Jack Welch
And the Motivation of...
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Hypothesis

Jack Welch has made General Electric Corporation (GE) into one of the world’s most successful companies. Through the use of goal setting, empowerment, and communication Welch transformed a complacent behemoth into an energized company ready to face world competition. Through an analysis of the techniques employed by Welch one can gain a better understanding of how to motivate outstanding performance in any organization.

Introduction

When Jack Welch became CEO of GE in 1981, he set out to reenergize one of America’s largest companies (see Appendix for GE company and product background information). Through a revision of GE’s mission and values (see Appendix), Jack Welch grew GE from a $24+ billion company to into a $74+ billion company, ready to face competitors and future challenges. Welch realigned goals and motivation, forcing managers to stretch to previously unknown limits. Any company not number one or two in their industry was divested or closed and though sometimes perceived to be a destroyer, he restructured GE into one of the world’s most staid corporations (see appendix for a detailed outline of the human story, the performance and divestiture/acquisitions story).

Jack Welch's management and motivation approach included three main areas:

1.) Goal setting and preparing the company on a corporate level for its competitive challenges;

2.) Empowering employees at all levels of the organization; and

3.) Communicating his new goals and visions through the entire organization, using such tools as extensive training programs, newly formed teams and 360° review processes.

Different aspects of Jack Welch’s management tactics, in terms of motivating employees to bring about change, can be compared and contrasted with some of the cases analyzed during this quarter. These include empowerment tactics used by Anita Roddick; “de-powerment” tactics used by Lyndon Johnson (LBJ); a reduction of bureaucracy and secrecy, as well as an opening of communication channels, such as advocated by Kissinger; issues related to benefiting millions at the cost of thousands and acting for the achievement of some greater “good”, as discussed as part of the Robert Moses case; and communication and mass motivation issues as discussed in the Xerox cases. Some of Welch’s other tactics can be directly related to topics discussed by Pfeffer, Cialdini and
others, including an analysis of resources, sources of power, allies, locations within communication networks, reciprocation, formal authority, reputation, and performance

Goals & Competition

An underlying theme for Jack Welch’s tenure as CEO of GE was his use of goal setting to motivate higher levels of achievement throughout the company. Welch set company wide goals, as well as specific performance objectives for individual companies and divisions. He often supplemented his goal setting by creating a sense of competition within the organization, as well as against all competitors.

Early on in Jack Welch’s career with GE, he exercised the use of goals and competition to drive above average performance. In 1968, at the age of thirty-three, Welch was promoted to the position of General Manager of GE’s LEXAN and NORYL plastics lines. His goal was to convince the market that both Lexan and Noryl could be used as replacements for more traditional materials such as steel or glass. Typical GE protocol would have been to separate the two lines and to position each for different markets so that no sales-territory-overlaps occurred. Bucking the old protocol, Welch told each group of sales people to attack the entire market and compete head-to-head. The strategy worked well for all parties. With Welch at the helm, GE Plastics earnings grew at 34% annually, compounded revenues in 1991 reached $4.7 billion and employees felt they were part of a winning, competitive team.

Similarly, in 1980, when Jack Welch was elected to the position of CEO for GE, he continued his competitive strategy to motivate performance in business units by requiring them achieve either number one or number two status in terms of market share in their respective fields. Many of GE’s businesses were already number one of number two in their market areas and yet Welch and his management team continued to set goals, which would not only keep them in those positions, but which would further grow their lead.

Constantly striving to stay ahead of his competitors stokes Welch’s competitive fires. To achieve GE’s leadership position and to drive constant growth, Welch required goals and stretch-goals to be set throughout the organization. His stretch-goal philosophy developed from his readings of Johannes von Moltke, a 19th century Prussian general who outlined strategy as something with a simple, far reaching set of goals which could be achieved through a dynamic organization not limited by strike guidelines. Welch preached a philosophy he called “planful opportunism,”
whereby GE employees were given an over-reaching stretch-goal and permitted to do whatever it took to reach the target. He was able to demonstrate the success of “planful opportunism” with the expansion of LEXAN into the world market. In the early 70’s LEXAN was only produced and marketed in the U.S. Welch created a stretch-goal of dramatically expanding LEXAN’s sales into the world market. He secured the necessary $55 million funding to build a plant in Holland and soon thereafter succeeded in growing global sales significantly. The stretch-goal succeeded, and in 1977 GE generated 26% of its revenues overseas. Not only has Jack Welch demonstrated “planful opportunism”, but many of his senior leaders have chosen to adhere to the same philosophy.

Welch continued to use stretch goals to drive performance throughout the company. In one instance, Welch challenged John Trani, the head of GE’s Milwaukee based GEMS unit, to increase production speed by a factor of five. Trani’s pursuit of this goal, while never quite reaching it, resulted in strong growth in both production and sales. In another example, Welch required the newly hired head of productivity, William Sheeran, to achieve 5% annual productivity. Sheeran never attained the lofty goal, however his efforts resulted in increasing productivity to over 2%. Finally, Welch used the same technique in an effort to improve product quality. Welch introduced GE to Six Sigma, a defect reduction program. GE had been operating at 3.5 sigmas, but that wasn’t enough for Welch, he wanted six sigmas (nearly twice the national standard). (See Appendix for additional information on quality and Six Sigma). In all these cases, Welch consistently set far reaching goals in an attempt to move the company in he direction he wanted. While not all goals may be reached, Welch reinforced the notion that advancing towards those goals was still considered success and rewarded managers accordingly1.

Another way of looking at Jack Welch’s attitude towards management and motivation in terms of goal setting may be compared to what is often referred to as “the boiling frog syndrome”. When a frog is placed in a pot of water in which the heat is slowly turned up, it will not recognize the rising temperate, remain complacent and eventually boil to death. Analogously, Welch sees GE as being the frog placed in the world pot of water. The water temperature around GE is slowing rising and GE is getting hotter. If GE does not react to the temperature increases related to competition, it will boil to death as does the frog. If GE leads the market however, throws itself right into the pot of boiling water, it will jump right back out, just like a frog would do, if thrown directly into a pot of boiling water. While

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1 “With the push for quality has come a new warrior class within the company: Green Belts, Black Belts and Master Black Belts – the new management samurai of global competition … If you don’t have a belt, you won’t get promoted … [and] Welch has tied 40 percent of each manager’s bonus to progress toward quality results.”
others may sit and wait complacently, slowly letting the heat rise around them, Jack Welch prefers throwing GE right into its challenges, shocking the system and forcing immediate reactions.

“The people with whom I have been associated have worked hard, enjoyed it more, although not always initially, and in the end, gained increased self respect from accomplishing more than they previously thought possible.”

Welch realized that he could motivate higher levels of performance by setting goals that were much higher than the managers would have set for themselves. These “stretch-goals” often caused the managers to outperform their original targets. The phenomenon that helped increase performance was the “slope of satisfaction” joined with internal competition focussed on gaining a leadership position in world markets.

The slope of satisfaction (pictured in the diagram below) refers to the incremental level of satisfaction a person gains for each additional unit of effort towards a goal. The slope increases as the person approaches the goal. Therefore, as a person gets close to reaching a goal he is more motivated to try to close the gap between the current level of performance and the target. Furthermore, he is likely to continue striving for the goal because the incremental satisfaction gained is thought to be worth the additional effort. However, if the goal is seemingly unachievable, the likelihood of the person undertaking or completing the task is reduced. Relief and stress often accompany goal setting. Relief is felt if the goal is achieved, but stress is encountered while trying to reach the goal or if the goal is not reached.

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The Washington Post, March 28, 1997, Talking Management with Chairman Welch...

2 Control Your Destiny of Someone Else Will, Tichy and Sherman, 1993
Welch played upon these emotions in the application of his goal setting\(^3\). Because Welch set such extreme stretch-goals, he needed to incent effort toward these seemingly unattainable targets. He rewarded people by giving bonuses if they made great progress towards the goals, even if they did not reach them. This succeeded in driving people to work beyond their original goals and even if they did not reach the stretch goals Welch often recognized them for superior performance. Employees realized that even though they often did not reach the stretch goals, they still performed at their highest possible level and therefore enjoyed personal satisfaction, (as understood by Maslow in his hierarchy of needs) in their attempts to reach the goals.

**Empowerment**

When Welch took over GE, he had a vision of creating an organization where people at all levels could be held responsible for their own work, and in the end make decisions for the betterment of their job. The goal was not to

\(^3\) “Jack will chase you around the room, throwing arguments and objections at you … 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. It’s a ritual. It’s like signing up.”
control workers, but instead to liberate them. Welch characterized this as creating a boundaryless organization in which empowered employees were self directed and motivated to effectively reach their goals.

When Welch became the CEO of GE he found that the company was still organized the way it had been when GE was founded near the turn of the century. Specifically, it was represented by an overwhelming nine layers of management between the shop floor and the CEO. This bureaucracy lead to an unresponsive, inward focused company whose employees found great difficulty in communicating with one another. In fact, if GE’s massive cost structure was not dramatically restructured, analysts projected that GE would become unprofitable by the end of 1982 (See Earnings Profile – With Cost Reductions diagram in appendix).

Welch addressed this issue by eliminating whole layers of management (see appendix for 1981, 1992 &1993 organizational charts), consolidating overlapping jobs and business units, and forcing employees at every level to take more responsibility for their own work. If something was not absolutely necessary they eliminated it (very much like Xerox did in “Dining at the Quality Restaurant”). They stopped gathering unnecessary financial data and eliminated unnecessary reports. In the past, it had not been unusual for business managers to request daily reports that contained so much detail that the reports often produced a 12-foot high stack of paper. The sheer mass of detailed information made a mastery of the details impossible thereby rendering the information relatively useless. In the plant equipment operators became responsible for the quality of their own work, reducing the need for inspectors. In effect, employees were given the ability to eliminate those aspects of their job that were unproductive and thus unnecessary. An important aspect of this has been the Work-Out, which has opened the communication channels necessary to help bring about innovative change (once again very much comparable to the training camps introduced by Xerox in its attempts to reinvent itself).

The Work-Out (also see appendix) has been an empowerment concept greatly favored by Welch. Thousands of GE employees get an opportunity to get together and share their ideas, thoughts and know-how, while building and fostering a more creative and team oriented atmosphere. The Work-Out encourages communication and accountability with the ultimate goal being to drive above average team performance. By providing each team member with the opportunity to contribute his ideas to the decision making process, Jack Welch’s hoped to 

A former GE executive remembering being “in the box” with Jack Welch
stimulate individuals to constructively challenge their bosses and promote a more motivated workplace. All Work-Outs included follow-up meetings where previous commitments were discussed and accountability was enforced.

Empowerment has been a two-way street. Employees have received the satisfaction of being able to air their concerns, while the company has greatly benefited from insights shared in the Work-Out. Under Jack Welch, GE began to realize that human beings are not machines and that each person has the potential to enhance productivity. Knowing how to use this resource can not only give the company a competitive edge, it can make each employee feel more important in the production process and thus more motivated.

“The only way to be more competitive was to engage every mind in the organization” ... “We hired the arms and backs and legs of people for years, and we never knew the brains came for free.”

“We proved that productivity is not a matter of cut and burn. It has nothing to do with whips and chains. It’s a never ending process that’s based on empowerment. It’s what happens when you get people excited about finding solutions to their problems.”

Empowerment drives favorable performance results for the employees and the company. An analysis of empowerment as a management strategy highlights the potential improvements that can be made when you take full advantage of the thoughts and ideas of all employees. The following is a list of ways empowerment can benefit an organization:

1. By empowering people, an organization gives employees the ultimate responsibility for their own work. If they share the company’s goals, they do not need much supervision. Cost will be reduced and layers of management will become unnecessary.

2. Employees become motivated to perform their jobs optimally. The old managerial habit of imposing ideas on people has the result of turning those ideas into rules, stripping them of their vitality. When a person develops his own ideas for how the work should be done, he will take ownership of his work and will perform that work with energy and enthusiasm. Welch understood that the power of command could not get him the loyalty he sought. He strove to liberate the minds of his subordinates and let them come up with the best ideas for getting the job done.

3. Large productivity improvements will often accompany the empowerment of employees. For years management had assumed that they always knew the best ways to do things. They forced workers to do things the way they wanted, so the workers succumbed to the wills of their bosses and did as they were told. However, what management often overlooks is the fact that the workers, who spend much more time than management actually doing the work, have great ideas for improving the processes and productivity of the work they are performing. When given a chance to implement these ideas, the company will often experience large productivity improvements. This point was illustrated in the Ingersoll-Rand case we studied during the quarter. When Ingersoll-Rand was trying to improve their grinder they solicited the input of all members from design to production, resulting in a revolutionary new tool design.

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5 Control Your Destiny of Someone Else Will, Tichy and Sherman, 1993
6 Control Your Destiny of Someone Else Will, Tichy and Sherman, 1993
4. The organization will be able to implement new ideas faster and will be much more responsive to the market. In the old GE, ideas had to be approved by many layers of management and had to be entombed in facts and research if they had any chance of being implemented. In the new GE, the person who comes up with the idea will have much more power and latitude to implement the idea without having to battle the bureaucracy.

Although it is difficult to measure the results of empowerment, GE believes that the success of the company in the future will prove that it was the right decision to make. The key question therefore is to find out how leaders like Welch decide that empowerment is the right strategy and how they in general decide if it is the right strategy to implement at their companies.

One way to decide on this is to envision a very hierarchical organization and an empowering organization. Our studies of Lyndon B. Johnson are a demonstration of a very authoritarian organization (proxy for the characteristics of a hierarchical organization). Johnson did all of the thinking and expected his subordinates to do exactly what he told them. He motivated his subordinates through fear, intimidation, and need. He hired them to do his bidding, not to think for themselves. In contrast, an example of an empowering company is the Body Shop. Anita Roddick believed that she could get the most out of her employees if she sold them on her vision but then encouraged free-thinking within the organization. The result of her philosophy is a group of very happy and motivated employees and a creative and customer focused organization. Though Lyndon Johnson may have been successful in some terms, there can be little doubt that, especially in today’s society, most would prefer to work for an organization such as the Body Shop, where employees feel that their knowledge is being leveraged and combined in the most useful way.

Based on this, it seems that empowerment (combined with some form of accountability and goal setting) would be the clear choice for most organizations, especially very large organizations. No matter how intelligent a business leader may be, he/she cannot plan to make all of the decisions for the company by himself/herself and still expect that the company will be successful. Today’s leaders must learn to nurture the creativity and intelligence of their employees if they are going to optimize the performance of their company. Jack Welch has done just that.
Communication

“Boundaryless behavior” and the elimination of unnecessary communication filters are the key phrases to describe Jack Welch’s attitude towards communication. He encourages input from every employee, from the factory floor to the executive suite. To facilitate goal setting and empowerment within GE, Welch needed to establish clear lines of communication in the organization. He realized that employees come to GE with many different experiences and backgrounds. He did not want to take away from the benefit of those various backgrounds, as much as reshape them with GE philosophies. This is not to say that he wanted a workforce of robots. Just the opposite actually, he wants free thinkers. One of his objectives was to motivate people to think outside the box and challenge the status quo. Open communication channels between Welch and his employees have been an important tool in this regard. These channels work in both directions, giving employees the ability to air their concerns and work towards a consensus for action. They also help motivate employees, because once again employees feel that they are directly contributing to the success of the company.

Welch is a proponent of facing reality, even when doing so is uncomfortable. He asks employees to “communicate candidly, even when doing so may sting”. He has done everything in his power to communicate directly with employees, including face-to-face meetings with subordinates as often as possible and participating in the Work-Out (previously discussed). Another major component of Welch’s communication philosophy has been his approach to the training of management.

Education and the “Crotonville training center” are a critical part of Jack Welch’s communication philosophy at GE. Crotonville is no ordinary training center, though. In addition to lectures, attendees participate in team building exercises and mandates to tackle real GE problems. Welch uses Crotonville as a hub for communication throughout the GE organization. At Crotonville, all GE managers are indoctrinated with the GE goals and value system. They are allowed to be frank with their opinions and concerns, while challenging policies and strategies of the company. Crotonville is the place where managers learn about GE and get to experience the face-to-face debate and problem solving that is a cherished part of GE’s culture.

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7 “You can’t say hello to Jack without it being confrontational. If you don’t want to step up to Jack tow-to-toe, belly-to-belly, and argue your point, he doesn’t have any use for you.”  
A former GE executive speaking of Jack Welch


9 Fortune, March 27, 1989, Inside the Mind of Jack Welch
Industry Week magazine\textsuperscript{10} estimated that Jack Welch spends 30% of his time on leadership development, “he even teaches a development program at Crotonville for senior leaders once a week”. “Once exclusively attended by high GE executives, it has been expanded by Welch to receive 5,000 GE employees annually, including everyone hired as manager or promoted to that rank. Every three weeks or so Welch choppers over to pitch his ideas to a new group and then debate them, rough-and-tumble, in an amphitheater called the Pit\textsuperscript{11}.

“New managers, for example, come to Crotonville about six months after their promotions – time enough for them to have made mistakes. They come with critiques of their performance from subordinates and supervisors. They learn what they’ve been doing wrong and promise to change. They discuss issues in teams, partly so they know they’re not alone in their experience.”\textsuperscript{12}

Although Welch used Crotonville as a hub for communication, he also wanted to open up all other available communication channels. The purpose was to allow those who were doing the work to get in contact with anybody that would help them get the job done. If people were to be empowered they should not be crippled by lack of communication. One of the first things Welch did to increase communication was to cut out all managers that simply gathered information from their subordinates and passed it up the line to senior management. Welch was used to going directly to the source when he wanted a question answered, so he did not want middle management standing in the way of such direct communication. By gaining such a great deal of access to personnel throughout the company employees had the ability to perform their jobs much better and were motivated by their successes.

Another valuable and motivating communication channel that Welch opened up was the 360\textdegree review between a boss and his subordinates. Employees spend time directly with their bosses and are given very clear information about successes or failures in their work, including being told if supervisors think they would be better off elsewhere. Employees are also allowed to evaluate their bosses. A better understanding of job responsibilities and performance combined with the ability to be a participant in the evaluation process have been instrumental in motivating employees and gaining their support during periods of massive restructuring and ever farther stretching goals.

\textsuperscript{10} Industry Week, August 18, 1997, The Stuff of Leadership
\textsuperscript{11} Fortune, March 27, 1989, Inside the Mind of Jack Welch
\textsuperscript{12} Business Week, December 14, 1987, GE’s Training Camp: An ‘Outward Bound for Managers
As another cog on the communication wheel, Welch instituted a 30-odd member Corporate Executive Council (CEC). This council has no formal authority, but has come to function effectively as GE’s political center. They are Welch’s team of managers who meet regularly to discuss, debate and argue about the future of individual business units. One of the CEC’s functions is to serve as the main nerve center, ensuring that “best practices” are communicated throughout the company. Welch has gone further still, though, by establishing an additional global best practices program, which has opened the communication channel for GE with outside companies.

“GE scours the world for companies which are better than GE itself at some specific aspect of business and then asks to pick their brains. In return GE promises to share with them the knowledge it gains.” As such, GE not only looks for diverse ideas internally, but also goes outside its normal scope to further improve itself. Once again communication lines are opened as a two-way street. Information is sought after, but also being shared with others, (part of the belief being that “if you can make your customer and suppliers more effective, it makes you so as well”). Employees are motivated by the belief that they are an active part in making GE number one, while outsiders are motivated to work more closely with GE for their own future benefit. Internal communication is further facilitated and encouraged through an additional level of personal responsibility to one another.

“Crotonville”, “the Work-Out”, “The Pit” and all the other training programs at which managers from different units get together serve the additional purpose of bringing them closer to each other personally, as advocated by Cialdini. Instead of receiving an anonymous help request from some other department, managers can now pick up the phone and call a rafting partner they met in Crotonville. Similarly, someone will be far more inclined to share information and assist another manager they know personally, rather than someone who has sent them a memo, which was perhaps forwarded through a multitude of bureaucratic layers before reaching the addressee, as may have been the case in the old days and as illustrated by the inefficiencies described in the Xerox case, “The Quality Restaurant”. Similarly, the Crotonville system provided a uniform pathway to all employees, away from the office and in a different environment, yet designed so that all employees would learn a similar set of principles and values (see appendix). Crotonville prepares managers for success at GE. It facilitates communication and information

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14 Forbes, April 8, 1996, GE: Bringing Good Leaders to Life
15 Influence - The Psychology of Persuasion, Robert B. Cialdini
handling for even the most difficult tasks, as discussed by Pfeffer\textsuperscript{16}, particularly in light of the decentralized structure at GE.

Communication is extremely important for the success of GE. Like many great leaders, Welch has realized the value of good communication in an organization. He flattened the organization to take away any communication blockers. Then he set up Crotonville as his communication hub, and established the CEC as the political center for the company. He also set up 360\textdegree reviews to let the employees know exactly where they stand in the organization. Welch has seen this communication as a major part of the force motivating people in their dealings with one another and in their attitude towards work and commitment to the organization. Unlike Henry Kissinger who coveted private information, or Lyndon Johnson who intimidated his workforce and fought to break their willpower, Welch has encouraged open communication and has challenged employees to think for themselves and stand up for what they believe. He believed that any employee who would argue his way through with him in “the Pit”, or in any other discussion, would be more dedicated to their own argument later own, doing everything in their power to make it work.

**Criticisms**

Up to this point we have focused on the benefits from Welch’s motivational techniques, but have neglected to mention the criticisms. Although we will not linger on the negative aspects of his tactics, they are nonetheless worth mentioning.

Like Robert Moses, Welch is a man who has benefited millions, while devastating thousands. He has succeeded in making GE a successful company for its shareholders, but has destroyed thousands of families through the mass layoffs he instituted.

Welch strongly believes that stretch-goals improve performance. Although he is probably correct, there are also costs involved cost. The side of stretch-goals we did not explore earlier is the feelings of stress and failure that accompany results that do not meet the goals. If people are always working towards stretch-goals they will wear themselves down and will likely start showing less progress towards the goals than previously thought. A great deal

\textsuperscript{16} Managing with Power – Politics and Influence in Organizations, Jeffrey Pfeffer
of stress will accompany the shortfall in goals. In addition, there may be occasions when employees will feel as if they have truly reached their maximum capacity. Unions, for example felt that Welch kept on demanding more and more at their workers expense, basically telling them to “shape up or ship out”, earning him the nickname “Neutron Jack”, among others.

A negative aspect of empowerment stems from people who do not want to be empowered. Union workers are often happy to take on more responsibility, but those who distrust management do not think they should have to do any more than their usual assignments. Welch had assumed that all people want more responsibility, but the fact is that many people do not want any more responsibility. Many workers reason that if they had wanted to have more responsibility they would have become managers.

A criticism of Welch’s communication style is that he is too open and too confrontational. Observers of GE might perceive the “higher decibel level” at GE to be seen as a “mugging"\(^{17}\), or shocking. Welch strives to build self-confidence in his managers, but his communication style will often cause people to lose self-confidence in themselves. Open communication channels work well when they are used to motivate performance and increase employee morale, but when they are used to intimidate they will have the opposite end in low self esteem.

**Conclusion**

Jack Welch's attitude towards management boils down to a few very simple ideas: breaking down hierarchies, ensuring free information flows throughout the organization, and encouraging people to talk, listen and be open to new ideas. When he first became a GE vice president at the age of 36, he “stalked out on the plant floor, or picked up the telephone to deal directly with anyone at any level when a problem came up"\(^{18}\) and that is the organization Jack Welch has attempted to build in terms of communication.

Welch succeeded in transforming a complacent behemoth into an energized company ready to face world competition. By flattening the organization and by removing unnecessary layers of bureaucracy, he liberated employees and empowered them to make decisions and effect their jobs, as well as the company as a whole. At the same time, he relied on stretch goals and the slope of satisfaction (as previously discussed) to further push the

\(^{17}\) Business Week, December 14, 1987, Jack Welch: How good a manager?
company to new levels of achievement. An additional sense of empowerment was relayed through various communication, training and motivation mediums, such as the “Work-Out”, “the Pit”, “the Corporate Executive Council” and other special project teams. Foremost he underlined his words with accompanying actions and an exemplary attitude, avoiding the well known saying that words by themselves are empty. Through the use of 360-degree review processes, appropriate bonus schemes and structural organizational changes, Welch created and opened communication channels at GE, allowing for unprecedented networking, teamwork, and openness to take place at GE. All of these factors combined to form a motivating force for the employees of GE. This motivation in turn has lead to a decade of outstanding performance by Jack Welch and General Electric Corporation.

\[\text{Forbes, March 15, 1975, GE: Not Recession Proof, But Recession Resistant}\]
APPENDIX 1

GE Aircraft Engines
GE Appliances
GE Capital Services
GE Electrical Distribution and Control
GE Information Services
GE Lighting
GE Medical Systems
GE Industrial Control Systems
GE Plastics
GE Power Systems
GE Transportation Systems
NBC
GE Research and Development
GE Supply
APPENDIX 2

GE's 1992 Business Portfolio

SERVICES
- Financial Services: Credit cards, equipment and industrial financing, leasing, real estate loans, insurance, asset management services, investment banking
- Information Services: Electronic messaging, data network services, information storage and retrieval
- NBC: Television network, TV stations, program production, cable programming services

TECHNOLOGY
- Aerospace: Electronics, avionic systems, radar, sonar, communication satellites, spacecraft, flight stimulators, support software, military equipment and services
- Aircraft Engines: Jet engines and parts for commercial and military planes and helicopters, engines for marine propulsion and industrial power
- Medical Systems: Magnetic resonance imaging, CAT scanners, X-ray systems, ultrasound equipment, nuclear imaging
- Plastics: Engineered thermoplastics, silicones, resins, laminates, man-made diamonds

CORE MANUFACTURING
- Appliances: Refrigerators, freezers, dishwashers, electric and gas ranges, washers, dryers, microwave ovens
- Electrical Distribution & Control: Circuit breakers, switchgear, controls, factory automation systems and equipment
- Industrial & Power Systems: Steam and gas turbines, generators, transformers, meters, relays, nuclear fuel and services
- Lighting: Incandescent, fluorescent, halogen, high-intensity discharge and specialty light bulbs, wiring devices, quartz products
- Motors: Electric motors for heavy industry, appliances, autos, air conditioning, heating
- Transportation Systems: Locomotives, electric wheels, transit propulsion systems
APPENDIX 3

GE Values

Jack Welch

GE Leaders...Always with Unyielding Integrity

- Have a passion for excellence and hate bureaucracy
- Are open to ideas from anywhere...and committed to Work-Out
- Live quality...and drive cost and speed for competitive advantage
- Have the self-confidence to involve everyone and behave in a boundaryless fashion
- Create a clear, simple, reality-based vision...and communicate it to all constituencies
- Have enormous energy and the ability to energize others
- Stretch...set aggressive goals...reward progress...yet understand accountability and commitment
- See change as opportunity...not threat
- Have global brains...and build diverse and global teams
APPENDIX 4

Cultural Change Processes

GE's Work-Out process was created in 1988 as part of the ongoing drive for better productivity and efficiency. Initially, Work-Out was intended to identify and eliminate unneeded processes and tasks that were left over from previous years, when management had more layers. After restructuring, many groups did more work with fewer people, rather than making comprehensive operational changes.

The aptly named Work-Out process involves identifying an area in need of improvement and bringing people together from all sides of the process (design, marketing, production, sales, etc.) to identify a better method. The Work-Out team meets outside of its normal work environment to discuss the issues and develop recommendations.

Team recommendations are presented to the responsible managers, who must accept or reject proposals on the spot. Ideas that require further study are reviewed for a period of time agreed on by the team (usually less than a month) before a final decision is made. The process encourages responsive leadership and greater employee participation, which increases the rate of change throughout the organization.

When Work-Out began, groups initially attacked the obvious things that didn't make sense in the new GE, known as "low-hanging fruit". As Work-Out evolved, customers and supplier-partners were introduced to the process. The Work-Out process is now part of everyday life at GE.

Change Acceleration Process (CAP)

Recognizing that change needs facilitators to thrive, GE created the Change Acceleration Process, called CAP. Participants are taught how to initiate, lead and manage significant change effectively, using a variety of effective tools. Projects, processes and personal change all are addressed in this program, which is often conducted with GE business partners.
Extract from the 1996 Letter to Share Owners on Quality & Six Sigma....

Just as Work-Out got us to a culture of learning and openness that defined the way we behave, quality improvement, under the disciplined rubric of Six Sigma methodology, will define the way we work.

Six Sigma quality means the virtual elimination of defects from every product, process and transaction this Company engages in every day around the globe. A Six Sigma quality level generates fewer than 3.4 defects per million operations in a manufacturing or service process.

It has been estimated that less than Six Sigma quality, i.e., the three-to-four Sigma levels that are average for most U.S. companies, can cost a company as much as 10-15% of its revenues. For GE, that would mean $8-12 billion.

Six Sigma quality is already becoming part of our culture and defining how we work. The Six Sigma process is a very specific scientific methodology of measuring, analyzing, improving and controlling every process we engage in, from making jet engine blades, to executing a credit transaction with a customer, to minimizing "dead air" between segments in broadcasting. It involves enormous amounts of training, with thousands of "Green Belts," "Black Belts" and "Master Black Belts" leading projects, teaching, and widening the circle of involvement in the quality initiative throughout GE.

The methodologies of Six Sigma we learned from other companies, but the cultural obsessiveness and all-encompassing passion for it is pure GE. The intensity level involved in our decade-long struggle to achieve a boundaryless culture now seems "laid-back" compared to the near monomania with which we are approaching Six Sigma quality. Forty percent of every manager's bonus is tied to his or her progress on quality results. Quality is the top item on every agenda in every discussion in every business in this Company. For leaders who do not see how critical quality is to our future--like leaders who could not become boundaryless during the 1980s--GE is simply not the place to be.

The momentum of the Six Sigma initiative is unprecedented. From launching this initiative in late 1995, with 200 projects and massive training, we moved to 3,000 projects and even more training in 1996; and we will undertake 6,000 projects, and still more training, in 1997. The $200 million we invested in 1996 has already returned nearly that much in quality-related savings. The additional $300 million we will invest in 1997 will deliver some $400-500 million in savings, producing an additional $100-200 million in incremental margins. This snowball will pick up size and momentum in terms of people trained, projects completed, and customer and employee satisfaction--all driving sales and net income growth. Growth and more growth.
APPENDIX 6

Growth Model

GE Product / Service / Media Businesses
- 11 Diverse Global Businesses;
  Triple-A Rated
- Service & Quality . . .
  • Expanding Margins
  • Capital Efficiency
- Consistent Cash Flow / Earnings Growth
- High Return on Total Capital

GE Capital Services
- 27 Diverse Globalizing Businesses
- AAA Rating / Leverage
  • Acquisitions ($5-10 Billion Per Year)
- Strong Internal Growth
- Consistent Strong Double-Digit Earnings Growth

$5+ Billion

$6+ Billion Cash Flow

$1+ Billion

Share Owners
- Consistent Double-Digit Earnings Per Share Growth
- $6+ Billion Cash
- 15-Year Return: 23% Per Year
APPENDIX 7

The Performance Story

Revenue Revenues
(Billions of U.S. Dollars)

Productivity rate
(%) $5

Net income
(Billions of U.S. Dollars)

$4 $3

Begins

$1

Based on average annual return, assumes reinvestment of dividend.
APPENDIX 8

The Human Story

Total employees

(RCA Acquisition)

Number of employees granted stock options

Organizational survey between CEO and shop floor

1981 1991

9 4-6
APPENDIX 9

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

In 1981, only Lighting, Motors, and Power Systems were leaders in their markets. By 1992, businesses were leaders in their markets.
APPENDIX 10

The Business Engine

The GE Transformation
A Dramatic Shift in Earnings

![Diagram showing changes in business segments from 1981 to 1991]

Earnings Profile—With Cost Reductions

![Graph showing earnings with and without cost reductions]

Earnings Achieved Entirely Through Cost Reductions
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