do – is to give each of our people an opportunity to win, to contribute, and hence earn self-confidence themselves. They don't get that opportunity, they can't taste winning, if they spend their days wandering in the muck of a self-absorbed bureaucracy.

Speed . . . simplicity . . . self-confidence. We have it in increasing measure. We know where it comes from . . . and we have plans to increase it in the 1990s.[5]

How successful was Welch in translating his performance culture into real financial performance? Tables 17.2 and 17.3 show key features of GE's performance under Welch.

TABLE 17.2 GE's performance 1981–2001

	2001	2000	1999	1997	1996	1995	1994	1993	1992	1991
Revenues ($bn)	125.9	129.9	111.6	90.8	79.2	70.0	60.1	55.7	53.0	51.3
Net earnings ($bn)	13.7	12.7	10.7	8.2	7.3	6.6	4.7	4.3	4.7	2.6
Return on average shareholders' equity (%)	26.0	27.3	26.4	25.0	24.0	23.5	18.1	17.5	20.9	12.2
Total assets ($bn)	495.0	437.0	387.4	304.0	272.4	228.0	194.5	251.5	192.9	166.5
Long-term borrowings ($bn)	79.8	82.1	73.5	46.6	49.2	51.0	37.0	28.2	25.3	22.6
Employees at year end ('000s)										
United States	158	168	167	165	155	150	156	157	168	173
Other countries	152	145	143	111	84	72	60	59	58	62
Total employees	310	313	310	276	239	222	221	222	268	284

	1990	1989	1988	1987	1986	1985	1984	1983	1982	1981
Revenues ($bn)	49.7	54.6	50.1	48.2	42.0	28.3	27.3	26.8	26.5	27.2
Net earnings ($bn)	4.3	3.9	3.4	2.9	2.5	2.3	2.3	2.0	1.8	1.7
Return on average shareholders' equity (%)	20.2	20.0	19.4	18.5	17.3	17.6	19.1	18.9	18.8	19.1
Total assets ($bn)	152.0	128.3	110.9	95.4	84.8	26.4	24.7	23.3	21.6	20.9
Long-term borrowings ($bn)	20.9	16.1	15.1	12.5	10.0	0.8	0.8	0.9	1.0	1.1
Employees at year end ('000s)										
United States	236	243	255	277	302	236	248	246	n.a.	n.a.
Other countries	62	49	43	45	71	68	82	94	n.a.	n.a.
Total employees	298	292	298	322	373	304	330	340	367	404

n.a. = not available.

SOURCE: GENERAL ELECTRIC 10-K REPORTS.

TABLE 17.3 GE's divisional performance, 1997–2001

	Revenue 2001 ($bn)	Profit 2001 ($bn)	Average return on assets 1999–2001 (%)	Revenue growth 1997–2001 (%)	Profit growth 1997–2001 (%)
Aircraft Engines	11.4	2.6	24.2	46	91
Appliances	5.8	0.6	23.8	0	–17
Industrial Products and Systems	11.6	1.8	26.2	7	11
Materials	7.1	1.6	18.0	3	–2
NBC	5.8	1.6	31.6	12	31
Power Systems	20.2	5.2	28.3	153	305
Technical Products and Services	9.0	2.0	28.5	84	99
GE Capital	58.4	5.6	20.6	46	71

SOURCE: GE ANNUAL REPORT 2001.

Reconfiguring the Business Portfolio

Although Welch was resolutely determined to retain GE's identity as a broadly diversified corporation, he was clear that GE's business portfolio should, first, be focused around a limited number of sectors and, second, these sectors should be attractive in terms of their potential for profitability and growth. During the early part of his chairmanship, Welch announced his intention only to retain businesses that held number one or number two positions within their global markets. His intention was to focus GE's resources on its best opportunities: "My biggest challenge will be to put enough money on the right gambles and no money on the wrong ones. But I don't want to sprinkle money over everything." This involved increasing GE's emphasis on technology-based businesses and service businesses. Welch sold off its consumer electronics business, mining interests (notably Utah International), small household appliances division, semiconductors, and radio stations.

GE's acquisitions included a few major ones, such as RCA, NBC, Kidder Peabody, and CGR, plus a host of smaller companies. During 1997–2001, GE made over a hundred acquisitions in each year. By far the largest sector for acquisition was financial services. During the 1990s, GE Capital's phenomenal growth was built on continuous acquisition of businesses in leasing, consumer and commercial credit, insurance, and other areas of finance. The result was the emergence of GE Capital as one of the world's biggest and most diversified financial services companies.

For all GE's expertise in identifying acquisition targets and then integrating them into GE's structure and systems, not all were successful. Kidder Peabody was a disaster for GE, and the acquisition of Montgomery Ward was viewed by most outsiders as a mistake. Welch's final acquisition goal – Honeywell – finally had to be abandoned because of opposition from the European Commission on antitrust grounds.

Changing the Structure

The changes in the portfolio transformed the product-market face of GE and increased its growth potential. However, to realize this potential required revitalizing the management systems and management style to generate drive and ambition. Achieving this required changes to GE's structure. Under Welch, GE eliminated several layers of management and large numbers of administrative positions. In particular, Welch disbanded GE's sectors, requiring the leaders of GE's 13 businesses to report directly to the CEO. The office of the CEO was expanded, and a Corporate Executive Council (CEC) was created to provide a forum for GE's business-level chiefs and senior corporate officers. Further organizational layers were eliminated, both at headquarters and within the businesses. Decision making was pushed down to the operating units.

> *We are now down in some businesses to four layers from the top to the bottom. That's the ultimate objective. We used to have things like department managers, section managers, subsection managers, unit managers, supervisors – we are driving those titles out . . . We used to go from the CEO to sectors to groups to businesses. We now go from the CEO . . . to businesses. Nothing else. There is nothing else there. Zero.*
>
> *When you take out layers, you change the exposure of the managers who remain. They sit right in the sun. Some of them blotch immediately – they can't stand the exposure of leadership. I firmly believe that an overburdened, overstretched executive is the best executive, because he or she doesn't have time to meddle, to deal in trivia, or to bother people. Remember the theory that a manager should have no more than six or seven direct reports? I say the right number is closer to 10 or 15. This way you have no choice but to let people flex their muscles, to let them grow and mature.*[6]

Empowering line managers meant reducing the power – and number – of staff. Welch's goal was to "turn their role 180° from checker, inquisitor, and authority figure to facilitator, helper, and supporter of the businesses . . . Ideas, initiatives, and decisions could now move quickly. Often at the speed of sound – voices – where once they were muffled and garbled by the gauntlet of approvals and staff reviews."[7]

The result was massive reductions in numbers of employees. Between 1980 and 1990, GE's headcount fell from 402,000 to 298,000. The biggest cuts were at the upper levels of the organization: at corporate headquarters and within sectoral administration. In some areas employee numbers increased – particularly in overseas operations. Welch's ruthless attack on bureaucracy and administrative costs earned him the nickname "Neutron Jack" – the building remained, but the people had gone.

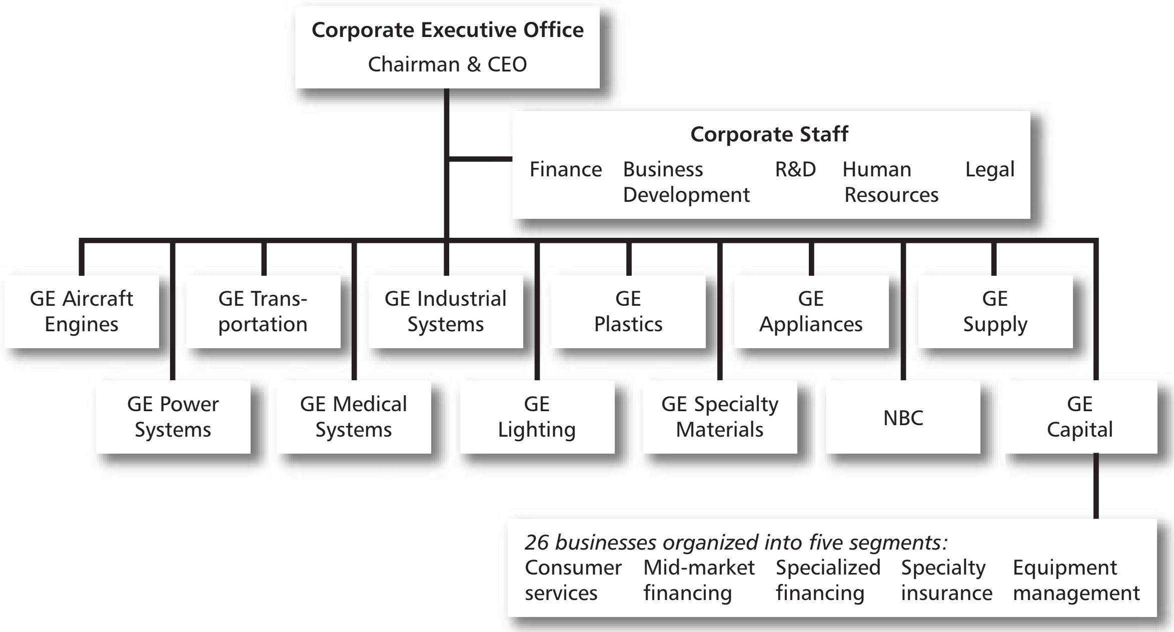
Figure 17.2 shows GE's overall structure in 2001.

Changing Management Systems and Processes

Strategic Planning

The changes in GE's structure were aimed at creating a more flexible and responsive corporation. This goal also necessitated changes in GE's highly developed management systems. In particular, Welch led a major overhaul of GE's much celebrated and

FIGURE 17.2 GE's organization structure, 2001



SOURCE: BASED ON INFORMATION IN GENERAL ELECTRIC 10-K REPORT, 2001.

widely emulated strategic planning system. The framework of an annual planning cycle was retained, but the staff-led, document-driven process was replaced by a less formal, more personal process. Instead of the big planning reports, Welch asked each business head to prepare a slim "playbook" that summarized the key strategic issues that the business faced, and how it intended to address them. This document provided the basis for a half-day, shirtsleeves review in mid-summer when Welch and key corporate officers would engage in discussion and debate with the top management team of each businesses. On the 1986 meetings, Welch commented:

> *We asked the 14 business leaders to present reports on the competitive dynamics in their businesses. How did we do it? We had them each prepare one-page answers to five questions: What are your market dynamics globally today, and where are they going over the next several years? What actions have your competitors taken in the last three years to upset those global dynamics? What have you done in the last three years to affect these dynamics? What are the most dangerous things your competitor could do in the next three days to upset those dynamics? What are the most effective things you could do to bring your desired impact on those dynamics?*
>
> *Five simple charts. After those initial reviews, which we update regularly, we could assume that everyone at the top knew the plays and had the same playbook. It doesn't take a genius. Fourteen businesses each with a playbook of five charts. So when Larry Bossidy is with a potential partner in Europe, or I'm with a company in the Far East, we're always there with a competitive understanding based upon our playbooks. We know exactly what makes sense; we don't need a big staff to do endless analysis. That means we should be able to act with speed.*[8]

Financial Planning and Control

Supporting GE's strategic planning system was a sophisticated financial budgeting system, which centered on the annual budget. Budget preparation began in July and involved extensive negotiation between the operating units, the intervening groups and sectors, and the corporate headquarters. Once the budget was set, managers were locked in to meet it "at all costs" regardless of changes in the marketplace. It was generally agreed that the system had undesirable consequences, such as gaming to set low targets, and cutting long-term development to meet short-term targets. Because managers were locked in to figures established 18 months before, the budgeting system often inhibited adjustment to external changes and gave little information on management performance.

Welch's commitment to a performance-driven organization meant that financial targets were of critical importance. However, the key was to create shareholder value rather than accounting profits per se. In addition, it was essential that the system should permit the performance of divisional and business unit managers to be assessed. Two changes were made. First, the controller's office prepared a set of financial objectives for each operating unit to reflect more realistically each unit's prospects and to reduce gamesmanship in target-setting. Second, the budgets (now called operating plans) were subject to revision as economic or competitive conditions changed. Thus, line managers could propose changes to the plans once the original assumptions on which they had been based could be shown to have changed. Performance evaluation was then made against the revised targets.

Central to the changes in financial control was the idea that performance was not about "making the budget." It was about raising performance expectations to be "as good as possible": the primary task of the businesses, emphasized Welch, was to produce earnings. As a guideline, Welch proposed that GE's earnings should grow at between one-and-a-half and two times the growth of GDP.

Human Resource Management

The key to GE's long-term development and performance was the development of its management talent. GE had a well-established system of management appraisal and development, which Welch retained. He believed that giving managers greater profit-and-loss responsibility earlier in their careers would be conducive to an even greater flourishing of managerial talent. But to encourage risk taking and higher levels of performance aspiration required more powerful incentives. Welch believed in giving more recognition to individual contributors and higher rewards to those who produced superior results:

> *A flat reward system is a big anchor to incrementalism. We want to give big rewards to those who do things but without going for the scalps of those who reach for the big win but fail. Punishing failure assures that no one dares.*[9]

Welch redesigned the bonus system to reach deep into middle management. The bonuses became much more discriminating. The typical 10 to 15% bonuses for senior managers were replaced by 30 to 40% bonuses for far fewer managers. In addition, stock options were extended from the top echelon of management to a much wider range of managerial and technical employees. By 1996, Welch was able to report that the number of employees receiving stock options had increased from 400 in the early

1980s to 22,000 by the end of 1995: "Today, stock option compensation, based on total GE performance, is far more significant than the salary or bonus growth associated with the performance of any individual unit or business. This aligns the interests of the individual, the Company, and the share owner behind powerful, on-company results."[10]

Welch believed that a performance-driven organization would not only encourage GE's managers to perform up to the limits of their capabilities, it would also nurture those capabilities. Welch firmly believed that GE's ability to outperform its peers ultimately depended on having outstanding employees. GE could offer opportunities for career development and the acquisition of skills and expertise that no other company could match:

> *Our true "core competency" today is not manufacturing or services, but the global recruiting and nurturing of the world's best people and the cultivation in them of an insatiable desire to learn, to stretch, and to do things better every day. By finding, challenging and rewarding these people, by freeing them from bureaucracy, by giving them all the resources they need – and by simply getting out of their way – we have seen them make us better and better every year.*
>
> *We have a Company more agile than others a fraction of our size, a high-spirited company where people are free to dream and encouraged to act and to take risks. In a culture where people act this way, every day, "big" will never mean slow.*
>
> *This is all about people – "soft stuff." But values and behaviors are what produce those performance numbers, and they are the bedrock upon which we will build our future.*[11]

Maintaining a vigorous, performance-driven culture required putting managers under continual pressure, including ongoing weeding-out of weaker performers. GE's system of evaluation was renowned for its thoroughness and its ruthlessness:

> *In every evaluation and reward system, we break our population down into three categories: the top 20%, the high-performance middle 70%, and the bottom 10%. The top 20% must be loved, nurtured and rewarded in the soul and wallet because they are the ones who make magic happen. Losing one of these people must be held up as a leadership sin – a real failing. The top 20% and middle 70% are not permanent labels. People move between them all the time. However, the bottom 10%, in our experience, tend to remain there. A Company that bets its future on its people must remove that lower 10%, and keep removing it every year – always raising the bar of performance and increasing the quality of its leadership. Not removing that bottom 10% early in their careers is not only a management failure, but false kindness as well – a form of cruelty – because inevitably a new leader will come into a business and take out that bottom 10% right away, leaving them – sometimes midway through a career – stranded and having to start over somewhere else. Removing marginal performers early in their careers is doing the right thing for them; leaving them in place to settle into a career that will inevitably be terminated is not. GE leaders must not only understand the necessity to encourage, inspire, and reward that top 20%, and be sure that the high-performance 70% is always energized to improve and move upward; they must develop the determination to change out, always humanely, that bottom 10%, and do it every year. That is how real meritocracies are created and thrive.*[12]

GE's management development process in which managers were moved between businesses was a critical means of deepening organizational capabilities. Welch attributed the remarkable success of GE Capital to its ability to apply the principles and techniques of manufacturing management to financial services:

> *At GE Capital, we combined ideas with manufacturing disciplines. When a loan went bad, we worked it out; we didn't put a line through it. One business of ours, Polar Air, came about because we had leased a bunch of 747s to Pan Am and the airline went out of business. We converted the planes to cargo carriers and started a shipping company. We got into the railcar business the same way, through a bankruptcy. That's what we could do at GE because we had the people with diverse operating experience, as well as capital, which gave us considerable staying power. Unlike most bankers, our people knew how to operate businesses . . . [W]e were able to bring manufacturing discipline to bear on credit decisions. Take commercial equipment finance, for example. The person running it today used to work in lighting and appliances. The experience in those businesses gave him rigor and operating discipline. He's worked with real hard assets; he understands them.*[13]

Corporate Initiatives

One of the distinctive characteristics of Welch's system of management was his use of periodic new corporate initiatives as mechanisms to drive particular aspects of company-wide performance. Thus, while strategic planning, financial control, and human resource management provided the basic systems for managing GE, about every two years, Welch would announce a major new initiative designed to energize the company and drive its performance in a particular direction. Over time, these initiatives would become absorbed into the ongoing management systems of GE.

Work-Out

The idea for GE's "Work-Out" process began with the no-holds-barred discussion sessions that Welch held with different groups of managers at GE's Management Development Institute at Crotonville, New York. Impressed with the energy and impetus for change that these sessions generated, Welch initiated a company-wide process called "Work-Out."

The idea was to create a forum where a cross-section of employees could speak their minds about the management of their business without the fear of retribution by their superiors. Typically, the sessions assembled a cross-section of 50 to 100 of the business's employees for meetings that ran for two or three days. In an environment that Welch likened to an old New England town meeting, the group would be asked to openly and honestly review the management process and practices in their part of the operation. Initially they focused on unproductive or bureaucratic behaviors that had limited their personal effectiveness. At the end of each Work-Out, the group's manager returned to hear the findings and recommendations, and could either accept or reject them on the spot, or appoint a team to report back with more data by a given date. Welch believed that Work-Out could achieve fundamental changes in management:

> *Work-Out has a practical and an intellectual goal. The practical objective is to get rid of thousands of bad habits accumulated since the creation of General Electric . . . The second thing we want to achieve, the intellectual part, begins by putting the leaders of each business in front of 100 or so of their people, eight to ten times a year, to let them hear what their people think. Work-Out will expose the leaders to the vibrations of their business – opinions, feelings, emotions, resentments, not abstract theories of organization and management. Ultimately, we're talking about redefining the relationship between boss and subordinate.*
>
> *These Work-Out sessions create all kinds of personal dynamics. Some people go and hide. Some emerge as forceful advocates. As people meet over and over, though, more of them will develop the courage to speak out. The norm will become the person who says, "Damn it, we're not doing it./Let's get on with doing it." This process will create more fulfilling and rewarding jobs. The quality of work life will improve dramatically.*[14]

Initially, Work-Out focused on eliminating bureaucratic practices ("low-hanging fruit"). Over time, Work-Out sessions evolved to the evaluation and redesign of complex cross-functional processes – often involving suppliers and customers as well as GE employees.

The Boundary-less Organization

Welch reacted strongly to descriptions of GE as a conglomerate. But for GE to be greater than the sum of it parts required utilizing its product and geographical diversity to improve performance within each business. The key to transforming diversity into strength, believed Welch, was the frictionless transfer of best practices and other forms of learning within GE. But to achieve this required eliminating – or at least making permeable – GE's internal boundaries, as well as increasing openness to external learning. By 1990, Welch was developing the vision of a new GE organization that would be a truly "boundary-less" company. His boundary-less company was one in which both external barriers and internal barriers became blurred:

> *In a boundary-less company, suppliers aren't outsiders. They are drawn closer and become trusted partners in the total business process. Customers' vision of their needs and the company's view become identical and every effort of every man and woman in the company is focused on satisfying those needs. The boundary-less company blurs the divisions between internal functions; it recognizes no distinctions between "domestic" and "foreign" operations; and it ignores or erases group labels – such as "management," "salaried," and "hourly" – which get in the way of people working together.*[15]

Unbounding GE required changes in structures, attitudes, and behaviors that would permit the "integrated diversity" that Welch envisaged. Examples of boundary-less behavior were widely publicized and praised:

> *Two years ago, one of our people spotted a truly innovative method of compressing product cycle times in an appliance company in New Zealand. After testing it successfully in our Canadian affiliate, we transferred the methodology to our largest appliance complex in Louisville, KY. It has revolutionized processes, reduced cycle times, increased our customer responsiveness, and reduced our inventory levels by hundreds of millions of dollars. Teams from all of our*

manufacturing businesses are now living in Louisville so we can spread the New Zealand-to-Montreal-to-Louisville learning to every business in GE.[16]

Globalization

All of GE's businesses were given global responsibility, which meant exploiting international growth opportunities and exploiting the advantages of global reach in terms of exploiting global-level economies of scale and increased learning opportunities. Global diversity played an important role in allowing GE to cope with economic problems that affected particular countries or regions, and take advantage of the opportunities that such downturns offered. For example, as "financial contagion" affected much of Asia during 1997–8, GE was seeking acquisition opportunities:

We've been down this road before. In the early 1980s, we experienced a United States mired in recession, hand-wringing from the pundits, and dirges being sung over American manufacturing. We didn't buy this dismal scenario; instead, we invested in both a widespread restructuring and in new businesses . . . Europe looked a lot like the United States in the 1980s, and in need of the same remedies: restructuring, spinoffs, and the like. So, while many were "writing-off" Europe, we invested heavily, buying new companies and expanding our existing presence . . . "GE Europe" is now a $20.6 billion operation. Our revenues have more than doubled from 1994 to 1997; net income has tripled to more than $1.5 billion; and growth is accelerating as the European recovery progresses . . . Mexico in the mid-1990s was a similar story . . . GE moved, acquiring ten companies and investing more than $1 billion in new and existing operations. The result was revenue growth of 60% and a doubling of earnings in the two years following the crisis. Today we are determined, and poised, to do the same thing in Asia we have done in the United States, Europe, and Mexico: invest in the future.[17]

Six Sigma

From 1998 to 2000, Welch's Six Sigma program was its dominant corporate initiative and primary driver of organizational change and performance improvement. Welch described it as his next "soul-transforming cultural initiative." The methodology of defining, measuring, analyzing, improving, and then controlling every process that touches a company's customers until it reduces defects to 3.4 per million was borrowed from Motorola. However, at GE it was implemented with remarkable fervor across an unprecedentedly broad front. In four years, some 100,000 people were trained in its science and methodology, and, by 2001, GE was able to report: "Now Six Sigma is the way we work. We all speak a common language of CTQs (critical-to-quality), DPMOs (defects per million opportunities), FMEAs (failure mode effect analysis), and Needs Assessment Maps, to name just a few." Across every one of GE's businesses, major gains in performance, ranging from reduced waste and lower operating costs to faster customer service and improved financial management, were reported.

Digitization

Welch was a late convert to the electronic business. However, once converted, he became a raving evangelist, urging his line managers and launching his "destroy-your-business.com" initiative in 1999. Each organizational unit was encouraged to visualize how it might be crushed by the dotcom juggernaut. The result was widespread discovery of opportunities to use the internet to improve internal processes and better serve customers. By spring 2001, Welch reported:

> *As we said in our 1999 letter, digitization is transforming everything we do, energizing every corner of the Company and making us faster, leaner, and smarter even as we become bigger. In 2000, these words began to turn into numbers, as we sold over $7 billion of goods and services over the net and conducted over $6 billion in online auctions. Digitization efforts across the Company will generate over $1.5 billion in operating margin improvements in 2001.*[18]

GE's Operating System

By 2001, these different initiatives had been institutionalized to the point where GE referred to them as its "operating system." Thus, referring collectively to Work-Out, Boundarylessness, Globalization, Six Sigma, and Digitization, GE described an integrated system for performance improvement:

> *The GE Operating System is GE's learning culture in action. It is a year-round series of intense learning sessions where business CEOs, role models, and initiative champions from GE, as well as outside companies, meet and share intellectual capital.*
>
> *The central focus is always on sharing, and putting into action, the best ideas and practices from across the Company and around the world.*
>
> *Meetings take place year-round, in an endless process of enrichment. Learning builds from previous meetings, expanding the scope and increasing the momentum of our Company-wide initiatives.*
>
> *Driven by the Company's values – trust, informality, simplicity, boundary-less behavior and the love of change – the Operating System allows GE businesses to reach speeds and performance levels unachievable were they on their own.*
>
> *The GE Operating System translates ideas into action across three dozen businesses so rapidly that all the initiatives have become operational across the Company within one month of launch, and have always produced positive financial results within their first cycle.*[19]

Notes

1 "Can Jack Welch reinvent GE?" *Business Week*, June 29, 1986, pp. 40–5.
2 Ibid.
3 GE Annual Report, 1993, p. 5.
4 Noel Tichy and Ram Charan, "Speed, simplicity, and self-confidence: an interview with Jack Welch," *Harvard Business Review*, September–October 1989.
5 Ibid.
6 *GE 1984*, Harvard Business School Case No. 385–315.
7 Tichy and Charan, op cit.
8 Ibid.
9 Ibid.
10 Jack Welch, address to 1989 shareholders' meeting.
11 Chairman's letter, General Electric Annual Report, 2000.
12 Ibid.
13 H. Collingwood and D. Coutu, "Jack on Jack," *Harvard Business Review*, February 2002.
14 Tichy and Charan, op cit.
15 GE Annual Report, 1990.
16 Ibid.
17 Chairman's letter, General Electric Annual Report, 1997.
18 Chairman's letter, General Electric Annual Report, 2000.
19 The GE Operating System (www.ge.com).