AN INVESTIGATION OF ORGANIZATIONAL CHANGE USING
A STRATEGIC PROCESS AS THE INTERVENTION TOOL

by

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Submitted to the Alfred P. Sloan School of Management
in partial fulfillment of the requirements
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ABSTRACT

*The one thing that we can be sure about with change, is that it is constant.*

author unknown

Changes in global competition, technology, government regulation and various socio-economic factors are forcing companies to transform themselves in order to survive in this new business order. This thesis examines organizational change at Electronic Data Systems, Corporation, where a strategic process (Corporate Initiative 5 -- CI5) was used as the intervention tool.

The thesis is developed based on a theoretical framework suggested by the Center for Organizational Learning (COL) with slight modifications recommended by my thesis advisor. This framework was used in order to produce a series of analytical case studies which describe and evaluate change and learning projects within companies.

The thesis begins with factors driving change within corporations, and a literature review of change processes and strategy development tools used by firms. Next the thesis structure and research methodology is discussed.

The main body of the thesis begins with a historical view of the company and its founder, in order to better understand the context under which CI5 emerged. This is followed by a broad analysis of the information services industry, EDS' strategic positioning, the company's competitive advantage and its sustainability and an analysis of its financial position. The next section of the thesis outlines the circumstances that motivated EDS to seek change. A detailed review of the steps taken to prepare for the intervention is discussed. The thesis concludes with description and analysis of the measurable outcomes, lessons learned form CI5 and series of recommendations.

While the list recommendations may not be complete or in some cases appropriate, given my limited knowledge of EDS, they do provide an opportunity for EDS to reflect on the progress of its change initiative and possible areas where critical gaps may exist.

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CHAPTER 1

Introduction

As this century draws to close, industrial companies find themselves facing tremendous challenges that require complex organizational changes. The dynamics that generate change in most companies tend to originate outside the organization. Changes in market demand due to global competition, the development of new technology, government legislation and a variety of other factors are driving executives to develop new strategies to accommodate these external forces.

The rapidly evolving global economy and the extensive use of technology, specifically information technology, are reshaping industries and changing the way companies compete. It is these two exogenous variables, globalization and technology, more than any other factors that are responsible for many of the changes we see in industry today.

Increasingly countries are reducing or eliminating tariffs and trade barriers, making it easier for companies to compete across national boundaries. Perhaps at no other time in modern history, have companies had the level of freedom they now enjoy to conduct cross border business transactions. The globalization trend is likely to accelerate as more developing countries seek to participate. In addition, firms are also being impacted by the use of technology which has improved overall worker productivity. In U.S. and Europe, the pervasive use of technology (e.g. PC's, robotics, information technology) have forced companies to reduce their
workforce in order to remain efficient and profitable. These kinds of changes have put organizations in uncharted territory. Not only are firms facing new competitors, but many of them are from outside traditional industry boundaries and may compete in ways unfamiliar to the organization. A company's ability to respond in a timely manner may totally depend upon its ability to transform itself quickly.

These two forces of globalization and technology are demanding a new form of leadership. It is essential now that executives feel comfortable with managing changes in a highly dynamic environment and have the capacity to provide a sense of strategic direction to guide the organization constructively into the future.¹ The dilemma that most executives and leaders face, is how to maintain stability in their organizations and at the same time develop the ability to easily adapt to these outside forces. Developing this type of flexibility require companies to find new ways of stimulating innovation, changing assumptions, technology, working methods, roles and relationships, and the very culture of the organization itself.

Rarely do companies, especially successful ones, have enough foresight to transform themselves before encountering a crisis or before the driving forces of change overwhelm them. The companies who have successfully navigated the uncharted waters of change (e.g. Chrysler, GE, Rubbermaid, Xerox, Allied Signal), were all engulfed in crisis before its leadership sought to initiate a transformation of the organization. Indeed, the business stage in littered with more companies who failed to transform themselves before being

consumed by crisis, than those who were able to visualize the future and help define it.

Organizational systems are inherently complex and highly resistant to change. Therefore, before the leadership of an organization decides to initiate a change process, the process itself must be carefully developed. Many of the companies that have tried to transform themselves through some sort of change process, fall well short of their expectations. The lack of success may be due to a variety of factors, but in general it is due to the leadership's lack of understanding of all the critical forces acting on the organizational system.

The Change Process

The change process has been described and debated in various literature for many years. Consultants, academia and others have all developed their own approaches or models for addressing complex organizational change. Edgar H. Schein, in his 1989 paper, Planning and Managing Changing, remarked, "When any kind of change is being contemplated, it is helpful at the outset to decide what system we are focusing on." Once that system has been clearly identified, Schein goes on to explain that any living system is always in some state of change (growth, metamorphosis, or decline), but that all systems are homeostatic, that is, they always tend toward some kind of equilibrium. This equilibrium is achieved by a balance of forces pushing in different directions. But because there are many forces acting, a change in some of these forces will move the equilibrium to a new level. In this sense the equilibrium is only "quasi-stationary." He later describes that the change process can be conceptualized as consisting of three phases, based on the model of quasi-
stationary equilibra -- a stage of unfreezing, a stage of changing, and a stage of refreezing. Schein suggests that:

"No change will occur unless the system is unfrozen, and no change will last unless the system is refrozen. Most change theories tend to focus only on the middle stage and then cannot account for inability to produce change in the first place, or inability to maintain the changes that have been achieved."

The three stages and the related processes are illustrated in Figure 1-1.

![Figure 1-1](image-url)  
A Model of Planned Change

Although all three stages are important, it appears the unfreezing stage is the most critical of the entire process. It is during this stage that the motivation to
change is created. Without that motivation the change process may simply end up being an intellectual exercise.

In their book *Organizational Transitions - Managing Complex Change*, Richard Beckhard and Rueben T. Harris suggest that the organizational change must first start by defining the need for change. They believe that by answering the question; "Why Change?", it provides the initial momentum for beginning the change process. Beckhard and Harris define the change process for a large complex system as having the following aspects:

- Setting goals and defining the *future state*, or organizational conditions desired after the change.
- Diagnosing the *present condition* in relation to those goals.
- Defining the *transition state*: activities and commitments required to reach the future state.
- Developing strategies and action plans for managing this transition.

Although the above steps may appear to be a recipe for approaching the change process, Beckhard and Harris point out that, "Change management is not a neat, sequential process." They attempt to demonstrate this through their Map of the Change Management Process outlined in Figure 1-2. The map illustrates the synchronous levels interaction which must occur when defining the future state and diagnosing the present condition. In addition, Figure 1-2 also illustrates the interdependency between these two steps.
The Beckhard and Harris model may lead one to question: Given the dynamics shown in the map, where does one start? The two authors would unanimously respond, "Organizational change must start by defining the need for change, for it is this question that provides the initial impetus."

The authors of the book *The Transformational Leader*, Noel M. Tichy and Mary Anne Devanna believe transformational leadership is about change. They describe it as a process that is systematic, consisting of purposeful and organized search for changes, systematic analysis, and the capacity to move resources from areas of lesser to greater productivity. In order to make their framework easier to understand, they portray organizational transformation in terms of a three act play:

**Act I:** Revitalization - recognizing the need for change
Act II: Creating a new vision

Act III: Institutionalizing change

Tichy and Devanna go on to explain that Act III is not the end of the transformational drama. Indeed, there is a predictable epilogue where the organization will face the need for transformation again, and with the accelerating rate of change the drama will be repeated more frequently than in the past. The complete drama and its associated steps are illustrated in Figure 1-3.

Figure 1-3
Transformational Leadership: A Three Act Drama
Recognizing this predictable epilogue exists, Tichy and Devanna attempt to address the organization's capacity for self-renewal before a deep crisis develops. They make the following points:

"Sensing the right time to reinvest, initiating the creative-destructive forces necessary to transform an organization is the ability that few leaders and few institutions nurture.... Self-renewing organizations embrace paradox. They possess many attributes that are simultaneously contradictory, even mutually exclusive. It is these paradoxical attributes which provide the capacity for successfully surviving multiple, unpredictable blows from the environment."

We will revisit this paradox and these attributes later, as we discuss the characteristics of the target organization, which is the subject of this thesis.

Each of these approaches to the change process has evolved through the authors working with organizations and testing their ideas. In most cases theories and models developed by the authors contain more similarity than differences. For example, Tichy and Devanna's framework can be compared with Schein's model, where both models recognize that the cycle of change will be repeated. It is not clear that any of the previously mentioned approaches to the change process is more advantaged than the other. What is clear, is that the transformation process for most organizations is complex and difficult, it requires the deep personal involvement of the organization's leadership, and a well developed strategy or plan in order to have any chance
at success. This strategic plan can play a crucial role as an intervention tool, in driving organizational change.

**Strategy as an Intervention Tool**

What is a Strategy? What does the word Strategy mean? According to The American College Dictionary, strategy is:

"The science and art of using a nation's (organization's) forces to execute approved plans as effectively as possible."

This definition emphasizes the role that execution plays in strategy. However, it is in the designing of the plan where strategy actually emerges.

The strategic planning process has spawned a litany of models and approaches to strategy development and implementation. Each presents its own view of what strategy means. However, most of these models also point out the role that strategy plays in driving organizational change. Regrettably many organizations have failed to gain the full benefit of these models. It appears that executives fail to grasp the role that strategy can play as an intervention tool, when attempting to transform the organization.

Arnoldo C. Hax and Nicolas S. Majluf in their book, *The Strategy Concept and Process: A Pragmatic Approach*, propose a formal and integrative approach to strategic planning. They offer a comprehensive definition of strategy:

1. A coherent, unifying, and integrative pattern of decisions;
2. determines and reveals the organizational purpose in terms of long-term objectives, action programs, and resource allocation priorities;
3. selects the businesses the organization is in or is to be in;
4. attempts to achieve a long-term sustainable advantage in each of its businesses by responding properly to the opportunities and threats in the firm's environment, and the strengths and weaknesses of the organization;

5. engages all the hierarchical levels of the firm (corporate, business, functional); and

6. defines the nature of the economic and non-economic contributions it intends to make to its stakeholders.

Hax and Majluf go on to point out that through this unified view, strategy becomes a fundamental framework through which an organization can assert its vital continuity, while at the same time, it forcefully facilitates its adaptation to a changing environment. They further state that, "The essence of strategy thus becomes the purposeful management of change toward the achievement of competitive advantage in every business in which the firm is engaged."

In developing the framework for their formal strategic planning process, Hax and Majluf recognize the different roles played by various managers within the organization in the development and implementation of the firm's strategies. They identify three levels which comprise the hierarchy of strategic planning (corporate, business, functional), the structural conditioners of the firm (vision of the firm, mission of each business) and the actual planning cycle (strategy formulation, strategic programming, strategic and operational budgeting).

The Hax and Majluf model may be viewed as a limiting form of strategic planning. However the authors suggest several solutions to avoid the usual
pitfalls of bureaucratization, rigidity and incrementalism. Perhaps a key learning that Hax and Majluf offers is, "Planning is done by line executives not by planners."

James Brian Quinn in his book *Strategies for Change - Logical Incrementalism*, defines strategy as:

"The pattern or plan that integrates an organization's major goals, policies, and action sequences into a cohesive whole. A well formuated strategy helps to marshal and allocate an organization's resources into a unique and viable posture based on its relative internal competencies and shortcomings, anticipated changes in the environment, and contingent moves by intelligent opponents."

Quinn insists that instead of following rigidly prescribed formal strategic plans, executives use logical incrementalism to develop and implement their most important strategies. He suggests that a company's full strategy is rarely written down in one place. The processes used to arrive at the total strategy are typically fragmented, evolutionary, and largely intuitive. Quinn views formal planning as one of the many building blocks in a continuously evolving structure of analytical and political events, that combine to determine strategies in large institutions.

Quinn offers a relatively elaborate model to describe how a company may manage logical incrementalism for its strategic change process. The approach is much too complex to discuss in any detail, however, Quinn
believes that the process is both logical and incremental and that good managers are aware of it. He suggests these managers use the process to improve the information available for decisions and to build the psychological identification essential to successful strategies. It is possible to conclude from Quinn's statements, that since good managers are aware of and use this process, most companies who have failed to execute transformational strategies, perhaps are being led by bad managers who do not understand this process.

In their latest book *Competing for the Future*, Gary Hamel and C.K. Prahalad present their updated view of strategy and the role it plays in organizational transformation. Hamel and Prahalad's new view of strategy is essentially based on this framework: (1) an understanding of how competition in the future is different; (2) a process for finding and gaining insight into tomorrow's opportunities; (3) an ability to energize the company top-to-bottom for what may be a long and arduous journey toward the future; (4) the capacity to outrun competitors and get to the future first, without taking undue risks. They go on to further discuss why this view of strategy is quite different from current practice, by introducing what they call, "The New Strategy Paradigm". Table 1-1 outlines Hamel and Prahalad's new strategy paradigm:
Table 1-1

THE NEW STRATEGY PARADIGM

**Not Only**

The New Competitive Challenge

- Reengineering processes
- Organizational transformation
- Competing for market share

**But Also**

- Regenerating strategies
- Industry transformation
- Competing for opportunity share

**Finding the Future**

- Strategy as learning
- Strategy as positioning
- Strategic Plans

**Mobilizing for the Future**

- Strategy as fit
- Strategy as resource allocation

**Getting to the Future First**

- Competing within an existing industry structure
- Competing for product leadership
- Competing as a single entity
- Maximizing the ratio of new product "hits"
- Minimizing time-to-market

- Competing to shape future industry structure
- Competing for core competencies leadership
- Competing as a coalition
- Maximizing the rate of new market learning
- Minimizing time to global preemption

Throughout their book, Hamel and Prahalad develop new strategic language and thoughtware. The book may be considered both controversial and thought provoking. Unlike other strategy books, it does not provide a cookbook for strategy development and implementation. It simply provides a high level framework for thinking differently about strategy. Perhaps "strategic
thinking" is the critical link in the strategy chain that most corporations fail to do when trying to successfully transform themselves.

No one really disputes the need for strategic planning. The debate tends to focus on the approach and the results or value generated by the approach. Traditional strategic planning is excellent for articulating management direction, designing management control systems and the strategic process itself. However, it tends to focus unduly on measurable quantitative forces and to under-emphasize the vital qualitative, organizational, and power-behavioral factors that so often determine strategic success. Indeed, in many cases the strategic planning process has become routine, bureaucratic, rigid and costly, and is used primarily as a basis for management control, rather than a creative direction setting process. It is unfortunate that formal strategic planning is now seen as such a burden. Certainly when these processes were first developed they were not designed to become unwieldy and sometimes ineffective as many of them have turned out to be. It is more likely that many of these strategic processes became dysfunctional, due to a lack of understanding of how to use them as organizational change tools.

Strategy by its very nature is inextricably linked with the organizational change. An essential feature of strategic planning is a forecast of the world ahead or, at best, a forecast of those parts of the environment that will have significant impact on the company's successes or failures. From such forecasts, a picture emerges of where and what a company would like to be in the future world. At the appropriate times the firm must initiate a series of programs or action plans that allow the company to move from its present position to its desired position in the future world. The change process itself
will usually emerge through these strategic programs or action plans and is closely linked to the firms overall strategy. This essential tie between the company's picture of the future world and the programs and action plans it initiates to get there, may be compared to what goes on during a chess game. A series of smart moves without some broader strategy will not ultimately win the game against a capable competitor, and a grand design without a series of moves to achieve it remains but a twinkle in the loser's eye.\footnote{Yavitz, Boris, and Newmann, W.H. \textit{Strategy in Action: The Execution, Policies and Payoff of Business Planning}, New York: The Free Press, 1982}
CHAPTER 2

Thesis Structure

The thesis was developed based on a theoretical framework suggested by the Center for Organizational Learning with slight modifications recommended by the thesis advisor. This specific framework was used in order to produce a series of analytical case studies which describe and evaluate change and learning projects within companies. The research framework for examining these projects is illustrated in Figure 2-1.

![Diagram showing the research framework](image)

**Figure 2-1:** Research Framework: Change Project Phases and Involved People

Through this model the change project was studied both over time and across groups of people who were involved in the process. The *historical context* examines the internal and external conditions under which the change was initiated. *Strategy formulation* is the period where contending ideas were developed and promoted. *Selection* is the phase where the approach to be used is determined as well as the people who will be involved in the change process. The process of planning and preparing for the intervention is
termed preparation. Implementation is the period during which the change was put into practice. Finally, outcomes describe the measurable results from institutionalization or routinization of the change as well as lessons learned.

The focus of this thesis is an investigation of organizational change at Electronic Data Systems (EDS), Corporation, using a strategic process as the intervention tool. In 1991, EDS began implementing a strategic planning process on a company-wide basis, through one of five corporate initiatives. They called the process Corporate Initiative 5 (CI5). The CI5 planning process was developed to enhance direction setting within the company. It was also believed that this new planning tool could be used as part of the leadership development process for EDS managers.

The main body of the thesis (Chapter 3) begins with a historical view of the company and its founder, in order to better understand the context under which the planning process emerged. The three eras which comprise EDS' history are discussed, including its organizational structure and cultural influences. The thesis author provides personal reflections and observations, which were developed during the onsite visit.

Chapter 4 includes a broad analysis of the information services industry, EDS' strategic positioning, the company's competitive advantage, an analysis of its financial performance.

The next section of the thesis (Chapter 5) outlines the conditions under which the change -- Corporate Initiative 5 -- was initiated. That is, the circumstances that motivated EDS to seek change. A description of how
various ideas were developed and promoted, the selection of CI5 as the strategic change process as well as who would be involved in driving the change are also discussed. This chapter concludes with an in-depth description of the CI5 process and the goals of the change project.

Chapter 6 reviews the implementation of Corporate Initiative 5. It details the steps taken to prepare for the intervention and the actual process of putting the change into practice.

The primary focus of Chapter 7 is an analysis of the results or outcomes from the implementation of CI5. The outcomes are captured through a series of interviews conducted and catalogued by the thesis author. The results from a set of previous surveys are compared with the results from a similar survey, administered by the thesis author to the same groups of employees. The survey results are used to supplement the test for routinization and institutionalization of the strategic change process. The survey is also used to test the hypothesis, that the change in mindset of the employees has been maintained or even increased, since the last survey. In addition, this section discusses what happened or did not happen, the lessons learned to date by the chief protagonists of the initiative and the leadership of the organization, and differences between reality and expectations.

In the final chapter of the thesis, the author draws conclusions regarding the change initiative, argues the sustainability of the change process itself and attempts to predict its longer-term successes and failures. The thesis author offers a list of recommendations and suggestions to minimize the risk of failure and to enhance potential for success.
Research Methodology

The primary research method was onsite field investigations, using interviews as a mode of data collection. In addition, phone interviews were used when necessary. Most of the onsite interviews were conducted at EDS' corporate headquarters located in Plano, Texas, during the week of January 16, 1995. Phone interviews were held with members of two SBU's (Strategic Business Units) located in Detroit, Michigan. An onsite interview was done at an SBU located in Waltham, Massachusetts. In total 23 EDS employees were interviewed during the months of January and February, 1995. Table 2-1 provides a breakdown of the various individuals or groups involved in the interviews, and their input based on the theoretical framework.

Table 2-1

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Note: Numbers next to employee group names are the number of people interviewed and shaded boxes represent the phase(s) for which each group provided input. For blank boxes the group did not provide input for that phase.

The thesis author used a questionnaire to initiate dialogue with interviewees and to ensure that the information being gathered would align with the theoretical framework (see Exhibit 1 for an example of the
questionnaire). The qualitative data from the interviews was then coded and analyzed based on the framework outlined in Figure 2-1.

The author prepared and distributed a survey (see Exhibit 2 for an example of the survey) to 120 key individuals who had participated in implementing the strategic change process -- CI5. This survey was developed based on a series of previous surveys prepared by EDS, and administered to these individuals while they were participating in the change process. The author's survey was slightly modified to reduce the potential for bias in the data. The results were compared with earlier survey results to test for sustainability and imbeddness of CI5 thoughtware.

Finally, EDS provided supporting documentation including internal newsletters, newspaper articles, previous survey results, video and audio tapes, speech transcripts and presentation overheads. Readings from books, articles, public financial reports, papers, etc., were also used as sources of data to supplement the research effort.
CHAPTER 3

Background and History

Electronic Data Systems (EDS) Corporation, is an independent subsidiary of General Motors Corporation. The company is headquartered in Plano, Texas, on a well-manicured campus-like office complex, where the perimeter is fenced-in and patrolled by armed guards. The recently built corporate office can been seen for miles as one approaches the complex. The facility is a shining monument of EDS' success, with its floor-to-ceiling atrium, mahogany-paneled walls and overall high-tech look. EDS' offices and grounds are decorated with a variety of symbols and artifacts that would inspire thoughts of entrepreneurism, risk-taking, power and various other inspirational reflections. Perhaps the most impressive symbol of all is the bronze compass sculpture located in the headquarters main lobby, standing approximately 10 feet tall, with the following inscription at its base:

"From the very beginning, mankind has created instruments to help steer and stay the course on open oceans, across unknown territories, even into the immense vastness of space. This sculpture, inspired by those instruments of discovery, serves to remind us -- the men and women of EDS -- that what we do helps our customers achieve a clearer sense of where they are and where they want to go. Working with our customer, we apply our imagination and experience to help them apply technology, transform their enterprise, change direction, open new frontiers, and most of all, become even more successful."
This statement, is perhaps as fitting as any, to describe how EDS perceives its role in the world of business.

EDS employees appear highly professional and dedicated. At the company's corporate headquarters, the environment seemed exceedingly formal. In fact, on each of the four days the author visited the company's cafeteria, he noticed that all male employees wore their jackets to lunch. The employees also seemed concerned about confidentiality and security. The formal nature of the organization and its concern for confidentiality, may be due to the combination of its founder personal history and the expectations of its customer base.

EDS pioneered the information services industry and has enjoyed unparalleled success as its market leader for over thirty years. By all standards and measures, EDS is a very successful company. The company has continuously enjoyed record revenues and earnings. Indeed in 1994, EDS' revenues topped the $10 billion mark for the first time in its history and recorded its thirty-second year of record earnings. Since its founding, EDS has been the "defining entity" for the rapidly growing information services market. However, EDS is now facing unfamiliar competitive pressures and tremendous market changes.

Why has EDS been able to consistently meet or exceed the expectations of its key stakeholders? In this chapter we will attempt to beginning answering the question by reviewing the company from a historical perspective, and investigating its structural and cultural influences.
The IBM Years

Ensign Ross Perot graduated from the Naval Academy in June 1953. As a junior officer aboard the aircraft carrier USS Leyte, Perot was assigned the duty of escorting visitors aboard ship. On one such visit, he met an IBM executive who invited him to interview with the company after he was discharged from the Navy. A few months after Perot completed his tour of duty, he interviewed with IBM. The company did not agonize over the opportunity to hire a disciplined naval officer, particularly one with sales skills fairly oozing from him.³

In the late 1950's, IBM employees were considered to be the brightest and usually the most energetic within American corporations. Ross Perot quickly became one of IBM's best. He easily made the company's "Hundred Percent Club" and captured some of the toughest accounts. However, the more Perot achieved at IBM, the more frustrated he became. Earlier he tried to interest management in a new selling concept. Based on observations of his customers, he proposed that IBM should start a computer services division. This service would provide complete computerized solutions to business problems, so-called turnkey systems, including skilled workers to run the computers. The IBM executives listened but were not interested in the idea.

The turning point in Ross Perot's life came one day in early 1962. He sat in a barber's chair browsing through Reader's Digest, when he read the following passage from Walden: "The mass of men lead lives of quiet

desperation." It was at that moment Perot decided to form EDS. On June 27, 1962, his thirty-second birthday, Perot incorporated Electronic Data Systems Corporation with $1,000 as the company's initial capital.

EDS' history is really comprised of three eras: (1) The entrepreneurial years (1962 - 1984), when the company was run by its founder (H. Ross Perot) and a small number of people; (2) The chaotic years (1984 - 1987), when EDS was acquired by General Motors (GM) and Perot left after conflicts with then GM Chairman and CEO, Roger Smith; (3) The contemporary years (1988 - now), punctuated with the emergence of Les Alberthal as Chairman and CEO, and a more consensus style of leadership. A more in depth discussion of these three eras is presented in the following sections.

**Building EDS (1962 - 1984)**

It took Perot five months to find his first customer, Collins Radio of Cedar Rapids, Iowa. EDS pioneered (early mover) the long-term fixed-price contract with Frito-Lay in 1963. The company negotiated a 5-year agreement, instead of the 60 to 90-day contracts usually offered by computer service firms. The company entered Medicare and Medicaid (called the Blues by EDS employees) claims processing in the mid-60's, insurance company data processing in 1963, and data management for banks in 1968. EDS became the number one provider of computer services in all of these markets and still holds that position today.

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Recognizing that he was in the intellectual capital business, Perot carefully built his organization. Like IBM, he hired only the best and brightest, many of them with military backgrounds. He designed the organization for "command and control". The company was structured into a series of super groups led by Senior Vice Presidents. Almost all decisions were made by Perot and a handful of managers. Through this nucleus, EDS developed a reputation for being able to get things done, even when projects seemed impossible. The company was admired for its hard-driving, results-oriented culture. Perot's persona dominated the company and the troops (employees) developed a mindset where the orders always came from the top.

In 1968, EDS successfully completed an Initial Public Offering (IPO). It bought Wall Street Leasing (computer services) and established regional data centers and central data processing stations. During the early 70's, EDS was an "early mover" with the concept of distributed processing. The company signed its first overseas contract with Saudi Arabia in 1976. In the mid-70's EDS began placing more emphasis on the installation of computer systems instead of simply managing them. Customers were purchasing more computers and EDS saw an opportunity to reinforce its long-term relationship by offering a complete service. That is, EDS would not only manage the computer, but it would purchase it, maintain it and program it if needed for a fixed contract price. Through this strategic thrust, EDS established the facilities management or outsourcing segment of the information services industry.
The Chaotic Years (1984-1987)

In 1984, on its twenty-second anniversary and Ross Perot's birthday, EDS was bought by GM for $2.5 billion. GM promised EDS its independence as well as contract work managing its lumbering data processing systems. EDS prospered under GM, but the differing managerial styles of Perot and GM Chairman and CEO, Roger Smith, resulted in uneasy alliance. In 1986, the uneasy alliance broke down and GM bought out Perot's GM-EDS shares for over $700 million. Perot later formed a company in 1988, which competed against EDS. He bid away six of EDS' top executives to work for Perot Systems. This led to series of lawsuits filed by both sides, which are still as yet unsettled. However, after 7 years in operation, Perot's new company has barely dented the EDS juggernaut.

The Contemporary Times (1988 - now)

Lester Alberthal became CEO of EDS, and through the rest of the 80's, he lessened the company's dependence on GM by broadening its participation in the information services industry. After the acquisition, GM generated revenues accounted for about 70 percent of EDS' net sales, but by 1994 this percentage had decreased to 36 percent (see Table 3-1 below).

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>GM Revenues</td>
<td>$2.4</td>
<td>$3.2</td>
<td>$2.9</td>
<td>$2.8</td>
<td>$3.0</td>
<td>$3.2</td>
<td>$3.4</td>
<td>$3.3</td>
<td>$3.3</td>
<td>$3.6</td>
</tr>
<tr>
<td>Total Revenues</td>
<td>$3.4</td>
<td>$4.3</td>
<td>$4.3</td>
<td>$4.7</td>
<td>$5.4</td>
<td>$6.0</td>
<td>$7.1</td>
<td>$8.2</td>
<td>$8.6</td>
<td>$10.1</td>
</tr>
<tr>
<td>% GM Revenues</td>
<td>71%</td>
<td>74%</td>
<td>67%</td>
<td>60%</td>
<td>56%</td>
<td>53%</td>
<td>48%</td>
<td>41%</td>
<td>39%</td>
<td>36%</td>
</tr>
</tbody>
</table>

Sources: The First Boston Corporation, EDS - Company Report, March, 1992
GM 10-K Report, March 1995
Alberthal recognized that the company could no longer be run the way it had been run in the past. EDS now had over 50,000 employees, the industry and technology was changing rapidly, and new competitors were emerging. Alberthal initiated a process in the Fall of 1988 which culminated in the Fall of 1989 and produced EDS' first strategic plan, dubbed Plan 95. The plan started EDS down the path towards globalizing its business and expanding its participation in the information services industry.

In order to expand its international presence and leverage its manufacturing customer base, in 1991 the company bought McDonnell Douglas System Integration (MDSI) and U.K. based SD-Scicon (SD-S). Through the MDSI acquisition, EDS gained access to more than 2,000 customers of MDSI's Unigraphics division, the second largest provider of computer-aided design and manufacturing software. The SD-S acquisition increased EDS' presence in the rapidly expanding European outsourcing market, just as the unification (European Economic Community - EEC) was beginning to create market opportunities.

Under Alberthal's leadership, EDS continued to re-invent itself. In 1989, the company re-organized into 39 separate operating units (Strategic Business Units - SBU's) around specific market segments. Alberthal also wanted to move EDS from its "command and control" roots, to a more "consensus and empowering" style of management. He established the Leadership Council to provide overall company direction. Affinity Groups were created to link SBU's which shared resources and had similar market dynamics. EDS increased its emphasis on management consulting by establishing its Management
Consulting Services (MCS) division. It was also during this period, that the company began its Corporate Initiative 5 (CI5) strategic planning process.

In May 1994, the company announced plans to merge with long distance carrier Sprint Corporation. A merger between EDS and Sprint would have created a technological giant with combined annual revenues exceeding $19 billion and more than 120,000 employees. Surprisingly, in June 1994, the merger discussions were called off. A similar deal with British Telecom had also collapsed in 1993. With the information services industry becoming increasingly volatile, EDS' future as the "defining entity" seemed increasingly unclear.

In the next chapter, we will discuss the reasons for increasing volatility within the information services industry and why EDS' role is less clear. In addition, we will also begin to build a framework for why EDS sought to transform its organization, given this uncertainty.
CHAPTER 4

Industry Analysis

In 1992, the information services industry generated revenues of over $42 billion. Revenue was forecasted to grow at an average annual rate exceeding 15 percent through 1996, with total revenues approaching $70 billion. Despite lower growth rates than in the past (growth rates approached 20 percent during the 1980's), the market for information services should remain one of the faster growth segments in the economy.

The industry is primarily comprised of four discrete business segments: outsourcing or facilities management, systems integration, systems development and information management consulting. During most of the 1980's and early 1990's, the fastest growing of these segments were facilities management and systems integration. Growth in outsourcing was driven primarily by structural, financial and strategic issues facing businesses. System integration growth was spurred by the increasing diversity of hardware and software used by firms.

In 1993, about 4,000 firms provided information services to business and government. Although entry costs were relatively low in the systems development and consulting segments, more than 70 percent of the overall market was controlled by 10 companies (see Table 4-1).

Table 4-1
(Revenue in $ Millions)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Company</th>
<th>1993</th>
<th>1992</th>
<th>Market Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>IBM</td>
<td>$9,711</td>
<td>$7,352</td>
<td>21%</td>
</tr>
<tr>
<td>2</td>
<td>EDS</td>
<td>$8,507</td>
<td>$8,155</td>
<td>18%</td>
</tr>
<tr>
<td>3</td>
<td>Andersen Consulting</td>
<td>$2,589</td>
<td>$2,445</td>
<td>5%</td>
</tr>
<tr>
<td>4</td>
<td>Computer Sciences</td>
<td>$2,502</td>
<td>$2,474</td>
<td>5%</td>
</tr>
<tr>
<td>5</td>
<td>Automatic Data Proc</td>
<td>$2,339</td>
<td>$2,075</td>
<td>5%</td>
</tr>
<tr>
<td>6</td>
<td>TRW</td>
<td>$1,900</td>
<td>$1,800</td>
<td>4%</td>
</tr>
<tr>
<td>7</td>
<td>Digital</td>
<td>$1,875</td>
<td>$1,570</td>
<td>4%</td>
</tr>
<tr>
<td>8</td>
<td>Unisys</td>
<td>$1,593</td>
<td>$1,336</td>
<td>3%</td>
</tr>
<tr>
<td>9</td>
<td>First Data</td>
<td>$1,500</td>
<td>$1,205</td>
<td>3%</td>
</tr>
<tr>
<td>10</td>
<td>AT&amp;T</td>
<td>$1,235</td>
<td>$1,199</td>
<td>3%</td>
</tr>
<tr>
<td></td>
<td>TOTALS</td>
<td>$33,751</td>
<td>$27,538</td>
<td>71%</td>
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</table>

Source: DATAMATION 100, June 15, 1994

This was due to the substantial upfront capital and infrastructure required to support the facilities management and system integration segments. These costs were well beyond the capabilities of most information service providers. Essentially, the market for the largest information service contracts, particularly in the outsourcing and systems integration arenas have been limited to an oligopoly.

The Porter Diagram offers a reasonable model with which to better understand the attractiveness of the information services industry and the effective positioning of firms within the industry. The model uses five forces, which are typically considered to shape an industry. These five forces (intensity of rivalry, threat of new entrants, threat of substitutes, bargaining
power of buyers, and bargaining power of suppliers), their interrelationship and other the factors that impact them, are critical to defining industry attractiveness based on this model.

The Intensity of Rivalry Among Competitors is expected to increase in the coming years (see Exhibit 3). As the market continues to migrate towards industry technical standards (telecommunications, networking, operating systems, software development tools, etc.) and the "information superhighway" (merging of video, voice and data), it is becoming more difficult to differentiate the information services offered by companies. Overtime, these standards may also lower buyer switching costs, which are relatively high, due to length of service contracts. Pricing competition is also heating up between the big service providers. Firms are bidding away key personnel from rival companies. And, a growing number of telecommunications companies are starting to provide information services, as outgrowths of their own equipment marketing efforts, as well as through acquisitions. The industry however, has remained attractive for the larger service providers. They continue to capture the larger contracts, which comprise most of the market.

The Bargaining Power of Buyers is gradually increasing (see Exhibit 3). This is primarily due to the increasing intensity of the rivalry between competitors. As technical standards are implemented, switching costs for buyers are being lowered. However, most of the large service contracts are still concentrated with few important buyers, namely FORTUNE 500 companies.

6 Semich, J. William. "In Services, Bigger is Not Better; The Computer Services Industry; Datamation 100", DATAMATION, June 15, 1994: p. 54
7 Byrne, John A. "Lock the Doors It's EDS". Business Week, September 19, 1994: p. 36
and the government. Their needs tend to outstrip the capabilities of most information services companies. Therefore, only firms within the oligopoly are usually in a position to meet the needs of these buyers; medium and small firms have to form "shaky" strategic alliances in order to bid for contracts. Many of the very large customers have significant negotiating strength and are likely to drive contract prices down.

There is some threat of buyer backward integration, since most information service providers also compete with the buyer's internal MIS departments for business. But, given the strong trend for buyers to shed non-core assets, the threat of buyer backward integration is somewhat neutral. There is little threat of forward integration from most information service companies. In general, information service costs comprise less than 4 percent of the customer's revenue. However, when the buyer decides to outsource it is usually due to financial issues affecting profitability. The Bargaining Power of Buyers has also remained attractive for large service providers.

The Threat of Substitutes is low and unlikely to change in the near future (see Exhibit 3). Large scale computer systems are becoming increasingly complex and will require even more capital, infrastructure and specialized knowledge to operate them. Competing firms essentially offer the same services, with few exceptions, like EDS and IBM. The merging of voice, data and video through digital phone switches may eventually replace the mainframe computer, and transform the nature of competition in the industry. Long-term, the implementation of industry technical standards and

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the "information superhighway" could lead to lower switching costs for customers as well as create viable alternatives. Therefore, the Threat of Substitutes is mildly attractive for the industry.

The Bargaining Power of Suppliers is low, because many of the oligopolistic service firms boast considerable purchasing power and negotiating leverage with computer hardware, software and telecommunications suppliers (see Exhibit 3). There are ready substitutes for many of the products and services offered by suppliers. However, in some cases, switching costs for service firms can be quite significant. The threat of forward integration by suppliers is very high. Indeed, several computer hardware and telecommunications suppliers already participate in the information services industry. The threat of backward integration by service firms are also high. Some service firms have made acquisitions and merged with suppliers. Others have taken equity positions, established joint ventures and strategic alliances. The Bargaining Power of Suppliers is attractive for the industry.

The Threat of New Entrants is increasing dramatically (see Exhibit 3). A growing number of computer hardware and telecommunications firms (who are also suppliers) are beginning to provide information services, especially system integration services. Although several of these new entrants may have the technology and in some cases the capital base, they lack the experience, infrastructure and the economies of scale to compete effectively

in the short-run. A reputable company name and solid image is critical to achieving and sustaining success. Building that kind of brand equity takes time. There is little differentiation in service offerings. However, the real metric for service firms is their ability to meet the contract requirements. This may require significant innovations by the service provider in order to satisfy the customer's need. Therefore, the Threat of New Entrants is mildly attractive in the short-term, but will likely become unattractive over the long-term.

**Competitive Positioning**

Prior to the implementation of its change initiative, EDS stated its mission as:

"Helping customers increase their profitability by harnessing the myriad of information technologies."\(^1^1\)

The company continues to capitalize on its quest for leadership by addressing the "Impact Gap". This gap represents the lag between the ability to invent technology and the ability to apply what is invented in a productive, cost-effective manner that enhances a company's business performance. Since it was first established in the early 1960's, EDS has excelled in filling the gap for many of the world's leading companies. EDS is the recognized leader in providing outsourcing or facilities management, system integration, and systems development services. The company has established and maintained its leadership position by developing a set of unique competencies (see Exhibit 4).

*Firm's Infrastructure:* EDS boasts perhaps the most experienced management team (20 years average EDS experience) in the information

\(^{11}\) General Motors Corporation Annual Report, 1993

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services industry, especially in the outsourcing and systems integration segments.

*Human Resources Management:* Much of the company's leverage comes from its dedicated, stable, highly-trained and productive workforce (see Table 4-2) who are very familiar with the latest software and hardware technology. Although productivity growth has slowed in recent years, it is the ability EDS' employees to creatively apply technology that allows company to consistently close the "Impact Gap".

Table 4-2
EDS Employee Productivity Statistics

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<tbody>
<tr>
<td>56,000</td>
<td>61,000</td>
<td>65,800</td>
<td>70,500</td>
<td>70,000</td>
<td>80,000</td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Revenue per Employee</th>
<th>$96,000</th>
<th>$98,700</th>
<th>$106,800</th>
<th>$115,700</th>
<th>$122,300</th>
<th>$126,250</th>
</tr>
</thead>
</table>

Source: EDS Annual Reports

Since Ross Perot's era, EDS has been known for its hard-driving, results-oriented culture. At times its culture has been called "militaristic", where EDS dictates terms to its customers. This perception regarding EDS' culture, is perhaps a direct result from Perot's own military background as well as the company's propensity during the 1960's and the 1970's, to hire people with military experience. However, through this culture, EDS has been able to forge a strategy which has allowed the company to consistently create value for its customers. Indeed, Alberthal remarked; "As a company, we're all about service. And since we don't manufacture a product in the traditional sense,
EDS employees everywhere assume a strategic role in the company's success."12

**Technology Development:** EDS also creates a competitive advantage through its access and use of enabling technologies, such as, EDS*Net, the world's largest private digital telecommunications network. In addition, the company has vast computing power, and computer-aided design and manufacturing (CAD/CAM) capabilities. The economies of scale generated by this infrastructure has allowed EDS to lower the information processing costs of its customers and to accurately estimate the costs of providing these services over the life of a long-term contract.

**Procurement:** Because of its considerable investment in technology, EDS has tremendous purchasing power. Therefore, EDS brings significant negotiating leverage to its discussions with suppliers.

**Operations:** EDS*Net allows the company to provide customers with an integrated package of data, voice, and video communications. This network forms the link between the Information Management Center (IMC) and 19 distributed Information Processing centers (IPCs). Through the IMC's network of more than 278,000 data terminals and 287,000 telephones, EDS' network operators can pinpoint a customer problem 24 hours a day, 365 days a year.

EDS' computing power and infrastructure is also quite vast. The company has over 110 global mainframe sites, 6,100 MIPS of computing power, 28,321 billion bytes of disk storage, and 150 mainframes.

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12 *General Motors Corporation Annual Report*, 1993
Marketing and Sales: EDS has used its strong reputation for quality and excellence, to build a tremendous brand franchise and broad base of customers. As a result, the company has been able to sell its services to most FORTUNE 500 companies and to the government. The long-term nature of most contracts allows EDS to leverage its image and reputation to gain new customers. The company also enjoys a very high degree of customer satisfaction, as shown by a contract renewal rate exceeding 75 percent. From 1986 to 1990, the average length of contracts increased from 66 months to 79 months. Finally, many of EDS' competitors do not have comparable financial resources. This gives EDS a competitive advantage in structuring more innovative contracts. For example, the System One contract with Continental Airlines, and more recently the Enron contract.  

EDS has a highly competent and experienced sales force. However, the company has also been noted for pursuing a take-it-or-leave-it attitude with its customers. But with increasing competitive pressures, EDS is in the process of re-inventing its marketing approach as part of its Corporate Initiative 5 (CIS) strategy process.  

The overall strength of EDS' value chain (see Exhibit 4), has positioned the company as the leader in the first tier of information services firms (see Exhibit 5). When compared with its peer group, EDS' strengths far outweigh its weaknesses, reinforcing its leadership position in the industry (see Exhibit 6).

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EDS' has been able to sustain its leadership position since Ross Perot founded the company in the early 1960's. However, will it be able to sustain its competitive advantage through the 1990's, as the industry becomes increasingly competitive? We will examine three factors that will affect EDS' ability to sustain its competitive advantage: (1) Commitment, which is based on EDS' development of resources and capabilities through its investments in durable, specialized and tradable factors; (2) Scarcity, factors that are not easily imitated or substituted; (3) Appropriability, the ability of non-owners to initiate hold-up or slack in the company.

**Sustainability**

*Commitment:* EDS has continued to aggressively leverage its management infrastructure, human resources, technology and operational infrastructure, and its extensive commercial and governmental relationships.

The management team remains mostly home-grown, with more than 20 years average EDS experience. Turnover is almost non-existent at the senior management levels, giving EDS the most experienced management team in the information services industry. However, the management team also lacks genetic diversity, and one would suspect that these managers have similar mental models.

Through two acquisitions (MDSI 4,900 employees and SD-S over 2000 employees) and targeted hiring, the company has continued to carefully build its workforce. Since 1991, EDS' workforce has increased from 61,000 employees to over 80,000. Such rapid growth in the workforce could stress EDS' employee training and educational systems, and negatively impact the high standard of quality among its employee base. In addition, finding the right people to drive
the company's growth through the 1990's, could prove increasingly difficult and expensive, as competitors go after the same people.

Since 1988, EDS has increased its capital investment from approximately $300 million to over $1 billion, with the sharpest increase coming in 1994 ($1.5 billion). The company is expected to continue investing aggressively in order to lead the changeover from mainframe-based computing to client-server computing. With continued investment in EDS*Net and computing power, the resulting economies of scale will be difficult for competitors to overcome.

*Scarcity:* In the long-run, perhaps the only "sticky factors" that may remain unique to EDS are: its managerial infrastructure, its human resources and its marketing and sales expertise. With a growing number of technologically sophisticated, well capitalized computer hardware and telecommunications companies beginning to provide information services, EDS' technological advantage will likely erode. However, the real key to EDS is in its people and its culture. Indeed, Alberthal described; "EDS believes that the key to future success ultimately rests with its own people."15

* Appropriability:* There is little *threat of Hold-up* by non-owners, because of EDS' considerable purchasing power and negotiating leverage with computer hardware, software and telecommunications suppliers. Additionally, the company has equity interests (20% interest in Hitachi Data Systems, an IBM compatible mainframe manufacturer), and has established strategic alliances with some of the non-owners. EDS also enjoys a high level of

15 *General Motors Corporation Annual Report,* 1993
customer satisfaction, which results in a contract renewal rate of between 75 and 80 percent.

There is little Threat of Slack by employees. Employee productivity (see Table 4-2, page 40) has increased every year since 1988, and the company's growth is fueled by its employees.

As we mentioned earlier in this chapter, EDS has demonstrated outstanding financial performance. The next section examines some of the key financial indicators, in order to further explain the company's performance.

**Financial Analysis**

*Stable and Growing Revenue Stream:* In 1994, EDS generated a recurring revenue stream of about 80 percent from its total revenue. As a result, EDS' earnings carries a high degree of consistency with minimal downside risk. With additional services contributing another 10 percent to the top line, only 10 percent of EDS' annual revenue stream comes from new business. Revenues have grown at a compound rate of 63 percent since 1988 (see Exhibit 7). This high degree of earnings stability derives from the long-term nature of most of EDS' contracts. Since 1986, the average length of those contracts have increased from over 5.5 years to 6.5 years.

*Consistent Double-Digit Earnings Growth:* During the last five years, EDS grew its pretax and net income in excess of 50 percent compounded annually (see Exhibit 7). In 1985, with the absorption of more than $2.4 billion in GM revenue, EDS quadrupled in size while managing to grow its base business (non-GM) at a 25 percent annual rate. During this period, pretax
margins consistently exceeded 10 percent and showed a steady recovery from 10.5 percent in 1985 to 13.2 percent in 1993, with a slight dip in 1991, 1992 and 1994 (see Exhibit 7). The slight decline in pretax margins for 1991 and 1992 may be associated with the acquisitions of MDSI and SD-S. Most of the decline of pretax margins for 1994 can be traced to increased costs of doing business. However, this could also be a sign of increasing pricing pressures.

**Low Economic Risk:** There has been little correlation historically between EDS' revenue growth and the economic cycle. Its leading position in a growth industry has insulated it from fluctuations in the economy. During the 1970's, EDS' revenue in constant dollars grew at a compound annual rate of 32 percent versus 2.8 percent for real Gross Domestic Product (GDP). The trend continued during the 1980's, as EDS logged real compound annual revenue growth of 38 percent, compared to real GDP growth of 2.6 percent. As the economy enters a recession, the demand for EDS' services increases as companies are pressed to reduce their operating costs and increase their productivity.

**Comparative Return on Equity Analysis:** EDS has consistently recorded the highest Return on Equity (ROE) in the information services industry (see Exhibit 8), ranging from 31.2 percent in 1988 to 25.2 percent in 1990. In 1991 and 1992, ROE dipped to 22.9 and 20.6 percent respectively. Most of this decline can be traced to a reduction in leverage and recent acquisitions. From 1988 to 1991, EDS reduced its loan from GM to $6.0 million from $313 million. At the same time, robust earnings growth lifted shareholders' equity from $1.4 billion to $2.6 billion. Currently, EDS' shareholders equity exceeds $4 billion. However, a discomforting trend can be
seen in the company's ROE. It continues a steady march towards the industry average.

**Value Creation Analysis:** At the close of 1993, GM-EDS (GME) shares sold at a 9 percent premium to the 1993 S&P Industrials. However, the stock traded at a 14 percent discount to the information services group of stocks, which sell at a 30 percent market premium. Given its leading position in the industry, its history of double-digit earnings growth and its improving earnings prospects, the stock appeared to be undervalued at its current price.

EDS' calculated cost of capital is 14 percent (see Exhibit 9). Since the company's 1994 ROE (19.4%) is greater than zero, and it is greater than the company's cost of capital, then the company is earning both accounting and economic profits. Using EDS' actual and estimated free cash flows between 1992 and 1997, yields a terminal value as a growing perpetuity of $12.7 billion (see Exhibit 7). The calculated terminal value for EDS as a stable perpetuity is $3.6 billion.

**Financial Forecast:** In 1994, EDS continued to invest, as it integrated its recent acquisitions and brought several large new contracts on stream. The MDSI and SD-S acquisitions were expected to be earnings neutral by 1993. Beyond 1992, EDS' earnings could grow 15 to 20 percent annually, as high-growth base business steadily captures a dominant share of the revenue stream. Non-GM revenues are expected to grow at a rate of 25 percent annually, through 1997. By the end of 1995, GM revenues should account for only 31 percent of total revenues, down from 71 percent in 1985.
CHAPTER 5

Conditions for Strategic Change

In the previous chapter, we presented a number of changing conditions that could drastically affect EDS' future, as the defining entity in the information services industry. These external factors when analyzed further, paint an increasingly uncertain competitive environment for the company.

Two of the most influential changes that could impact EDS' strategy, are the migration towards industry technical standards and the "information superhighway". These external factors are likely to lower buyer switching costs, which are relatively high. The high costs associated with switching information service providers, deters customers from terminating or not renewing their contracts. Technical standards may also make it more difficult for service companies to differentiate their offerings, since the products they integrate will now be using the same standards.

The "information superhighway" -- dubbed for its ability to link universities, business, government, libraries and home users via computers, modems and phone lines -- will offer keyboard access to reams of information.\footnote{King, R.J. "Workers cheer -- but doubt -- EDS merger", The Detroit News, May 17, 1994: Sec. E; p. 1} Although EDS has the world 's largest private digital telecommunications network, it is unlikely the company would be able to aggressively participate in the superhighway, without a strong relationship with a major telecommunications company. Indeed, with some of the well capitalized telecommunications companies (ex. AT&T) already starting to

\footnote{King, R.J. "Workers cheer -- but doubt -- EDS merger", The Detroit News, May 17, 1994: Sec. E; p. 1}
provide information services, EDS has pursued mergers with British Telecom and Sprint. Both deals collapsed, but in the near future EDS is likely to establish some type of relationship with a telecommunications company. Such an arrangement will provide EDS with lower phone line charges, thereby allowing the company to be more competitive, especially in the growing overseas market.

A significant segment of the company's customer base are migrating to client server technology. This computing environment is less stable and requires different types of skills than the traditional mainframe skills on which EDS built much of its success.

A possible spin-off by GM could also affect the EDS' flexibility. Although the company has been managed autonomously from GM, it depends on a significant portion of its revenue from General Motors and its other subsidiaries. In addition, as part of the spin-off, GM could burden EDS with debt, thereby limiting the company's flexibility as a stand-alone entity.

The increasing trend of using management consulting as a pull-through for gaining outsourcing and systems integration contracts could impact EDS' contract renewal rate. If competitors earn the consulting business in a firm, they are likely to use their own organizations to address the customer's outsourcing and systems integration needs, versus giving the business to rival company. In 1991, EDS established a management consulting division. Although the business has grown rapidly, it still lags several of its key competitors in this rapidly growing segment. Additionally, it is still unclear what role the Management Consulting Services (MCS) division is
expected to play within EDS. Its consultants are being hired at salaries far exceeding traditional EDS employees, which could create some backlash. Also, will MCS be subordinate, equal partner or lead SBU when working with existing EDS customers?

A significant number of EDS' customers are increasingly focused on the global marketplace. Currently, EDS generates less than 25 percent of its revenue from non-US operations. When compared with two of its key rivals, IBM and Arthur Andersen Consulting (non-US operations contributes well over 40 percent of revenue), EDS trails in non-US representation. The company's efforts in this area are critical to maintaining its base of global customers. EDS' recent acquisition of SD-S appears to be part of its strategy to close the gap.

Finally, maintaining highly-motivated, results-oriented workforce, is critical to EDS' growth strategy. Finding and training the right people could prove increasingly difficult, as competitors go after the same candidate pool and perhaps bid-up wages.

These exogenous forces in addition to others, played a key role in influencing EDS to launch a preemptive strike to try and reinvent itself before it faced a crisis. The company had the foresight to recognize the need for change and began a series of corporate initiatives to transform the organization.
Internal Conditions Driving Change

During the entrepreneurial and chaotic eras, EDS was run without any type of formal strategic planning process. Indeed, many companies have become successful without systematic attention to strategy. Typically, its founder had the vision and/or luck to select a favorable domain plus the capability to exploit this growing market. The employees counted on Perot and his handful of executives to give direction and make the decisions. Indeed, the strategic direction was relatively straightforward, "Do whatever it takes to make the deal and satisfy the customer." The company was strong on execution, which was exactly what its customers wanted. Throughout this period, EDS was essentially, "An opportunity-driven sales company."

The combination of rapid market growth and lack of any real competition, created an environment in which strategic planning was not critical to the company's success. EDS could essentially rely on Perot and a small band of executives to formulate the company's strategy. At some point however, most large companies need some type of strategic planning, especially in today's turbulent business world. There are just too many potential changes for one person or a small group of people to comprehend them all. Moreover, a shift in strategy for a large company usually requires changes by several departments, business units, etc., and predicting the results of such adjustments requires specialized knowledge. This level of knowledge is usually not held at the top executives of the firm.

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With Perot leaving and Alberthal taking the reins, Alberthal proceeded to try and change the way EDS had been run. He recognized that the company needed to, "better leverage its assets and operate more as a team." EDS was now a company of well over 50,000 employees and had revenues of almost $3 billion. Managing EDS was becoming an increasingly complex task. Alberthal believed the company needed to conduct a careful strategic analysis, in order to better understand the issues it was facing and to help define the company's future direction. It appears he viewed strategy as a potentially powerful tool in transforming the organization. During the fall of 1988, EDS initiated its first formal strategic planning process -- Plan 95.

**Plan 95**

Plan 95 was developed over a twelve month period (completed fall of 1989), with a team of about 20 people. The team included several of the company's senior officers and small group of hand-picked people, who were considered some EDS' brightest. The main emphasis of the planning effort centered on examining the company's external business environment and defining the company's future expectations. As a result of the planning effort, the new vision and value statements were communicated throughout the company. In addition, EDS established goals of being global and being a $25 billion corporation.

The company quickly put Plan 95 into action by reorganizing into 39 SBU's (Strategic Business Unit) and SSU's (Strategic Support Unit), and establishing a Corporate Strategy group. EDS also made a series of acquisitions to broaden its scope in the industry and expand its global reach, particularly in Europe.
However, Plan 95 was considered to be "rudimentary" by some of the people who participated in the strategic planning process. They felt the Plan was not looking forward looking enough to really drive strategic change because, "no actionable went further than 6 months into the future." Indeed, Hamel and Prahalad in their book *Competing for the Future*, note that the goal of strategy, "is not simply to benchmark a competitor's products and processes and imitate its methods, but to develop an independent point of view about tomorrow's opportunities and how to exploit them." In addition, these team members were concerned that Plan 95 could merely become an incremental approach to strategy. Recognizing that strategic planning usually depends on defined sets of categories, these categories almost always reflect what already exists in the organization. In other words, planning tends to map onto the current used categories, strategic as well as structural; it does no tend to invent new ones.18 The Plan 95 sub-group also believed that the team lacked corporate diversity. That is, the team that created Plan 95 were primarily senior officers and other mid-level managers with similar managerial frames, versus a broad cross-section of the company.

Coincidentally, while some members of the Plan 95 team were reconsidering the robustness of the strategic process, a relationship was struck with Gary Hamel. Hamel a world renowned author, lecturer, consultant and instructor at the London Business School (LBS), was planning to offer a 4 - 5 day seminar on global leadership. A member of the Plan 95 team developed a relationship with Hamel and was intrigued by his thinking about strategy,

especially, "why companies surrender leadership?" The Leadership Council was scheduled to hold one of its meetings in London, during the fall of 1990. Hamel was invited to address the company's senior officers, while they were visiting in the United Kingdom.

Hamel's presentation was titled, "Why Great Companies Surrender Leadership." The Leadership Council was asked to consider the characteristics that undermine the success of industry leaders. Figure 5-1 illustrates the model Hamel presented.

As the EDS executives evaluated the factors which lead to failure, they concluded that EDS was not immune from the "industry leader disease." They committed themselves to ensuring that EDS remained the defining entity for the information services industry. In fact, upon returning from London,
Alberthal directed a member of his staff to determine how many Fortune 500 companies (based on market value) in 1970 still existed in the same form in 1990. The results were startling, less than 40% of these firms were still considered Fortune 500 companies. Table 5-1 provides an example of similar data ranked by market value.

Table 5-1

<table>
<thead>
<tr>
<th>1972</th>
<th>1982</th>
<th>1992</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM</td>
<td>$46.8</td>
<td>Exxon</td>
</tr>
<tr>
<td>AT&amp;T</td>
<td>29.2</td>
<td>AT&amp;T</td>
</tr>
<tr>
<td>Eastman Kodak</td>
<td>23.9</td>
<td>Exxon</td>
</tr>
<tr>
<td>General Motors</td>
<td>23.2</td>
<td>General Electric</td>
</tr>
<tr>
<td>Exxon</td>
<td>19.6</td>
<td>General Motors</td>
</tr>
<tr>
<td>Sears-Roebuck</td>
<td>18.2</td>
<td>RoyalDutch Shell</td>
</tr>
<tr>
<td>General Electric</td>
<td>13.3</td>
<td>Eastman Kodak</td>
</tr>
<tr>
<td>Xerox</td>
<td>11.8</td>
<td>Schlumberger</td>
</tr>
<tr>
<td>Texaco</td>
<td>10.2</td>
<td>Toyota Motor</td>
</tr>
<tr>
<td>3M</td>
<td>9.7</td>
<td>Amoco</td>
</tr>
<tr>
<td>P&amp;G</td>
<td>9.1</td>
<td>Chevron</td>
</tr>
<tr>
<td>RoyalDutch Shell</td>
<td>9.1</td>
<td>Mobil</td>
</tr>
<tr>
<td>Coca-Cola</td>
<td>8.9</td>
<td>Sears Roebuck</td>
</tr>
<tr>
<td>Du-Pont</td>
<td>8.4</td>
<td>Atlantic Richfield</td>
</tr>
<tr>
<td>Ford Motor</td>
<td>8.0</td>
<td>Hitachi</td>
</tr>
</tbody>
</table>

Source: FORTUNE, June 1994
Note: Strikethru in 1972 identifies companies not ranked in the top 15 for 1992.

After listening to Hamel's presentation and reviewing the Fortune 500 data, Alberthal and some members of the Leadership Council were determined to act.
Birth and Nurturing of Corporate Initiative 5

In June 1991, EDS selected six people, some of them members of the Plan 95 team, attended Gary Hamel's Global Leadership seminar at the LBS. The seminar had a profound effect on the EDS executives and they returned with a totally new view of strategy. One executive took copious notes and reorganized them into alternative way to conduct the seminar. The alternative approach was provided to Hamel for him to review. He was so impressed with the redesign, that it led to discussions concerning him possibly working with EDS.

The six executives that had attended Hamel's seminar, started to meet on informally on a regular basis to discuss, "What they wanted to do as a result of the learnings from the seminar?" They pondered questions like, "What makes us believe that EDS will be different than any of the Fortune 500 companies we researched?", "Does any of what we learned apply to the service industry?", and many other difficult questions. They continued to meet over the next three months. During that period they began to utilize some of the techniques they had learned at the seminar. They consulted and met with Hamel a few times to help fine-tune their thinking. They began to work through, "What was EDS' strategic intent?" and "What were EDS' core competencies?" The group was essentially rethinking EDS' strategy.

At some point, a member of the Leadership Council heard about the group and asked one of its members, "What is that rump group doing?" The member replied, "Oh, we're changing the company?" The group started to expand as the initial members realized they lacked expertise in certain areas. They invited people from technology areas, non-U.S. managers, and a person

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19 Rump Group - British term for an informal group who share common interests.
from corporate strategy to join the group. There were now 10 to 12 people
meeting regularly and discussing how to change the company. Approximately
six months into the activity, the group paused to compare and contrast the
Plan 95 effort with this still as yet unsanctioned process. They reached
consensus that, "In order to create a greater sense of urgency, EDS needs a
process that will generate a much deeper and collective sense of ownership."

It turns out that at the same time the group was reaching its consensus,
the Leadership Council was developing its corporate agenda. The corporate
agenda were four initiatives the company should focus on for the next 12 to 18
months. Although this thesis only focuses on Corporate Initiative 5, the other
four initiatives included:

*Corporate Initiative 1:* Develop processes that will make EDS a well
managed company.

*Corporate Initiative 2:* Develop a robust European strategy.

*Corporate Initiative 3:* Define Leadership for the 1990's.

*Corporate Initiative 4:* Operationalize Quality within EDS.

So, approximately 6 months after the "rump" had started to meet, some of its
members went to Alberthal and suggested that, "One of the things that should
be on the corporate agenda is the next generation strategic plan. We think
the plan ought to be based on Gary Hamel's concepts and have broad
participation." Having attended Hamel's presentation in 1990, Alberthal was
well acquainted the issues the group had been discussing. He agreed to
sponsor the activity and dubbed the next generation strategic plan, Corporate
Initiative 5.
Alberthal choose the Corporate Initiative 5 moniker (later called CIS), because there were already four corporate initiatives that he and the Leadership Council had already decided to pursue. CIS would become the fifth initiative, the regeneration of EDS' strategy. Corporate Initiative 5's mission was to revitalize EDS and reposition it for continuing industry leadership.20 That is, formulate a corporate direction based on a deeper and broader view and align corporate behaviors and practices with that view.

The participation of the six executives in the LBS global leadership seminar and the meeting between Hamel and the Leadership Council, were really the two events that triggered the Corporate Initiative 5 effort. But perhaps we are overlooking an even more obvious factor, fear. That is, recognizing that EDS had many of the characteristics of great companies who eventually failed, and the fear of becoming a statistic, motivated Alberthal and the Leadership Council to seek strategic change, beyond Plan 95.

Much of what has been described in this chapter, may be viewed through a theoretical lens, using Schein's model of planned change. Most of this chapter's content could be considered the Unfreezing stage of Schein's model, where the motivation was created for EDS to seek change. Disconformation occurred when the company's leadership and a few executives recognized that many of the characteristics outlined in Hamel's seminar, existed within EDS. This caused these executives experience varying levels of Anxiety and reinforced their need to seek change. Finally, Alberthal provided Psychological Safety by sanctioning the "rump" group and becoming

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its sponsor. This allowed the group to move forward with organizing and implementing the strategic change process.
CHAPTER 6

Organizing and Executing Corporate Initiative 5

Although recognizing the need to change is perhaps the most critical phase of any change process, defining the activities and commitments needed to implement the change, and managing the transformation process itself are just as important. Indeed, Beckhard and Harris point out that, "In managing the overall change process it is always important to (1) determine the major tasks and activities for the transition period, and (2) determine structures and management mechanisms necessary to accomplish those tasks."

Another important step in this process, is the setting of goals and defining the future state, or organizational conditions desired after the change. It appears that, Corporate Initiative 5 (CI5) had multiple goals:

- Enhance the strategic skills of the people involved in the change process.
- Formulate a corporate direction based on a deeper shared view.
- Alignment of corporate behaviors and skills with the corporate direction.

These goals, provided a framework on which to organize and execute the CI5 effort. The "rump" group, now officially called the Corporate Change Team, (CCT) was charged with developing the tasks and activities that would comprise CI5. The CCT was also responsible for implementing the initiative. Membership of the CCT had expanded from the six executives who attended the Hamel seminar, to approximately 12 people. The team now included, domestic and overseas line managers, a person from corporate strategy, people from
the technology area, administrative staff, marketing managers and group executives.

**How Do We Do This?**

A few members of the CCT had experience in formal strategy development, prior to their joining EDS. However, most of the group wondered, "How do we do this?" That is, no one really knew how to begin the process. Hamel had been working informally with the team's original members, so it was recommended that the CCT formally request Hamel's help in designing the CI5 process. This was very practical recommendation, since the team had already informed Alberthal that the next generation strategic plan should be based on Hamel's concepts. Some members of the team began to meet with Hamel. In addition to Hamel, the CCT sought advise from several academics, lecturers and consultants, including Yves Doz from INSEAD, Lester Thurow form MIT, futurist Joel Barker, and others. Eventually, from a blank sheet of paper and with guidance of Hamel et al, they designed a multiple step process that became the basis for the strategic change model - CI5.

The strategic change model was based on first creating a shared view or mindset among a diverse group of people selected from throughout the company. Second step focused on using a shared view formulate a corporate direction. The last step of the change model was to align corporate behaviors and practices with the new direction. Figure 6-1 illustrates the flow of the CI5 strategic change model.
In order to develop a shared mindset on which to set the corporate direction or strategy, the team designed a reinvention framework. The reinvention framework utilized several of the concepts outlined in Hamel and Prahalad's book, *Competing for the Future*. Figure 6-2 describes the framework in more detail and illustrates the reciprocity between each of the concepts.
Based on the reinvention framework, the CCT decided to establish five teams. These teams would be the basis for developing a shared view.

The teams were called WAVES. How the CCT developed the name is unclear. However, one can visualize that after completing the CI5 process, each WAVE would be expected to return their respective organization and share their learnings. This would help to spread the corporate direction and perhaps gain alignment more quickly. Each WAVE would have approximately 30 members, making it total of approximately 150 people who would participate in the process. Each WAVE would attend a series of workshops which would include an abridged version of Hamel's Global Leadership seminar and number of exercises. They would be assigned a discovery assignment focused
a specific area of the reinvention framework. Figure 6-3 provides a graphical representation of the WAVE concept.

Figure 6-3
EDS WAVE Concept

Source: EDS Corporate Strategy

The discovery assignments were designed to help people explore ideas related to a specific area (ex. core competencies). The WAVE participants would then discuss the implications of their ideas and arrive at a collective point of view. This shared point of view would eventually be incorporated into the corporate direction. Each WAVE was assigned a support team. The support team included a coach and analysts. The coach's role would be act as facilitator during the workshops. The analysts would be responsible for researching and gathering information related to area being addressed by the WAVE. The Leadership Council was updated on a regular basis regarding the progress of
the CCT. In fact some council members were directly involved in the process used to nominate candidates for the WAVES and the support team.

**Selection of Participants**

From its early stages of development, one of the key criteria for creating EDS' next generation strategic plan was, it had to involve a broad cross-section of the company. The CCT designed a rigorous process to ensure they would meet their objective. WAVE participants and the support team were selected primarily for their ability to think "outside the box", and their potential to change their own mental models and become a change agent within the company.

Candidates were nominated by the CCT. They drew candidates from the company's progression and succession process. However, it is important to note that the people selected were not just the top 150 people within the company. The CCT wanted people who were, "going to be the next generation of EDS leaders, not necessarily the current." The CCT audited the candidate pool for diversity, "not just race and gender, but we looked for international representation proportionate to the non-U.S. revenue we wanted to have 10 years out." In order to ensure the WAVES had organizational depth, candidates were selected up to seven organizational levels below the Chairman's office. An effort was made to have no more than two people from the same business unit participating on the same WAVE. Figure 6-4 graphically presents the selection criteria used select WAVE candidates.
The lists of nominated candidates were routinely presented to Alberthal for his review and final approval.

**Barriers to Execution**

Prior to launching the workshops and seminars, a debate ensued over what role the Leadership Council should play, since they had been so central to the Plan 95 effort. Some members of the council expected that they would be the focal point of the C15 effort. Indeed one member of the leadership council commented, "My knothole is bigger than most people. All you (CCT) will get by
involving a lot of people, is that it will take a lot of time and you will get mediocre results because everything will have to done by consensus." He went on to say, "If you'd just come up to my office and write down what I have to say, then we could get done a lot quicker." The debates continued until the CCT was finally able to arrange a one and half day offsite meeting with the Leadership Council to present their implementation plan for CI5. Gary Hamel also attended the meeting in a supporting role.

As expected, the offsite meeting was quite lively, with a great deal of debate concerning the role of the Leadership Council, and the depth and breadth of the initiative. Alberthal allowed the debate to continue for awhile. According to some of the people attending the meeting, Alberthal finally said, "You all think back to where you were 8 to 10 years ago and tell me that you didn't have a good idea, and you didn't think top management wasn't listening at the time." It seems that Alberthal was trying to get members of the Leadership Council to empathize with the difficulty or barriers that exist, in sharing ideas with the top of the corporation. Eventually, the Leadership Council agreed to let the CCT be the focal point of the CI5 process. Figure 6-5 illustrates the key stakeholders involved in CI5.
It was also agreed that the CCT would continue to meet with the Leadership Council and provide regular progress updates on CI5.

The Execution of CI5

Having gained the approval of the Leadership Council, the CCT proceeded to invite the people nominated, to the first in a series of workshops for each WAVE. The WAVES were not run concurrently, but sequentially (as shown in Figure 6-3 on page 56). There were five WAVES: WAVE 1 focused on Industry Drivers, WAVES 2 and 3 addressed EDS' Core Competencies, WAVE 4 developed "white space" opportunities and WAVE 5 designed the Foundations for Change within the company. There was some overlap between WAVES 2 and 3, but essentially the WAVES were designed to feed into each other.
Participants were informed of their selection in a variety of ways, but most were notified through their supervisor. Although they were unsure of what would be expected of them, most of the participants were elated when told that they had been selected. None declined the invitation. In fact, it appears that all invitees viewed their selection as a great honor. It turns out however, that later as the WAVE workshops progressed some of the participants had to withdraw due to pressing job responsibilities.

In June 1992, the first workshop for WAVE 1 was held offsite in Leesburg, Virginia. Approximately thirty people participated in the workshop, which was an abbreviated version of Hamel's LBS seminar. Throughout this initial workshop, most of the time was spent with Hamel lecturing or leading a discussion. There were breakout sessions were people would go off and work in sub-groups on various exercises. WAVE 1's discovery assignment was focused on Industry Drivers.

The group dynamics for this inaugural WAVE 1 workshop was relatively formal. Most of the sessions were led by a coach or someone from academia. In addition, a number of senior managers participated, which may have intimidated some of the participants who had not been previously exposed to that level of management. However, it seems that people were encouraged by what they saw and learned at this first workshop. One of the WAVE 1 participant I interviewed, who attended this first workshop remarked, "In WAVE 1 there were a lot very sharp people, I was impressed....it was impressive and reassuring to see that the company had a lot of sharp people who thought strategically." This individual went on to say, "During the early stages of the
workshop, many of the participants were saying, yeah, we're more or less
doing things right things....but by the end of the class I think virtually
everyone - with the exception of one or two people - had shifted their
thinking and saying, we need to be doing a lot more."

With each ensuing WAVE 1 workshop, which were all held offsite, the
barriers of formality were eventually eliminated. The follow-up workshops
required much more debate and deliverables. The debates were highly
constructive and yielded innovative strategic thinking. Indeed one of the
analyst I interviewed said, "When the sub-group discussions or action
learning exercises were actually in progress and you had eight people
debating an issue, I was amazed at how people transformed themselves to not
being the senior officer or the systems engineer anymore, but equals sitting
around discussing an issue." The increase in informality may be attributed to
the fact that the workshops were held offsite, people were dressed casually and
at times the workshops were held on weekends, and in the evenings. This
environment perhaps created Psychological Safety for most of the
participants, thereby enabling them to change their behaviors.

WAVE 1 was able to deliver a robust analysis of future industry drivers that
would be most important to EDS. For example, The Importance of Children in
EDS' future was described as follows:

"The increase in the number of computer-literate children will
significantly affect the nature of the information industry. As
they mature, they will expect business applications to have the
same advanced interfaces, built-in feedback loops and other intuitive features they have become accustomed to."^{21}

There were a total of thirteen drivers identified by the group. They were incorporated into the reinvention framework, which would be used to formulate the corporate direction.

I will not debate the viability of the industry drivers, because what is important to this thesis is the construct used to produce these drivers. As was previously mentioned, strategic planning as a concept was still new to much of EDS. Therefore, my area of real interest was how the company used strategy as an intervention tool to transform the organization.

As the first WAVE through, WAVE 1 provided most of the discovery for the entire WAVE process. Towards the end of the first workshop, some of the participants became concerned that mechanism was needed to formally integrate the WAVES. A decision was made that two people would be selected from each WAVE (1-5). It is interesting to note at this point, that the WAVE 1 people selected play this role, were chosen unilaterally by one the managers attending the workshop, versus through consensus or volunteering. Later on however, the other WAVES (2-5) sought volunteers.

These ten people would meet on a regular basis to ensure that each information and knowledge would be transferred between each successive WAVE. The volunteers who assumed this role were called the "linking-pins." Initially, no one seemed to know how or why this name was selected. However,

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I learned later on that the name had been selected by Corporate Strategy from Hax and Majluf's book, *The Strategy Concept and Process: A Pragmatic Approach*. Hax and Majluf describe "linking-pin" as: An integrating role aimed at coordinating the activities of two or more units of the firm.

The activities of the succeeding WAVES (2 - 5) will not be discussed in this thesis, since the strategic change process was quite similar for each group. WAVE 1 provided the bulk of the learnings, which were used to fine tune the process for the other WAVES. The WAVE process itself was completed towards the end of 1992. Over the next six months the CCT along with the Corporate Strategy group (acting as Subject Matter Experts) integrated and synthesized the results from the WAVE groups. This resulted in the formulation of a new corporate direction or strategic intent, as well as a new strategic architecture or blueprint for building EDS' competitive advantage.

In June 1993, the CCT arranged a strategy summit with the Leadership Council and group executives. The proposed strategic intent and strategic architecture was discussed and debated, but eventually the group reached consensus. The company's strategic intent was now:

"EDS will be the leader in shaping how information is created, distributed, shared, enjoyed and applied for the benefit of enterprises and individuals worldwide."\(^{22}\)

The interesting thing to note regarding this statement, is the inclusion of the words "enjoyed and individuals". These were new words in EDS' strategic

\(^{22}\) "Rearticulated Vision", *EDS Connections*, April 1994: p. 9
vocabulary. As a result of the CI5 process, EDS had expanded its scope beyond its traditional business to business focus to include information opportunities that directly affect consumers.

The strategic architecture that would now be used to evaluate previously unidentified and unexploited competitive areas, was based on three dimensions:

*Globalize:* The ability to make products and services pervasive by thinking globally and acting locally.

*Individualize:* The ability to provide products and services that are perceived as having been selected, designed and/or developed uniquely for the customer.

*Informationalize:* The ability to translate data into useful information and information into knowledge.23

Again, the key dimension to note in this new architecture, is the increased focus on individuals.

The success or failure of CI5 must be measured against the original goals of the initiative. Since these goals were instrumental in providing the framework on which CI5 was organized and implemented, it is important that we evaluate CI5's outcomes using that background. In the next chapter we will discuss the outcomes of the CI5. In addition, we will attempt to determine the permanence of the organizational transformation.

CHAPTER 7

Analysis of CI5 Outcomes

The goals or objectives articulated by the Corporate Change Team (CCT) provide a framework on which to analyze the outcomes of CI5. We will briefly revisit these objectives in order to structure the analysis. CI5 had multiple goals, they included:

1. Enhance the strategic skills of the people involved in the change process.
2. Formulate a corporate direction based on a deeper shared view.
3. Alignment of corporate behaviors and skills with the corporate direction.

In revisiting these objectives, one of the goals that I believe may missing is, a well thought-out process on how to institutionalize and routinize the strategic change process beyond the 150 WAVE participants. We will discuss this issue further later in the thesis.

Although this was not a formal objective of the initiative, one of the outcomes from CI5 was the reconfiguration of the CCT. This occurred during the strategy summit. Some members of the original CCT remained, but essentially the team was reorganized. The new team included four members of the Leadership Council, seven group executives and Corporate Strategy. The group was renamed the Delta Force (the name Delta symbolizing change). The role of the Delta Force (DF) would be somewhat different than that of the CCT. Whereas the CCT’s role was to develop the tasks and activities which made up CI5 and to execute the initiative, the DF’s mission would be to act as a catalyst
and motivator for revitalizing EDS. The DF would also ensure the coordination of any new corporate initiatives and be the main link between the Leadership Council and the rest of the group executives.

During my investigation as to the role of the DF, it became apparent that some members of the Leadership Council may have wanted to join the CCT in order to gain more control over the change process. Indeed these members may have believed the CCT was enjoying too much influence over the corporate agenda. It is also interesting to note, where the CCT was comprised of volunteers, the people on the DF were assigned.

In addition to organizing the DF during the strategy summit, four new corporate initiatives were launched for 1994, to take advantage of the momentum generated by CI5 and to produce measurable result against the new corporate direction. Four group executives who were members of the DF, were assigned to champion these initiatives. They organized teams to address what were now called Strategic Initiatives (SIs):

Strategic Initiative 1: Global Opportunity Network --
Intended to institutionalize the processes needed to identify, screen, incubate and integrate opportunities into the organization.

Strategic Initiative 2: Core Competencies -- Design a model under which responsibility for overseeing core competencies is shared between SBU's and the oversight team.

Strategic Initiative 3: Refining Corporate Governance --
Establish a set of balanced management measures, align and
rationalize the numerous corporate initiatives, define the roles and responsibilities of senior leaders and sponsor the core process reengineering effort within EDS.

*Strategic Initiative 4: Communications and Mobilization* -- Overseer communications of information regarding CI5, but also work to engage EDS employees in meaningful dialogue regarding the impact of CI5 findings on their work and customers.

I believe all of the above initiatives were ambitious and worthy goals, given the apparent energy generated by the CI5 effort. However, during my interviews, when people were asked about the status of the Strategic Initiatives, the response was almost unanimous, "We just haven't done enough." Further interviewing and analysis revealed that although the DF meetings were supposed to focus on long-term corporate strategic issues, they tended to degrade quickly, addressing mostly short-term issues related to specific SBU's or business groups. In addition, feedback received during my interviews lead me to conclude that some of the group executives responsible for the SI's were ineffective in making significant progress with their initiative. Indeed, I believe some of them just simply did not embrace that type of work. Despite the apparent pessimism concerning the SI's, there were some successes.

**Successes**

Beginning with its first issue in January 1994, a newly launched monthly employee newsletter called EDS Connections, provided information regarding CI5 and other related strategic change activities. During the first six months of 1994, each issue carried several articles on the strategic change initiative.
A hotline was established, where EDS employees could call for further information, offer comments or ask questions regarding CI5. Although I was unable to gather any specific results concerning this communications effort, it seems that this was one way of attempting to intellectually engage employees on a broader basis.

Several of the people I interviewed are convinced that the CI5 exercise helped them to communicate better with their customer base as well as broaden their market scope. One group executive stated, "The value we've really gotten in a relatively short period of time is our ability to communicate more effectively with our marketplace.... And, our ability to position EDS from an image standpoint since we now have a better understanding of industry drivers, has had immediate returns with our customers." Another interviewee noted, "The whole notion of the consumer environment for information technology services, is purely attributable to our CI5 activities. Our radar screen was focused on business to business relationships and the consumer opportunities were never really on our screen. We don't know what to do about it yet or how to get into it....but we do know that it's an opportunity that we shouldn't let go untouched."

Beyond the sheer conviction that many people have for CI5, some of the SBU Presidents and managers who participated in the WAVE process have launched a series of projects which they attribute to CI5. Many of these projects fall under the banner of expeditionary marketing or what people at EDS call "100 meter races", which is a term borrowed from Hamel and Prahalad's book. These are projects that produce measurable progress towards the corporate direction or strategic intent.
One such project, Docunet, was launched by the Travel Services business unit and is being managed through a partnership with another company. Using a device similar to an Automated Teller Machine (ATM), consumers will be able to pick-up their airline tickets wherever the units are located. Currently, the machines are being placed in supermarkets on the East and West coasts. There are several points to note about this project. First, Docunet will leverage EDS*Net the company's vast private network. Secondly, the machine theoretically has the capability to dispense more than just airline tickets, for example, government payments like Medicare or Medicaid. Finally, this project was one of the first to directly impact the consumer, which is in line with EDS' new corporate direction.

Another project that I learned of which benefited from CI5 was started in the Financial Services Division (FSD). In this case, FSD supports consumer lending activities which includes the processing of second-tier auto loans originated by an auto dealer, booking the accounts receivable and receiving payment. Eventually, the loans are securitized and sold to the capital market. This project, essentially puts EDS into a different competitive realm. Indeed, the SBU President remarked, "Our business now, it isn't the same business that it was a few years ago...we are clearly playing in a broader market than we used to, which changes who is our customers as well as our competition."

In December 1993, a completely new and diverse business opportunity was started in Germany, with CI5 playing a key role in the strategic justification for the project. Through a joint venture, EDS planned to launch an on-line service in Germany. The entire process including the business
case was developed and driven by EDS' German unit. According to one of the industry team members I interviewed, "When we presented it to our senior management we used the company's new strategic architecture of Globalize, Informationalize and Individualize to clarify the strategic fit. Even after our joint venture partner went their own way, we didn't say, OK, let's stop, we continued on and developed a prototype. We are now negotiating with several possible partners." Upon further investigation, it turns out that the Group Executive responsible for Germany was one of the WAVE participants, hence he was already sensitive to the corporate direction.

Although these projects seem to have gained momentum as a result of CI5, I was unable to generate enough evidence to unequivocally conclude that they were all initiated due to CI5. Indeed, I believe that several of the projects may have been justified under the umbrella of CI5. There is certainly nothing wrong with that approach, since many of these projects may never have been considered prior to the Initiative. Based on my minimal understanding of the projects, it appears that some of them were truly a shift in EDS' paradigm. That is, some of the projects were "outside the box" in which the company normally operates. However, I believe none of these projects represent a true "first or early mover" opportunity for the company. For example, in Germany, several other companies like Deutsche Telekom, IBM, GE, America Online and Compuserve are pursuing on-line services. And for the remote ticket distribution opportunity, AT&T through their information systems unit (previously NCR) and Japan's Fujitsu Corporation are actively seeking to participate in this market.
Survey Results

During my investigation, I learned from one of the WAVE analyst that a survey had been administered to each of the WAVE groups. According to this individual, the surveys were developed to measure shifts in the mindset of WAVE participants. A survey was conducted for each WAVE at the first workshop and at the end of the last workshop. The structure of the questions on the entry survey was different than most of those on the exit one, and therefore, did not provide the opportunity for a full comparative analysis. However, it did provide some evidence of an overall shift in the mindset of the participants. By the end of the workshops it seems that most attendees had a greater sense of urgency regarding the need for strategic change. Table 7-1 describes the entry and exit percentages for questions related to, the need for change in EDS, the need for change in the participants business unit, and the participants personal impact on EDS' future.

Table 7-1

<table>
<thead>
<tr>
<th>Questions</th>
<th>Interview</th>
<th>Little</th>
<th>Moderate</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Need for change in EDS?</td>
<td>Entry</td>
<td>4%</td>
<td>20%</td>
<td>76%</td>
</tr>
<tr>
<td></td>
<td>Exit</td>
<td>2%</td>
<td>2%</td>
<td>96%</td>
</tr>
<tr>
<td>Need for change in Unit?</td>
<td>Entry</td>
<td>4%</td>
<td>19%</td>
<td>77%</td>
</tr>
<tr>
<td></td>
<td>Exit</td>
<td>2%</td>
<td>10%</td>
<td>88%</td>
</tr>
<tr>
<td>Personal impact on EDS?</td>
<td>Entry</td>
<td>3%</td>
<td>14%</td>
<td>83%</td>
</tr>
<tr>
<td></td>
<td>Exit</td>
<td>3%</td>
<td>3%</td>
<td>94%</td>
</tr>
</tbody>
</table>

Source: EDS Corporate Strategy

As the results in Table 7-1 indicates, it seems that at the end of the workshops WAVE participants had a greater sense of urgency about the need for change
on a company-wide basis and within their business units. In addition, it appears there was a higher level of commitment regarding the impact these individuals would have on the future of EDS. The percentages were already high in the significant category, but the increases between the entry and exit surveys were all double-digit, thereby warranting a positive conclusion.

I also learned that EDS had been conducting employee surveys since 1991. These were ongoing random sample surveys, which included questions concerning corporate direction and management of growth. Data gathering and interpretation for the survey changed from a percentage based system during 1991 and 1992, to rating scale of 1 to 7. Under this new system 1 meant disagree, 4 was considered neutral and 7 represented agree. Table 7-2 lists the results for the related questions, for the years 1993-94.

Table 7-2

<table>
<thead>
<tr>
<th>Questions</th>
<th>1993</th>
<th>1994</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seeking business growth?</td>
<td>5.21</td>
<td>5.89</td>
</tr>
<tr>
<td>Clear sense of direction?</td>
<td>4.66</td>
<td>5.10</td>
</tr>
<tr>
<td>Managing growth efficiently?</td>
<td>4.17</td>
<td>4.51</td>
</tr>
</tbody>
</table>

Source: EDS Corporate Strategy

It is interesting to note the positive improvement in the ratings for 1994. This leads me to speculate that perhaps the CI5 communications effort launched through the EDS Connections newsletter, played a significant role in providing employees with intellectual content regarding the strategic
change. Given magnitude of the rating increase, I believe this may be a more plausible explanation, than a trickle-down effect from the WAVE messengers.

In order to further quantify my analysis of outcomes from the initiative, I suggested to my EDS sponsor that we conduct another WAVE survey, similar to the one done at the entry workshop. My hypothesis was: The average scores for comparative questions of this new survey would exceed the entry survey scores, hence the mindset shift had achieved some permanence. In addition, given that this survey was being administered two years after the WAVE process was completed, I believed this would be an opportunity to check for depth, breadth and pace of the change initiative.

Most of the survey questions were rated on a 1 to 5 scale, with scores of greater than 3 representing a higher than average affinity with the question (see Exhibit 1). Space was provided on the questionnaire for people to write in comments. A total of 120 surveys were distributed, and 53 or approximately 45 percent were returned. Exhibit 10 lists the results of the questions, which were compared with similar questions from the WAVE entry surveys.

In general, the results support the hypothesis. WAVE participants continue to have a sense of urgency regarding the strategic change initiative. Additionally, they see themselves playing a greater a role in making changes that affect the future of their unit. There is also a slight improvement in how they see their role in making changes on a company-wide basis. There is a much better understanding of competitive issues, which I believe may be totally attributed to CI5. The sharing of ideas horizontally (i.e. across SBU's and SSU's) is still an area for improvement. Significant opportunities may be
lost due to what appears to be inadequate horizontal linkages. I was surprised by the lower average rating for question 5. I believe this directly related to the "sense of drifting" I discovered during my interviews. It is unclear to a significant number of these key people how they may directly affect EDS' new corporate direction.

Exhibit 11 lists the results of the other questions. These questions were meant to test the depth, pace and breadth of the change initiative. Most of the WAVE participants fulfilled their role as a messenger for CI5. A rough extrapolation by taking the sample size (53) and the range of people spoken to based on the calculated percentages, yields a total of 7,000 to 11,000 that have been directly exposed to some of the learnings from CI5. On a percentage basis, that is 10 to 15 percent of EDS' total employee population. It is difficult to assess whether this a good or inadequate level of communication, given two years have passed since CI5 ended. However, based on the results from question 6c, it is clear there is still a lot of opportunity to share information about the initiative.

Most of the WAVE participants are dissatisfied with pace of the transformation. In addition, most believe that the transformation process is slightly below their expectations. I believe these two points are directly related to lower results for question 5. Finally, the majority of the participants see top management as having the most impact on the future success of EDS. I was somewhat surprised by this result, I had anticipated the WAVE participants would have ranked themselves a the key group. Even more surprising to me was that staff and subordinates ranked second. These results
may reflect the continuing need to get direction from the top, and also the need to emotionally engage people at the lower levels of the company.

In concluding this chapter, I believe the three goals established for CI5 were met. But as I mentioned at the beginning of the chapter, I believe the CCT missed one goal. That is, a well thought-out plan on how to institutionalize and routinize the strategic change initiative beyond the 150 WAVE participants. I believe the analysis conducted throughout this chapter reinforces the need for such a plan.
CHAPTER 8

Conclusions and Recommendations

The purpose this thesis was to investigate organizational change at Electronic Data Systems, Corporation, where a strategic process (CI5) was used as the intervention tool. Based on my evaluation of the overall process and my analysis of some of the outcomes, I conclude that CI5 achieved some level of institutionalization and routinization with a small group of the employees. I believe that most of these employees were able to go beyond the stage of understanding strategic change at just an intellectual level. They were also able to become emotionally engaged, thereby giving them the confidence to return to their organizations and take action. Most of these employees were participants in the WAVE process. Based on the process used to select these individuals, they were prime candidates for changing their mindsets about strategy.

Although, I was able to gather employee survey data that indicated a significant affinity with the corporate direction, it is unclear whether the majority of employees understand how they may play a role in achieving the new direction. As expected most of the WAVE participants acted as messengers and teachers when they returned to their respective organizations. Their communications efforts have already yielded positive results. However, it has been two years since CI5 ended and I sense that these "Centurions"\(^{24}\) may be in need of renewal.

\(^{24}\) A Roman warrior who represented Caesar's philosophy at the far ends of the Roman empire.
The concepts described in Hamel and Prahalad's book, *Competing for the Future*, provided a unique and valuable framework for EDS to develop and implement CIS. However, I believe the book failed to provide a substantive approach on how to re-engineer the mindset of the entire enterprise. It is my belief that EDS is at very crucial stage, where they must find ways to truly institutionalize strategic change at various levels of the organization. In fact, one of the employees I interviewed said, "I don't believe that across all 38 SBU's and SSU's you've both emotional and intellectual buy-in....Because people haven't seen yet how they can structure their day-to-day business activities around our new direction." I suspect a significant number of people will remain about skeptical about the change initiative, until each can make a connection with their own activities.

Although I did not have the opportunity to interview members of the Leadership Council, I am somewhat troubled by what appears to be a reining in of the change initiative. The Delta Force was recently dissolved and most of its responsibilities transferred to the Leadership Council and Group Executives. Three teams have been formed: Value Empowerment, Value Creation and Value Delivery, each consisting of two to four members of the Leadership Council and five to nine Group Executives. Indeed, this is the exactly the opposite of what I would have expected to see, given the need to move the change initiative to all levels of the company.

I am concerned that such a move may be perceived as "taking strategy out of the hands of many and putting it back into the hands of a few." It may be also be seen as a return to the "command and control" way of doing things. I suspect the Leadership Council and Group Executives may be experiencing
some discomfort with embracing the paradox of change. Indeed, Tichy and Devana point out, "...initiating the creative destructive forces necessary to transform an organization is the ability few leaders and few institutions nurture.... Self-renewing organizations embrace paradox. They possess many attributes that are simultaneously contradictory, even mutually exclusive."

Many of the executives on the Leadership Council joined the company during the Perot era. It is possible that changing some of their mindsets regarding strategy, may prove to be quite difficult if not impossible to change. The majority of their experience dates to a time when the strategic planning was a non-issue. Therefore, using strategy as an intervention tool for organizational transformation may be foreign to a number of these executives. Based on what I learned during my interviews, some of these senior leaders may lack the discipline and rigor for strategy formation, since it appears that they are more operationally focused. At this point I have no data that would lead me to conclude that EDS' leadership has fully embraced the paradox of change.

A potential danger I see with what people learned in CI5, is that it will be used to fix old economic engines versus discovering new ones. The downside of such activity is that it focuses energy and resources on businesses that may be fundamentally bad businesses, and denies resources to businesses which offer greater opportunities. It also retards the company's effort to remain the defining entity in the information services industry. I was unable to learn of any process that would minimize such activities taking place.
One of the things that concerned me during my investigation, was what I perceived to be an overuse of terminology. For example, there are strategic initiatives, corporate initiatives, corporate direction, strategic intent, global leadership model, reinvention framework, etc. It seems to me, if EDS wants to gain momentum on a company-wide basis for its strategic change, the leadership needs to simplify its message and stick to a central theme. Perhaps the recently formed Value teams is a move in that direction.

My investigation has reinforced my perception of how difficult and complex the change process is. Although EDS has made great strides in their strategic change initiative, the company is far away from the refreezing stage that Schein describes in his change model. Indeed, the company is currently at a very fragile point in the change process. Given what I learned during my investigation, I believe that EDS is still at the unfreezing stage of the Schein model. There are attempts to create new beliefs, values and behaviors throughout the company. However, I believe these efforts will fail over the long-term, unless the leadership of the company is able to create a "psychologically safe" environment for the change initiative and remains vigilant about the process. Unless EDS is able to successfully navigate the unfreezing stage the entire organizational transformation will be jeopardized.

**Recommendations**

In order to reduce the risk of CIS becoming strategy du jour, I suggest that EDS consider the following recommendations. This list is by no means complete or in some cases appropriate, given my limited knowledge of EDS, but they do provide the occasion for EDS to consider the progress of its change effort and the areas where major gaps may exist.
1. Integrate the company's strategy process with its performance appraisal and reward system. As Hax and Majluf describe in their book, *The Strategy Concept and Process: A Pragmatic Approach*, "The strategy formation process should be integrated with other administrative processes of the firm, particularly management control, information and reward systems, and the organizational structure." This should be done primarily with the senior and mid-level managers of the company. In doing this, strategy should become as important as the day-to-day running of the business.

2. Develop a formal course or workshop to teach CIS concepts to selected EDS employees. These employees would then be able to act as change agents within their respective organizations. This workshop could be modeled off the recently developed Strategic Value Selling program. It could be taught by ex-WAVE participants who have real life experiences and examples of how they have applied the concepts to their day-to-day work. It would also give the ex-WAVE's an opportunity for some personal renewal. Corporate strategy's role in this course would be to organize it and act as subject matter experts.

3. Simplify the theme or message that EDS leadership wishes to have its employees rally around. EDS employees are a bright and talented group, but I believe majority of them are somewhat confused with the deluge of terminology being used for the change initiative. Based on my interviews, it is my perception that the terms CIS and Globalize, Informationalize, Individualize are synonymous with strategic change in the minds of employees. Therefore, I suggest that one of these terms should be used as the main theme for structuring EDS' organizational transformation.
4. Develop a well thought-out process for institutionalizing and routinizing the strategic change initiative beyond the 150 WAVE participants. I believe Beckhard and Harris in their book, *Organizational Transitions: Managing Complex Change*, offer a reasonable prescription for accomplishing this goal. Tichy and Devanna in their book, *The Transformational Leader*, also offers a plausible approach. Both books suggest that a critical component of managing the institutionalization and routinization process, is a system to monitor and track changes in the organization.

5. Finally, I highly recommend that during this very crucial stage of the strategic change initiative, members of the Leadership Council and group executives, should meet as often as possible with employees. At these meetings the senior executives should take the opportunity to discuss, areas where the company has been successful with its new direction, issues facing the company, steps being taken to address these issues, and the role that each employee can play. These meetings or forums should be as informal as possible, in order to invite questions, feedback or comments from the employees.

In concluding this thesis I must express my admiration for EDS and its willingness to seek self-renewal during a period when it is enjoying record revenue and earnings growth. However, I do believe if EDS is to remain the defining entity in this converging industry, it must be successful with its organizational transformation.
REFERENCES


References (continued)


Thesis Interview and Dialogue Guide

Electronic Data Systems (EDS), Corporation

Corporate Initiative 5 Strategy Planning Process

Title: An Investigation of Organizational Change Using the Strategic Planning Process

Prepared by: Lance F. Drummond
January 15, 1995

Questions

1. What was the event or series of events that led to the genesis of the Corporate Initiative 5 planning process?

2. What was CI1 through CI4?

3. What does Corporate Initiative 5 mean and who or how was the name selected?

4. Describe what Corporate Initiative 5 means to YOU and what you believe means to your peers and subordinates?

5. At this point, what does "CHANGE" mean to EDS?

6. How does EDS view its role in the information technology industry?

7. How do you believe the Initiative is working, that is, how are you measuring the outcomes and who is responsible for measuring or monitoring those outcomes?

8. Do you believe that Corporate Initiative 5 is well understood by employees at all levels of the organization? If so, why? What evidence, if any, do you have to support this belief?

9. How will the future of your industry be different?

10. Where are you trying to go as a company?

11. How will Corporate Initiative 5 help you to get there?

12. What corporate challenges have been established and the timetable associated with those challenges?

13. What core competencies will EDS need in the future industry?

14. How will EDS go about building and retaining those competencies?

15. How do ideas flow throughout the hierarchy within EDS? For example, how would a lower level employee communicate directly with the CEO?

16. Who are the "culture carriers" for EDS?

17. Where do you think EDS would be today if it had not initiated the Corporate Initiative 5 process?
18. How are you communicating Corporate Initiative 5 to the masses? How many employees have participated in sessions associated with this Initiative?

19. Why did you believe that Corporate Initiative 5 was the right approach to drive change throughout the company?

20. Has EDS' relationship with its customers changed as a result of Corporate Initiative 5 and if so, how has it changed?

21. What type of people does EDS try to recruit?

22. Describe EDS' culture prior to Corporate Initiative 5 and how the culture has changed since the Initiative?

23. Describe EDS' values prior to Corporate Initiative 5 and how the culture has changed since the Initiative?

24. Describe YOUR vision of diversity for EDS?

25. What is the role of your newly formed Management Consulting Services SBU?

26. Who really owns the corporate strategic planning process?

27. In the past, how did EDS measure its performance and has this changed as a result of Corporate Initiative 5? If so, how?

28. What mechanism do you have in place to ensure resources are focused in the most critical areas across SBU's?

29. In the past, what was the reward and consequences system for an employee and how has the system changed if any, as a result of Corporate Initiative 5?
Dear WAVE Participant:

We are currently working with an MIT Sloan Fellow to assess EDS' organizational transformation using the strategic planning process (CI5) we initiated in 1991. We need your help in completing this confidential questionnaire. Please take a few moments to answer the questions below, by placing a check mark in the box that most accurately reflects your opinion or belief. Please return this sheet by Friday, March 10, to Clyde Kesling (H1-5D-07). Thank you.

1. In your view, to what extent do people in EDS currently:
   a. understand the need for the Corporate Initiatives?  
      [ ] [ ] [ ] [ ] [ ]
   b. understand competitors?  
      [ ] [ ] [ ] [ ] [ ]
   c. share ideas with colleagues from other parts of EDS?  
      [ ] [ ] [ ] [ ] [ ]

COMMENTS:

2. To what extent do you believe transformation is needed in:
   a. the unit you work?  
      [ ] [ ] [ ] [ ] [ ]
   b. the company as a whole?  
      [ ] [ ] [ ] [ ] [ ]

COMMENTS:

3. Do you believe you have a role in making changes that affect the future of:
   a. the unit you work in?  
      [ ] [ ] [ ] [ ] [ ]
   b. the company as a whole?  
      [ ] [ ] [ ] [ ] [ ]

COMMENTS:
4. With approximately how many people have you shared your learning's from the WAVE/CIS workshop? 

<25 25-100 100-200 200-300 300+

COMMENTS:

5. How clearly do you see the specific actions that you may need to take in order for EDS to become -- the "defining entity" by the end of the decade? 

Not clear Very clear

1 2 3 4 5

COMMENTS:

6. To what extent do you believe the new strategic process (CIS) is well understood by:

a. top management?

b. me and my peers?

c. staff and subordinates?

COMMENTS:

7. How fast do you believe the company is moving to make the transformation happen? 

Too slowly Very fast

1 2 3 4 5

COMMENTS:

8. Since participating in workshop, has the transformation process met, exceeded or been below your expectations to date? 

Well below expectations Exceeded expectations

1 2 3 4 5

If it is below your expectations, what do you believe needs to be done? 

__________________________________________________________
9. Rank (1,2,3) the following groups in order of importance concerning their impact on EDS' future success:

   a. top management?
   b. me and my peers?
   c. staff and subordinates?

COMMENTS:

10. In your opinion, what will be the magnitude of the changes facing EDS in the future, based on the following areas:

   a. serving customers
   b. beating the competition
   c. shaping the industry

<table>
<thead>
<tr>
<th>Little</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

COMMENTS:
PORTER'S FIVE FORCES MODEL APPLIED TO THE INFORMATION SERVICES INDUSTRY IN 1992

威胁新进入者（中度有吸引力）
- 大量经验曲线效应，基础设施，和规模经济
- 公司声誉和形象对成功至关重要
- 创新通常需要满足客户需要
- 增加新进入者来自电信和计算机硬件厂商的风险

讨价还价的供应商力量（有吸引力）
- 谋报政府服务公司拥有相当大的采购权
- 向前整合由供应商完成
- 向后整合由服务行业通过收购/合并
  - 准备替代但高昂的转换成本

讨价还价的买家力量（有吸引力）
- 大型服务合同集中在少数重要买家（例如《财富》500强，政府）
- 决定外包驱动由财务问题影响利润率
- 大型客户在谈判中的力量更大，可能会驱动合同价格下降
- 买家MIS部门竞争者为服务提供商

替代品的威胁（中度有吸引力）
- 长期较低转换成本对买家由行业技术标准
  - 信息超级高速公路
  - 复杂性增加对大型计算机系统
  - 数字电话交换机融合语音，数据和视频

竞争力的强度（有吸引力）
- 比价竞争升温，边际利润可能下滑
  - 企业从竞争对手吸引关键人员
  - 增加新进入者的威胁
  - 市场被10家公司控制
  - 增加战略联盟和合并的数量

强度的直接和竞争（有吸引力）

98
VALUE CHAIN FOR EDS, CORP.

Managerial Infrastructure

- Most experienced management team in information services industry

Human Resources

- Highly trained, dedicated, stable, productive
- Hard-driving, results-oriented culture

Technology Development

- EDS-NET
- Economies of scale
- Strategic alliances
- Best contract estimating accuracy

Procurement

- Considerable purchasing power and negotiating leverage

- EDS-NET integrated voice, data, video
- IMC and IPCs
- Customer support 24 hours, 365 days
- Vast computing power

Operations

Marketing and Sales

- Reputation for quality and excellence
- Strong brand franchise
- Contract renewal rate exceeding 75%
- Contract length exceeds 79 months
- Financial resources permit innovative deals
- Highly competent and experienced sales force
Exhibit 5

STRATEGIC GROUP ANALYSIS OF INFORMATION SERVICES INDUSTRY (71% of market)

Product Leadership

Leader

EDS
IBM

Follower

Andersen Consulting
Computer Sciences
Digital
Unisys
AT&T

ADP
TRW

1st Tier

2nd Tier

3rd Tier

Brand Identification
### SUMMARY ASSESSMENT OF EDS AND THREE MAJOR COMPETITORS STRENGTHS AND WEAKNESSES

<table>
<thead>
<tr>
<th>Company</th>
<th>Strengths</th>
<th>Weaknesses</th>
</tr>
</thead>
</table>
| EDS              | • Experienced management team  
                   • Highly trained, stable, dedicated, workforce  
                   • Highest employee productivity  
                   • Hard-driving, results-oriented culture  
                   • EDS-NET, computing power economies of scale  
                   • Purchasing power  
                   • Brand franchise  
                   • Financial resources  
                   • Sales force  
                   • Contract renewal rate and contract length | • Limited international business  
                   • Significant amount of business dependent on one customer (39% revenues from GM) |
| IBM              | • Brand franchise  
                   • Global business  
                   • Computer manufacturing capacity  
                   • Sales force  
                   • Highly trained, dedicated workforce  
                   • Computing power economies of scale  
                   • Leading market share  
                   • Expanding facilities management business | • Linkage to computer manufacturing and sales, customer perception IBM main interest is selling hardware  
                   • Financial performance  
                   • Lagging productivity |
| Andersen Consulting | • Global business  
                   • Brand franchise  
                   • Robust capabilities in systems integration, systems development, consulting, CASE tools  
                   • Historical business relationships | • Limited outsourcing capabilities  
                   • Partnership structure  
                   • Limited capital base |
| Computer Sciences | • Leading position in Federal systems integration  
                   • Technology consulting (Index Group) | • Limited facilities management business  
                   • Limited international business  
                   • Limited capital base  
                   • Significant amount of business dependent on one customer, General Dynamics |

### EDS Income Statements

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>5,373</td>
<td>6,021</td>
<td>7,028</td>
<td>8,155</td>
<td>8,562</td>
<td>10,052</td>
<td>11,560</td>
<td>13,294</td>
</tr>
<tr>
<td>Gross Profit</td>
<td>1,205</td>
<td>1,383</td>
<td>1,613</td>
<td>2,013</td>
<td>2,171</td>
<td>2,523</td>
<td>2,659</td>
<td>3,058</td>
</tr>
<tr>
<td>Pretax Income</td>
<td>680</td>
<td>789</td>
<td>894</td>
<td>1,001</td>
<td>1,131</td>
<td>1,284</td>
<td>1,526</td>
<td>1,755</td>
</tr>
<tr>
<td>Net Income</td>
<td>435</td>
<td>496</td>
<td>547</td>
<td>636</td>
<td>724</td>
<td>822</td>
<td>983</td>
<td>1,130</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Gross Profit</td>
<td>22.4%</td>
<td>23.0%</td>
<td>23.0%</td>
<td>24.7%</td>
<td>25.4%</td>
<td>25.1%</td>
<td>23.0%</td>
<td>23.0%</td>
</tr>
<tr>
<td>Pretax Income</td>
<td>12.7%</td>
<td>13.1%</td>
<td>12.7%</td>
<td>12.3%</td>
<td>13.2%</td>
<td>12.8%</td>
<td>13.2%</td>
<td>13.2%</td>
</tr>
<tr>
<td>Net Income</td>
<td>8.1%</td>
<td>8.2%</td>
<td>7.8%</td>
<td>7.8%</td>
<td>8.5%</td>
<td>8.2%</td>
<td>8.5%</td>
<td>8.5%</td>
</tr>
</tbody>
</table>

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>0.0%</td>
<td>12.1%</td>
<td>16.7%</td>
<td>16.0%</td>
<td>5.0%</td>
<td>17.4%</td>
<td>15.0%</td>
<td>15.0%</td>
</tr>
<tr>
<td>Net Income</td>
<td>0.0%</td>
<td>14.0%</td>
<td>10.3%</td>
<td>16.3%</td>
<td>13.8%</td>
<td>13.5%</td>
<td>19.5%</td>
<td>15.0%</td>
</tr>
<tr>
<td>Compound Revenue</td>
<td>0.0%</td>
<td>12.1%</td>
<td>28.8%</td>
<td>44.8%</td>
<td>49.8%</td>
<td>67.2%</td>
<td>82.2%</td>
<td>97.2%</td>
</tr>
<tr>
<td>Compound Net Income</td>
<td>0.0%</td>
<td>14.0%</td>
<td>24.3%</td>
<td>40.6%</td>
<td>54.4%</td>
<td>67.9%</td>
<td>87.5%</td>
<td>102.5%</td>
</tr>
</tbody>
</table>

### EDS - Profitability

- Gross Profit
- Pretax Income
- Net Income

### EDS - Growth

- Revenue
- Net Income
- Compound Revenue
- Compound Net Income
COMPARATIVE RETURN ON EQUITY ANALYSIS

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>EDS</td>
<td>31.2%</td>
<td>27.6%</td>
<td>25.2%</td>
<td>22.9%</td>
<td>20.6%</td>
<td>21.7%</td>
<td>19.4%</td>
</tr>
<tr>
<td>Industry</td>
<td>14.0%</td>
<td>16.1%</td>
<td>12.9%</td>
<td>13.3%</td>
<td>13.6%</td>
<td>13.4%</td>
<td>13.1%</td>
</tr>
</tbody>
</table>

EDS - VALUE CREATION ANALYSIS

Ke - cost of capital
Rf - risk free rate on T-Bills
Be - beta of equity (Morgan Stanley & Co.'s EDS - Company Report)
(Rm - Rf) - risk premium (Principles of Corporate Finance Text, Brealey & Meyers)

Ke = 6% + 1.0 (8%)
Ke = 14%

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Free Cash Flow</td>
<td>422</td>
<td>383</td>
<td>608</td>
<td>669</td>
<td>736</td>
</tr>
<tr>
<td>Terminal Value Perpetuity</td>
<td></td>
<td></td>
<td></td>
<td>5,255</td>
<td></td>
</tr>
<tr>
<td>Terminal Value Growing Perpetuity</td>
<td></td>
<td></td>
<td></td>
<td>18,392</td>
<td></td>
</tr>
</tbody>
</table>

Assumptions:
1. Discount Rate 14%
2. Growth Rate 10%
### New WAVE Participant Survey

<table>
<thead>
<tr>
<th>Comparative Survey Questions</th>
<th>New Average</th>
<th>Old Average</th>
<th>Average Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. In your view to what extent do people in EDS currently:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. understand the need for the Corporate initiatives?</td>
<td>3.3</td>
<td>2.8</td>
<td>0.5</td>
</tr>
<tr>
<td>b. understand competitors?</td>
<td>3.0</td>
<td>2.4</td>
<td>0.6</td>
</tr>
<tr>
<td>c. share ideas with colleagues from other parts of EDS?</td>
<td>2.9</td>
<td>3.0</td>
<td>-0.1</td>
</tr>
<tr>
<td>2. To what extent do you believe transformation is needed in:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. the unit you work?</td>
<td>4.0</td>
<td>4.0</td>
<td>0.0</td>
</tr>
<tr>
<td>b. the company as a whole?</td>
<td>4.1</td>
<td>3.8</td>
<td>0.3</td>
</tr>
<tr>
<td>3. Do you believe you have a role in making changes that affect the future of:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. The unit you work in?</td>
<td>4.6</td>
<td>4.4</td>
<td>0.2</td>
</tr>
<tr>
<td>b. the company as a whole?</td>
<td>3.8</td>
<td>3.7</td>
<td>0.1</td>
</tr>
<tr>
<td>5. How clearly do you see the specific actions that you may need to take in order for EDS to become — the &quot;defining entity&quot; by the end of the decade?</td>
<td>3.4</td>
<td>3.7</td>
<td>-0.3</td>
</tr>
<tr>
<td>10. In your opinion, what will be the magnitude of the changes facing EDS in the future, based on the following areas:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. serving customers</td>
<td>3.9</td>
<td>4.2</td>
<td>-0.3</td>
</tr>
<tr>
<td>b. beating the competition</td>
<td>3.9</td>
<td>4.2</td>
<td>-0.3</td>
</tr>
<tr>
<td>c. shaping the industry</td>
<td>4.2</td>
<td>4.4</td>
<td>-0.2</td>
</tr>
</tbody>
</table>
## New WAVE Participant Survey

<table>
<thead>
<tr>
<th>Other Questions</th>
<th>&lt;25</th>
<th>25-100</th>
<th>100-200</th>
<th>200-300</th>
<th>300+</th>
</tr>
</thead>
<tbody>
<tr>
<td>4. With approximately how many people have you shared your learnings from the WAVE/CIS workshop?</td>
<td>9%</td>
<td>23%</td>
<td>25%</td>
<td>8%</td>
<td>36%</td>
</tr>
<tr>
<td>6. To what extent do you believe the new strategic process (CIS) is well understood by:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. top management?</td>
<td>4.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. me and my peers?</td>
<td>3.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. staff and subordinates?</td>
<td>2.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. How fast do you believe the company is moving to make the transformation happen?</td>
<td>2.6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Since participating in the workshop, has the transformation process met, exceeded or been below your expectations to date?</td>
<td>2.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Rank (1,2,3) the following groups in order of importance concerning their impact on EDS' future success:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. top management?</td>
<td>41%</td>
<td>19%</td>
<td>41%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. me and my peers?</td>
<td>26%</td>
<td>67%</td>
<td>8%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. staff and subordinates?</td>
<td>33%</td>
<td>13%</td>
<td>50%</td>
<td></td>
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</tr>
</tbody>
</table>
THESIS PROCESSING SLIP

FIXED FIELD: ill ___________________ name ___________________

index ___________________ biblio ___________________

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Lindgren Music Rotch Science

TITLE VARIES: ☑ See degree book

NAME VARIES: ☑ Launcelot Fitzgerald

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YEAR: 1995 DEGREE: M.S.

NAME: DRUMMOND Lance F.