The history of general electric company management essay



The history of General Electric Company is a significant part of the history of technology in the United States. General Electric (GE) has evolved from Thomas Edison's home laboratory into one of the largest companies in the world, following the evolution of electrical technology from the simplest early applications into the high-tech wizardry of the early 21st century. The company has also evolved into a conglomerate, with an increasing shift from technology to services, and with 11 main operating units: GE Advanced Materials, a specialist in high-performance engineered thermoplastics, silicon-based products, and fused quartz and ceramics used in a wide variety of industries; GE Consumer & Industrial, which is one of the world's leading appliance manufacturers, stands as a preeminent global maker of lighting products for consumer, commercial, and industrial customers, and also provides integrated industrial equipment, systems, and services; GE Energy, one of the largest technology suppliers to the energy industry;

GE Equipment Services, which offers leases, loans, and other services to medium and large businesses around the world to help them manage their business equipment; GE Healthcare, a world leader in medical diagnostic and interventional imaging technology and services; GE Infrastructure, which is involved in high-technology protective and productivity solutions in such areas as water purification, facility safety, plant automation, and automatic environmental controls; GE Transportation, the largest producer of small and large jet engines for commercial and military aircraft in the world, as well as the number one maker of diesel freight locomotives in North America; NBC Universal (80 percent owned by GE), a global media and entertainment giant

with a wide range of assets, including the NBC and Telemundo television networks, several cable channels, and the Universal Pictures film studio

GE Commercial Finance, which provides businesses, particularly in the midmarket segment, with an array of financial services and products, including loans, operating leases, and financing programs; GE Consumer Finance, a leading financial services provider, serving consumers, retailers, and auto dealer in about three dozen countries; and GE Insurance, which is involved in such areas as life insurance, asset management, mortgage insurance, and reinsurance. The staggering size of General Electric, which ranked fifth in the Fortune 500 in 2003, becomes even more evident through the revelation that each of the company's 11 operating units, if listed separately, would qualify as a Fortune 500 company. GE operates in more than 100 countries worldwide and generates approximately 45 percent of its revenues outside the United States. Over the course of its 110-plus years of innovation, General Electric has amassed more than 67, 500 patents, and the firm's scientists have been awarded two Nobel Prizes and numerous other honors.

MAJOR CHANGES IN GENERAL ELECTRIC

GE's economic problems were mirrored by its managerial reshuffling. When John F. (Jack) Welch, Jr., became chairman and CEO in 1981, General Electric entered a period of radical change. Over the next several years, GE bought 338 businesses and product lines for \$11. 1 billion and sold 232 for \$5. 9 billion. But Welch's first order of business was to return much of the control of the company to the periphery. Although he decentralized management, he retained predecessor Reginald Jones's system of classifying divisions

according to their performance. His goal was to make GE number one or two in every field of operation.

One branch of GE's operations that came into its own during this period was the General Electric Credit Corporation, founded in 1943. Between 1979 and 1984, its assets doubled, to \$16 billion, primarily because of expansion into such markets as the leasing and selling of heavy industrial goods, inventories, real estate, and insurance. In addition, the leasing operations provided the parent company with tax shelters from accelerated depreciation on equipment developed by GE and then leased by the credit corporation.

MERGER & ACQUISITION

Factory automation became a major activity at GE during the early 1980s. GE's acquisitions of Calma and Intersil were essential to this program. In addition, GE entered into an agreement with Japan's Hitachi, Ltd. to manufacture and market Hitachi's industrial robots in the United States. GE itself spent \$300 million to robotize its locomotive plant in Erie, Pennsylvania. Two years later GE's aircraft engine business also participated in an air force plant-modernization program and GE later manufactured the engines for the controversial B-1B bomber.

In 1986 General Electric made several extremely important purchases. The largest-in fact, the largest for the company to that date-was the \$6. 4 billion purchase of the Radio Corporation of American (RCA), the company GE had helped to found in 1919. RCA's National Broadcasting Company (NBC), the leading U. S. television network, brought GE into the broadcasting business

in full force. Although both RCA and GE were heavily involved in consumer electronics, the match was regarded by industry analysts as beneficial, because GE had been shifting from manufacturing into service and high technology. After the merger, almost 80 percent of GE's earnings came from services and high technology, compared to 50 percent six years earlier. GE divested itself of RCA's famous David Sarnoff Research Center, because GE's labs made it redundant. In 1987 GE also sold its own and RCA's television manufacturing businesses to the French company Thomson in exchange for Thomson's medical diagnostics business.

GE justified the merger by citing the need for size to compete effectively with large Japanese conglomerates. Critics, however, claimed that GE was running from foreign competition by increasing its defense contracts (to almost 20 percent of its total business) and its service business, both of which were insulated from foreign competition.

In 1986 GE also purchased the Employers Reinsurance Corporation, a financial services company, from Texaco, for \$1.1 billion, and an 80 percent interest in Kidder Peabody and Company, an investment banking firm, for \$600 million, greatly broadening its financial services division. Although Employer's Reinsurance contributed steadily to GE's bottom line following its purchase, Kidder Peabody lost \$48 million in 1987, in part because of the settlement of insider trading charges. Kidder Peabody did come back in 1988 to contribute \$46 million in earnings, but the acquisition still troubled some analysts. GE owned 100 percent of Kidder Peabody by 1990.

General Electric's operations were divided into three business groups in the early 1990s: technology, service, and manufacturing. Its manufacturing operations, traditionally the core of the company, accounted for roughly one-third of the company's earnings. Still, GE continued to pour more than \$1 billion annually into research and development of manufactured goods. Much of that investment was directed at energy conservation-more efficient light bulbs, jet engines, and electrical power transmission methods, for example.

In 1992 GE signaled its intent to step up overseas activity with the purchase of 50 percent of the European appliance business of Britain's General Electric Company (GEC). The two companies also made agreements related to their medical, power systems, and electrical distribution businesses. Welch said that his aim was to make GE the nation's largest company. To that end, General Electric continued to restructure its existing operations in an effort to become more competitive in all of its businesses. Most importantly, the company launched an aggressive campaign to become dominant in the growing financial services sector.

GE's aggressive initiatives related to financial services reflected the fact that the service sector represented more than three-quarters of the U. S. economy going into the mid-1990s. Furthermore, several service industries, including financial, were growing rapidly. GE's revenues from its giant NBC and GE Capital divisions, for example, rose more than 12 percent annually from about \$14. 3 billion in 1988 to more than \$25 billion in 1994. Encouraged by those gains, GE's merger and acquisition activity intensified. For example, in 1994 the company offered a \$2. 2 billion bid for Kemper Corp., a diversified insurance and financial services company (it retracted https://assignbuster.com/the-history-of-general-electric-company-management-essay/

the bid in 1995). GE's sales from services as a percentage of total revenues increased from 30 percent in 1988 to nearly 45 percent in 1994, and neared 60 percent by 1996. The troubled Kidder Peabody unit remained a drag on GE's services operations, leading to the company's late 1994 decision to liquidate the unit. As part of the liquidation, GE sold some Kidder Peabody assets and operations to Paine Webber Group Inc. for \$657 million.

In contrast to its service businesses, GE's total manufacturing receipts remained stagnant at about \$35 billion. Nevertheless, restructuring was paying off in the form of fat profit margins in many of its major product divisions. Importantly, GE made significant strides with its Aircraft Engine Group. Sales fell from \$8 billion in 1991 to less than \$6 billion in 1995, but profit margins rose past 18 percent after dipping to just 12 percent in 1993. Reflective of restructuring efforts in other GE divisions, the company accomplished the profit growth by slashing the engineering workforce from 10, 000 to 4, 000 and reducing its overall Aircraft Engine Group payroll by about 50 percent, among other cost-cutting moves.

Despite a global economic downturn in the early 1990s, GE managed to keep aggregate sales from its technology, service, and manufacturing operations stable at about \$60 billion annually. More importantly, net income surged steadily from \$3. 9 billion in 1989 to \$5. 9 billion in 1994, excluding losses in the latter year from Kidder Peabody operations. In 1994, in fact, General Electric was the most profitable of the largest 900 U. S. corporations, and was trailed by General Motors, Ford, and Exxon. Revenues reached \$70 billion by 1995, the same year that the company's market value exceeded \$100 billion for the first time.

The late 1990s saw General Electric reach a number of milestones. In 1996 the company celebrated its 100th year as part of the Dow Jones Index; GE was the only company remaining from the original list. That year, NBC joined with Microsoft Corporation in launching MSNBC, a 24-hour cable television news channel and Internet news service. Overall revenues exceeded the \$100 billion mark for the first time in 1998, while the continuing stellar growth at GE Capital led that unit to generate nearly half of GE's revenues by the end of the decade.

Acquisitions in the late 1990s centered on two of the company's growth initiatives: services and globalization. In 1996 the GE Appliances division acquired a 73 percent interest in DAKO S. A., the leading manufacturer of gas ranges in Brazil. GE Capital Services expanded in Japan through the 1996 purchase of an 80 percent stake in Marubeni Car System Co., an auto leasing firm; the 1998 acquisitions of Koei Credit and the consumer finance business of Lake Corporation; and the 1998 formation of GE Edison Life following the purchase of the sales operations of Toho Mutual Life Insurance, which made GE Capital the first foreign company involved in the Japanese life insurance market. In early 1999 GE Capital made its largest deal in Japan to date with the purchase of the leasing business of Japan Leasing Corporation, a business with \$7 billion in leasing assets. Then in late 1999 GE Capital agreed to purchase the remaining assets of Toho Mutual for ¥240 billion (\$2. 33 billion); Toho had collapsed during 1999 after suffering huge losses from the thousands of old, unprofitable policies in its portfolio, and a large portion of its liabilities were to be covered by Japan's life insurance association. Expansion also continued in Europe for GE Capital, highlighted by the 1997

acquisition of Woodchester, one of the largest financial services companies in Ireland. Overall, GE spent some \$30 billion during the 1990s in completing more than 130 European acquisitions.

RESTRUCTURING

Under Welch's leadership, General Electric in the late 1990s also adopted "
six sigma," a quality control and improvement initiative pioneered by
Motorola, Inc. and AlliedSignal Inc. The program aimed to cut costs by
reducing errors or defects. GE claimed that by 1998 six sigma was yielding
\$1 billion in annual savings. The company also continued to restructure as
necessary, including taking a \$2. 3 billion charge in late 1997 to close
redundant facilities and shift production to cheaper labor markets. During
1999 General Electric adopted a fourth growth initiative, e-business
(globalization, services, and six sigma being the other three). Like many
longstanding companies, GE reacted cautiously when the Internet began its
late 1990s explosion. But once he was convinced of the new medium's
potential, Welch quickly adopted e-commerce as a key to the company's
future growth. Among the early ventures was a plan to begin selling
appliances through Home Depot, Inc.'s web site, a move aimed at
revitalizing lagging appliance sales.

In late 1999 Welch announced that he planned to retire in April 2001, but he did not name a successor. At the time, General Electric was one of the world's fastest growing and most profitable companies, and boasted a market capitalization of \$505 billion, second only to Microsoft Corporation. Revenues for 1999 increased 11 percent to \$111. 63 billion while net income rose 15 percent to \$10. 72 billion. These figures also represented huge gains https://assignbuster.com/the-history-of-general-electric-company-management-essay/

since Welch took over in 1981, when the company posted profits of \$1. 6 billion on sales of \$27. 2 billion.

Welch was not done yet, however. In October 2000 he swooped in to break up a planned \$40 billion merger of United Technologies Corporation and Honeywell International Inc. The Honeywell board accepted GE's \$45 billion bid, which was set to be the largest acquisition in the company's history. Honeywell was coveted for its aerospace unit, a \$9. 9 billion business involved in flight-control systems, onboard environmental controls, and repair services. The addition of this unit was expected to significantly boost the GE Aircraft Engines unit, creating a global aerospace giant. Welch agreed to stay on at General Electric through the end of 2001 in order to see the acquisition through to fruition. He did, however, name a successor soon after this deal was announced. In November 2000 Jeffrey R. Immelt won the succession battle and was named president and chairman-elect. Immelt, who joined GE in 1982, had most recently served as president and CEO of GE Medical Systems, a unit with revenues of \$12 billion. Immelt's two chief rivals in the race to become only the ninth CEO in GE's long history, W. James McNerney Jr., head of GE Aircraft Engines, and Robert L. Nardelli, head of GE Power Systems, soon left the company to become CEOs of 3M Company and Home Depot, respectively.

Rather than serving as a capstone for a much admired reign of leadership, the Honeywell deal instead provided a sour ending for the Welch era. In the summer of 2001 the European Commission blocked the deal on antitrust grounds as 11th-hour negotiations between the European regulators and GE executives broke down.

RECONFIGURING THE BUSINESS PORTFOLIO

Although Welch was resolutely determined to retain GE's identify 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 focusGE'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 upon 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, and 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 upon 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 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 some outsiders as a

mistake. Most recently, GE's biggest takeover, Honeywell, was unconsummated 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 managementsystems and management style in order to generate drive and ambition. Achieving this required changes to GE's structure. Under Welch, GE eliminated severallayers 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. now down in some businesses to four layers from the top to the bottom. Welch's ruthless attack on bureaucracy and administrative costs earned him the nickname "Neutron Jack" - the building remained, but the people had gone.

CHANGING MANAGEMENT SYSTEMS AND PROCESSES

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 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.

Modify Human Resource Management

The key to GE's long-term development and performance was the development of its management talent. GE had a well-developed system of management appraisal and development which Welch retained. He believed that giving managers greater profitand- 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 redesigned the bonus system to reach deep into middle management. The bonuses became much more discriminating. The typical 10 to 15 percent bonuses for senior managers were replaced by 30 to 40 percent 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."

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." 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 businessin 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. 13 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 its 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 – https://assignbuster.com/the-history-of-general-electric-company-management-essay/

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. Unbounding GE required changes in structures, attitudes, and behaviors that would permit the "integrated diversity" that Welch envisaged.

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.

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 with unprecedented 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 ranking from reduced waste and lower operating
costs to faster customer service and improved financial management.

NEED AND FORCES FOR CHANGE

Controlling bureaucracy:

One of Welch's signature concepts and the one term most closely associated with the GE leader. To spark productivity and break down the walls that he felt were killing the company, Welch sought to topple every barrier: internal barriers, such as those between functions (sales and manufacturing), and external barriers, such as anything that got between GE and its customers and suppliers. Any wall was a bad one, insisted Welch. In a boundaryless organization, information flows easily. There is nothing to impede the seamless transfer of decisions, Ideas, people, etc. Boundaryless behavior helped GE to rid itself of its century-old bad habits of rigid hierarchy and bloated bureaucracy. Anything that limited the free flow of ideas and learning was destructive, Welch said, and he spent two decades taking aim at GE's bureaucratic ways.

Lack of Sharing information

There was the communication gap between top management and lower management. They did not talk with each other, the goal was not clear to them. So there was a need arise to adapt the change so that every one understand the goal and objective of organization.

Mobilising the workforce

Winning competitive advantage

As the competition was growing day by day and GE was lacking behind, so there was a need arise to adapt the change. Ge has to minimize the disturbance when this transition ocuurs not only at the top but throughout the entire organization.

For exapanding the business

As for competitive advantage jack has to expand his business, so for it he globalize his business With more than 350 businesses, many faring poorly, his first task was to attack the problems plaguing weaker domestic businesses (i. e., the hardware phase: restructuring, delayering, downsizing, etc.). Once the hardware phase was behind them, Welch could focus on making GE a truly global organization.

Advancement of Technology:

As the tech. was growing day by day, so for retaining itself in competitive world, they have to adapt the change. Welch used internet initiative. As part of GE's e- Initiative, Welch recommended that every process be digitized. The GE CEO sees this as yet another important step in making the company fasterand more agile.

MODEL OF PLANNED CHANGE

The three theories of planned change in organizations described above-Lewin's change model, the action research model, and contemporary adaptations to the action research model-suggest a general framework for planned change. The framework describes the four basic activities that https://assignbuster.com/the-history-of-general-electric-companymanagement-essay/ practitioners and organization members jointly carry out in organization development. The arrows connecting the different activities in the model show the typical sequence of events, from entering and contracting, to diagnosing, to planning and implementing change, to evaluating and institutionalizing change. The lines connecting the activities emphasize that organizational change is not a straightforward, linear process but involves considerable overlap and feedback among the activities.

Unfreeze, Change, Freeze

Kurt Lewin proposed a three stage theory of change commonly referred to as Unfreeze, Change, Freeze (or Refreeze). It is possible to take these stages to quite complicated levels but I don't believe this is necessary to be able to work with the theory. But be aware that the theory has been criticised for being too simplistic.

A lot has changed since the theory was originally presented in 1947, but the Kurt Lewin model is still extremely relevant. Many other more modern change models are actually based on the Kurt Lewin model. I'm going to head down a middle road and give you just enough information to make you dangerous...and perhaps a little more to whet your appetite!

So, three stages. Unfreezing, Change, Freezing. Let's look at each of these.

Stage 1: Unfreezing

The Unfreezing stage is probably one of the more important stages to understand in the world of change we live in today. This stage is about getting ready to change. It involves getting to a point of understanding that

change is necessary, and getting ready to move away from our current comfort zone.

This first stage is about preparing ourselves, or others, before the change (and ideally creating a situation in which we want the change.

In this Welch decide to adapt the change like contoll bureaucracy, downsize the organization, delayer the organization, use boundarylessness, etc. so for adapting change he restructure the organization, use six sigma and done merger and acquisition.

Stage 2: Change – or Transition

Kurt Lewin was aware that change is not an event, but rather a process. He called that process a transition. Transition is the inner movement or journey we make in reaction to a change. This second stage occurs as we make the changes that are needed.

People were not want to adapt the change, so in this phase he went under merger and acquisition changing management system and process, reengineering and restructure and change in HR to retain the best talent in the organization

He also took the corporate initiative like work out, boundaryless organization, globalization, six sigma to improve the quality.

Stage 3: Freezing (or Refreezing)

Kurt Lewin refers to this stage as freezing although a lot of people refer to it as 'refreezing'. As the name suggests this stage is about establishing

stability once the changes have been made. The changes are accepted and become the new norm. People form new relationships and become comfortable with their routines. This can take time.

So after adopting the change GE become one of the successful organization & its employees get to ten ranking in the FORTUNE 500 magazines. They achieve a huge growth after adopting the changes.

ROLE OF LEADERSHIP

Welch has a very specific vision of the ideal leader. Unlike the "command and control style" of autocratic leadership, Welch's leadership ideal encompasses a wide range of qualities closely associated with a learning organization. Early on, Welch looked for customer-focused leaders who had "head," "heart," and "guts." Later he spoke of a leader's ability to embrace change, think globally, and deliver results. He also articulated ideal leaders as those who had the "Four E's": Energy Energizer (can excite others), Edge (competitive types who moved quickly), and Execution (delivered in the form of results).

GE AS AN EXECUTIVE FARM CLUB

Thanks to GE's ability to nurture managerial talent, the company became a "farm club" for executives. Over the years, many ofWelch's key managers became CEOs of other Fortune 500 companies. Examples i