

# The hospitals jit inventory management marketing essay



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To gain sustainable competitive advantage operational decisions should be according to your business strategy. This study tries to explore that how operational decisions in Boeing Corporation an aero space and defence manufacturing firm and Arnold Palmer Hospital a service provider leads to a sustainable competitive advantage. Boeing's innovative and new product development strategy always remains one of its key capabilities. Having a diversified product line with customized options Boeing allows to its customer a wide range of products according to their need. Boeing is also known from its quality and one of its teams had won gold award for implementing six sigma standards. Boeing skilled personals are also its main strength that contribute through innovative ideas and assure quality standards.

Arnold Palmer Hospital's main strength in term of operations is its quality service providing. More than 95 percent patients from hospital recommend other people this hospital. Hospital's JIT inventory management, using flow charts and stork board for its staff leads the hospital to get competitive advantage.

Organizations consist of people gathered for a common purpose that can be profits or the welfare of human beings. They transform some input into output for this purpose. Activities that are needed to transform input into the output for the purpose of creation of goods and services came under the field of Operation management (Heizer, 2009). In the literature researchers are agreed that operations management is one of the most important contributor to the success of an organization and we can achieve

competitive advantages if we made operational decisions in accordance with our business strategy (Hayes and Wheelwright, 1984; Skinner, 1986).

Significant area of studies in Structural decision are location management, facility provides, capacity planning, and process management. These strategies play as the mortar role in the organization and are seen as one of the most significant component in a long-term strategy frame work (Hayes and Wheelwright, 1984). On the other hand production planning and control, workforce management, organization design, and quality assurance came under the concept of Infrastructural operational decision making. Having technicalities in itself Infrastructural operational decision making is also very important and can be costly and difficult to change (Hayes and Wheelwright, 1984).

Operations management is not only important in manufacturing sector for the creation of goods but also in service sector. Today service sector is seen as heart of economic activities and it is a matter of fact that every economy needs infrastructure provided by service sector in the form of health care, transportation and education. So researchers have also started to study the practices of operations management in service sector (Fitzsimmons and Fitzsimmons, 2000).

This study tries to explore the operational decision making to gain competitive edge in two different industries i. e. service and manufacturing sector. Arnold Palmer Hospital as a service provider and Boeing as a manufacturer of jetliners are studied in operational perspective that how

they can achieve competitive advantage through their operations by fulfilling their customer's need.

## **History of Boeing:**

As an airplane manufacturer Boeing started its business in 1916. It was William Boeing and George Westervelt who bring this company in to existence. It was 1952 when Boeing launched its first short range jet plane with the name of Boeing 707 (<http://www.boeing.com>). After that Boeing continued its journey and makes a number of joint ventures, mergers, acquisitions and many contracts with many Governments and suppliers and became one of the largest Aircraft Jetliner manufacturers in the world. As one of the largest exporter in USA Boeing has a wide range of products. Boeing manufactures and design commercial jetliners and military aircraft combined, rotorcraft, electronic and defence systems, missiles, satellites, launch vehicles and advanced information and communication systems and also is one of the major service providers to NASA in operating Space Shuttle and International Space Station (<http://www.boeing.com>). Boeing is divided its operations into two business units (1) Boeing Commercial Airplanes (2) Boeing Defence, Space & Security. Today having almost 200, 000 people employed in almost 70 countries Boeing is serving to its customers in more than 90 countries all over the world. (<http://www.boeing.com>).

## **Product and Design for competitiveness:**

Good products always provide competitive advantage to their firm. Good firms try to focus on only a few products instead of a very large product line and concentrate on those products only. One of the strategy managers adopt is to concentrate on established customized product family. This provides <https://assignbuster.com/the-hospitals-jit-inventory-management-marketing-essay/>

option for customers to choose the product they needed (Heizer and Render, 2009). Walsh et al. (1988) define product design as “ the configuration of elements, material and components that give a product its attributes of function, appearance, durability and safety”. He also discovered that product design is more significant than price alone for gaining competitive advantage of the firm and it also differentiate a firm to its competitors (Walsh et al., 1988). Better product design than competitor is also one of the value adding activity that leads to a competitive advantage for that firm (Porter, 1985).

Boeing is also focusing in providing customize family product. Today main Boeing’s products are family of Boeing 737, 747, 767, and 777 along with Boeing Business Jet. Boeing is also focusing on new product development efforts for Boeing 787-8 Dreamliner and the 787-9 Dreamliner. Boeing also provides option for their customers for a particular category i. e. Boeing 747 include 747-400, 747-400 Domestic, 747-400 Combi, 747-400 Freighter, 747-400 ER, 747-400 ER Freighter with different engine capacity. Almost 12, 000 commercial jetliners are in service around the world, which is about to 75% of the world fleet (<http://www.boeing.com>)...

A general concept is evidenced among researchers that firm’s internal resources is an important factor that lead to a competitive advantage. According to resource based theories firms having capabilities of no substitute and difficult to copy in their internal resources like unique product or efficient process leads to a sustainable competitive advantage. Boeing’s new product 787 Dreamliner provides unique features for its customers.

Wide range of facilities and technology with new engine design and airframe including super lightweight titanium graphite laminate, carbon fibber and <https://assignbuster.com/the-hospitals-jit-inventory-management-marketing-essay/>

epoxy and composites is provided in this new jet plane to meet current needs of their customers. 787 Dreamliner also contain innovative electronic monitoring system which increases the efficiency of plane to report maintenance requirements to ground base computer system. 210 – 250 passengers could travel with 787-8 Dreamliner on routes of 14, 200 to 15, 200 kilometres; while on 787-9 Dreamliner 250 – 290 passengers can travel on routes of 14, 800 to 15, 750 kilometres. Working with General Electronics and Rolls-Royce Boeing manufactured engines with fuel efficiency and friendly environment. 787 Dreamliner has fuel 20 percent less fuel consumption as compare to today's similarly sized airplane and also having similar speeds to today's fastest wide bodies, Mach 0. 85 that will provide to enjoy more cargo revenue capacity. (www. boeing. com).

So this new product development and wide range of product family provides their customers a variety of options and fulfil the customer's need that lead to competitive advantage for Boeing.

### **TQM practices:**

The ability to meet customer's need is called the quality of that product (Heizer and Render, 2009). Firms can reduce cost through quality management practices and increase their sales and ultimately the firm's profits. By attaining the utmost efficiency through cost reduction and improvement in customer satisfaction TQM practices leads to develop sustainable competitive advantage (Deming, 1982).

Boeing follows the quality guidelines provided by international aerospace agency as ISO 9000 series is not enough for airline industry.

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## **Six Sigma Award and continuous improvement:**

“ 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). In October 2008 a Boeing team working on B-C17 project was awarded with Gold from the International Team Excellence Program for their efforts to implement the practices of Lean Six Sigma production. “ 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). Boeing also follows continuous improvement model strategic looping action of PDCA (plan, do, check, act) for upgrading their quality standards (www. boeing. com).

“ 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 (www. boeing. com).

Boeing also uses information technologies in their operations like computer aided design (CAD) and computer aided manufacturing (CAM) which leads to increase their quality. CAD makes easy and reduce the time for design stage and also increases the probability of success of design. Boeing also uses CAD and CAM to design and produce their aircraft, such as the B-777 (Making of the Boeing 777, n. d.). By recognizing the power and needs of information <https://assignbuster.com/the-hospitals-jit-inventory-management-marketing-essay/>

technology Boeing uses an e-tool called a capability maturity model which measures different facets of Six Sigma and customer quality satisfaction (Little, 2003). These quality management practices lead Boeing toward a competitive advantage for Boeing.

### **Supply Chain Management:**

“ Supply chain management integrates the activities that procure material and services, transform them into intermediate goods and final products, and deliver them to customers” (Haizer and Render, 2009). Firms can gain competitive advantage by using supply chain management practices to their operations and strategies.

In this time of globalization firms are trying to improve their performance and through outsourcing firms get a chance to look across their traditional boundaries that support innovation to get that performance (McIvor et al, 2009). Having suppliers all over the world company has developed good relations with their suppliers. Boeing is relying on outsourcing strategy and a number of parts are provided by its suppliers. In making 787 Drem liners Boeing is working with more than 20 international allies. For Boeing as an innovative organization that brings new ideas with new features in their products to meet their customers' need it is very difficult to manufacture all of its products on its own alone. As a big portion of Boeing's products are outsourced, so it is very important to maintain the required quality and on time delivery for their productions. To cater this problem Boeing also leveraged their skilled and brilliant employees to their customer who train their suppliers about their customer's needs and how to maintain quality of their supplies

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## **HRM practices:**

Having more than 158000 employees in 70 countries all over the world Boeing represents the most diverse personals. Biggest strength of Boeing is the employees more than 123, 000 having college degrees which include 32, 000 advanced degrees work force. Code of Basic Working Conditions and Human Rights is been plasticized in Boeing that lead Boeing to an attractive place to work. Boeing also believe to select and retain the best qualified people available without any kind of discrimination in regard of race, colour, religion, national origin, gender, sexual orientation, gender identity, age, physical or mental disability, or veteran status not only in recruiting and hiring, but also in transfers, promotions and terminations, compensation and benefits.

These things are very vital and motivate the employees that ultimately increase the quality of that product. Continuously for previous five years, Boeing has been awarded by the Human Rights Campaign Foundation as a firm that provides non-discriminatory workplace and stood at the top rating of the Corporate Equality Index. Many other awards Boeing has won for HR practices which increases the motivation level of their employee.

## **Boeing's competitiveness:**

These strategies of Boeing to achieve competitive advantage differentiate it from its competitors and bring at the top of aerospace industry. Boeing's innovative new product developments, its suppliers' capability , it standards for quality to meet their customer need along with its human resource power is a complete package that make it different from its competitors in its industry.

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## **Arnold Palmer Hospital:**

### Vision

A trusted leader inspiring hope through the advancement of health

### Mission Statement

To improve the health and quality of life of the individuals and communities we serve.

Arnold Palmer Hospital situated in Central Florida is one of the most famous children hospitals not only in Florida but all over the world. Hospital has saved over 6.8 million lives including children and women and their families and having highest survival rates in the USA for its Neonatal Intensive Care Unit, more than 10000 babies are delivered at Arnold Palmer Children Hospital from the start of Arnold palmer hospital to 2006. It was known as a Hospital provides services both women and children, including delivery services (Heizer and Render, 2009). After the opening of Winnie Palmer Hospital for Women & Babies in 2006, all women's services, including delivery services were moved to Winnie Palmer Hospital. Arnold Palmer Hospital became a children's hospital focused solely on specialty and sub-specialty healthcare for children. Today Arnold Palmer children Hospital is facilitating a 158-bed to serve their patients in Florida, United States. Arnold Palmer Hospital's operational strategy satisfies to their patients that lead to achieve competitive advantage for the hospital. Arnold Palmer Hospital's scores for customer satisfaction on the top of 10 percent of national benchmark studies show its strength in their operations to meet requirements and needs for their patients (Heizer and Render, 2009)..  
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As only one of “ America’s Best Children’s Hospitals” in Central Florida Arnold Palmer Hospital has been ranked as 30th nationally in paediatric heart care/heart surgery in the 2010 and 2008 edition of the report and also ranked with 28th nationally in orthopaedics in the 2010 edition of the report (www. orlandohealth. com).

### **TQM Practices:**

According to Render and Heizer almost all quality management techniques which they present in their book is been practiced in Arnold Palmer Hospital (Heizer and Render, 2009). Basic of Total Quality Management is the continuous improvement in operations. Arnold Palmer Hospital also works on continuous improvement program and always tries to find out the innovative and new ways to cut down the infection rate, readmission rates, hospital stay time, costs and deaths in their hospital. Hospital faculty gathers data from patients through questionnaires and follows daily results to take remedial measures and corrective actions immediately if any problem is founded. (Heizer and Render, 2009)

Employees are empowered to cater the problem, they found and they got training for this. They have the power to serve with gifts to their patients if they found someone displeased with their service. There are about 2000 organizations that are belonged with the hospital and monitor the hospital in many areas for standards and submit monthly report which contain the feedback with problems and solutions. Inventory is also be maintained on JIT (just in time) basis that allows the hospital to solve quality problems along with low cost. (Heizer and Render, 2009)

Children's Bill of Rights at Arnold Palmer Hospital is been displayed and implemented. This Children's Bill of Rights tells their patient that what services they can expect from hospital when they are admitted. These expectations include time to play, People to knock on my door before coming in my room, People to understand that sometimes I need to cry when I'm afraid or hurt, My parents to help take care of me, People to laugh with me, Safe, quiet times during each day, People to tell me what's going on and why, My room and my bed to be safe places, People to let me choose what I want when it's O. K, My favourite toy from home to be with me and to go along to surgery and different places in the hospital, A hug when I need one (www. orlandohealth. com).

A stork board is been used in hospital which is a visible status chart containing the information about the Deliveries which keeps up to date all doctors and nurses. Pareto charts and flow charts are also been used to monitor processes and these charts help to identify problems with their possible solutions. (Heizer and Render, 2009)

All these activities and behaviours help Arnold Palmer Hospital to maintain a quality culture and continuous improvement and ultimately fulfil the needs of their patients to gain competitive advantage.

### **Process Management:**

As a largest neonatal intensive care unit and the 4th busiest hospital of US in Florida Arnold Palmer hospital is ranked at 5th position among other 5000 hospitals nationwide in term of satisfaction of their customers and patients (Heizer and Render, 2009).

Arnold Palmer Hospital uses different tool for their operations like process flow charts and Stork board which assist staff to proceed. Staffer Dianne Bowles' flow chart is used to control and manage the vacated rooms that speed up the admission process which is very important as hospital suffers over capacity for the year. All work is done systematically according to this flow chart. For example a number of steps are involved for a maternity patient from the entrance to the exit. A flow of activities is defined and everyone knows his duty. Doctors and nurses can also follow their duties at stork board. This efficient process management increases the productivity and less chance of error which ultimately provide competitive advantage to the hospital.

### **Capacity Planning:**

As a busiest hospital in Florida Arnold Palmer Hospital's capacity for the birth per year was 6500 deliveries with 281 beds and demand was increasing and by the end of 2004 hospital having a demand of more than 10000 births per year (Heizer and Render, 2009)..

Hospital was found difficult to fulfil the demand that every day was increasing for their obstetric, gynaecological and children's services and hospital decided to go for expansion to cater this over capacity problem. A team of 35 members was established and a new expansion plan was developed. Hospital decided to go for a new eleven-story building having 273 additional beds (Heizer and Render, 2009). Hospital divided its operations into two specialized units with the name of Winnie Palmer Hospital for Women & Babies and Arnold Palmer Hospital for children. New building was named Winnie Palmer Hospital for Women & Babies while old building <https://assignbuster.com/the-hospitals-jit-inventory-management-marketing-essay/>

remains for Arnold Palmer Hospital for children only. After this expansion hospital's capacity for birth has been increased from 6500 to 13500 per year (Heizer and Render, 2009). Hospital's expansion with specialized units brings competitiveness for hospital and over 95 percent of patients from Arnold Palmer Hospital recommend it to others.

Along with new building hospital also expand its operations for children at vacant space after separation and start paediatric services. Today hospital is providing many healthcare services including acute care, a Congenital Heart Institute, paediatric intensive care, emergency medicine, trauma service, nephrology, neurology etc to meet the demand.

### **Supply Chain Management:**

In 2003 Arnold Palmer Hospital along with seven other hospitals situated in Florida formed an alliance corporation with the name of Healthcare Purchasing Alliance Corporation. This small but powerful alliance having purchases of \$200 annually was the result of lack of negotiation with local manufacturer to get the best bid price. This alliance saved \$7 million on 1st year and divided it into eight members. They also make contracts for 3-5 years instead of one year with a guaranteed and committed volume. This alliance dominates on supplier and help to reduce cost and increase the profitability of a firm that leads to a competitive advantage.

In spite of collaborative strategy between supplier and buyer for new innovative products, the approach is different in the case of service industry. At Arnold Palmer Hospital a quality standard and economic benefits are

analyzed by medical Economic Outcomes Committee to make purchase decisions.

## **Inventory Management:**

Inventory management is also one of the critical issues that need full attention in achieving competitive advantage. Arnold Palmer Hospital follows the JIT (Just in Time) inventory management system. Render and Heizer define JIT in their book

“ JIT systems are designed to produce or deliver goods just as they needed” (Heizer and Render, 2009).

Reduced cost along with improved quality is the concept behind JIT. Hospital spending is about \$30 million per year and thousand of stock keeping units. An account executive along with two service personals is employed to manage daily deliveries from McKesson General Medical, a major distributor partner of Arnold Palmer Hospital. Surgical packs are also ordered and delivered on the basis of JIT.

By adopting JIT hospital reduces its cost and avoid expensive bulky orders storage cost along with high quality standards and this strategy leads hospital to a competitive place where it stands today.

So these strategic decisions in their operations lead Arnold Palmer Hospital to a world's famous hospital with a very high level of customer's satisfaction.