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## Global Leadership Operational Plan - Case Study of Boeing Company

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Global Leadership Operational Plan: Case Study of the Boeing Company

Ronald Dearing

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### Abstract

This paper is an examination of the operational functions of the global organization of The Boeing Company. The final chapter assesses the impact of the global market on Boeing operations optimization as it seeks competitive advantage in today's global economy.

## **Part I**

### **Global Organization Prospectus on the Boeing Company**

Boeing has experienced operational problems due to lack of understanding of personnel issues and unethical conduct. As an international management consultant called in to advise the Boeing Company about issues affecting its ability to optimize operations in today's economy, this author offers a prospectus on these unique issues facing Boeing; how these issues may affect optimizing key operational elements and changes needed to enhance operations management in the future. The Boeing Company is a well established American icon of the aeronautical industry, having started business in 1916, not long after the Wright Brothers flew the first plane in 1903 (Boeing History, First Flight). Since those early beginnings, Boeing has expanded across the United States and the world, holding major contracts with many governments and as a primary builder of the International Space Station (Integrated Defense Systems). Through design to implementation and distribution, Boeing is a major manufacturer of commercial jet airliners, military aircraft, rockets, space shuttles and more, employing almost 200,000 people in 70 countries (Boeing in Brief).

As any large company, Boeing has experienced failures due to internal growth and external change. At times this has caused weaknesses in operational management. As an international management consultant, this author would like to outline issues where more attention and strategy could be employed to counter any negative occurrences in production of and delivery of goods and services. Issues such as customer retention through demonstration of ethical conduct and internal human relations problems that cause a backlog of deliveries are matters of concern to operational managers.

### **Problem Statement**

Over the last several years Boeing Company has experienced internal weaknesses and outside threats leading to a need to improve leadership management operations and understand markets (Heizer and Render, 2009, p. 29). The need to improve internal operations includes lack of understanding of organizational culture that inhibits current and future growth of the company. This can be witnessed through the backlog of deliveries caused by a machinists strike in 2008 and early 2009. The need to improve ethical behavior that has caused a loss of clients resulting in a loss of revenue-generating contracts is another operational issue addressed.

### **Purpose Statement**

The purpose of this qualitative study is to explore the operational management issues of: (1) need to improve operations (Heizer and Render, 2009, p. 29) (specifically personnel actions that interfere with productivity) and (2) the need to improve ethical behavior for purposes of clientele retention that may lead to changes needed to enhance operations management in the future.

### **Background**

In the 2008 year end financial statement, Boeing had revenue of \$12.7 billion, down from \$17.5 billion from the 2007 year end statement. The price per share decreased \$1.79 from the end of the 2007 year. Backlog “grew 8 percent in 2008 to a record \$352 billion” (Boeing 4<sup>th</sup> quarter loss, 2008). A major contributor to these year end statistics was an internal strike that was not settled until January of 2009. “Revenues for the quarter declined 27 percent to \$12.7 billion, due primarily to the effects of the strike

which reduced commercial airplane deliveries by approximately 70 units and revenues by an estimated \$4.3 billion” (Boeing 4<sup>th</sup> Quarter Loss, 2009, p. 1).

### **Operational Issue One- Management of Employees**

“Employee uncertainty and fear can paralyze operations and lead to a significant decline in trust and motivation, affecting the company's overall productivity”

(Makawatsakul & Kleiner, 2003, p. 52). Boeing machinists held a strike for 57 days in 2008 because they felt their wages and insurance coverage was too low. The strike had an enormous negative impact on operational effectiveness and decline in the revenue at Boeing. “Earnings from operations at Boeing's commercial-aircraft business fell by more than half, to \$394 million from \$945 million last year. Quarterly sales declined 16% to \$6.9 billion, driven by fewer deliveries due to the strike and supplier delays for certain wide-body planes” (Hinton, 2008, para. 3). Understanding the negative affects of personnel issues on the delivery of goods is demonstrated by the decrease in the revenue stream due to slowed delivery of goods.

### **Operational Issue Two- Understanding the Consequences of Unethical Behavior**

The reputation of a company creates sales opportunities and ethical behavior helps retain those customers. Understanding consumer expectations of honesty and supplier integrity are essential to making sales. “What used to be a matter of finding and purchasing goods and services at the most favorable price has changed. At some companies, procurement has become closely intertwined with strategic decision making and board policy at the highest levels of the organization...Unethical business behavior... can result in significant transaction costs and have major financial implications.” (Butter and Linse, 2008, p. 76, 78).

One example of Boeing's leadership's unethical behavior is the destructive, trickle down affect the executives' choices had on Boeing's relationship with the U. S. military. Boeing recently lost a long held contract with the U. S. Air Force to rival supplier, Northrop Grumman because of unethical behavior in 2004. Boeing executives created a position for a government employee, Darleen Druyen, who in exchange, made the military contracts more lucrative. When caught, Druyen admitted to collusion with Boeing (Leung, 2005). Because of unethical decision making by key leadership in 2004, Boeing's relationship with the U.S. military has been strained. This rift between supplier and consumer has caused the recent loss of a lucrative military contract- if not the main cause of the loss; certainly the miss-trust was a contributing factor. "A 2004 award to Boeing was undone by an ethics scandal that resulted in prison terms for a former company executive and a former high-ranking Air Force official." (Hendricks, 2009, para. 12).

### **Significance of Study to Leadership**

Managerial operations encompass many aspects of product and delivery including the internal operations of functional personnel and understanding and meeting the expectations of clients. Lack of knowledge of internal operations that led personnel to strike causes a delay in getting good to the market can be studied so that such internal conflicts can be avoided in the future. Increasing knowledge of consumer expectations of leadership integrity can lead to strong relationships between suppliers and consumers. The study of the Boeing Company's managerial operations increases the general knowledge of conditions that lead to weaknesses in the supply and demand chain and

creates opportunities to generate new and improved mechanisms to construct better working conditions that lead to increased revenues.

### **Research Questions**

The central question of this qualitative study is what are managerial operational issues at Boeing that have caused a decrease in revenue?

Two sub-questions that will support the phenomenological question are:

- 1) What internal operational management weakness in the area of personnel management has caused a backlog in Boeing's delivery of materials to international clients?
- 2) What operational management weakness led to unethical behavior of leadership that tarnished the reputation of Boeing, causing a rift between Boeing and its client, the U.S. military?

### **Method**

A case study method is used to answer the central questions and sub-questions of Boeing's operational management weaknesses. How these weaknesses may affect optimizing key operational elements and changes needed to enhance operations management in the future is explored by concentrating on Boeing's internal management of personnel issues creating backlog and affecting delivery. Understanding the effects of unethical leadership on customer retention is another issue explored in this case study.

### **Summary of Proposal**

Leadership needs to be in a position to act rather than re-act to potential weaknesses and threats. An examination of Boeing can further the study of managerial operations that may inhibit success by creating a negative internal atmosphere and



alienating consumers. This study can lead to strategic opportunities Boeing can implement to strengthen these issues so that such problems can be avoided in the future.

## Part II

### Operational Problem and Purpose Problem Statement

#### Problem Statement

There are risks associated with reliance on a supply chain strategy. “Significant supply chain disruptions can reduce a company’s revenue, cut into market share, inflate costs, go over budget, and threaten production and distribution” (Bosman, 2006, ¶ 2). “Supply chain problems can wreak havoc on the reliability of your manufacturing system, leading to several significant losses, including the following:

- Loss of sales when the organization is sold out
- Late or non-delivery penalty failures (e.g. customer penalties, demerge, etc.)
- Warranty costs associated with materials defects
- Marketing costs to replace customers
- Brand value/market reputation erosion costs
- Forced suboptimal product mix, which fails to maximize profits (Troyer, 2009)

One factor of which management needs to be aware is how a global company needs to be in tuned to the perceptions of the employees. Work stoppage issues can create real time delays in the flow of the supply chain. The Free Dictionary defines work stoppage as “a group's refusal to work in protest against low pay or bad work conditions” (Free Dictionary, 2003-2008). Work stoppage examples include strikes, walkouts and job actions (Free Dictionary). The results of disgruntled employees involved in conflict with management can have devastating consequences to the operations of the business. An example of a resulting supply chain problem directly related to work stoppage was the

machinists strike at the Boeing Company in late 2008 (Pew, 2008). “Boeing acknowledges that the problems have sorely tested the patience of suppliers and customers, and damaged its credibility” (Drew, para. 6). Additionally, the company has had to pay close to \$360 million in overdue penalties (Record \$1 billion, 2009). The problem presented in this qualitative study is identification of strategies Boeing could employ to circumvent a delay in the supply chain should another work stoppage issue arise.

### **Purpose Statement**

The purpose of this paper is to identify the strategies operations management at Boeing could use to keep the supply chain moving in the event of work disruption. “Supply chain management is the integration of the activities that procure materials and services, transform them into intermediate goods and final products, and deliver them to customers...As firms strive to increase their competitiveness via product customization, high quality, cost reductions, and speed to market, added emphasis is placed on the supply chain.” (Heizer and Render). The management operations of the Boeing Company are headquartered in Chicago, IL; the machinists’ union employees were located in Boeing plants throughout the United States, including Washington, Oregon and Kansas. Personnel issues such as inadequate health insurance, uneasiness of job security, and declining retirement benefits were among the major causes for employee/union dissatisfaction that led to the strike (Pew, 2008, para. 1). This qualitative needs analysis/assessment (RES/711Definitions of Qualitative Methods) will explore the operational management decisions which caused the machinists strike of late 2008 while

producing the B747 in Houston, TX, and the strike during the production of the 787 Dreamliner. “A needs analysis/assessment study can present a concise description of the HRD process of an organizational problem situation. The needs analysis/assessment can also be used to support evaluation research studies and cost-benefit analysis... The benefits of needs analysis are that all stakeholders are consulted; the assessment identifies areas of ...potential error, and process concerns in current processes” (RES/711Definitions of Qualitative Methods, Needs Analysis/Assessment). Both work stoppages caused production and delivery delay that cost the Boeing Company financially and undermined their market credibility.

### **Part III**

#### **Organizational Behavior**

Optimizing operations in a global environment often involves restructuring traditional organizational behavior patterns. Optimal operations methodology requires recognition of the constantly evolving, inextricably intertwined nature of organizational behavior practices and issues in the new economy. The Boeing Company is no exception. Having relied on a traditional form of administrative leadership, Boeing must expand its thinking to encompass new leadership techniques to address issues of organizational behavior and accept new roles of leadership and human resources. Communication skills within a global organization need to be refined to support domestic and foreign operations. An integrative approach to a transnational organization may be what will optimize Boeing's organizational behavior operations.

Older theories of organizational behavior are not always the best theories to pursue in today's ever changing global business environment. Simon won the Nobel prize for economics in 1978 for his contributions to macroeconomics. Simon wrote *Administrative Behavior: A Study of Decision-Making Processes in Administrative Organizations*, in 1947. Scott (2003) said, " Herbert Simon...clarified the processes by which goal specificity and formalization contribute to rational behavior in organizations...In general, organizations both simplify decisions and support participants in the decisions they need to make" (p. 50) "The ultimate goals-making a profit, achieving growth, prolonging life- are those that, by definition, are not viewed as means to ends but as ends in themselves" (Scott, p. 52). Overall, Simon helps us understand how

the decisions of hundreds or thousands of individuals in an organization can be directed toward ultimate organizational goals" (Krollag, ¶ 9). His main thoughts were of "satisficing" which is a decision making theory that is about not always being able to reach a goal through optimal means, but adjusting to the current circumstances and what is available to meet that goal. (Brown, 2004)"People will satisfice when they make a decision that satisfies and suffices for the purpose" (Brown, p. 1241).

The new transnational organization must accept new ways of operating in a global atmosphere. In order to retain competitive advantage, leadership must adjust traditional thinking of organizational behavior to encompass the affects of human capital, and radically changing needs and wants of domestic employees, expatriates, and locally hired staff at various overseas sites. Operational processes that are coordinated often develop strategic frameworks that cultivate relationships necessary for maintaining integration (Bowersox, Closs, and Stank 1999; Chow, Heaver, and Henriksson 1995, in Rodrigues, Stank, and Lynch, 2004). A relational strategy encourages identification of supply chain partners that share a common vision and are pursuing parallel objectives to create structures and processes that improve cross-organizational behavior (Rodrigues, Stank, and Lynch, 2004, ¶ 3).

Boeing is a company experiencing the effects of "environment[al] change due to economic conditions, technological developments, and the actions of competitors" (Trice & Beyer, 1993, p. 1). How people interact in the work place is known as organizational behavior (Clark, 1998-2009). "Maximizing shareholder value is the dominant goal that influences management decision making in business practice. This goal-with rapid improvements in technology, changes in capital markets, and global competition-has

altered employment relations between workers and top executives” (Singh and Schick, 2007, p. 349). This paper is a study of the organizational behavior of Boeing.

“Organizational behavior differs from human resources management in that it focuses on the overall design of the organization and group structures, as well as how individual positions populate the framework to build core competencies and support attainment of business objectives” (BUS/721 Week 6 Lecture, p. 1).

### **Analysis of significant behavior issues facing Boeing**

#### **Need for New Leadership Techniques**

The management at Boeing appears to conform to a traditional Western style of management. “The management approach in most U.S.-based companies [is] built on a willingness to delegate responsibility while retaining overall control through sophisticated management systems and specialist corporate staffs. The systems provided channels for a regular flow of information to be interpreted by the central staff and used by top management for coordination and control” (Bartlett, 2008, p. 337). This type of management is often referred to as authoritarian leadership. The leadership dictates policies and procedures and controls and directs activities of employees (Business Dictionary, 2009). This style is in conflict with today’s newly emerging global organizational strategies that rely on human resources heavily. “A multinational strategic mentality develops as managers begin to recognize and emphasize the differences among national markets and operating environments.” (p. 11). Often, one of the best techniques of a multinational company is to use not only local labor but also local managers that relate to the needs of the customers in the host country while displaying independence

and self-motivation which helps the company achieve their multinational goals (Bartlett, 2008).

### **Lack of Communication between Leadership and Labor**

Boeing and the International Association of Machinists and Aerospace Workers in Washington, Oregon and Kansas have experienced a strained relationship because miscommunication of human resources issues since the 9/11 incident in 2001 (Boeing And Labor: Frayed Relations, 2006). Personnel issues such as inadequate health insurance, uneasiness of job security, and declining retirement benefits were among the major causes for employee/union dissatisfaction that led to the strike (Pew, 2008, para. 1).

### **Optimizing Operations**

In the opinion of this author, Boeing executives could look to partner more effectively with the machinists union to optimize operations. Leadership and management are changing from traditional roles, but there will always be a need and purpose for leadership. Banutu-Gomez and Banutu-Gomez (2007) discussed what leaders need to do in order to establish successful and competitive organizations outlining 7 points: develop a flat and team-oriented organization, determine the nature of leadership, and organizational philosophy, leaders need to not only practice but also teach leadership, develop leadership and organization culture, constantly evaluate leadership practices; develop practices that do not alienate followers; and constantly remember that leadership and teamwork is a changing process.

An issue of meeting the changing needs of both domestic and international employees also needs to be considered when discussing leadership's role in



organizational behavior. “Managing cultural diversity, cultural differences, and cross cultural conflicts has become the most common challenge of multi-cultural teams (Marquardt and Horvath, 2001 in Matveev and Nelson, 2004). Multicultural teams face many of the challenges that locally based teams face, but communication issues may be amplified if the manager does not understand cultural differences. Communication competence is a must for successful teams for two reasons.

- (1) “Cross cultural communication competence increases the likelihood of achieving high team performance, as the team members can clearly express themselves and better understand their colleagues.
- (2) Cross cultural communication also improves the decision making and problem-solving abilities of managers in the global marketplace” (Matveev and Nelson, 2004)

Leadership must communicate the needs and expectations of projects to employees as well as accept orders from superiors. “Effective communication competencies include demonstrating appropriate emotional intelligence, active listening, non-defensiveness, appropriate and skillful use of language, and body language, effective interviewing, effective negotiation, rumor control, techno-etiquette, and presentational skills, Tubbs and Jablokow (2009). The leadership needs to be able to prove: 1) skillful use of body language; 2) effective interviewing; 3) effective negotiation; and, 4) presentational skills (Tubbs and Jablokow).

### **Summary**

An integrated network organization which is based on two way communication between leadership and facilities may be more conducive to effectively increasing communications. In addition, an integrated network organization would assume many of these functions; management being a key toward the implementation of this strategy harnessing the ideas, skills , capabilities and knowledge of each of the world wide units (p. 341). The anatomy of such an organization would include cross-unit teams and task forces. Communications would be reshaped to put more emphasis on informal relationships. And, the psychology of the structure would include three components that each unit would adhere to” the mission; the importance of consistent managerial behavior; and developing appropriate personnel systems. “a firm that pursues a relational strategy, develops information and measurement structures to support relational processes, and then uses these tools to implement and execute integrated operations will experience high levels of logistical performance”(Rodrigues, Stank, and Lynch, 2004, p. 65). The elements of this integrated organizational structure will posture Boeing for future success both locally and internationally.

## **Part IV**

### **Assessing Optimization**

Organizational leadership must constantly monitor and assess the effectiveness and value of current enterprises in progress to guide the organization to operational optimization. The Boeing Company employs operations techniques such as Six Sigma can direct continuous improvement initiatives while keeping apprised of information technology advances can help leadership in the decision-making process. Assessing total quality management through qualitative and quantitative methods can help leadership evaluate organizational competitive advantage and maintain stakeholder satisfaction.

Boeing is committed to long-term improvement for the benefit of its customers and stakeholders. “Our commitment to steady, long-term improvement in our products and processes is the cornerstone of our business strategy...To achieve this objective, we must continuously work together to improve the overall efficiency and productivity of our design, manufacturing, administrative, and support organizations” (Boeing Quality Management system Requirements, 1995-2009, ¶ 1).

Leadership at the Boeing Company is extensive. Engineering, Operations & Technology is a division that supports Boeing units globally. Boeing defines its leadership as offering the right people, technologies, processes and performances to support the company worldwide through research and technology, intellectual property management, and information technology (Boeing in Brief, 2009). Boeing’s Operational Leadership prides itself on developing strategic initiatives and providing solutions that

“enhance and protect the company's intellectual capital and fostering a culture of innovation” (Boeing in Brief, ¶ 9).

Management of a multinational organization needs to take advantage of opportunities and risks, coordinating and integrating activities to increase global efficiency and develop competitive advantage. In other words, global organizations need to make shrewd decisions always trying to improve the company's position for future success. The purpose of this paper is to explore how leadership at the Boeing Company employs and measures quality production through Six Sigma, information technology and maintaining total quality management to achieve operational optimization.

### **Total Quality Management at Boeing: the parameters, levels of accountability, and validation**

“Managing quality helps build successful strategies of differentiation, low cost, and response” (Heizer & Render, 2009, p. 168). Quality management can “increase sales and reduce costs, both of which can increase profitability. Increases in sales often occur as firms speed response, lower selling prices as a result of economies of scale, and improve their reputation for quality products. Similarly, improved quality allows costs to drop as firms increase productivity and lower rework, scrap, and warranty costs” (Heizer & Render p. 168). In addition, proving quality products and services decreases lawsuits that

may occur due to product liability issues and increases its ability to compete effectively on a global scale.

Boeing regards quality measurements highly and is a staunch advocate of the quality assurance standards set by U. S. and international organizations. The ISO 9000 series of quality assurance standards is not specific enough to the airline industry so Boeing follows the guidelines set forth by the international aerospace agency. “The international aerospace industry realized the necessity to supplement the ISO quality system model to satisfy internal, government, and regulatory requirements applicable to the aerospace industry-- requirements that ISO, as a generic standard, was never designed to satisfy” (Quality requirements and information, 1995-2009, Why AS 9100?).

#### Qualitative and Quantitative Measures of Operational Optimization

##### **Lean Six Sigma: Quantitative Measures**

“Lean Six Sigma for services is a business improvement methodology that maximizes shareholder value by achieving the fastest rate of improvement in customer satisfaction, cost, quality, process speed, and invested capital” (Lean Six Sigma, 2009, ¶ 2). Lean Six Sigma is a combination of the Lean and Six Sigma models of quantitative quality assurance (Lean Six Sigma, 2009). While the Lean philosophy centers on “maximizing process velocity and provides tools for analyzing process flow and delay times at each activity in a process,” Six Sigma enhances this schematic by “emphasizing the need to recognize opportunities and eliminate defects as defined by customers and recognizing that variation hinders our ability to reliably deliver high quality services”

(Lean Six Sigma, ¶ 5-6). In October 2008 the Boeing team working on the B-C17 received the Gold Award from the International Team Excellence Program for its efforts to enforce Lean Six Sigma objectives. “The Gold Award-winning team used data and tools to learn where improvement could be made to processes in the production of its Boeing C-17 aircraft. Key tools for project selection included: lean value-stream mapping, trend analysis of performance metrics, and brainstorming sessions with stakeholders” (Jacobsen, 2008, p. 30).

### **Model of Continuous Improvement: Qualitative Measures**

A qualitative concept used at Boeing is the model of continuous improvement to keep upgrading quality standards. Boeing applies a circular model uses a strategic looping action of PDCA, or “plan, do, check, act.” “As part of the continuous-improvement cycle, Boeing has four initiatives designed to support customer, competitive analysis, corporate direction and Boeing operational goals, and strategies. These activities include the advanced quality system... and a closed-loop corrective/preventive action system” (Boeing, Customer Input, ¶ 4). Boeing participates in “the U.S. Department of Defense's Commercial Best Practices Laboratory”; identifies practices and attitudes of organizational behavior; and has recently created a five year plan to convert to a team-oriented culture (Customer Input). “The basis of the philosophy [of continuous improvement] is that every aspect of an operation can be improved. The end goal is perfection, which is never achieved but always sought” (Heizer & Render, 2009, p. 172).

### **Role of Information Technology (IT) in Operational Optimization at Boeing**

English (2008) advised leadership to use IT in the decision-making process by: 1) acknowledging when traditional technology needs upgrading; 2) supporting and promoting teamwork and cooperation and discouraging competitiveness in the decision-making process; 3) accepting change to better meet the demands of operational functions; and 4) Value and understand how IT can improve competitive advantage. In addition, “Information technology—with wireless links, Internet, and e-commerce—is reducing costs and accelerating communication (Heizer & Render, 2009, p. 9)

Boeing is a company that has recognized the power of information technology. Boeing uses an e-tool called a capability maturity model that measures aspects of Six Sigma and customer quality satisfaction (Little, 2003). Sharma, the CEO of TATA Interactive Systems (TIS), the company that provides technology support to Boeing said,

Globalization and instant access to information, products, and services have changed the way our customers conduct business...Old business models no longer work. Today's competitive environment leaves no room for error. We must delight our customers and relentlessly look for new ways to exceed their expectations. This is why Six Sigma quality has become a part of our culture (Little, p. 106).

Two other IT methods used at Boeing is computer aided design (CAD) and computer aided manufacturing (CAM). These programs use software to assist in the design of products and also keeps an accurate log of processes and procedures. CAD creates an opportunity for operations optimization by shortening the design stage and increasing the chances for successful design outcomes. “Some CAD systems have moved to the Internet through e-commerce, where they link computerized design with

purchasing, outsourcing, manufacturing, and long-term maintenance. This move supports rapid product change and the growing trend toward “mass customization” (Heizer & Render, 2009, p. 146). Boeing uses CAD in marketing by allowing customers to see 3-D images of airports and planes in their website (Airport Technology, Boeing). CAD and CAM augment the supply chain by providing databases of suppliers and capabilities (CAD/CAM Equipment Survey, 2009). In addition, Boeing uses CAD and CAM in the design and production of aircraft, such as the B-777 (Making of the Boeing 777, n. d.).

### **Evaluating Operational Effectiveness of Leadership at Boeing**

Executive decisions are often decisions based on intuition and intellect supported by objective data gathered through the use of technology. “Weber (1986) noted that DSS (decision support systems) are by nature supportive of “human cognitive processes and semi-structured situations.” He states that the benefit of DSS is the ability to support individual and organizational learning and performance while reducing the “cognitive differences” that people may have” (English, 2008). Leadership should: 1) Provide direction and purpose- The company vision must be clear, remain true to the core set of strategic objectives and organizational values, and direct the same message to all units; 2) Leverage corporate performance- “Top management’s role is to provide the controls, support, and coordination to leverage resources and capabilities to their highest level of performance” (Bartlett, Ghoshal, & Beamish, 2008, p. 659); and, 3) Ensure continual renewal- Remember that organizations should be dynamic, not static. Constantly create an atmosphere of friction by questioning and challenging old thinking; revisit mission and values statements to ensure that the company does not stagnate; constantly set new



goals and benchmarks of success. By incorporating such techniques into an operational strategy, the expected outcomes would be an integrated and balanced style of leadership where internal lines of communication would be open and transparent to all international units as top management provides the guiding hand toward successful global operations.

### **Summary**

To achieve operational optimization, Boeing integrates many methods to create and assess production of a quality product that offers competitive advantage. Boeing employs quantitative methods through measurement of quality assurance methods such as Lean Six Sigma. It measures human resource effectiveness through qualitative analysis such as continuous improvement ideology. Information technology supports and enhances quality production and speed. All companies seeking a competitive advantage need to find methods to enhance earning potential and profit. Ensuring quality may add costs up front but will improve product or service and delivery in the end, improving global competitive advantage.

## **Part V**

### **Boeing's Global Strategy**

The global market influences the organization's operation and its strategic planning. In order to be successful in the global market, Boeing must leverage all avenues of its organization to enhance operational optimization. Leadership must remain flexible in the face of an ever dynamic and shifting global climate. Boeing exhibits many traits of a company aligned with a competitive advantage theory to target and develop essential objectives in the realms of competitive, location and structural strategies and the ethical issues of corporate and global social responsibility.

### **Competitive Advantage Theory**

The effects of the market and competition have long played a role in the conduct of business. The *Competitive Advantage Theory (CAT)* is a theory of how businesses can best attain optimization while remaining flexible to the current trends of the market and consumers. The theory was developed by Michael Porter, who believed that enhanced profitability and industry positioning was essential for a competitive advantage, which piloted prevailing strategies that included: cost leadership and differentiation. The Competitive Advantage Theory is reliant on Porter's *Five Forces Typology* that includes: consumer and supplier bargaining power; threat of substitutes and new entrants; and competitor rivalry (Porter, 2008a; Porter, 2008b) to analyze the industry. These influential factors affect the economic environment and shape industry competitiveness and when an economic shift is noted within these five forces an organization must craft

its business strategy in a manner that is opportunistic via cost leadership or differentiation, which can be a source of sustained competitive advantage. According to CAT, competition is the focal point that determines organizational success or collapse, as well shapes the suitability of corporate actions that can play a part in its performance. Porter (2008a) posits the purpose of *CAT* is to create a favorable, profitable and sustainable position, which is resistant against the *Five Forces* that ascertain industry competition (Porter, 2008a).

**Competitive Strategies: Optimizing Operations through Expanded Globalization.**

**Strategies to build Relationships with Consumers**

Internet technology has changed the way companies conduct affairs and made global operations instantaneous and Boeing is no exception. Boeing has harnessed the power of the internet in its customer relations, offering the Boeing Connexion website to customers interested in Boeing services. “Connexion by Boeing, recipient of the 2003 World Travel Award for World's Leading High-Speed In-flight Internet Services Provider, brings high-speed Internet, data and entertainment connectivity to travelers. Connexion by Boeing also offers a high-speed connectivity solution for the business aviation market and has announced plans to enter the maritime market” (Boeing Connexion, ¶ 9). Global alliances, human capital marketplaces and peer production communities will provide access to new markets, ideas and technologies (Tapscott & Williams, 2008). Bartels (2000) discusses the strategic advantages of using internet technology and says that this technology has the potential to “gain new revenue or lose some existing revenue to new competitors” (¶2). He also suggests that e-commerce

strategies benefit all companies and both electronic and internet networks should be utilized to optimize interactions with customers, suppliers or distribution partners(¶2).

### **Strategies for Use in the Supply Chain**

The internet is a major contributor to the function of Boeing's supply chain operations: where Boeing converses with partners, suppliers and clients (Suppliers, 1995-2009). Porter (2001) coined the term 'value chain' in 1985 to describe how information technology influences and plays a role in how a company stays competitive in today's market (Porter and Miller, 1985). Information technology plays a large role in how a business creates structures, how the business's financial goals are supported and how these interactions can create new industries. Porter (2001) saw information technology not as a support service, but as a direct authority in the way companies compete. Managers can use the value chain as one way to evaluate the influence of information technology on their company's abilities to compete by taking note of how the company is progressing in five technological areas. Those areas are: a) "assess[ing] information intensity; b) determ[in]g the role of information technology in industry structure; c) indentif[ing] and rank[ing] the ways in which information technology might create competitive advantage; and, d) investigat[ing] how information technology might spawn new businesses" (Porter and Miller, 1985).

No where is this more obvious at Boeing than in its relations with suppliers. Boeing securely transmits data between suppliers, designers and production areas through a technical data exchange known as SNET, the Supplier Network. "The goals [of the network are to]: reduce cost and the time it takes to distribute digital data to suppliers, ensure data integrity and security all while using the very public internet.

Location Strategies: Identifying New Geographic Markets

**Outsourcing**

Outsourcing is “usually the term used when a company takes a part of its business and gives that part to another company” (Alexandrou, ¶ 1). Hagel and Brown reminded the reader that outsourcing can also include reliance on outside businesses that help the company with one aspect of their operations. “Even though offshoring and outsourcing are distinct, they often become related operationally” (p. 32). Outsourcing includes functions such as specialized databases, phone centers, human resources activities, payroll distribution and shipping.

Boeing refers to outsourcing as “offloading” (Destafani, 2004). Outsourcing has grown as Boeing operations have grown. Stonecipher, President of Boeing said, “Instead of a closed and vertically integrated structure, you want a supply chain that includes innovative, smaller companies that have proved in competition that they are the best in class. You want suppliers who are highly focused on core competencies of their own, continually striving to create additional value in everything they do...sharing the work has brought us a dual benefit of access to technology and access to market and it has been a key factor in launching a program that we expect to underpin our leadership in commercial aviation for a generation to come (Boeing Outsourcing, 2004, ¶ 9).

**Offshoring**

Boeing has facilities across the world (and outer space). An organization modeling an integrated network could expect to maximize many operational functions, harnessing the

ideas, skills , capabilities and knowledge of each of the world wide units (Bartlett, Goshal, & Beamish, 2008, p. 341). Establishing units across the world can help in the battle to achieve competitive advantage. Hagel and Brown (2005) defined offshoring as a “refer[ring] specifically to the movement of business activities to other countries to exploit cost or skill differentials” (p. 32). Larger companies may offshore some of their resources, again because of cost savings. They suggest that offshoring has the potential to “become a powerful source of innovation in products and services” (p. 35). Boeing has worked hard to attain operations units that expand its outreach into local communities; moving from a traditional structure to one that encompasses new strategies of global optimization.

[Boeing has] become more centrally located among our facilities and customer base, but that's only the tip of the iceberg. We're no longer co-located with existing operations...business units are given unprecedented freedom and flexibility... focusing on developing and implementing global growth strategies, financial goals and performance, sharing best practices and technologies across our businesses, developing our people, and communicating with our employees and external audiences (Boeing Corporate, ¶ 1).

### **Structural Strategies: Domestic and Global Cross-cultural Influences**

Operational optimization is working with resources and capabilities to achieve among other things, competitive advantage. Commanding human resources is a part of achieving overall organizational success. Hagel and Brown (2005) reminded the reader that “Managing across two cultures can be challenging-it requires managers who can understand and respect the cultural needs of both parties” (p. 43). Expanding and shifting

industries to developing countries exposes a business to different cultures. Working within these countries requires most businesses to hire employees from that nationality. Managing teams made up of people from other backgrounds can encounter some issues that a homogeneous team may not face. Poole, et al. (1995) has broken down how a manager (in her article, the head nurse) can overcome several problems by focusing on what must be clarified so that every member of the cross cultural team understands the basics of the task.

Boeing seems to realize how important human resources are to the smooth functioning of the organization. “We recognize that our strength and our competitive advantage is - and always will be - people. We will continually learn, and share ideas and knowledge. We will encourage cooperative efforts at every level and across all activities in our company” (Boeing Culture, 1995-2009, ¶ 6). When speaking about issues of diversity, Boeing stated, “We value the skills, strengths and perspectives of our diverse team. We will foster a participatory workplace that enables people to get involved in making decisions about their work that advance our common business objectives... We know that diversity gives us a competitive advantage. (Boeing Culture, 1995-2009, ¶ 7).

### **Corporate and Social Responsibility as Influenced by the Global Market**

Mack and Pless (2009) said that leadership plays a guiding force in not only business, but the world’s socio-economic issues as well. Impacting and solving issues such as global warming and AIDS, clean water and poverty require expertise that business leaders can offer. International exchanges are making the world closer knit, so what happens in one region of the world has an impact on all other regions. “Business leaders are key actors and agents in establishing a global economy with a human face by

contributing to a cosmopolitan business practice in a world, “where a host of complex relationships link people across national borders, and the accident of birth in any given nation now looks in some ways as morally arbitrary as the accidents of race, class, and sex” (p. 547).

Boeing attempts to meet social expectations of corporate responsibility. “The simple description of a corporation implies three elements: products/services, business practices; and community engagement. Our core competencies direct us to a systems approach to citizenship that challenges us to constantly seek ways to channel our resources for greater impact” (Boeing Global Corporate Citizenship, ¶ 4).

### **Summary**

Boeing is a company vying for competitive advantage in today’s global market. The condition of the market influences leadership’s decisions and shapes the ways in which Boeing strategizes to achieve operational optimization. Operational optimization occurs on three fronts: in competitive, location and structural arenas. Consumer and stakeholder demands also influence the way the organization holds itself accountable and must exhibit a degree of social responsibility. Leadership has to remain flexible and open-minded to new ideas of integrated operational systems that will increase competitive advantage. Boeing is a global corporation that is creating new strategies to meet the demands of an ever changing global market where competitive advantage plays such a vital role.



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