AN ANALYSIS OF STRATEGIC PRACTICES IN A COMPUTER SERVICES COMPANY

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ABSTRACT

This thesis examines the strategies and management plans that have been employed by a major computer services company to meet corporate objectives for growth in the commercial business segment. In so doing, the emphasis is on strategic management and its execution, not the planning process in isolation.

The thesis traces the history of the company from its formation in 1970 to 1988. Emphasis is placed on the organization and its evolution during these years. The company structure, style, culture and processes had a significant effect on product and industry strategies. Major shifts in corporate strategies and resultant successes or setbacks are analyzed in this context. It is important to examine the company relative to the computer services industry as a whole, therefore industry features, trends, and future strategies were explored to determine whether this firm should continue to compete in this environment. It was concluded that the firm should continue to pursue opportunities in the computer services industry. Recommendations for improvement center on management techniques and incorporating strategic plans into the operating management of the company.

Thesis Supervisor: Dr. N Venkatraman
Title: Assistant Professor of Management

DISCLAIMER

The analysis, recommendations, and conclusions reached in this thesis are those of the author and in no way reflect the position of the management of Boeing Computer Services or The Boeing Company.

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CHAPTER 1

INTRODUCTION

The Boeing Company has an established tradition of excellence and world presence in the commercial jet aircraft industry. The company has captured and maintains more than a 60 percent share of the world commercial jetliner market, is consistently rated as one of the ten best managed companies in the world and holds down the top spot as the single largest exporter ($6.3 billion estimated in 1988)[1] in the United States. Although best known as a manufacturer of commercial jetliners, Boeing competes in a number of world markets as a diversified, high technology firm. The company consists of seven primary business units, commercial airplanes, aerospace, helicopters, military aircraft, electronics, advanced systems, and computer services. It is the computer services company that is the general focus of this thesis.

1. "Made in the U.S.A.", Business Week, February 29, 1988

Boeing Computer Services

Boeing Computer Services (BCS) was formed in 1970 with a two-fold objective: first to create a single cost effective source of computing services to other Boeing operating companies, and second, to compete in the commercial and government systems marketplace. The first objective has been achieved successfully. BCS consistently wins high marks from the other operating companies and Boeing corporate offices when rated each year against established cost and performance criteria. BCS support to Boeing has also been tested in terms of cost and service competitiveness with outside sources of computing. Time and time again it is found that the quality, depth, and breadth of the service provided by BCS can not be cost effectively matched by external sources.

However, there is some debate as to whether Boeing has successfully achieved the second objective, that of competing effectively in the external market. It is important therefore, to examine the strategies associated with the formation of Boeing Computer Services external business segments, Commercial Services Group (CSG) and Government Information Services (GIS), and the evolution of these plans with respect to creating, developing, and maintaining a competitive, profitable business venture.

Strategic Planning in the Computer Services Industry

Most companies in the computer services industry have a difficult time instituting strategic planning due to rapidly changing technology and the proliferation of low-cost start-up firms. Markets for these products and services are extremely hard to define, and 'windows-of-opportunity' tend to be very small. However, it is precisely these factors which make a good strategic plan and management of that plan critical to achieving success in the computing services industry.

Strategic management is a dynamic process that integrates mission, strategies, and implementation plans.[2] Linkages between strategy and managing strategy are often weak. Effective strategic planning should not be done apart from managing the business but rather should be an integral part of the day to day operations.

At all levels there must be a clear understanding of strategic direction and tactics for execution. Is the company moving in the right direction? Are the strategies correct? Are they being executed as expected? If not, why? And what should be done?

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2. S. M. Felton, What's New in Strategic Planning: A perspective for Planners, Presentation for the Northern Wisconsin Chapter of the Planning Forum, DATALOG file, No. 87-1123, September 18, 1986.

> "Chesire Puss," (Alice) began,..."would you please tell me which way I ought to go from here?" "That depends on where you want to get to," said the Cat. "I don't much care where...," said Alice. "Then it doesn't matter which way you go," said the Cat.
>
> Lewis Carroll _Alice in Wonderland_

Thesis Objective

This thesis proposes to examine whether the product and service strategy developed and executed by Boeing Computer Services-Commercial Services Group (BCS-CSG) has been effective in achieving and sustaining CSG's competitiveness in the commercial marketplace. This question will be addressed in the following context:

-Description of industry markets.

-Effects of technology on the computer services industry.

-Description of the strategies employed by CSG.

-Analysis of the strategies and their execution.

-Examination of the results achieved.

-Recommendations for the future.

Thesis Scope

The thesis will focus specifically on Boeing Computer Services' external business segment, the Commercial Services Group. I adopt both an internal view (organizational strengths, weaknesses, and capabilities) and an external

view (market opportunities, industry threats etc.). I look inward at the company itself with primary emphasis placed on planning activities which have taken place since 1983. However, in order to keep recent developments in the proper perspective, it is essential to review the history of this planning process since the formation of Boeing Computer Services in 1970.

An external view will place special attention on the computer services industry as a whole, with specific emphasis on the markets and product niches in which Boeing has selected to compete. The relative strategies and successes of the Government Information Services group will be used as a point of comparison to the Commercial Services Group, where appropriate.

Methodology

The thesis is primarily an empirical study. That is, it is based on research gathered as a result of observation and/or practical experience. The information presented in the body of the thesis was collected in a series of interviews conducted with key individuals in the Boeing Company and at Apollo Computer, Inc. Individuals interviewed at Boeing were selected based on their position within the company and/or their known expertise and experience. The interviews conducted at Apollo were done in

order to gain a clearer understanding of the computer industry in general, as well as to discuss market trends, past, present and future. Apollo was selected as opposed to other local high technology firms because of their expertise in the engineering and scientific product areas.

Boeing strategic planning documents, long range business plans, and operating plans were collected and used as reference material. Research data regarding the computing services industry at large, and information specifically related to competition within the industry was reviewed to develop questions for the interviews.

Thesis Organization

This thesis is organized into five principal parts. The first is this chapter (Chapter 1) which serves as an introduction, discusses the objective, scope, and methodology used in the thesis. Chapter 2 provides a general overview of the computing services industry, with a section devoted to Boeing Computer Services' position in the industry. Chapter 3 traces the history of BCS from 1970 to 1988, emphasizing organization, market, and product strategies. Chapter 4 is an analysis of Boeing Computer Services' strategic planning process, strategic plans, and

strategic management. Chapter 5, the final section of this thesis, presents recommendations and conclusions drawn from information presented in the preceding sections.

CHAPTER 2

THE COMPUTER SERVICES INDUSTRY

For the top 100 companies in the data processing business, total revenues were up to $176.9 billion in 1986, 17 percent over the total revenues of 1985. In 1985, the computer services industry alone was 5.72 percent of the total data processing market, generating revenues of $8.6 billion. In 1986 computer services market share had grown to 6.7 percent with $11.9 billion in revenues. Although the services industry is relatively small when compared to total hardware sales ($112.3 billion for mainframes, minis, micros and peripherals), it is never the less a rapidly expanding segment of this industry which cannot be ignored.[3]

This chapter will examine the computer services industry in general with specific focus on Boeing Computer Services and the relative position it assumes in this industry. The publication Datamation is used to provide industry definitions, financial data, and competitive rankings. Specifically, Boeing Computer Services external businesses will be described in terms of customer profile,

3. Staff Report,"The Datamation 100", Datamation, 15, June 1987.

markets and products. BCS strategic management will be reviewed with emphasis on two products, software sales and office services.

Industry Description

Definition

Datamation defines data services as including: custom programming, systems integration, consulting, time-sharing, and remote processing. Other definitions may include telecommunications and extended professional services such as education and training. The market for these services remains quite strong because both public and private organizations are still wrestling with office and factory automation and must often rely on outside sources for advice, training, custom programming, processing time, and development of integrated or turnkey systems.

BCS

Boeing Computer Services established itself in the services industry in 1970 serving both the private and public service sectors. The United States government and state and local governments have proved to be excellent markets for facilities management programs, major systems integration and telecommunications projects. On the commercial side, the product niche that BCS carved out has changed significantly over time. Initially time-sharing was the primary business with various, less significant

consulting, training, and programming support activities generating the balance of the revenue. As technology and the customers' needs changed, the BCS commercial strategy was directed toward market opportunities in areas that Boeing traditionally had expertise, such as systems integration, super-computing, and value-added labor services. Figure 1 indicates BCS' relative market position in the computer services industry by 1985.

MARKET SEGMENT	**MARKET SHARE** (Percent)
Professional Services	1.0
Software	1.5
Support Services & Integrated Information Systems	1.8
Commercial Processing*	3.4
* Traditional time-sharing market was rapidly declining.	

Fig. 1 BCS Commercial Services Market Position-1985
(Market Value=$25 Billion)

Business Environment Today

In todays' data processing environment the services industry is lagging behind the hardware industry in terms of revenue and profits. But today, more than ever, both are essential to achieve cost effective objectives through the implementation of automation. Traditional services such as

payroll, accounting, bank processing and credit authorization continue to be huge profit centers. However, the need to integrate multiple suppliers hardware systems, or access super-computing processing from an engineer's desk-top has opened up new areas of opportunity for the services industry. This new era in services--systems integration--has growth potential beyond what anyone could have imagined prior to 1982.

Systems Integration

Systems integration is the capability to tie various computer hardware and software systems together into networks that will increase their value to the user. Hardware and application software have vastly different life cycles. In order to maximize the investment in both and take advantage of technological improvements, systems integration capability is essential. This includes providing the networking between old hardware and new, as well as creating linkages between new hardware and existing software or databases.

To be a successful integrator, a computer services company must have the skill and expertise to understand the hardware and software technology available to their customers. This is why firms, large and small, are deciding to "buy versus make" when requiring these services. The

complexities of the market almost dictate that the services company be a large, high technology firm with sophisticated in-house resources. The closer the ties between the services company and the hardware suppliers, the greater the benefit to all parties.

Alliances

In the early years of data processing IBM and one or two other large companies set the pace and the standards for the entire industry. Their power tended to rest in the ability to manufacture and sell mainframes. The migration from mainframes to distributed processing systems has enabled many new companies to enter the market and exert significant influence on customer purchasing decisions. Indeed, it is becoming increasingly clear that one supplier (hardware or software) can not go it alone. Hence, strategic alliances are playing an ever expanding role.

The key to success in todays' environment lies in strategic alliances between and among computing industry companies. Alliances are entered into for multiple reasons: to increase product distribution networks, to develop joint marketing strategies, create total systems solutions for the customer, and to develop new technologies and eventually products. No longer is trying to sell just a piece of software or hardware the main solution. In many cases

survival in the industry is dependant solely on the firms ability to enter into alliances. Companies such as AT&T and Sun Microsystems, DEC and Apple, IBM and Dassault, Microsoft and Ashton-Tate, have joined together to leverage their position in the market(Figure 2). These "teams" have begun to gain strength by virtue of the alliance and as a result are becoming industry drivers.

COMPANIES	RESULTING PRODUCTS	YEAR FORMED
Apple/DEC	Connectivity	1988
AT&T/Olivetti	PC's/Marketing	1983
AT&T/Sun Microsystems	Workstations/Software/ Chip Technology	1985/ 1987
Data General/Nippon Telephone & Telegraph	Communications Network	1988
General Motors(EDS)/ McDonnell Douglas	CAD/CAM/CAE	1987
Honeywell/Bull/NEC	PC's/Distribution	1987
IBM/Dassault	CAD/CAM/Marketing	1985
IBM/Lotus	Software/Marketing	1987
IBM/Microsoft	Operating System/ Software/Marketing	1982
Microsoft/Sybase/ Ashton-Tate	Database Server	1988
Sperry/Burroughs (Unisys)	Minis/Mainframes/ Networks	1986

Fig. 2 Key Alliances in the Computer Industry

Future

The key to maintaining success for the future rests with the company or partners' ability to be creative and innovative. This not only means new products, but new methods of bringing those products to market, or new services which will add value to existing products. To ensure future success each company will have to be innovative in the strategic planning process and more importantly in the execution of these plans.

Key Companies

Every year Datamation collects information on more than 200 data processing companies worldwide. The companies are ranked on the basis of their data processing revenues. The revenues are defined as coming from the following categories: computer systems, peripherals, software, data services, and maintenance and repair.[4] Figure 3 ranks the leading computer services companies for 1985 and 1986. It is important to note that each year more and more businesses are entering the services industry. New entrants signal a more attractive and more competitive environment.

4. Ibid.

COMPANY	1986 ($ MIL.)	1985 ($ MIL.)	% Change
1. TRW Inc.	1450.0	1275.0	13.7
2. ADP Inc.	1298.1	1102.1	17.8
3. General Motors Corp. (EDS)	1125.9	978.3	15.1
4. Computer Sciences Corp.	977.7	800.7	22.1
5. McDonnell Douglas	803.2	650.0	23.6
6. Control Data Corp.	752.0	1058.7	-29.0
7. Martin Marietta	659.4	564.4	16.8
8. Nippon Telegraph & Telephone	577.6	382.0	51.2
9. General Electric Co.	550.0	950.0	-42.1
10. Arthur Anderson	546.0	414.7	31.7
11. Cap Gemini Sogeti	419.9	245.1	71.3
12. NCR Corp.	350.0	300.0	16.7
13. The Boeing Company	300.0	270.0	11.1
14. IBM	300.0	300.0	NC
15. Nomura Computer Systems Co.	263.5	151.7	73.7

Fig. 3 The Top 15 Computer Services Companies

In reality, Boeing Computer Services is not in direct competition with all those companies ranked in the top fifteen (Refer to Figure 3). Primary competitors in the major government systems programs include, Martin Marietta, Computer Sciences Corp, EDS, TRW, McDonnell Douglas, and IBM. Competitors not included in the top fifteen ranking such as Lockheed, Grumman, Ford, Bendix, and AT&T further complicate the picture. However, it is important to understand that a competitor on one government bid contract may become a partner or team member on the next bid.

In the commercial services area competition is somewhat different. Boeing is in competition with universities,

hardware and software companies, as well as other service organizations. Competitors include CDC, EDS, CSC, and IBM as shown in Figure 4. Unlike the government systems side of the business where you team with a company one day and compete the next, BCS commercial plans to build alliances with hardware companies as part of a long term strategy. Relationships of this nature include companies such as Apollo Computer, Inc., and SCS.

COMPANY	PROCESSING	SOFTWARE	SERVICES
Service Companies			
SIS(CDC)	X		
EDS	X		X
CSC	X		X
Consulting Firms		X	X
Hardware Companies			
IBM	X	X	X
DEC		X	
Software Companies			
McCormick and Dodge		X	
Cullinet		X	
Intergraph		X	
Calma		X	
Western Data		X	
In-house	X		X

Fig. 4 BCS Commercial Competition-1987

In each case the alliance benefits both parties in that it

provides BCS with a mechanism for getting their software products and services into the market, and in turn BCS products add marketable value to the suppliers hardware.

BCS's Position in the Commercial Market

Customer Profile

One of the greatest resources BCS has to draw on when developing products and services targeted for the external market is the systems expertise developed inside Boeing in support of the other Boeing operating companies. As Boeing is primarily an engineering and manufacturing company it has always seemed natural for BCS to concentrate its sales efforts on companies with similar needs and products. This spills over quite naturally into the high technology and scientific computing arena as well. Specifically, those companies that fit into this profile are centered in the aerospace, automotive, computer hardware, communications, and energy industry. Attempted entries into the financial, banking and medical services businesses although initially successful, were later abandoned due to lack of synergy with Boeing expertise.

However, there has always been a dichotomy on the part of BCS management when making reference to the customer base. On one hand it has been stated that BCS sees its potential customers as the Fortune 500, more specifically

Fortune 100, companies. This customer segment appears to have been selected based on who could afford the products and services more than on customer need. On the other hand, there is little evidence, either in the way the sales accounts are handled, or in the identification of specific customers that this in fact is the target market. Rather, product development and market strategy focuses on general industry accounts, as opposed to specific customers.

Market Niche

BCS has identified integration services as their major strength in the market. There is a growing recognition that "integrated systems" furnish the competitive edge in the commercial marketplace. This, when combined with something referred to as "solution selling", that is, not just selling an individual product but bringing many resources to bear on a problem, make BCS somewhat unique in the services industry. Further, the innovative technologies that are used to solve systems problems within Boeing can be transferred for use in the external market. The products and services that BCS offers are not low cost and often priced higher than the competition. Therefore it is essential that the customer recognize the value added by BCS: quality, customer service, commitment, and nearly unlimited technical resources.

Products

BCS product strategy today is focused on what are referred to as "core" offerings. This includes a manufacturing integration software tool, PMS; a engineering design and integration tool, Axxyz; an integrated manufacturing services organization, CIM; professional consulting services; and an engineering-scientific services group providing labor and application software support and super-computing services.

It is in the marketing and distribution of these core products that strategic alliances or partnerships with outside suppliers become increasingly important. Boeing, like others in the services industry can no long rely on thinking that the product will sell itself. Long development cycles for sophisticated software tools such as those mentioned above must be off-set by strong effective distribution networks. In addition, alliances with hardware suppliers can create access to alpha or beta test sites at which time both hardware and software can be tested in a production setting. Alliances should be an integral piece of this overall product strategy.

Effect of Technology on Market Strategies

Evolution of Technology

Rapid growth in the data processing industry during the

past thirty years is directly related to the seemingly unending changes in technology. In 1970 more than 90 percent of the of the dollar value of computers sold was attributed to mainframes, a total of 68 percent of the computers shipped.[5] The balance was minicomputer deliveries and purchases. This was the era of batch processing and time-sharing. Large corporations that could afford mainframe power often times found themselves with excess capacity and as a result discovered a natural market for selling it--time-sharing. This was a lucrative and profitable business throughout the 1970's and gave many, including BCS, their start in the computing services industry.

In 1980 microcomputers accounted for only 15 percent of the market dollar value for computer hardware, but represented an amazing 83 percent of the units shipped. By 1987 microcomputers accounted for 40 percent of the sales revenue and 97 percent of the computers shipped.[6] Having gone from no market presence in 1970 to shipments of over 4 million in 1987 demonstrates the profound effect this device had on the information processing industry.

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5. Parker Hodges, "Three Decades by the Numbers", Datamation, 15, September 1987.
6. Ibid.

With the advent of the microcomputer the end-users needs changed as well. Dependency on the mainframe had been reduced, or in many cases eliminated, and workstation technology had replaced it. Workstation technology could take many forms, word processors, personal computers or professional workstations, but by 1982 the major industry emphasis had shifted from the number-crunching power of mainframes and minicomputers to what would become known more generally as office automation. The power of computing could now be placed at the fingertips of the computing non-professional. Information management became an industry buzzword. People needed networks in order to better manage and access the multiple databases residing at desktop workstations. Those with workstations or personal computers wanted to access minicomputers or super-computers. The industry had grown so rapidly that no standards existed between or among the various types of hardware, making it almost impossible to pass information from one make of machine to another. To further complicate the problem, literally thousands of software manufacturers sprang up overnight, with some going out of business just as quickly. Compatibility did not exist between the various brands of software. This provided the computer services industry with an opportunity to enter new markets with products and services.

(Examples of) BCS Product Strategies

In the early 1980's BCS management made a decision to implement a product based strategy, two components of which were software products and office services. The first, software, was driven by the perceived opportunity for BCS in the market based on technology trends rather than on a clear understanding of BCS's actual in-house capabilities. Microprocessor software was also an area in which profit margins were between 15 and 25 percent in an industry where hardware and support service margins hovered around 8 percent. The opportunity to improve overall profit margins was certainly attractive to BCS. The second, office services, was undertaken because there appeared to be an opportunity in the market and a logical way to weave this into the overall company strategy. Yet the real decision behind setting up this group had more to do with providing a "band-aid" solution to another problem than with marketing strategy.

Microprocessor Software

In the microcomputer software products market BCS had the ability to develop excellent products; business spreadsheets and graphics packages. However, typical of Boeing, the product development cycle was quite long, in an industry where the window of opportunity is relatively short. Internal costs were high, in an industry where many

firms did not even pay minimum wage. Effective channels of distribution were almost non-existent in an industry where much of the pre-packaged "shrink-wrapped" software was sold in retail outlets. Competitors in this market were companies either devoted exclusively to the creation of software such as Lotus, or companies that developed software to run on their own hardware, such as IBM or NEC. BCS was neither. Boeing had a technically superior product but had strategically miscalculated their capabilities and the market.

As part of its strategy to consolidate its commercial businesses, in November 1987 BCS sold its micro products group to m+s elektronik of West Germany. Along with the products themselves went the responsibility for sales distribution and service. In February 1988, the sale was rescinded. Conditions of the sale were not made public. Now that microprocessor software products are no longer an active part of the BCS strategic direction, the final disposition of the product group is up in the air.

Office Services

An aborted entry into the office automation market provides a second example of BCS product based strategic management and planning.

In 1982, at the direction of the president of BCS, an office services group was created. The intent was to sell consulting services, IBM host-based computing products, and Boeing developed software that would enable connectivity between different office systems. There was one groundrule established going into the venture: the group could only sell products that already existed within Boeing. The underlying motive, however, was to try to enhance time-sales. This could be accomplished, it was felt, by selling an IBM time-sharing product, PROFS, which Boeing was using and IBM was not yet selling commercially. Labor consultation would be sold using IBM's products as leverage. In addition, the consultants would be trained to do office systems requirements studies, systems design, etc. But, there was a second underlying strategy in all this. BCS senior management believed that they could gain access "through the office" to companies that they could not otherwise penetrate. Then once inside, the salesforce could leverage the entire BCS product line where appropriate.

In concept this seemed like a good strategy. Consultants said the market for office information services was huge and that a corporation could achieve a 15 per cent improvement to the bottom line if a total office system was implemented. There was growing consciousness among senior executives that the majority of the workforce was now white

collar, and that achieving productivity gains in this area was becoming more and more critical.

In fact, the strategy worked fairly well. The organization began to generate revenue, but more importantly the sales force began to penetrate companies where they had no previous success. However, there was confusion as to who the customer really was, what the market strategy really was, and how the product should be handled. Office services, like software did not fit neatly into the industry market strategy. It cut across all industries. Concurrently, revenues in the other product sectors began to spiral downward and cost reductions had to be made. The market staff saw office services as a small frog in a big pond, and they needed just the opposite. After approximately a year of fairly successful operation the group was disbanded.

The strategy to rescue time-sharing and gain access to new companies through office services served to mask the basic issue. There was no time-sharing strategy and no strategy to cultivate new customers. Rather than looking to a new market to solve these problems the organizational strategy should have addressed them directly.

Chapter Summary

The average annual revenue growth rate for the computer services industry is predicted to be between 15 and 20 percent a year through 1991.[7] It is an industry driven by technology, which in turn drives the needs of the customer and the market. It is in a "strategically favorable position--in the center of the information business, occupying the middle ground between conduit and content, between medium and the message."[8] As a result, computing services companies are in a good position to take advantage of the trends that change computing: systems integration, outside processing, and consulting, design and programming assistance in automating in-house functions. The stronger the ties between the computer services company and the hardware/software manufacturers, the greater the leverage.

The computer services company must avoid developing and executing strategic plans that are based solely on market trends and technology; they change too fast. Instead, companies must develop strategies that use technology and market trends to build on their strengths. They should then supplement their weaknesses through alliances and teaming arrangements.

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7. Robert G. Atkins, U.S. Industrial Outlook 1987, September 1986.
8. Stephen T. McClellan, Investment Merits, Data Services Industry, Merrill Lynch Pierce Fenner & Smith, 14, May 1987.

CHAPTER 3

STRATEGIC DIRECTIONS

Managing change is one of the most critical challenges facing management today. Pulled by the equally strong forces of current operational needs and future strategic direction, corporate managements have to make critical decisions now for both today and tomorrow. Strategic planning is meant to harness present demands to a vision of the future.[9]

This chapter will trace the history of BCS, specifically CSG, from its formation in 1970 through early 1988. The goals, objectives and strategies that are a part of this history will be recounted in the context in which they occurred. Future strategic directions will follow the historical account.

The Beginning of BCS

In late 1968, T Wilson, then Chairman and CEO of the Boeing Company, commissioned a corporate study to evaluate

9. Rochelle O'Connor, Facing Strategic Issues: New Planning Guides and Practices, The Conference Board Report No. 867, 1985.

whether it would make sense to consolidate all existing computing resources into a single business unit within Boeing. Prior to this time all data processing hardware and support services were integrated into individual product or operating divisions throughout the company. This was not of great concern when data processing was in its infancy, but, as computing became more and more sophisticated and greater expenditures were made, the need to manage and control these resources became more important.

Concurrently, the aerospace industry in general, more specifically Boeing, was entering a severe depression. The SST had recently been canceled; there was a significant downturn in commercial jet aircraft sales; and government awarded contracts were dwindling. Employment at Boeing in the Seattle area fell from 101,554 in January 1968 to 37,200 in October 1971. T Wilson was extremely concerned about the loss of highly skilled data processing people. In his words, "all the goods ones were leaving the sinking ship". In order to stop "the bleeding, take advantage of the skills we had, and to diversify into the commercial market," BCS was formed. Although the main objective was to "develop an organization which would be attractive enough to retain the higher class people, as opposed to the mediocre ones," no less important was the desire to expand into the commercial

computing services marketplace.[10]

In early 1970 a corporate charter was drafted which effectively established Boeing Computer Services, Inc. as a wholly owned subsidiary of the Boeing Company. It was decided that BCS should be a separate entity, i.e. not a division of Boeing, in order to demonstrate to the world that "we meant business".

The objectives associated with the formation of Boeing Computer Services were:

-Gain control of data processing costs
-Reduce the unit costs of computing
-Provide advancing technology throughout the entire Boeing Company
-Provide the capabilities to plan, design, and implement Boeing-wide systems
-Balance machine utilization in all locations
-Develop standards and a standard approach to computing
-Attract and retain the most qualified people
-Gain better utilization of scare technical skills
-Diversify the Boeing business base
-Compete in the commercial marketplace

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10. T. A. Wilson, retired Chairman, The Boeing Company, interview by the author,tape recording, by telephone from Boston, MA, March 1, 1988.

To further emphasize the importance of the new organization, Bob Tharrington, then BCS president, and a portion of his immediate staff were headquartered in New Jersey. The intent was to give the overall appearance of separation from Boeing corporate offices in Seattle, Washington. In addition, primary markets for external sales, financial services, banking and federal systems were centered in the east.

The First Decade 1970-1980

Organization

Figures 5a and 5b graphically illustrate the evolution of BCS between 1970 and 1980. The chart reflects a period of tremendous organizational growth and change. New market opportunities and the associated attempts to sell products into these markets had a direct impact upon the structure of the organization. Throughout the 1970's, both the commercial and government business segments were managed and organized in one organization. In the early 1980's, the business units were functionally separated into two organizations, hence two distinct profit centers.

1970

In 1970 the company was divided into four districts, keyed to four geographic locations where Boeing had computer

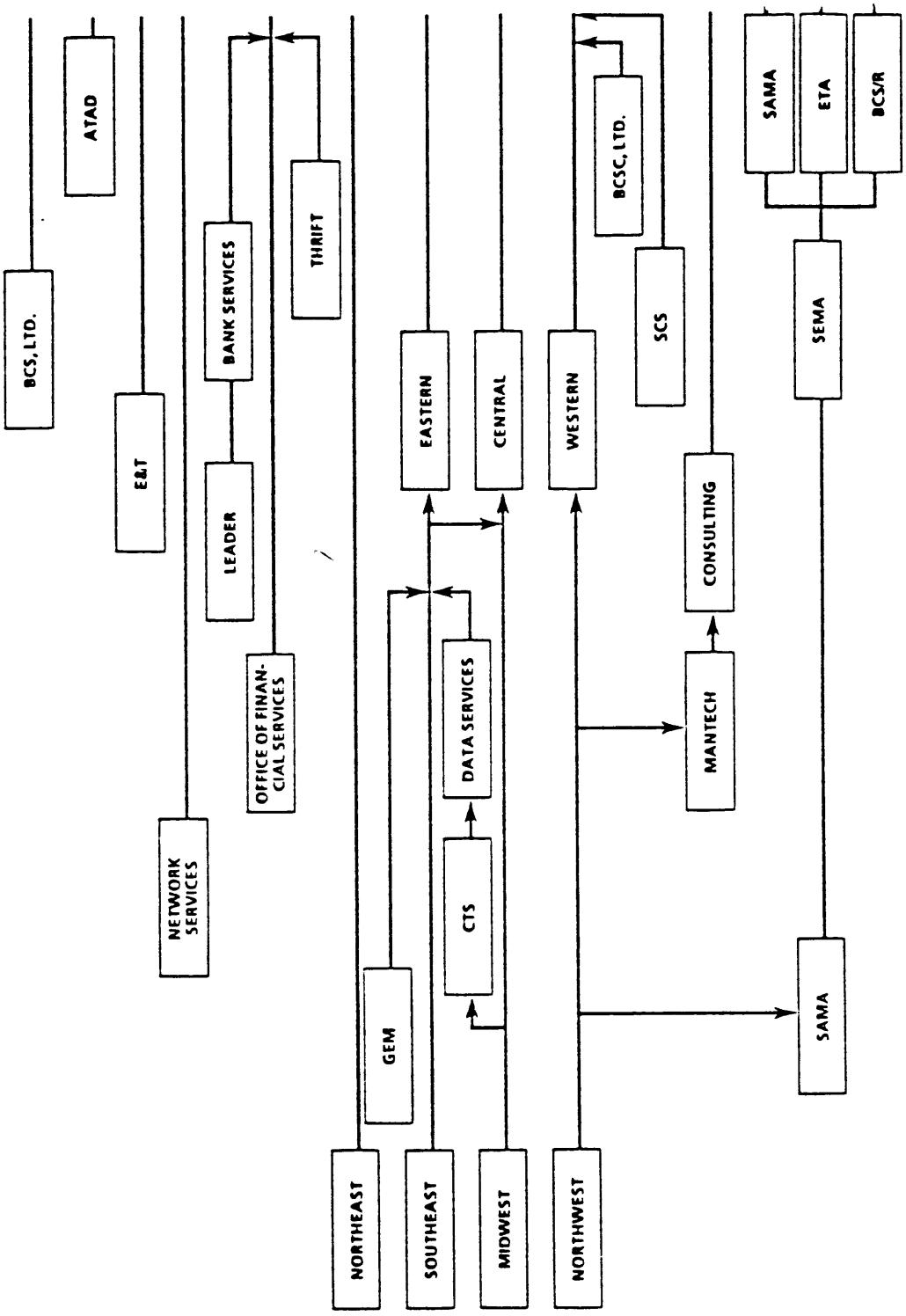


Fig. 5a Organizational Flowchart 1970-1977

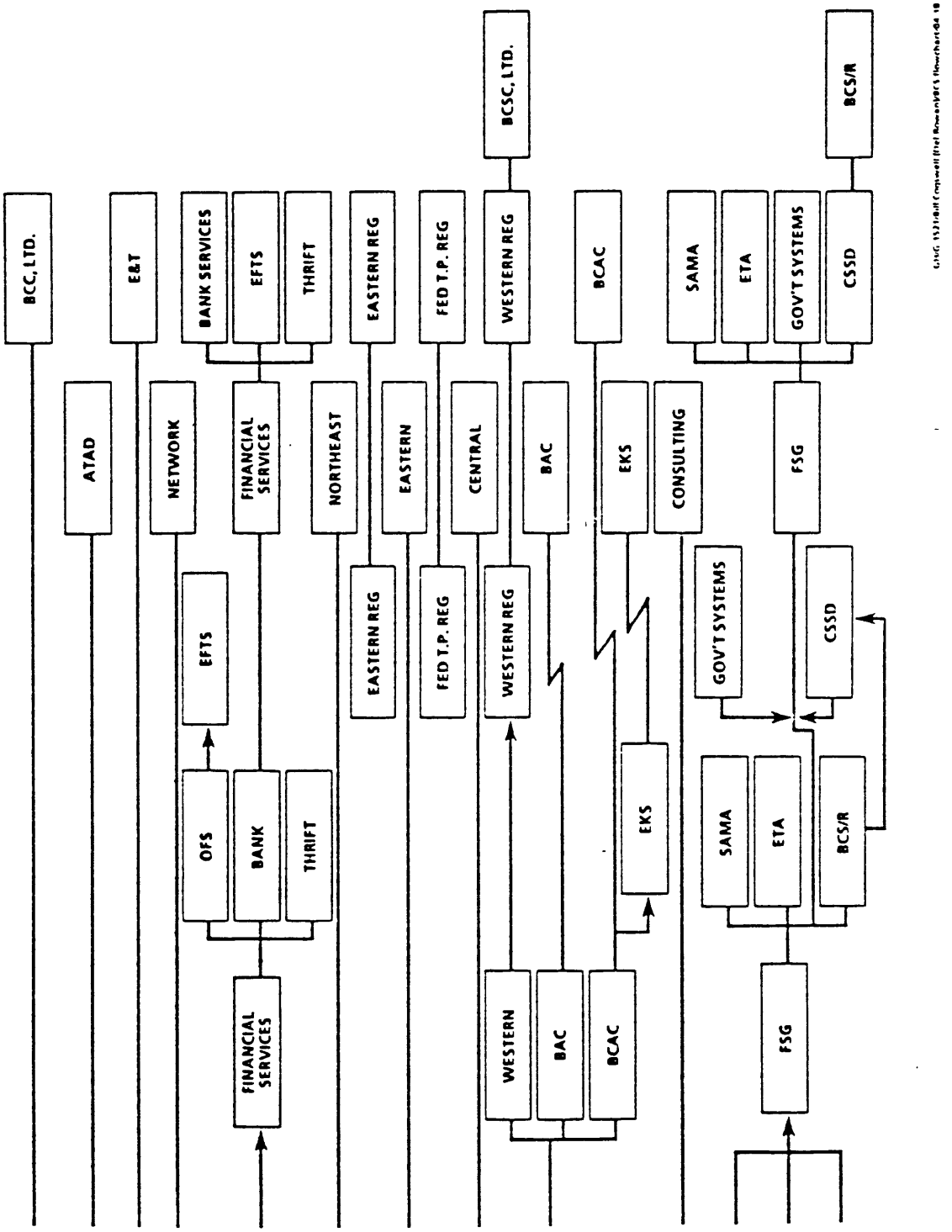


Fig. 5b Organizational Flowchart 1978-1980

installations: Northeast, Southeast, Midwest, and Northwest. These districts combined resources that supported both Boeing internally as well as the commercial and government markets. At this time no formal sales force existed. Commercial sales relied on Boeing's ability to sell excess data processing capacity (time-sharing) based on name, reputation, and image alone.

1970-1973

Between 1970 and 1973, three new organizations were formed to address emerging markets. The first, G.E.M., based in Washington D.C., was oriented toward the Government, Education, and Medical markets. SAMA, Space and Military Applications Division, was established to focus on NASA and DoD. The third, Network Services, was based in Seattle to provide telecommunications support to Boeing and commercial customers. The salesforce had grown from zero to thirty-nine, with the majority of these people located in the Washington D.C. metropolitan area supporting government opportunities. This represents the first major investment made by the company to actively pursue external business.

In 1973, two new business opportunities were initiated. First, the Office of Financial Services heralded Boeing's entry into the financial and banking services industry. The Leader Corporation, a company similar to ADP, was Boeing's

first acquisition to supplement banking service offerings. Financial and banking services would continue to play a role until 1985 when it was decided to abandon this commercial market segment. The second organization created in 1973 was the consulting group. It provided systems analysis and design support, specialized computing labor services and general systems consultation. Today this organization is still am important part of BCS' service offering.

1974-1975

Beginning in 1974 more significant changes took place. The acquisition of SCS, a small data processing firm located in Alaska, and Tenant and Song, a similar company located in Canada, were completed. SCS supported expanding markets in Alaska, while Tenant and Song provided the basis for the formation of BCS of Canada, Ltd. A fourth acquisition, Androcor Inc., was a software firm based in Chicago, that specialized in "point of sale" applications. SCS and The Leader Corporation, as well as BCS of Canada were eventually phased into BCS. In 1975 a decision was reached to shut down Androcor Inc. as the software product hoped for never really materialized.

A new division was formed in 1974--Education and Training. Training activities began as a product line with the formation of BCS and then in 1974 were brought to maturity with divisional status. By the end of 1975 the

salesforce stood at ninety-eight. Commercial sales were dependent upon the time-sharing business, both business and scientific, while the government time-sharing market continued to expand. Both proved to be quite profitable. In addition, Education and Training was doing an outstanding job not only training Boeing employees, but in capturing outside contracts at companies such as Ford and GM.

1976-1980

Between 1976 and 1980 things began to change quickly. Some structural changes were made to enhance distinctions between the various product and service offerings. That is, an attempt was made to concentrate a single product or service into one group, or to focus on a specific customer/market segment. Until this time there had been no need to structurally separate BCS support to Boeing from the commercial and government services activities. In 1976 the Boeing Commercial Airplane Company and Boeing Aerospace Corporation Support Districts were formed to provide dedicated support to the Boeing customer.

This restructuring resulted in the consolidation of commercial services in the west into a stand-alone organization-the Western Region. The Western Region was supposed to concentrate on expanding commercial opportunities. Whether this restructuring strategy resulted

in greater efficiency with regard to support to Boeing, or improved success in the commercial marketplace is unclear. Whatever the reason (perhaps a combination of both) in 1979 the entire sales organization was restructured into regions to "further enhance and strengthen our support to our commercial customers".

Boeing Computer Services was unincorporated in late 1978 and granted full status as a Boeing operating division. This was significant in that BCS was now recognized by corporate management as a mature contributing business, no longer a business in its infancy.

By 1980 the Federal Systems Group (FSG) had matured to include SAMA (Space and Military Applications), ETA (Engineering Technology Applications), Government Systems and the Computing Support Services Division (CSSD). Commercial Services was now more or less organized geographically into regions, with Financial Services remaining a separate group. Network Services also stood on its own. BCS which began the 1970's with 2,900 employees, no sales force and a modest organizational structure, ended the decade with 6,700 employees (the majority of the 6,700 supporting Boeing internally), 133 sales people, and an accompanying organizational structure made up of twenty-five support districts and twenty-five general managers.

Culture-Style-Processes

Although BCS was established as a subsidiary of Boeing and handled as a separate operating entity, the Boeing culture, style, mode of operation, policies, and processes naturally became an integral part of BCS. Personnel policies, performance measures, accounting and financial procedures, compensation policies, etc., were all the same as in the rest of Boeing. The notable exception was the sales commission plan and Quota Club, both of which rewarded top sales performers in CSG. The culture was that of a high technology aerospace firm with a heavy orientation toward the government sector. Although successful in the commercial services market throughout the 1970's due primarily to time-sharing, as we shall see later, the strong influence of the Boeing culture on BCS may in part have inhibited future growth. It certainly impacted the performance of the BCS subsidiaries during the 1970's. These subsidiaries were relatively unsuccessful, perhaps because BCS management attempted to run these small firms like Boeing, recognizing too late the incompatibility in culture and style.

Structure

Initially BCS was structured in a fashion that conveniently complemented the existing Boeing computing data

centers located around the country: geographic districts. As the company grew during the seventies, this geographic orientation began to shift to a market driven structure. Identification of markets that required heavy data processing, i.e. financial and governmental, focused increased emphasis on new organizations. As there was no specific product with the Boeing name on it being marketed at this time (most sales were based on labor and time-sharing) no attempt was made to organize along product lines. Emphasis was placed on improving support to Boeing during these years. The capabilities, skills, and resources inherent in BCS were directed toward building new systems to support the development of the 757 and 767 airplanes, as well as designing and implementing systems for use in bidding and winning government contracts. However, a substantial amount of senior management time and attention was concentrated on developing the external market. While profits from sales were put back into the company to encourage growth (subsidiaries), low outside investment from Boeing corporate was received during this time.

The Transition Years 1980-1982

Management Transition

In 1980 a significant change took place. Bob Dryden, formerly of IBM, was brought in as executive vice president of Boeing Computer Services. This demonstrated two things:

Boeing had recognized that information technology had become a mature business and it offered a good opportunity for further diversification and growth. The industry connections that Dryden brought to BCS gave a clear signal that emphasis would be placed on developing outside markets. As a result of his tenure at IBM, Dryden brought marketing expertise, competitive intelligence, strategic planning experience and technical capability to Boeing.

Strategic Focus

A strategic management staff, reporting to Dryden, responsible for developing business plans, operating plans, and business strategy was created. In fact, this proved to be the beginning of a separate strategic planning process for CSG. Internal factors such as corporate priorities, values, and cost would be considered as part of the strategic plan. In addition, for the first time, consideration was given to the external environment; including the economy, market, technology, competition, and political policy. Strategic plans would become an integral part of the overall planning cycle in BCS. Appendix A details this process.

New Management Impact

The impact Bob Dryden had on the organization was not felt immediately. Initially minor changes were made to the

organizational structure in order to accommodate new personnel and growth within BCS. Toward the end of 1982 more significant organizational changes would take place to prepare BCS for strategic redirection. Emphasis continued to be placed primarily on support to the internal Boeing customer. Dryden had brought a bit of IBM culture into Boeing and at the same time was attempting to adapt to the Boeing culture of BCS. It was critical that he gain acceptance among his peers in the other operating divisions of Boeing. This is why strong emphasis was placed on internal services and support.

While long range strategic planning took place at executive levels throughout the 1970's, changes began to take place in the way BCS described future external markets and directions. The strategic planning process in BCS had been one that functioned from two to ten years in the future. It was concerned with identifying and understanding trends and changes in the economy, business, personal, and political environment in order to determine what BCS should do in response. It focused on determining what to do--rather than how to do it.

The Dryden redirection altered the strategic planning process in BCS. Planning was now focused on the next few months through the next five years. Management became

concerned with identifying the industries and service offerings that would produce near term revenue and profit, in addition to those with long term benefit. Planning became dependant upon, and solicited input from BCS internal and field sources. It was truly an attempt to get BCS positioned for long term success, within the constraints of near term performance requirements.

Emerging Technologies

In the early 1980's emerging technologies had a dramatic impact and influence on the end-user computing environment. Data processing power was moving from the mainframe in either demand batch or on-line mode to distributed processors and the desktop with the introduction of personal computers. Application software had evolved from machine code and standard languages in the 1960's and 1970's to high level languages of the early 1980's. As the technology changed so did the sophistication of the end user. The customer had begun to make the transition from being solely a data processing technician, to a computing professional, to the non-professional and management.

Emergence of a Strategic Plan 1982-1983

Highlights

Now that technology had begun to drive processing from centralized mainframes out to dispersed systems with more and more non-technical users, there was a growing

recognition that systems should be integrated. The BCS service offering that addressed this need was stated as, "a high technology, networked, and integrated remote computing delivery service (RCS) complemented by professional support. The service will include distributed information services utilizing both extended utility and specialized work stations to satisfy the needs of clerical workers, management, data processing and engineering professionals."[11] The professional services would focus on RCS support systems design and verification, systems engineering, systems management and training. Mission oriented facilities management for the federal government would be emphasized and extended into the commercial customer market.

The published strategic plan on the commercial and government side of the business was to "establish permanent presence in the Fortune 500 accounts and major federal agencies." This was to be accomplished by vertical and horizontal account penetration by a "stable and skilled sales force supported by highly skilled technical and professional personnel."[12] The strategic objective was on penetration and growth.

Markets were divided into three segments. Tier one

11. 1982-1983 BCS Commercial Strategies Presentation.
12. Ibid.

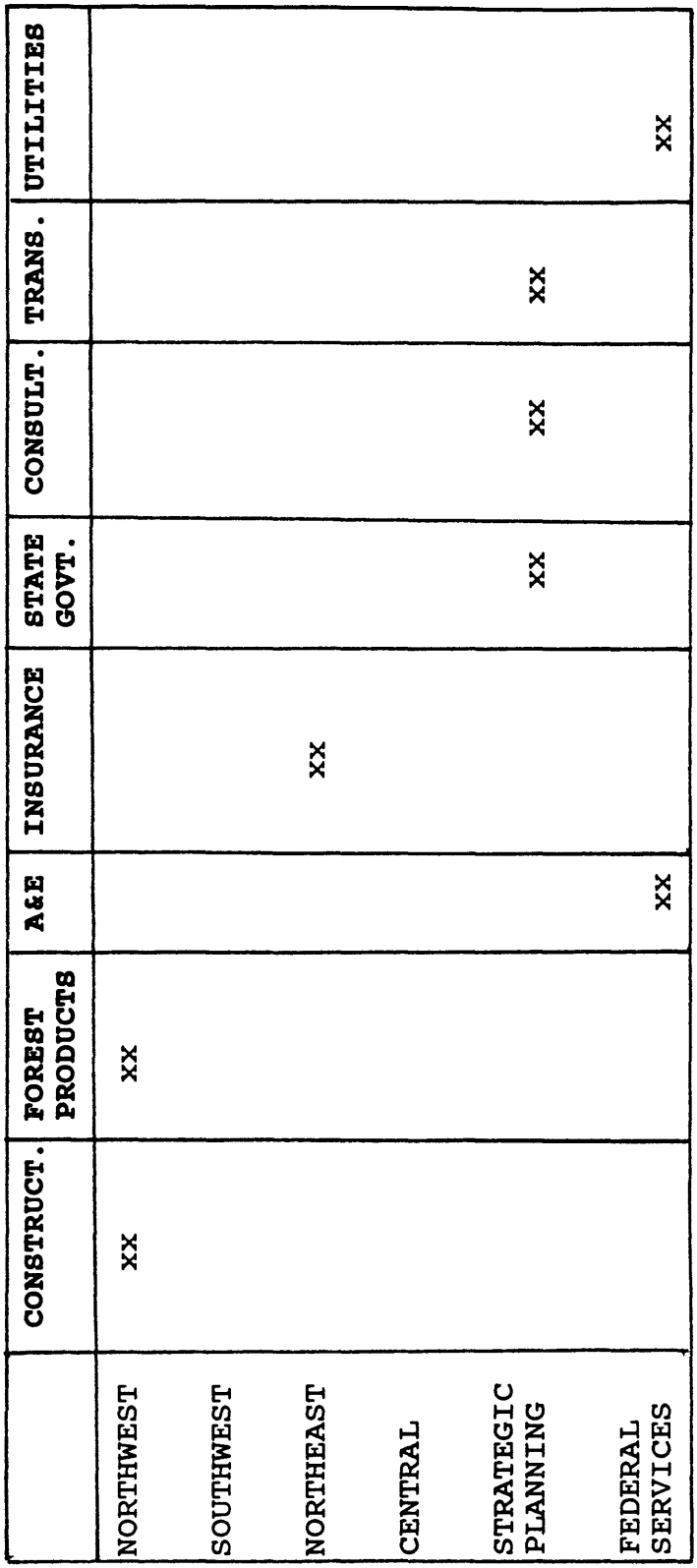
emphasis was on the federal government, energy, manufacturing, and communications. Tier two, which had less emphasis, was banking and finance. Tier three consisted of areas under study for future consideration. Within each industry group specific service offerings were established: time-sharing, professional services, (system design and maintenance, consulting, training) network services, and facilities management. Two new service offerings, software products and office services, were established in 1983. The Software Products Group, headed by a newly hired ex-IBM employee was formed to "move BCS strongly into the software products market place."[13] The Software Products Group reported directly to Dryden and included marketing, sales, development, and production of all BCS software products. This organization, its structure and reporting relationship, violated the intent of the vertical industry matrix and further confused who had profit responsibility, hence accountability, for commercial services. The office services group reported to the vice president of CSG and was established to sell office automation consultation and workstation communications software across all industries.

Products were matrixed across industry groups indicated in Figures 6 and 7. However, the regional district reporting structure put in place in the late 1970's

13. BCS Management Information Bulletin, 1, July 1983.

USER FUNCTIONS	CROSS INDUSTRY	GOVT	ENERGY	MFG	FINANCE	COMMUNICATION
BUSINESS SYSTEMS	EEEE	EEEE	DDDD	DDDD	DDDD	DDDD
ENGINEERING SYSTEMS	EEEE	DDDD	EEEE	SSSS		
MANUFACTURING				SSSS	EEEE	DDDD
DISTRIBUTION	SSSS	DDDD		SSSS		
SUPPORT FUNCTIONS						
DATA PROCESSING	EEEE	EEEE			LEGEND:	
OFFICE AUTOMATION	SSSS				Emphasis=EEEE	
NETWORKS	DDDD				Development=DDDD	
					Study=SSSS	

Fig. 6 BCS Product/Industry Matrix-1983



	CONSTRUCT.	FOREST PRODUCTS	A&E	INSURANCE	STATE GOVT.	CONSULT.	TRANS.	UTILITIES
NORTHWEST	XX	XX						
SOUTHWEST								
NORTHEAST				XX				
CENTRAL								
STRATEGIC PLANNING					XX	XX	XX	
FEDERAL SERVICES			XX					XX

Fig. 7 BCS Secondary Industry Assignments-1983

remained. In the near term, investments would be limited to product and internal resource development. Internal resource development would include motivational programs, training and job rotation. Internal business systems would be upgraded and "an aggressive investment would be made in the development of productivity tools and processes."[14] The ultimate goal was to become a $500,000,000 company in 1985 with 20 percent return on investment.

New senior management, combined with rapidly changing technologies, was beginning to have an effect on the products, processes and planning procedures within BCS. BCS had evolved and matured as the industry at large matured. It was obvious that in order to be competitive BCS had to have a strategy, goals, objectives and tactics flexible enough to meet market requirements. The 1982-1983 strategic plan was the first step toward achieving planned growth.

Growth Years 1984-1986

Environment

The challenge that faced BCS entering 1984 was that of executing the strategic objectives announced in 1983. BCS had been reorganized into three major functional groups: the Boeing Support Group, Federal Systems Group, and Commercial Services Group. The Commercial Services Group

14. 1982-1983 BCS Commercial Strategies Presentation.

was restructured internally to address the market opportunities that presented themselves to BCS. Business segments reporting to the vice-president of CSG were, network services, systems management, office services, information services, financial services, and professional services. A sales organization responsible for commercial sales, federal teleprocessing sales, sales administration, and marketing communications reported to the vice-president. Marketing responsibility for commercial services was separate from the sales group and also reported directly to the vice-president. The Software Products Group was not part of CSG, but was in the same markets and selling to the same customer base.

Another factor that had to be taken into account at this time was the rapidly diminishing time-sharing business. This problem was not unique to BCS. "General Electric sold off its failing computer manufacturing line in 1970. It seemed to be headed for another computer disaster in 1983, when its time-sharing business began to crash. When computing power became cheaper to own, nobody needed time-sharing".[15] Although experts had been predicting the decline in time-sharing sales for some time, no one anticipated how quickly the market would drop off. BCS was caught in the middle. In 1983 an organization had been

15. Alyssa A. Lappen, "Messenger of the gods", Forbes, 21 March, 1988.

created to strategically place new products and services in the market. The combination of time-sharing drying up, and BCS management underestimating the length of time it would take to bring new products to market created an unexpected decline in revenues and profits.

In addition to the decline in time-sharing sales, a second problem occurred. BCS had for some time counted on the petroleum industry (energy) for substantial revenues in scientific computing time sales. Boeing was essentially the "only game in town" when it came to providing the petroleum companies sophisticated geological analysis data using supercomputers. The supercomputer had been acquired for internal Boeing use and was running under capacity. This resulted in very high profit margins for time sales. In 1984 the bottom fell out of the energy market, limiting the need for exploration. No exploration meant no need for supercomputing.

Growth Plan

On May 3, 1985 Frank Shrontz, recently appointed President of the Boeing Company, posed the following question to BCS senior management, "How fast could Boeing Computer Services prime business grow without limits on investment?" This was not the first time a question of this nature had been asked, but it was different in that no

significant restrictions on investment were imposed. Shrontz was encouraging diversification and growth in BCS in order to compensate for decreasing margins in other business segments; commercial airplanes and fixed price government contracts. The overall objective was simply to increase earnings. Internal growth was emphasized as opposed to growth that could be achieved through outside acquisitions. The task was now to put together a comprehensive yet realistic growth plan, consistent with company objectives, that would identify potential opportunities for sales growth.

In October 1985, BCS management returned to corporate offices with a report that established a top level dollar value growth target and provided some general direction for meeting this objective. The growth opportunities should be consistent with company long term goals:

Growth in selected markets

-government

-manufacturing

-energy

-selected cross industry opportunities

Net profit contribution

Leadership and quality image

Specifically it was agreed that BCS external sales (government and commercial) should be in the $1.2 billion

annual range by 1990. Two markets should be identified and concentrated on. Only areas of expertise and past success should be developed. Focus was on internal growth, although a "well-suited" acquisition would be acceptable if it supported product development inside Boeing. Finally, the initial incremental investment required to achieve growth should be moderate, not unlimited. Twelve specific areas of opportunity, seven within manufacturing and five in the government sector, were identified.

Booz Allen and Hamilton was brought in to review the business case, including revenue projections, market analysis, investment and execution risks. BAH reported back in April 1986 that the $1.2 billion growth plan seemed extremely aggressive, citing that "no computer service/software firm the size of BCS had grown that rapidly" or had pursued twelve diverse opportunities simultaneously. They also noted that BCS was particularly weak in the areas of marketing and sales. The plan was adjusted downward to $1.0 billion by 1990 and market opportunities limited to six. On May 8, 1986 corporate executive council approved the growth plan and committed to an up-front investment.

Organization

In an effort to follow the intent of the Growth Plan and to focus attention on specific markets, both CSG and the

Federal Services Group (now known as Government Information Services) reorganized. Commercial sales operations was restructured to concentrate the companies resources on two specific industry segments: energy and manufacturing. Commercial sales and marketing were combined into one group, reporting to the vice-president of CSG. All sales and marketing activities supporting government systems became a part of the Government Information Services group. The Software Products Group was transferred into CSG, rather than reporting directly to the company president. A new group, Strategic Alliances was formed.

Emphasis on growth forced CSG into an era of continual reorganization. Successive changes of this nature are in direct contrast to the more stable organizational structure typically found at Boeing. Although the aerospace business is cyclical, the structure tends to remain much the same over time. In fact, within BCS the Boeing Support Group remained relatively unchanged during this same period.

The restructuring that took place in CSG and in Government Information Services gave them the appearance of a very large company when in fact the external side of BCS remained quite moderate in terms of revenues. The massive structure put in place to accommodate growth suited the major systems contracts with the federal government but made

flexibility difficult with regard to commercial customers and the market. Overhead costs increased. The sheer size and structure of the organization made product development cumbersome, therefore windows of opportunity could easily be missed. This put BCS at a disadvantage in the microprocessor software products market. It led them to develop commercial software products that had a longer product life, were produced in lower volume, but at a higher cost to the customer.

Even during this growth period, the BCS culture was still Boeing, and the management style had not changed. Internal capabilities continued to keep pace with technology. The planning process had been altered somewhat with the inclusion of Booz Allen and Hamilton in the strategic growth plan. However, there was some question as to whether product plans took best advantage of BCS skills and strengths, or appeared attractive due only to market trends. The behavior was that of a market driven company yet the question being asked was, how do I take the products I have and put them into the market? The answer seemed to be, find out what the market wants and then paint your products that color.

Strategic Redirection 1987-1988

Retrenching

By the end of 1986 it had become apparent that BCS markets were softening and that the growth plan needed to be reevaluated. The services industry was dramatically lagging the hardware industry. The business mix was changing between commercial and government, with the government business now playing a more dominant role. However, BCS was experiencing unanticipated delays in government contract awards. A lower investment budget was proposed that represented a more focused strategy. Internally BCS, specifically CSG, began to reduce internal costs by significantly reducing headcount and overhead. The goal for the external business segment was to break even in 1988. Increased emphasis was placed on developing alliances in order to leverage available resources and bring many varied skills to bear on large complex projects. The objective of becoming a $1.0 billion business by 1990 was postponed until 1991.

Organization

At Dryden's request a BCS task force was established to study the external business segment and make recommendations to improve the effectiveness of the organization. The result was a proposal to establish a BCS corporate position,

reporting to Dryden that would direct marketing, market research, advertising, and evaluate potential acquisitions, teaming arrangements, and review investments. This position, in fact, was never filled. Instead, in March 1987, to strengthen the senior management team in commercial sales and government, Mike Hallman, former IBM vice president was hired and appointed vice president of BCS-CSG and GIS. Hallman, with extensive sales and marketing experience, would obviously strengthen these disciplines in BCS. However, rather than serving as a strategic manager (corporate development) for Dryden, Hallman was given line management responsibility. The first change was to once again reorganize, this time by major industry, not by products, i.e. software, computer integrated manufacturing, financial services etc. The industry orientation would focus on manufacturing and engineering-scientific businesses. It was felt that this would allow BCS products to be sold vertically within an industry and horizontally across industries. Additionally, marketing would no longer be a staff function serving all products and services. It would now be a specialized task supporting individual industry groups, with a small centralized marketing staff. This change would not last long because in January 1988 another reorganization would take place. By that time Hallman had been promoted to President of Boeing Computer Services. He had had little time to implement the sales and

marketing skills and strategies he brought to BCS.

Throughout the second half of 1987 the commercial business continued to deteriorate. Management began to reduce costs, beginning with administrative support organizations and ending with reductions in sales and marketing. However, reductions did not take place quickly enough to protect the established profit targets. The general assessment of performance over the past two years was that the growth plan was too ambitious, the product set was too broad, and in-house skills did not support the shifting product mix. A more conservative approach to the commercial business was emphasized: consolidate profitable core offerings, while "harvesting" commodity services such as time-sharing and education and training; focus on manufacturing software and supercomputing. The sales and marketing organization needed to be "revitalized" and greater emphasis would be placed on strategic development and marketing alliances.

The appointment of a new vice president of CSG in March 1988, led to a product oriented restructuring in the manufacturing industry segment, while engineering-scientific and super-computing were combined. It was believed that structuring around products would encourage profit and loss accountability where none had existed before. It would also

facilitate a shift from a strategic plan to a more tactical view in 1988.

The tactical approach is focused specifically on products with the "objective of minimizing the number of products in order to optimize each product business unit."[16] Each product will be evaluated to see if it has enough value in its own right to be part of the eventual strategy. The belief is that this will enable each product to fail or succeed in the marketplace rather than fail or succeed trying to get out into the market. If products succeed in the market fine, if not, fine...but at least management will know. As stated by the current vice president of CSG," the strategic approach to a business plan is not sacred now...tactics are."[17]

Chapter Summary

The evolution of BCS since its formation in 1970 can be summarized in terms of the "eras" described above. During the 1970's BCS was in its infancy. While emphasis was placed on skill retention and providing high quality support to the Boeing Company, commercial and government sales activities received a substantial amount of management

16. J. P. Farmer, Vice President, BCS Commercial Services Group, interview by the author, tape recording, Bellevue, WA, January 19, 1988.
17. Ibid.

attention. Excess in-house mainframe time (commercial and scientific) was the profitable stable product. Salesmen sold data processing, pure and simple.

Then in 1980 things began to change. Bob Dryden began to place more emphasis on external sales. To expand the existing business base a fairly complex product strategy was developed. Dryden envisioned a product line strategy for BCS that would consist of microprocessor software, systems integration, telecommunications and office automation. These products were most important with all others taking a back seat.

Problems arose due to the fact that the vice president of CSG believed in a different strategy. He wanted to build an overall plan where all components complemented one another. It was a matrix approach to product management with sales and marketing focused vertically on the manufacturing, energy, and government business segments. Products such as office automation, which did not fit neatly into this strategy were kept separate organizationally, floundered and eventually were discontinued. Meanwhile, time-sharing and energy began to fade, and planned new business ventures did not become profitable as quickly as expected.

The investment dollars allocated to CSG and Government Information Services during the growth period increased over ten times. The investment has paid off on the government side, with contract awards, both in numbers won and in dollar value awarded, tracking with planned targets. Some hold that too much investment, over too short a period of time in CSG, was not good for growth because it forced management to make "big" decisions rather than more modest, capability driven decisions. Others would argue this point. BCS management was forced to reevaluate the growth strategy because objectives were not been met. The result has been the development of a smaller, more manageable strategy that is based on core businesses that can be profitable and growth oriented. Recent restructuring has been undertaken to bring costs in line with expectations of sales. Management, in scaling down the organization, is taking a proactive position, rather than the reactive stance that kicked-off the growth years. BCS president, Mike Hallman views 1988 as a "year to establish our confidence in what we are doing. We clearly believe we are in the right business in the government arena. In the commercial arena our objective now is to really stabilize our business so that we can begin to show success and establish a confidence

level."[18] The key to success will be the ability to execute. Execution is the critical success factor for BCS external sales in 1988.

18. Interview with Mike Hallman, Boeing Computer Services Online, December 1987, Volume 3, No. 9.

CHAPTER 4

ANALYSIS

"The goal of planning is to create the future, not to forecast it."[19]

This chapter will analyze the results of strategies developed by BCS to establish itself as a competitive force in the computing services industry. Emphasis will be placed on the years 1983 through 1988, although events that occurred prior to that time will be referenced.

Should BCS attempt to compete in the computer services business?

Time and time again, while conducting thesis interviews and doing thesis research the same question kept coming up, "should BCS even be in the commercial computer services business?" Each time the question was raised I would arrive at the same conclusion; a resounding yes. In the 1988 sales

19. Rochelle O'Connor, Facing Strategic Issues: New Planning Guides and Practices, The Conference Board Report No. 867, 1985.

kick-off meeting BCS President, Mike Hallman reinforced this by stating: "The key point I should make at the outset is that I believe a commercial business is critical to our success in BCS. It is critical to the overall profitability and stability of BCS. Moreover, the external sales side of BCS is critical to the long-term objectives of The Boeing Company--to the extent that we can take technologies and skills and transfer them from within Boeing to outside Boeing and visa versa."[20]

This may seem strange given the difficult time BCS has had in sustaining itself in this endeavor. In fact if the only consideration is the bottom line then the obvious strategic direction would be to adopt exit strategies. However, I am convinced that a company such as Boeing must maintain technological leadership if it is to remain competitive in all aspects of its business, from airplanes to electronics to space. Government Information Services and the Commercial Services Group serve as conduits to the external environment, facilitating a two way transfer of technology: from Boeing out to the industry, and from the industry into Boeing. This technology transfer, something that cannot be quantified in terms of dollars and cents, is the real benefit of sustaining a commercial services organization. This should in no way compromise the fact

20. Interview with Mike Hallman, Boeing Computer Services Online, February 1988.

that BCS can and should be more successful when it comes to establishing market presence, achieving competitive advantage and generating substantial revenues through the sale of its products and services.

Therefore, the analysis and recommendations that follow will be based on the premise that Boeing Computer Services should be in the commercial computer services industry. The analysis will demonstrate that although the business is right for Boeing, significant improvements can and should be made to ensure future success.

Assessment of Strategy

Planning Process

The planning process serves to establish the company's mission, goals and objectives, strategies, programs and resource requirements, that will enable the organization to best cope with and influence an uncertain future.[21] A firm will benefit from the planning system if all levels of management are involved.

The process described in Appendix A ties strategic plans to the company operating plans such that management can effectively determine the resources required to carry out the planned strategies. Planning in BCS begins as a top

21. William R. King and David I. Cleland, Strategic Planning and Policy (New York: Van nostrand Reinhold Company, 1978)

down process with the creation of the strategy document, and concludes with an operating plan that is built from the bottom up. Since the strategy document is updated annually and the operating plan updated quarterly, adjustments can be made to keep the organization aligned with both long term vision and short term goals. A benefit in this process is that all levels of management are involved so that planning becomes part of the day to day operation of the organization.

However, there is a downside to this process as it is practiced in BCS. The system lacks a mechanism that holds all levels of management accountable for implementation of the strategic plan. Executive management is rewarded or penalized based on performance relative to the operating plan. Weighted specific performance measures include execution of current business, long term strategy, acquisition of new business and resource management. Achievement of short term goals however, often overrides the strategic direction established at top levels for the organization. There is less incentive for executive management to stick to the strategy, but rather more incentive to manage "by the numbers". The result is that tactics become more important than strategy. The bottom line and profitability become more important than establishing market presence, achieving product acceptance,

and gaining competitive advantage. There is no strategic management or execution of the plan taking place on a day to day basis at all levels.

The Strategic Plan

BCS documented an important in-depth commercial strategy in 1983.[22] It began with a vision and objectives for the commercial services business and followed with an assessment of the external and internal business environment as applied to the computer services industry. The document included a fairly extensive study of the external environment: economy, market, technology, competition, political, and sociological factors. The internal analysis focused on Boeing corporate priorities, management values, cost, and marketing. Strategies were stated in terms of: primary objectives, "establish permanent presence in the Fortune 500 extended accounts and major federal agencies"..."to be accomplished by vertical and horizontal account penetration;" market objectives, "business management systems, engineering, and information services,...energy, manufacturing, financial, and communications industries;" and services offerings, "high technology, networked, and integrated remote computing delivery service complimented by professional services." Laying out this strategic plan more or less formalized what

22. BCS Commercial Strategies, 1982/83. Boeing Limited document.

the commercial and government businesses had evolved into during the 1970's. BCS was already selling or had sold into most of these markets and had founded these sales primarily on remote computing services.

Subsequent plans, including the Growth Plan of 1985, contained all of the same elements with minor variations. One year the plan would emphasize vertical market integration by industry, while the next year it would next focus on products for horizontal penetration into the market. Some industries were deleted over time; medical services and financial services, while one was added; the communications industry. Others stayed in the plan; manufacturing, engineering, and energy, while high technology (hardware and software) market was completely ignored.

On the product side the same thing occurred. Products like microprocessor software and office services were discontinued. Time-sharing declined as technology changed. BCS' software integration tools (Axxyz and PMS) underwent a complete transformation from the time they first appeared in 1983 to their inclusion in the 1988 plan. Super-computing, consulting services, and education and training stayed in the plan relatively unchanged.

It seems ironic that BCS changed its organizational structure each time the strategic plan shifted emphasis from industry to product, even though the specific industries and products remained the same. Constant reorganization implies that management believed that the way the producing groups were organized had a direct bearing on how effectively they could get their products into the marketplace. Is it necessary for the organization to mirror the market? You can continually rearrange the deck chairs on a ship and end up with a better view, but it is still the same ship, heading for the same port.

Strategic Management

The shortcoming in the strategic planning process for BCS is in the execution and management of the plan. Every strategy describes in detail what it is the company intends to do and where it intends to end up, but never <u>how</u> it is going to get there. Strategic management has not become a part of the day to day operation of the company. This is why management has had to resort to a tactical approach in 1988 and use it as a year of recovery.

The inability to execute the Growth Plan or the office automation strategy, to accurately forecast the decline in time-sharing and not have one or more replacement products in the pipeline, highlight this shortcoming. Despite the

emphasis on planning, reorganization and product development, something is still missing. Why is execution such a problem?

Execution starts at the top. If management is not committed to the overall strategic vision for the company then others in the organization will have no incentive to implement the plan. BCS-CSG appears to be operating on the assumption that creating the strategic plan is the objective, as opposed to the objective being the implementation of the plan. A lack of accountability in the system provides little impetus for execution. It has been stated by the vice president of CSG that the recent reorganization (aligning the organization by individual, self-contained, product groups) will force everyone to be accountable for the success or failure of the product. This is still a product orientation, not a management orientation. Accountability for the success or failure of a specific product is not the solution. If management is committed to stay in the commercial computing services industry because, as stated, it is good for Boeing (technology transfer) and a profitable business to be in, accountability must be moved higher up the ladder. Senior management must be held accountability for the success or failure of the organization at large. Management should continually be asking, "if this were my own company would I

run it this way?". In reality, everyone in the organization should have an ownership attitude. This breeds commitment. This is a business which should encourage risk-taking and entrepreneurial spirit, neither of which are an important part of the Boeing culture.

The conflict is further complicated because Boeing Computer Services is chartered to serve two masters; the external market, and The Boeing Company. In executing the commercial and government strategies, management must constantly balance external growth with reliable, cost effective internal Boeing support. The day to day management challenge inherent in one, is not always compatible with the other. The dominant influence of the internal Boeing customer has made quick reactions to the external market and customers difficult. This has often slowed decision making and made entry into new markets cumbersome. On the other hand, the external commercial business, in relation to other Boeing businesses appears quite modest in terms of dollar value. Decisions that are made regarding investments or expenditures of funds are sometimes made quite hastily because in the overall scheme of things they are not viewed as significant. Either way, execution is hampered.

Marketing and Sales

Mike Hallman, President of BCS, has established execution as one of his critical success factors for BCS in 1988. However, even with faultless execution, there are still some obvious holes in the strategy that will prevent the Commercial Services Group from achieving success.[1] Two glaring weaknesses in the organization are marketing and sales.

Marketing

How can a company hoping to compete in the external market do so without an effective sales and marketing function? Through 1987 there was a centralized marketing staff located in Vienna, Virginia, some 3,000 miles from the product groups in Seattle. Up until 1983 this might have been a satisfactory arrangement because much of the marketing revolved around time-sharing services which were located in Vienna. When the product strategy began to shift toward software and professional services, both based in Seattle, marketing support was not readily accessible. Often times a strategic approach would be developed by the marketing group only to have a tactical decision made by senior management in Seattle preempt the entire plan. The last director of marketing was the seventh person to hold that position in eight years. The size of the staff changed

dramatically over time from 100, to 60, to 40 and ultimately 15. Today there is no central marketing staff and no competitive analysis function, rather marketing has been decentralized and embedded in the product/line organizations.

While senior management may have been to blame for overriding marketing strategies, the marketing organization was not staffed with trained professionals experienced in the computer services industry. One CSG vice president when asked how many people in the marketing group had prior marketing experience said I do not know. The answer was one.

An independent consultants study commissioned by The Boeing Company concluded that BCS's sales and marketing were not appropriate for highly competitive rapidly changing markets.[23] BCS has not fully recognized that the computer services industry is substantially different from other Boeing businesses. As such, it requires a totally different marketing orientation. Name, reputation and technical superiority are not all it takes to compete in this dynamic market.

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23. Independent Consultants Report, 11 August 1987. Boeing Limited document.

Sales

Since 1984 the commissioned sales force has declined from 107 to less than 30. During this same time period the total number of people in BCS has grown from 8,200 to 11,200, with most of the growth occurring in the Boeing support organizations or in Government Information Services. Between 1984 and 1988 commercial revenues (CSG only) declined by 50 percent. This seems to indicate that management emphasis has not been directed toward selling or revenue growth, but rather on cost reduction. This is particularly puzzling given the corporate emphasis placed on growth in 1985-1987, and the investment made to achieve this objective. A strong sales force that knows and understands the customers is essential. The emphasis has not been on actively cultivating customers in an industry where one of its strongest attributes is recurring revenue.[24] CSG is not customer driven: it is product driven. CSG is structured to produce, not to sell.

To further complicate the matter, the domestic sales team has undergone a series of internal reorganizations driven by cost considerations, not changes in the strategic plan. Territories have been repartitioned, management changed, offices closed, and staffs centralized. Sales

24. Stephan T. McClellan, Investment Merits, Data Services Industry, Merrill Lynch Pierce Fenner and Smith, 14, May 1987.

people who had named national accounts suddenly found themselves assigned industry accounts selling unfamiliar products, often times not ready for market. Today accounts are assigned based on which account the individual sales person thinks he or she should have. This is not a well thought out sales strategy.

All of this has reduced the overall effectiveness of the salesforce. Like marketing, senior sales management was located in Vienna, Virginia where contact with producer groups and the customer was minimal. The result is that the sales force lost confidence in the producers as well as in their management.

In 1987 and 1988 renewed emphasis on cost reductions has sent mixed signals to the sales staff. On one hand sales quotas have not been reduced, yet the number of people in any given region attempting to meet that quota is less than before. Cost reductions send a signal: "you never need to take the customer to lunch, you never need to run an ad, you never need to hold a seminar, etc." The cost of being in a highly competitive commercial business is that you have to spend to sell. In 1986 when Wang Laboratories saw a drop in profits and revenues, they too began cutting costs. But instead of cutting sales and marketing, they reduced the overall staff by 7,500, increased the sales

force by twenty-five and kicked-off a new advertising campaign. Wang balanced both sides of the equation, something BCS management has not done. The Boeing corporate objective for 1988 and beyond is to reduce costs while improving short term profit. BCS has not yet figured out how to grow and maintain profitability through selling and marketing, while keeping costs under control.

Chapter Summary

The issues that surround the future success or failure of Boeing Computer Services in the external marketplace are simple yet at the same time fairly complex. There are those in the company who would say that the return on investment just is not there so we should kill it and move on. There are others who would argue that although the returns are small the ability to access outside technology reduces the overall cost of computing to Boeing and therefore is of significant value. Along this same line there are many who believe that the technology itself is important enough to keep the business alive. All of these arguments ignore the market opportunity for growth in this services sector which is substantial. They also ignore that fact that there have been two market areas in which CSG has been very successful. They are engineering and scientific services and (ESS) and the high technology market.

In either example the reasons for success are relatively simple. In ESS management assembled a competent team, provided strong leadership, established strategic direction, was responsive to the customers needs. Success in the high technology industry (a more detailed description follows in Chapter 5) follows much the same pattern. What sets these two apart from the others is that strategies were developed, adhered to and executed. In the final analysis it is the ability to effectively executive strategies, linking the plan with the day to day management of the business that is essential for success.

CHAPTER 5

RECOMMENDATIONS AND CONCLUSIONS

Boeing Computer Services stands at a crossroads in 1988, this year of retrenchment and confidence building. Frank Shrontz, Chairman and CEO of the Boeing Company has stated that cost reductions and improved profits are corporate objectives for this year and the years beyond. This of course must be balanced with emphasis on improved quality, productivity, and long term strategic planning. Profit margins on primary products such as commercial jet airplanes and defense systems are shrinking. The management in Boeing Computer Services must make a strategic choice. Should they continue to reduce costs by eliminating traditional overhead functions such as sales or marketing and risk continued declines in revenues? Or should they develop a strategy targeted at growth opportunities and make a positive contribution to the Boeing bottom line?

In this chapter I will explore some of the options BCS has relative to improving the operation and revenues generated by the Commercial Services Group.

Recommendations

The problems identified in Chapter 4 will be reviewed in this section with accompanying recommendations.

Planning Process

The following are inherent weaknesses in the planning process in BCS.

-No mechanism that holds all levels of management accountable for implementation of the plan.

-Does not reinforce the need to execute on a daily basis.

-Does not encourage development of a long term strategy.

The planning process should be tied to the annual Management Performance Planning and Evaluation (MPP&E) process (Appendix B). MPP&E is a BCS management evaluation tool mutually agreed upon between a manager and his or her superior. It details in narrative form, business goals and objectives for the year and is reviewed annually. The MPP&E combines quantitative performance targets with qualitative objectives. Objectives stated in the MPP&E are not necessarily projects or plans that will terminate in that twelve month period, but may be plans or projects that carry over several years. At year end it is used as part of the performance appraisal system. Incorporating strategic plans

for the organization in the MPP&E would serve three purposes: 1) It would force two way communication ensuring that strategies were understood and agreed to by both parties, 2) It would tie accountability for results to more than making the numbers in the operating plan, 3) It would encourage management to begin to take a longer view of planning, versus a short term orientation.

Strategic Planning

Past BCS strategic planning documents share two major problems: they are reactive, not proactive, which has resulted in continual reorganization generating instability and lack of confidence among employees. In BCS-CSG structure does follow strategy. Secondly, there is no emphasis on how to carry out the strategy, only what the strategy is. The absence of a "how to" plan reinforces a short term focus.

First and foremost, senior management in BCS needs to stabilize the organization. This will occur quite naturally if a proactive strategy is developed in which all organizations, sales, producing groups, planning staff, and senior management play a role and have input in establishing strategic direction.

Strategic Management

The following issues have been identified as significant problems that prevent strategic management from taking place in BCS.

-Apparent lack of commitment from the top. This holds true for both BCS senior management and Boeing executive management. It is difficult to determine whether they seriously consider BCS-CSG to be a profit center for Boeing or not.

-No execution.

-Lack of accountability, fueled by marginal incentives for good performance and no penalties for poor performance.

-No entrepreneurial spirit. Risk-takers are not rewarded. Ownership attitude in almost non-existent.

-BCS must serve two masters, Boeing and the external market. Therefore BCS has adopted the culture, processes and procedures (bureaucracy) of Boeing, which slows the decision making process.

It is essential that senior management demonstrate commitment to the strategies developed by BCS to enhance and grow the commercial side of the business. This commitment needs to come from those at the highest levels of the Boeing Company. This is the first critical success factor for BCS-CSG.

The second critical success factor is implementation. All the strategy and plans in the world are only as good as the paper they are written on if they are never carried out. BCS must develop the ability to strategize "how to" to compliment who, what, and when.

The third critical success factor is senior level management accountability. An internal system that provides incentives for execution and implementation, and penalties for lack of execution are needed. This should be grounded in rewards for adherence to long term strategies, not short term goals or revenue targets. Success needs to be rewarded over time (and lack of success penalized in the same way) to encourage commitment to the long term strategic growth objectives of BCS.

More difficult to carry out, but equally as important, is the idea of creating an entrepreneurial spirit in BCS-CSG. This is the culture of the industry at large and as such Boeing needs to come closer to understanding that culture. Risk-taking should be encouraged and rewarded. This becomes critical when entering into alliances with smaller entrepreneurial hardware and software companies that were founded by risk-takers who have a pride in ownership.

Last and perhaps the most difficult to handle is the fact that BCS must continue to serve two masters, The Boeing Company and the external market. This will always be a balancing act for management. However, serious consideration should be given to establishing a small company (or series of companies) in which Boeing would have majority equity interest, and perhaps a hardware manufacturer minority equity, to market and sell a Boeing developed product. The staff would consist of sales, marketing, and technical support personnel whose sole mission is to get the product into the market and support it once it is out there. It might be necessary to have a product development liaison person as well. This would accomplish two things. First it would force the product development cycle inside Boeing to end...there would be a finished product. Second, it would eliminate the Boeing bureaucracy and force sales and marketing to be more responsive to the marketplace and the customer. Decisions could be made much more rapidly. In addition, this would not compromise managements' intent to have BCS-CSG function as a technology transfer pipeline between Boeing and external industry.

Marketing

The basic problem with marketing is that it is for all practical purposes non-existent in BCS. Contributing

factors to its ineffectiveness are:

-It has been decentralized into the product group.

-No professional, experienced staff.

-No competitive analysis conducted.

This gives the appearance that marketing is a non-essential function in the computer services industry, when in fact the opposite is true. BCS should engage a consulting or headhunting service to locate and hire a professional experienced marketing "guru", and then let the professional put the organization together, develop marketing strategy, and execute. More emphasis also needs to be placed on competitive analysis within this function.

Sales

The following were recognized as problems inherent in the sales organization.

-No stability. Disjointed function.

-Continually experiences cuts during cost reductions.

-Managements' attitude is wrong. They think that the product sells--not the sales force.

-Sales training non-existent.

-No national sales account system.

-No common sales strategy. Each industry or market should have a custom tailored strategy for success, however, there should be a common "BCS" thread that runs through it all.

The sales problem is relatively easy to solve. It goes back to management commitment. If management believes that a professional, well trained sales organization is critical to the success of BCS-CSG then most of the problems will solve themselves.

There is however, one other issue that is not so easily solved, that of sales strategy. This is an essential part of the long term strategic plan for CSG. Few sales strategies have been developed or adhered to over the years creating confusion within the salesforce and also with the customer. The high technology strategy, mentioned in Chapter 4, is an example of a strategy that was developed in 1984 and continues to be executed, quite successfully today. I would like to review it as an example of how strategic management can and should be implemented in sales.

The High Technology Strategy

The high technology strategy is a sales plan for working with hardware and software vendors primarily, but not exclusively in the Boston area. It was developed in 1984 by the sales representative in the BCS Boston office as a result of the recognition that substantial market opportunities existed for Boeing in the high technology industry in Boston, Silicon Valley, Minneapolis, and Texas. Ignoring the high technology industry as a potential

customer or marketing partner when you are in the computer services industry is much like doing business in Detroit and ignoring the automobile manufacturers.

This strategy encompasses all elements of conducting business with high technology companies, including, sales marketing, product development, alliances and resultant distribution agreements. The key elements of the strategy are:

-Identify companies that could potentially benefit from Boeing's technical expertise.

-Establish a rapport with key executives of these companies.

-Create initial sales opportunities.

-Invite key executives to visit Boeing in Seattle, meet with BCS senior management and obtain a better understanding of how Boeing can bring value to them.

-Obtain agreement between management in both companies to form a working relationship.

The crux of the strategy is top down selling combined with matching the strengths and weakness of the companies to extract the best from both. Implementation and execution of the strategy requires a continuous effort on the part of the BCS sales professional. In addition to plotting account strategy with senior executives, there are influential

technical experts within each account that need to be nurtured. This is where teamwork selling techniques come into play. The strategy puts emphasis on getting the right technical personnel from BCS working with the appropriate people within the customer accounts. Primary contacts or coordinators within the customer accounts have been formally established in order to ensure that the Boeing message gets to the right people in a consistent manner. The key is that the strategy is directed by the sales professional; the person who knows the customer best.

The communications strategy, above, is essential to the success of the high tech plan, in that it allows BCS to capitalize on existing opportunities or those that develop as a result of strategic changes or redirection within the customer accounts. For example, a major hardware manufacturer recently jumped into the mini-supercomputer market by buying the rights to another vendors' hardware. The relationship that had been developed between BCS and this company provided an immediate opportunity for BCS to adapt existing operating and applications software for use on this equipment. The high technology strategy recognizes that the industry trend toward "total solution" orientation ("we are not just a hardware company anymore") is good news for BCS. It opens the door for OEM opportunities, joint bids, or product incorporation. It also includes porting

Boeing software products to manufacturers platforms, selling labor services, (leading to future product sales) and remarketing agreements.

Every year, within the high technology accounts, BCS has seen significant growth over the previous year. The keys to success in the high tech sales plan are relatively simple. They center on the fact that once a plan was developed in 1984 it was followed. First, and most importantly, this is an industry strategy, not a product strategy. The sales professional has taken time to understand the market and the customer. The importance of cultivating strong personal relationships with key personnel in each account has been emphasized. Rather than concentrating only on products, the strategy has been "solution selling", directed toward establishing long term, mutually beneficial, relationships with these companies.

The benefit to Boeing resulting from this sales strategy is three-fold. First, it provides BCS with a growing revenue base. Second, it enhances the transfer of technology into the Boeing Company. Most importantly, it helps keep BCS on the leading edge of the computer services industry.

Concluding Remarks

In any industry there are many ways you can measure success. Some focus on short term profitability accompanied by high margins, while others focus on low margin, long term gains. Many emphasize maintaining competitive advantage through the acquisition of new technology as essential for success. To others the acquisition and retention of highly skilled personnel ensures competitive position. Outstanding quality, both in process and product is another indicator of advantage or success. At The Boeing Company success is measured as a combination of all of these factors.

Boeing Computer Services maintains competitive advantage through technical superiority and retention of highly skilled personnel. However, in this case, success cannot be measured by advantage alone. In order for BCS to gain respect within the industry and respect inside The Boeing Company it must improve the bottom line. This must not only be achieved through cost reduction measures or continual redirection, but by implementing and executing a sound strategic sales and marketing growth plan. Three critical success factors, management commitment, accountability, and execution will greatly enhance the probability of future commercial profitability of Boeing Computer Services.

APPENDIX A

The Planning Process in BCS

Planning, both forecasting of resources required to conduct day to day business and that of defining the strategic direction the corporation or individual operating divisions will pursue is carried out on a annual basis. In BCS the process begins each spring with an off-site senior managers meeting. The off-site meeting is a forum for the senior managers in BCS to consider any proposed changes to the strategy developed the preceding year. At this point in the year, it has been six to ten months since the last "creative" attention was paid to the subject at hand. A strategic document will be the result of the off-site meeting. It is intended to be a broad statement of company vision, current company objectives (short and long term) and the strategies which will be put in place to satisfy the stated objectives. It typically is a reassessment of the existing strategies and represents an update, or tuning of that direction based on the experiences of the past year. The finished document, published internally, is generally brief in form and couched in terms of directions the company is headed relative to specific business opportunities.

Following completion of the Strategy Document, the more

structured planning activities begin, as directed by Boeing corporate offices. The first step is the creation of what is known as the "Key Elements Review". This is essentially a presentation that concentrates on issues which require Boeing corporate decision or agreement. Corporate decisions relative to the Key Elements Review focus on a few items: overall investment, net profit and capital outlay or investment. The Key Elements Review will typically focus on a relatively small number of issues and uses the previous year's adjusted Long Range Business Plan and current Operating Plan (see below) as a baseline for describing where the division is and any new directions in strategy. This presentation is made to senior corporate management mid-summer each year, sometime after the operating organizations have begun work on next years Long Range Business Plan and Operating Plan. During this presentation, senior management (typically the CEO), will share overall company direction and describe how the operating company should plan to fit this strategic direction.

The Long Range Business Plan (LRBP) is intended to provide a ten year forecast of expected business levels and a five year forecast of the resources required to execute this business. Since the Strategy Document is only distributed internally (that is within the operating division, i.e. BCS) and the Key Elements Review is in

presentation format, the LRBP is used to summarize topics extracted from both of them. The LRBP also reflects any strategic redirection provided by the corporate offices during the Key Elements Review. It includes a mission statement, division goals and objectives, business and market environment characteristics, strategies, identifies key competitors and key technologies, and finally quantifies the resources required to carry out the business plan. Current groundrules state that the first two years of the LRBP, Key Elements and the Operating Plan have to reflect the same numbers.

The Operating Plan, is the culmination of the planning cycle. It defines company commitments and performance measures as well as providing financial and resource requirements data for the first two years of the LRBP. Resource requirements (labor and non-labor) for the first year are spread by month, and the second year spread by quarter. The Operating Plan provides the detailed information needed by the functional organizations and corporate staff for the day-to-day administration of resources. The plan provides the basis for BCS performance evaluation. It is updated quarterly during the year to reflect changes in commitments as they affect resources.

APPENDIX B

MANAGEMENT PERFORMANCE PLANNING AND EVALUATION PROGRAM

A. PURPOSE

The purpose of the Management Performance Planning and Evaluation Program is to encourage clear communications about performance expectations, performance progress and status and performance evaluation which will aid management employees in developing and demonstrating competencies supportive of their continued career development.

B. PROGRAM CONCEPT

The program consists of four related segments:

1. Performance Planning

   The Performance Planning and Evaluation process begins with performance planning jointly conducted by the employee and supervisor. The completed performance plan will reflect (1) those delegated performance objectives which directly support accomplishment of the organization's current business objectives and (2) performance objectives established by the employee and supervisor to sustain/improve overall organization performance. The plan should be revised during the year as necessary to reflect changing conditions.

2. Coaching

   During the performance plan period, continuing attention should be given by the employee and supervisor to the progress being demonstrated toward achievement of performance plan objectives. Both the employee and the supervisor have responsibility to identify potential/developing performance problems and either may initiate discussion leading to determination of the preventative/corrective actions which need to be taken.

3. Performance Evaluation

   At the completion of the performance plan period, the supervisor will evaluate and discuss with the employee results achieved during the period.

4. Career Development

   As an aid to the employee in career development planning, the supervisor will discuss with the employee observations of the performance strengths demonstrated during the period and those areas of performance in which the development of increased competence would contribute to improved performance in current assignment and/or to longer-term career growth.

C. PROCEDURE

1. The normal performance plan period begins immediately following establishment of the organization's annual business plan. To provide for the communication of organization goals down through the management organization, the performance planning process begins with those managers reporting to the organization head and continues down through all management levels. Performance plans for employees assigned/reassigned in the organization during the performance plan period will be prepared as a normal part of the orientation process.

   At the beginning of the performance planning period, the supervisor and employee should meet to discuss the employee's responsibilities and to record the performance objectives the employee will be working to achieve during the forthcoming period. During this meeting the employee should be encouraged to participate fully in the performance planning process.

   The employee should be informed that at the end of the period, overall performance will be evaluated. The evaluation will consider results achieved in ongoing position responsibilities as well as achievement of objectives set forth in the performance plan.

2. During the period, the employee and the supervisor should meet whenever appropriate to review progress, discuss ways to improve, and agree on changes in direction, procedure or responsibility. The employee should be encouraged to initiate these reviews whenever they feel a need to discuss the job with the supervisor.

3. At the conclusion of the period covered by the the plan, the employee should summarize achievements specifically related to objectives contained in the performance plan. Conditions which may have altered the plan or impacted achievement of objectives should be noted. The intent here is for the employee to make a self-assessment of what has been accomplished.

4. The employee should then meet with the supervisor for joint review of achievements. The supervisor may concur in the employee's assessment, or note additional information pertaining to accomplishment of objectives. The supervisor should then complete entries evaluating the degree to which achievements met the plan objectives.

5. Following review and evaluation of specific achievements, the supervisor should then summarize the employee's overall performance using the section provided on the Performance Planning and Evaluation Form. Additionally, the supervisor should discuss with the employee observations of the significant performance strengths demonstrated by the employee during the period and observations with respect to those areas of performance in which development of increased competence would contribute to improved performance in current assignment and/or to longer-term career growth. Following such discussion, the supervisor will record any useful conclusion.

C. 6. At this point, it is the responsibility of the next level of management to review the evaluation to assure consistency and equity. Following this review, the manager and employee should meet to discuss the performance evaluation and implications of the evaluation with respect to the employee's career development. While career development remains primarily an employee responsibility, the manager may suggest for the employee's consideration, actions that might be taken by the employee and/or the Company to aid the employee in achieving his or her objectives.

An important consideration in career development is the employee's willingness to consider internal job opportunities that require relocation to a different geographic area. While it is recognized that response to a relocation assignment depends on the specific job opportunities and circumstances at that time, it is useful to understand in advance whether or not the employee is amenable to relocation consideration. The employee may so indicate in the space provided on the form.

D. ROLE OF THE REVIEWING MANAGER

1. The reviewing manager is responsible for assisting subordinate managers and for ensuring the overall quality of the Performance Planning and Evaluation Program. This includes:

   a. Guidance in the preparation of performance plans to ensure equity and consistency.

   b. Periodically reviewing the status of performance plans and results; providing counsel, as appropriate, to subordinate managers.

   c. Previewing proposed performance evaluations to provide guidance for equity, consistency and completeness. The reviewing manager should also discuss appropriate coaching and counseling techniques for the evaluation discussion.

   d. Discussing the results of the evaluation and counseling interview; providing assistance in resolving any open issues between the administering manager and the employee, and signing the form.

E. USE OF FORMS

1. The Performance Planning and Evaluation Form (No. X-23229) is to be used for preparing performance plans and evaluations. Supplemental forms may be established, with the prior approval of the Director of Industrial Relations, provided the essential content and use follows the procedure and meets the basic objectives of the Performance Planning and Evaluation Program.

2. Completed MPP&E forms will be retained for two years.

MANAGEMENT PERFORMANCE PLANNING AND EVALUATION

LIMITED

Employee Name (Last, First and Initial)

Employee Social Security No.

Position Title

Date Assigned Present Position

Date Assigned to This Appraiser

Date of Performance Plan

Date of Performance Evaluation

Organization Name

Budget No. Location

Employee Name (Last, First and Initial)

X-23229 REV 11/87

PERFORMANCE PLAN OBJECTIVES

Statement of performance objectives employee can reasonably be expected to achieve during the coming period. List first any objective(s) which is critical to achievement of a current overall Division objective and identify as Primary (P1, P2, etc.). Then list in priority order objectives necessary to sustain/improve business operations. Changes in the plan may be recorded at any time during the period.

		Employee s Signature	Date
	Supervisor's Name	Supervisor's Signature	Date
Management Review (Optional Comments)			
	Reviewer s Name	Reviewer's Signature	Date

ACHIEVEMENTS

Summarize results achieved in each of the objectives set forth in the Performance Plan. Record other achievements/contributions in space provided below.	EVALUATION		
	Fully Met	Partially Met	Did Not Meet

Other achievements/contributions (use additional page if necessary).

PERFORMANCE REVIEW SUMMARY (USE ADDITIONAL PAGE, IF NECESSARY)

Supervisor's Evaluation of Overall Performance: Considering results achieved in ongoing position responsibilities as well as Performance Plan achievements, summarize your evaluation of overall performance.

Supervisor's Observations/Suggestions: Discuss with employee observed performance strengths and areas where improvement might be advantageous to employee. Record any conclusions which may be useful.

Employee Comments: The employee may record any comments pertaining to this review, including desired developmental opportunities:

Overall Performance Rating.

- ☐ Exceeds normal job requirements in all areas.
- ☐ Meets normal job requirements and exceeds requirements in many areas.
- ☐ Meets normal job requirements.
- ☐ Does not meet normal job requirements.

Willing to consider relocation? Yes _____ No _____		Employee s Signature	Date
	Supervisor s Name	Supervisor s Signature	Date

Management Review (Optional Comments)

Reviewer s Name	Reviewer s Signature	Date