Audit Process Quality Management in the Airlines Sector with Glykas Quality Compass

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Abstract

The purpose of this paper is to examine the application of quality management in the airline's sector and analyze it in the context of the Glykas Quality Compass (GQC). We present GQC with its categories and basic concepts. We provide a literature survey of the field of quality management classified in the four main categories of GQC, namely: philosophies, frameworks, standards and excellence awards. We also provide a survey of all quality related issues associated with the airline's sector. The application of the four aforementioned quality categories in the airline's sector is also envisaged and finally we conclude with the presentation of the quality audit process in the airline's sector as an indicative application of quality standards.

Keywords: Quality Management, Process Management, Glykas Quality Compass (GQC), Airline Sector, Quality Audit Process

1. Introduction


The four categories of GQC are: philosophies, frameworks, standards and excellence awards.

While Quality Management is related to defining appropriate standards and procedures and ensuring that these are followed, the successful implementation of Quality Management Systems (QMS) deals with the implementation of these four categories which is possible through the incorporation of ten core quality concepts. This implies the identification of the significance of the quality concepts during the implementation of quality systems. The ten quality concepts which are further subdivided into three categories: five core concepts, three intra-core concepts and two auxiliary concepts as described below:

The core concepts are:

1. **Customer focus**: Focusing on the way the product or services are delivered to the customers. Focusing on the customer segment and supporting processes. For example, Quality Function Deployment is a technique for analyzing customer focus.

2. **Human resource management**: It comprises 4 elements namely performance measurement, training and education, rewards and incentives and career pathing.

3. **Leadership**: It is a soft skill that involves empowering of individuals in an organization. It is very important and deals with how authority and decision making is delegated to human resources.

4. **Process focus**: Process flow is the sequence of activities. Process management deals with the activities and flow of activities.

5. **Strategic focus**: Deals with developing business objectives and the critical success factors.

The intra-core concepts are:

6. **Performance measurement**: Measurement of the efficiency and effectiveness of all organizational elements namely managerial system, job description, organizational structure and processes-procedures.

7. **Change management**: The management of the change in all organizational elements in a controlled manner.
8. **Continuous improvement**: Using the PDCA cycle to improve all elements of the organization continuously.

The auxiliary concepts are:

9. **Information-Knowledge management**: Knowledge comprises of education, experience and training. Knowledge management is serving knowledge, using knowledge to achieve something. It deals with the way knowledge is documented in an organization.

10. **Partnership, Social Responsibility and Stakeholders’ value**: Partnership is the relation with the suppliers, subcontractors and outsourcing firms. Social responsibility is the responsibility of all other authorities in the wider community. Stakeholder is anybody who has influence or interest in the company’s functioning.

The above ten concepts are used in all four quality categories (philosophies, methodologies, standards, excellence awards) and follow the PDCA cycle for constant continuous improvement. PDCA is a methodology composed of four phases: Plan, Do, Check, Act, with different techniques used in this type of cycle for the ten aforementioned concepts.

The first two phases (Plan and Do) are the most important during quality management implementation. The Plan phase is considered with the design of all organizational elements that will support and control the implementation during the Do phase by utilizing all organizational resources.

The organizational elements we are concerned with in the Plan Phase in GQC are: Processes, Organizational Structure, Job Descriptions, and Managerial Systems. The organisational resources we concentrate on at GQC in the Do Phase are: Land and Buildings, Equipment, Human Resources, Material and Inventories, Cash-Money, Information Systems. Both organizational elements and organizational resources can be utilized in all four quality categories apply to different quality concepts. A table depicting the GQC is presented below:
Airline quality management systems are mostly associated with airline service certification associations that provide accreditations on an airline's performance level mainly via awards. These awards can be based on service level evaluation, regional level performance, customer satisfaction etc. Therefore, the importance of airline service certification systems has flourished during the last two decades. However, the importance of quality in this sector is somewhat different compared to others, thus giving a sense of uniqueness in every attempt to analyze quality in it. For example, the importance of quality in such a complex industry is always in balance with maintaining passenger safety standards and cost competition for the services provided.

We provide a literature survey of quality management systems, based on the aforementioned Glykas GQC quality categories, and their applications in the airline's sector. We also present the design of the quality audit process in the airline's sector, job descriptions related to quality management, quality metrics and performance measurement systems; quality related organizational structures as well as an example of the quality audit process of ETIHAD airline. Etihad is one of the most developing airlines in the Middle East region, with major investments in quality management systems. These systems have become the company's focal point in their attempt to achieve the company's major strategic objectives which are focusing on the attraction of new customers while maintaining their existing customer base amongst fierce competition.

2. Quality management awards and frameworks in GQC

In this section we describe the most well known quality management awards classified in GQC.

**U.S Malcolm baldrig national Quality award (MBNQA)**

The Malcolm Baldrige National Quality Award (MBNQA) is an award that established to reward US organization that implemented the quality system and has a high awareness of quality. This award is given to specific sectors for their business excellence; these sectors are Manufacturing, Service Company, Small business, Education, Healthcare and Nonprofits. This award is given to those organization which accomplished high achievement in seven criteria as shown in the below figure.

![Figure 1: MBNQA](image)

This diagram shows the seven important criteria to implement the quality management award and framework, which started first with Leadership: This category checks how the leader and top managers are able to control and manage the organization and establish an ethical environment and control internal and external factors. Secondly it moves to Strategic Planning: This category checks the strategic planning of the company and how they work to achieve this planning, what will happen if there are challenges get in and finally report the results and measurement on the action. Comes next Customer focus: this category focus mostly on customer and examine the interaction between the employee and customer, gets feedback, complaints and work to improve the customer service. Also works hardly to track the customer and build good relationship with him, after that it start Measurements, Analysis, and knowledge.
management: this category check out the technique that the company use it to collect data, study this data and convert them to information and develop information technology to get high performance, next it focuses on people who called Workforce focus: This category shows how the firms can find the potential side that owned by its employee and how to develop them and give them chance to practice managerial system to build good relationship. Process Management: This category shows how the company creates their internal process, procedures, regulation and set up managerial system and how to implement these all, finally we get the Results: which is the final category which examines overall performance, leadership, strategic, customer focus, Information technology, workforce, process and the outcomes of the companies effectiveness and competition.

2.1.2 International Quality Award Programs

Deming Prize

Deming has categorized prize to three prizes, for individuals, which given to the people who have done an excellent role in studying the Total quality management, secondly the Application Prize which is given to firms or specific department in the firm that accomplishes huge improvement in the organization performance and function by using the application of Total quality management and third one is The Quality control Award for Operations Business Units: given to those a specific unit in the business which accomplished unique improvement using the process of quality control.

European Quality Award

![Figure 2: EFQM](http://www.ijmsbr.com)

European Quality award has got a new name called (European Excellence Award) (EFQM), this award was established by a group of European organization which specialized in the quality. European Quality award is nonprofits and focuses on increasing the awareness of quality among European firms. European Quality award is given to those organization which achieved excellence in their different performance and based on some criteria which are shown in above figure, the excellence result related to performance, customers, people and society are implanted by Leadership which hold and connected to policy and strategy, which is outcomes of people partnerships and resources and processes.

Canadian Awards for Business Excellence

The below diagram shows the six principles which most of the Canadian organization use them to accomplish excellence in the business and gain high performance.
Figure 3: Australian Business Excellence Award

This award is awarded to an Australian organization that achieves high performance standards in the annual evaluation which is based on eight values: leadership, customers, systems thinking, people, information and knowledge, corporate and social responsibility sustainable results.

Figure 4: Australian Excellence Award Values

Quality Awards in China

China has established its award in cooperated with China Association for Quality which has been changed the name into Performance Excellence Award. This award has designed with the new standard which was written by one of the famous academies in china; however this award depends on Malcolm Baldrige National Quality Award (MBNQA) criteria for a quality system.

This award helps internally the Chinese firms which recent start their business and drive them to consistent development and build their name in the workplace,
ISO 9000:2000

ISO 9000:2000 standard refers to the international organization for standardization, it was designed of 91 nations who have set a composed of standards for quality in 1987 and these standards lastly revised in 2000 and called ISO 9000:2000 standard and consist of three documents ISO 9000, ISO 9001 and ISO 9004.

ISO standard was structure to ensure continuity in developing, enhancing organizational operation, high quality in delivering products and service, all these could be done by following the organization process and guidelines consistently.

Below is a diagram for the ISO 9000:2000 principles that it should be implanted to get ISO 9000:2000

![ISO Quality Management System](image_url)

These eight principles are set to achieve five goals, Keep up improvement in goods and service to cover requirements, Strongly enhance the functional area of the company to satisfy customer and stakeholders, Build a kind of confidence that the quality is important and makes everyone feel satisfied, Build as well confidence to both external customers that the products and services are being in good quality and Build confidence that the quality that has been followed is totally satisfied by all.

Six sigma
Six sigma has a significant achievement that differs completely from other standards. It was extremely used by big and known companies. Six sigma works statically on the number of defects and errors in each firm which should be computed less than 3.4

Six sigma can briefly be explained that hard working to find out the cause of the defects, getting a solution to avoid it in the future and helps the organization to use it to improve the organization operation and increase the revenues. Six has done lots of jobs to implement the quality system. Six sigma focused mostly on the worker and teamwork that are managed by top managers. Six sigma has multi activates among operation, work and polices. It depends mostly on the collected data from the statically technique. Furthermore Six sigma concentrated largely to develop the overall organization and is trusted that this development will make financial return its organization.

2.1.3 Quality Standards

A quality standard is a document that provides requirements, specifications, guidelines that is used regularly to ensure that materials, products, processes and services are fit for their purpose and are of good quality.

ISO (International Standard Organization)

The ISO is the most used quality standard. Organizations and companies often want to get certified to improve the efficiency and effectiveness of the company’s operations. Business sellers and providers want to get certified as reassurance for customers that purchase their products and pay for their services. The certification is not a requirement but they decide to seek certification for many reasons, such as the fact that it is a contractual or regulatory requirement (ISO, 2013). In addition to that it is important to meet customer needs and preferences, it is also a strategy of the risk management programme and it gives a clear goal for the development of the management system that the staff can follow. ISO develops the International Standards however it is not involved in the certification of the standards they develop. The certifications are done by an external body. ISO International Standards only ensures that products and services are safe, reliable and of good quality. For businesses, ISO is a strategic tool to reduce costs by minimizing waste and errors and increasing productivity. It also helps companies in accessing new markets and facilitates free and fair global trade. The ISO standards are developed by a group of experts from all over the world, which they call the technical committees. The experts negotiate the aspects of the standard including its scope, key definitions and content (ISO, 2013). The standard is based on global expert opinion. Depending on the standard, the technical committees are made up of experts from that relevant industry.

The ISO doesn’t decide that they want to develop a new standard, instead they respond to a demand or a request from an industry or a consumer group. The development of a new ISO standard and all the previous ISO standards was a consensus-based approach and the comments stakeholders make are taken into account (ISO, 2013).

American National Standard Institution (ANSI)

The (ANSI) is the voice of the American standards and conformity assessment system, it assists in strengthening the U.S. marketplace position in the global economy by empowering its members and constituents and ensuring the safety and health of the consumers is kept in mind and that the environment is not affected negatively. They are required to enhance the competitiveness of the U.S. businesses globally and promoting and facilitating standards conformity assessment systems and safeguarding their integrity that will lead to the enhancement of the U.S. quality of life. This institute oversees nearly every sector from dairy and livestock production to energy distribution, it is required to monitor the creation, distribution and the usage of thousands of guidelines that impact the economy and businesses. ANSI don’t work alone, they are actively engaged in accrediting programs like ISO; that assess conformance to standards (ANSI, 2013).

Quality Excellence Awards

The MalcomBaldrige National Quality Award

A recognition system with a set of organizational performance excellence criteria that applies to all functions of an organization including: leadership, strategic planning, customers, performance measurement, workforce, process management and improvement, and organizational performance results. This prize is given in categories of manufacturing, service, education, healthcare, and all other fields of business. This national award program improves quality and productivity by stimulating American companies to obtain a competitive edge through increased profits, recognizing the companies’ achievements and improving the quality of their goods and services and being role models
for other establishments. It also helped in establishing guidelines that are used to evaluate their quality improvement efforts.

Deming Prize

This prize, which was established in honours of Deming; the person who founded the principles of TQM (Total Quality Management) is focused on the effective planning of the organization structure and operational aspects. It assesses ten different categories: policies, organization, information, standardization, HR, quality assurance, maintenance, improvement, effects and future plans. This prize had exerted great influence directly and indirectly in the development and success of quality control and management in Japan. This prize gave companies the chance to challenge each other and apply new quality management approaches that met the needs of their working environment. ‘Organizations developed effective quality management methods, established the structures for implementation, and put the methods into practice’

European Quality Award

The EFQM excellence model is the most used and popular quality tool in Europe. Organizations are driven to improve using the EFQM excellence model, which is a comprehensive management framework. To implement the model methods, training, assessment tools, recognition is provided and integrating good practices in their portfolio. This award started to ensure that European organizations are recognized as the benchmark for sustainable economic growth globally by implementing quality techniques and energizing the leaders who want to bring innovation within their organizations to learn and train their staff. ‘It encourages organizations to move from rigid corporate structures to more agile ones that are better suited to rigors of today’s global economic environment’

This framework works by assessing the performance of an organization and identifying the key strengths and improvement areas then integrating existing tools, procedures and processes by aligning them all and removing duplicates (Torino, 2007). Offer a goal that will stimulate continuous improvement and then identify what is driving more good results and which areas need more attention.

Canadian Awards for Business Excellence

This award is given to organizations that are committed to excellence and deserve recognition. This award recognized many organizations and has many categories such as business excellence in quality, customer service, healthy workplace, community building and so forth. This award allows the committed to economic progress organization to take a more prominent position and gain greater influence globally and also benefit the Canadian market as a whole. ‘This prestigious award is tangible evidence of an organization’s level of excellence.

Australian Business Excellence Award

The framework of this excellence award focuses mostly on leadership and customer and market focus. They look for organizations that lead by example and have a clear direction. The organizational structure must be aligned and it must focus on having a sustainable rate of achieving goals. Leaders in such organizations must develop and value the people in the organization and their capabilities and skills. Also make sure they behave in an ethically, socially and environmentally responsible manner, the leaders and followers in that organization. This is all the leaders’ responsibility and it reflects their leadership skills when they act in such a manner. But when it comes to the customer and market focus the organization’s management must understand the markets and customers’ value in the present and in the future. They must also drive the organization with innovation, strategy and great products and services. The whole focus should be on having sustainable values and outcomes.

The Singapore Quality Award (SQA)

It is considered to be the highest national award that achieved the Business Excellence Standard. This award is given to organizations that show outstanding levels of business excellence in all managerial and organizational areas. The organization that wins this award is referred to as ‘world-class’ organizations where SQA is benchmarked against other global quality awards such as the European Quality Award and Malcolm Baldrige National Quality Award. The framework of this award is based mainly on leadership, planning and information. The organization must value visionary leadership and innovation focused planning and knowledge driven systems (Xiang, 2010).

Business Performance Improvement Resource (BPIR) Model
The BPIR is a complete resource for improvement and business excellence; it is built around one primary goal. Where for every given process there are performance measures, benchmarks, best practices, self-assessment tools, expert opinions, articles and case studies that are available to guide you to innovation and improvement. This model classifies more than 250 business processes information and data. The information is customer and market value oriented, planning and strategy focused and excellence in production. It also pushes the organization to deliver leadership and develop human resources.

**Sheikh Khalifa Excellence Award (SKEA)**

SKEA acknowledges the EFQM framework and model fully. The whole model is based on the assumption that with excellent performance, valuing customers, people and society will drive in excellent results achieved through leadership that value strategy, human resources and the providing of great quality products and services.

![Radar Methodology](image)

Just like EFQM, SKEA applies the same fundamental concepts in training then choosing the winners of this prestigious award. This award is awarded to organizations that demonstrate superior organizational and managerial excellence through a process or rigorous assessment.

### 3. History of Airlines sector

The world’s first passenger airline is DELAG (Deutsche Luftschiffahrts-Aktiengesellschaft, or German Airship Transportation Corporation Ltd) was founded in 1909 as an offshoot of the Zeppelin Company. DELAG created the job description of the flight attendant first undertaken by Mrs. Heinrich Kubis in March, 1912. In the late 1930s two engineers, Frank Whittle and Hans von Ohain developed the jet engine which boosted the aviation industry. The increase in demand to travel through air led to the creation of a huge number of commercial airlines being established all over the world. In America the numbers are astonishing, in the united Sates alone there are nearly 100 airlines in North America with most of them well known all over the world, just to name a few: Delta Airlines, United Airlines, Southwest Airlines, American Airlines, US Airways, Air Canada, Alaska Airlines, West jet and Air Jamaica. In Central America and the Caribbean there are around 26 airlines: Caribbean Airlines, LIAT, Insel Air and others. Additionally, there are approximately 13 airlines in South America like, Gol Air Transport, Lan Airline, AerolineaasArgentinas, Avianca etc. There are 76 airlines in Europe such as Austrian Airlines, Lauda Air, Brussels Airlines, Air Berlin, Euro wings, British Airways etc. There are 15 airlines in Africa such as South Africa Airways, Air Mauritius, Kenya Airways, Ethiopian Airlines etc. In the Middle East there are around 10 Airlines such as Etihad Airways, Emirates Airways, Oman Air, Qatar Airways etc. There are around 36 Airlines in Asia such as Tiger Airways, Thai Air Asia, and Singapore Airlines. In Australia there are approximately 30 airlines such as Qantas link, Air Link, Air Whitsunday, Virgin etc.

**Airlines association, standards, framework and Agencies**

http://www.ijmsbr.com
There are a number of associations that regulate the airline market and their aim is to enhance customer safety and standardize service offerings. These are:

1. IATA: The International Air Transport Association
2. IOSA: IATA Operational Safety Audit
3. EASA: Europe established an Agency which called European Aviation Safety Agency
5. AEA - the Association of European Airlines
6. AAPA Association of Asia Pacific Airlines
7. ICAO International Civil Aviation Organization (Agency)
8. ELFAA European Low Fares Airline Association
9. EBAA is the leading Association for Business Aviation in Europe
10. BATA is the trade association for UK-registered airlines
11. PESTLE Analysis Frameworks of Airline Industry

IATA is the most established and rapidly expanding regulating association in the airline sector worldwide. It was established in April 1945 as a subsidiary of The International Air Transport Association, an airlines worldwide trade association. IATA’s main objective is to ensure the high level of airline safety and airline reliability while ensuring that economic air services satisfy the world’s passengers. This objective becomes more and more difficult to be achieved as in recent years the Airline sector network has grown enormously and is now around 100 times bigger than it was in 1945, the year IATA was established. IATA started with 57 members from thirty different nations. Today its member’s list exceeds 240 Airlines originating from 118 different nations. In order to manage this vast network and the big number of airlines, IATA has developed a series of standards named IOSA (IATA Operational Safety Audit) which is internationally prominent. IOSA is focusing on operational management and the development and use of control systems of an Airline. More specifically, it assesses the safety and quality audit processes, systems and principles of an Airline. Airline conformity to IOSA standards is a prerequisite for joining IATA and is also a reason for Airline exclusion from IATA if they fail to prove conformity during reevaluation. IATA has selected eight well known certification companies that perform audits on its behalf:

1. Aviation compliance Solutions Pty Ltd
2. Aviation Quality Services GmbH
3. GHS Aviation Auditing
4. Morten Beyer & Agnew, Inc
5. ARGUS PROS (Partners and Resources for Operational Safety)
6. Quali-audit
7. ICF-SH&E
8. Wake (QA) Limited

IOSA Airline audits have a frequency of 24 months. According to IATA’s rules, the IOSA auditing company for an Airline changes every four years and if it does not comply will be given one year notice period and if it still does not comply, the Airline will lose their IATA registration. IOSA Airline audit findings are categorized into two levels, those that require immediate corrective actions and those that can be fixed within a period of one year. IOSA standards require that the operator should have a strict human resources policy that requires staff in operation critical functions to be assessed and certified that are physically and medically fit for duty. For example, if IOSA auditors on duty to audit a flight identify unfit personnel on board this will be considered as a finding that requires immediate corrective actions.

To comply with IOSA the Airline must have a valid Air Operator Certificate (AOC) or equivalent document and it must be issued by each country that allows the operator to fly to and from its airports for commercial air transportation. The AOC should contain:

1. Operator identification (name and location)
2. Date of issue and period of validity
3. Description of types of operations authorized
4. Type(s) of aircraft authorized for use
5. Authorized areas of operation or routes
6. Exemptions, deviations and waivers (listed by name)
7. Special authorizations, to include, as applicable
8. Low visibility takeoff (LVTO)
9. CAT II and/or III approaches. CAT provides and assesses procedures for low visibility takeoff used by pilots in the case of no visibility during their take off.

For example in the United Arab Emirates (UAE) each Airline, in order to operate, must obtain the Air Operator Certificate (AOC) and submit it to the General Civil Aviation Authority (GCAA). The Airline is responsible for renewing their AOC every two years. The GCAA is observing aviation safety and security in the UAE. IOSA accredited Airlines follow the ISM (IOSA Standards Manual). IATA is updating the manual continuously in an effort to meet advances in the sector.

Europe established an Agency called European Aviation Safety Agency (EASA) and each Airline can’t travel to European airports without having the approval from this agency. It focuses on safety and the level of maintenance of all aircraft types. For example, once Etihad Airways decided to open new stations in Europe all Etihad aircrafts had to be audited by EASA in order to verify if it follows EASA regulations. EASA audits and promotes environmental protection and motivates Airlines to operate in an ecofriendly manner.

Occupational Health and Safety Advisory Services (OHSAS) 18001 have been developed to be compatible with ISO 9001 quality standards and ISO 14001:2015 environmental management standards. OHSAS requires that the Airline must have designed and implemented hazard identification processes with priority in protecting human injury or the cause of illness or death. Risk assessment is the process of distinguishing risk severity arising from hazards. OSHAS controls are required to be in place in order to reduce the level of hazard consequences.

OHSAS requires airlines to set procedures and strict rules for all engineers and ground handling agents. They train their personnel in safety procedures and how they can follow them in their day to day activities. They also train them in the proper use of personal protection equipment and clothing such as the yellow vest, ear-plugs, safety shoes etc. Airlines are required to appoint an auditor who continuously assesses OHSAS compliance.

The Association of European Airlines (AEA) is a non-profit organization that assists its members Airlines interconnects and amalgamates networks. Under the umbrella of The Association of European Airlines there are thirty two European Airlines. The association is monitoring and assessing aircraft manufacturers, airports Authorities, governments and other organizations on the sector. The Association of Asia Pacific Airlines (AAPA) has been created to serve Asian Airlines in a similar manner. It is based in Kuala Lumpur and performs operational performance measurement and monitors Airlines’ traffic. The association helps members via its offices in Brussels and Washington get familiar with the United States and European aviation regulations and expand in these regions.

The International Civil Aviation Organization (ICAO) Agency has produced standards on the safety and security of its 191 registered members. They also set standards and mandatory regulations for environmental protection. The European Low Fares Airline Association (ELFAA) is focusing on low cost carriers as well as the charter Airlines in Europe. The number of low cost airlines is constantly increasing and safety in those carriers should be viewed from a different perspective. The main areas of focus are passengers’ rights, low cost airports, market liberalization, operational and environment safety between main operators and subcontractors. Examples of the ELFAA members are Rayaair, Easyjet, Flybe etc.

The application of PESTLE in the Airline Industry is based on the analysis of six major factors political, economic, social, technological, legal and environmental:

- **Political**: Terrorism is the biggest political problem in the aviation industry, issues like hijacking are still significant in passengers’ assessment. Counterterrorism measures can alleviate costs. The most well known example is Ryanair who had to cancel 279 flights and created a huge loss within a few hours.

- **Economic**: Oil prices have a significant impact on the airline's sector mainly on aircraft flight costs and thus ticket prices. The changes in the oil prices have forced the airlines to form partnerships to buy fuel in large quantities to decrease purchasing oil prices.

- **Social**: The need for airline travel is increasing; people now prefer to fly to their favorite destinations but a large percentage cannot afford it, therefore low cost carriers are coming into play to support travel.
Technological: Technological advancements not only in flying but also selling via the internet has lowered ticket costs as there is no intermediary to pay commissions to.

Legal: Legal frameworks of each country differ from each other, however when it comes to the environment, all governments are trying to have standard measures so that sustainable development is possible.

Environment: Measures such as tax implications on the basis of each airline's carbon footprint emissions is applicable, this has made the airlines reduce their footprints because it will reduce their tax cost and green activities are a new way to attract customers.

EBAA is the leading Association for Business Aviation in Europe and takes part in regulatory negotiations and debates representing its members at various European Union institutions. It contributes to 9% revenue of the aviation business and 7% of the flights. They also contribute to standards development in areas such as maintenance, training, research and development etc. Business aviation has produced 40% higher results in the last 40 years. The negligible carbon footprints of 0.04% of global man made carbon emissions is a big achievement of the EBAA.

BATA is the trade association for UK-registered airlines which contribute to 96% of UK flights and carry 129 million passengers every year and over 1.1 million tons of cargo. They employ 73000 people and own 80% of the total UK fleet. BATA contributes majorly to sector revenue generation. BATA takes all necessary actions to reduce the environmental impacts of air travel and motivate the idea of sustainable development and helps all its partners to achieve that goal.

4. Quality Management in the Airline Sector

Types of Airlines

An airline as most businesses have different types of ownerships for example in the west ownership is at the hands of private owners or a mixed combination of both government and private companies. In other countries airlines are purely government owned. In most countries the type of airline is determined by the revenue it generates from operations then it is categorized into three different categories regional, national and major.

Major airlines – Revenues of major airlines exceed 1 billion dollars. In 2000 there were 12 major airlines in the US: US Airways, Northwest, American eagle, Continental Alaska, American, America West, American Trans Air, United, Delta, Northwest, Southwest and Trans World. In terms of employment the numbers are really staggering. In 2000 United Airlines was employing 97,000 employees, American airlines 93,000 and Delta 77,000.

National airlines – Revenues of 100 million to 1 billion US dollars annually. These airlines have major routes in the country they operate and some international flights. In their operations they use medium- and large-sized aircrafts. Some examples of such airlines are Emery Worldwide Atlas Air, Aloha, AirTran, Hawaiian, Evergreen and Midwest Express. They hire fewer employees compared to major airlines for their operations for example Midwest express employs around 2500 and AirTran above 3700.

Regional airlines – Regional airlines are classified into 3 subgroups: Large regionals – They generate revenues of 20 to $100 million dollars annually and a typical aircraft can accommodate more than 60 people. Medium regionals – operating revenues of under $20 million, and thus use small aircrafts. Small regionals – These airlines do not have a set segment of revenue, but are usually referred to as "commuter airlines". The aircrafts they use are small and can only accommodate less than 60 people.

5. Anatomy of an Airline

The most important assets of an airline are its aircrafts and its employees. Employees are classified into different types:

• Line personnel – it consists of up to 85 % of the airline's labour force and are the people the consumers encounter while they are travelling. Line personnel includes pilots and flight attendants, reservation clerks, airport check-in and gate personnel and security guards.
• Operations – they are the back bone of an airline. Scheduling of aircrafts, maintaining the flight crews are some of the responsibilities of operations. These are the people to adhere to the FAA standards, and responsible for employee training.
• Maintenance – Airplanes are very expensive assets, thus maintaining such expensive and highly technical equipment is a necessity. Around 10% is dedicated to aircraft maintenance.
• Sales and marketing – people responsible for generating revenues. Ticket pricing comes under sales. Some other tasks are: Cargo sales, reservations, advertising, customer service and food service.

An airline may also outsource tasks and activities to sub contractors. This specialized work force consists of employees like lawyers, accountants, and employee- and public-relations specialists. Their role is to support the work of line personnel. Normally, such people are at the airline's headquarters. Subcontractors, however, sometimes perform core daily tasks like cleaning, fuelling, security, food services and sometimes maintenance.

5.1 Hubs and Spokes

In 2001 the majority of airlines in the USA used a hub-and-spoke network to route their airline traffic. The hub and spoke system started becoming the standard of major airlines after the federal government of U.S deregulated airlines in 1978. A hub is defined as a chief airport that various flights are routed through. Spokes are smaller airports that airplanes use as a destination flying out of the hub airport. Most airlines have one central hub airport where their main flight traffic goes to. Maintenance, fueling, food service support etc. is based in the hub airport. Some major airlines have multiple airports as their hubs usually on different continents.

The main benefit of the hub-and-spoke system is to give passengers alternative routes via combined flights, at a lower cost thus increasing booking numbers. This has increased complications in ticketing procedures which are relying mainly on internet booking companies or the airline's internet booking system. Fares keep on constantly changing. What a person might pay today will be different for another passenger travelling on the same route on the same flight on another day. Even people choosing seats in different sections of the aircrafts pay different prices; sometimes people
in the same section have also paid differently for their travel as they booked tickets on different days. Fares are calculated on the basis of what a passenger pays (in cents) per mile. In 1978, consumers paid about 19 cents per mile. In 1997, consumers paid around 14 cents per mile.

There are several factors that contribute to the cost of a fare:

- **Purchase date** – the earlier a ticket is brought the cheaper it will be (in most cases).
- **Class** – The first class is more expensive than business and business class more expensive than the economy.
- **Destination** – the longer the distance to the destination the more expensive the ticket. The other reason for high ticket costs can be the popularity of the destination combined with the scarcity of alternative airlines.
- **Flight date and time** – Flight at less convenient departure or arrival times are cheaper than the flights at convenient or peak times. High season tickets like summer season are much more expensive than other seasons due to vacations travellers.
- **Fuel costs** – Fuel cost is the second most money consuming activity of an airline second only to the labour force, a hike in the fuel price directly reflects on the ticket price of the passenger.
- **Competitors’ fares** – As in any other business competitor ticket pricing policies play a critical role in determining the final fare. Airlines use dedicated software to monitor fares of competitor airlines per destination.
- **Special factors** – there are special fares offered to frequent flyers, government officials, children and senior citizens.

![Diagram of International Arrivals and Domestic Boarding](image)

**Figure 9**

Overbooking is a very normal activity which is carried out by every airline. Airlines overbook flights based on historical data and the percentage of “no show up” customers per flight. In some cases overbooking is important otherwise this may result in high flight costs resulting in a loss.

In the case that all customers show up airlines offer free tickets and special fares to customers who are willing to give up their tickets. If an airline under any circumstances forced the passenger to not fly against his will, the airline has to compensate the passenger.

### 6. Airline Quality Management

Every Airline must ensure that IATA regulations are implemented so each Airline has a Quality and Standards department to ensure the implementation of IATA regulations and provide the mechanisms to back track in cases of nonconformity in order to correct mistakes and defects identified. Within the scope of IATA regulations a series of systems should be in place as well as an integrated management system consistent for integrating their functionality. Examples of such systems are: Safety Management System, Quality Management System, Health & Safety Management System and Security Management System.

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The Quality department in most major Airlines around the world is responsible for ensuring the quality of operations in the following areas:

- Flight Operations
- Cabin Crew Operations
- Flight Dispatch
- Ground Operations
- Cargo Operations
- Aviation Security
- Emergency Response Plan
- Safety Department
- Documentation System
- Organization, Management and Supervision of the Operations
- Aircraft Maintenance and Airworthiness
- Operations Training
- Codeshare and wet lease partners
- Staff competence and training

Fierce competition and the customer service oriented approach of the aviation sector has forced Airlines to invest extensively in Quality Management. Their main objective is to implant the continuous improvement philosophy in the whole organization by:

1. Cross-functional product design. It demands coordinated efforts by both the Safety & Quality department and the sales and marketing divisions.
3. Supplier quality management. The Safety & Quality department inspects all suppliers in the Supply Chain.
4. Customer involvement. Customer feedback process and customer opinion analysis are undertaken by both the Safety & Quality department and the sales and marketing divisions.
5. Information and feedback. The Safety & Quality department collects information on all aspects of operations ranging from Safety to customer service provision at all levels. This information is used in process measurement and analysis.
6. Leadership. Involvement and commitment of Corporate Governance, Board of Directors, Chiefs in all aspects of quality management.
7. Strategic planning. Quality management targets and objectives are included in strategic plans and communicated to all departments.
8. Human Resources. Cross-functional training in quality management usually coordinated by the Operational Training department. Employee involvement through road shows, staff conferences and departmental meetings and gatherings.

Quality findings are classified into three levels. In level one belongs non-compliance and non-conformity errors which lower safety standards and expose passengers to hazards. These findings need immediate corrective actions. An example of this type of finding is the identification of a major and serious problem in an Aircraft discovered by auditors during their inspection. If one of the turbines of an A320 aircraft is not working properly it is a finding that must be fixed immediately within seven days. If the maintenance department exceeds this period they must provide a detailed explanation to the Safety and Quality department. This is considered a high level of risk exposure and it can yield high company losses.

In level two we classify findings of non-compliance and non-conformity with requirements, which could lower the safety standard and possibly create safety hazards. Design of corrective actions should normally be completed within thirty days and their implementation should not exceed 90 days. Finally, findings that belong to level three do not require immediate or midterm action but rather stem from recommendations or other observations and comparisons to industry best practices. The corrective action plan and the implementation are included within the continuous improvement plan of the airline.
6.1 Excellence Awards in Airlines

Excellence awards are inherent in the aviation industry. They enable airlines to assess their performance against industry wide accepted set of measures that are included in the excellence awards. The assessment of excellence awards is holistic as they evaluate the airline from a wide spectrum of measures from operations, safety, customer perceptions, timely service provision etc.

SkyTrax is one of the most well known Excellence Awards in the aviation industry (Skytrax: http://www.skytraxresearch.com/). SkyTrax assesses each airline annually and performs an analysis based on operations effectiveness and efficiency as well as on passenger experience on the airline service in the three different classes first, business, and economy. SkyTrax assesses excellence and best performance in subcategories of its assessment and thus provides a series of awards such as the best Airline, the best Airline by aircraft cabin, best seats, best lounge service, best catering, best regional airline, staff service winners and best low cost airline.

SkyTrax measures customer satisfaction. The survey covers more than thirty eight key performance indicators of Airline service such as the ground personnel services including check and boarding, the service on board per Aircraft seat class (economy, business and the first class) etc. Additional measures on SkyTrax are assessing food quality, cabin cleanliness, beverage quality, in-flight entertainment and staff service level. This survey has been applied to more than two hundred Airlines of any type from major international Airlines to the smallest local ground service.

6.2 The Airline Quality Rating (AQR) System

Airline quality ratings used to be based on subjective surveys focusing on and analysing customer opinions about the service offered. Each airline used to develop its own survey thus creating havoc in the industry with no comparisons being possible between airlines.

Airline Quality Rating (AQR) is a uniform framework for airline rating (AQR; 2016) based on multi factor and the weighted average methods. AQR analyses data that are publicly available by airlines in their reports and on invariant quality factors important passengers.

For a factor or “Element” to be included in the AQR rating system has to meet two important criteria: 1) the element should be publicly available and published by all airlines; and 2) the element should have significance to consumer apprehensions on airline quality.

Examples of AQR elements are: baggage allowance, on time departures, mishandled baggage etc. Each element is given a significance coefficient. The higher the element’s significance the higher the value of the coefficient. For example if an airline allows free baggage of 40 kg then the consumer preference towards the airline increases and the airline does well in this particular element (AQR; 2016). Each element is very distinct from one another; therefore every airline in order to get a high rating has to perform very well in each element.

Each element in AQR can be assigned a positive or a negative value to reflect the impact of the consumer in cases of poor performance. For example “on time arrival” is positive if we reach on time but can get a negative number in case of delays and reduce overall scoring.

The AQR criteria and the weighted method provide the basis for analysis and comparison amongst airlines. The AQR has a standard formula shown in the following table. It has over 22 years of historical data and is currently the only regularly published rating for airline sector performance (AQR; 2016).
The AQR releases figures based on the performance of each and every US airline and also of the whole industry combined. The 2015 AQR score for the US Airline industry has marginally improved in comparison to 2014. It contains an analysis of thirteen airlines. Six major airlines improved their AQR scoring in 2015 whereas another set of six airlines decreased their 2015 AQR results. Overall AQR results from 2008-2015 are shown in the table below:

### Airline Quality Rating Scores 2008 - 2015

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Alaska</td>
<td>-1.80</td>
<td>-1.35</td>
<td>-1.11</td>
<td>-1.24</td>
<td>-1.28</td>
<td>-1.28</td>
<td>-1.24</td>
<td>-1.21</td>
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<tr>
<td>American</td>
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<td>-1.35</td>
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<td>-1.28</td>
<td>-1.28</td>
<td>-1.24</td>
<td>-1.21</td>
</tr>
<tr>
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<td>-1.35</td>
<td>-1.11</td>
<td>-1.24</td>
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<td>-1.28</td>
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<tr>
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<td>-1.65</td>
<td>-1.35</td>
<td>-1.11</td>
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<td>-1.28</td>
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<tr>
<td>ExpressJet</td>
<td>-1.65</td>
<td>-1.35</td>
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<td>-1.24</td>
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<tr>
<td>Frontier</td>
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<td>-1.35</td>
<td>-1.11</td>
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<tr>
<td>Hawaiian</td>
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<td>-1.35</td>
<td>-1.11</td>
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<td>-1.28</td>
<td>-1.24</td>
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<tr>
<td>JetBlue</td>
<td>-1.44</td>
<td>-1.35</td>
<td>-1.11</td>
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<tr>
<td>SkyWest</td>
<td>-1.35</td>
<td>-1.35</td>
<td>-1.11</td>
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<tr>
<td>Southwest</td>
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<td>-1.35</td>
<td>-1.11</td>
<td>-1.24</td>
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<td>-1.28</td>
<td>-1.24</td>
<td>-1.21</td>
</tr>
<tr>
<td>Spirit</td>
<td>-1.58</td>
<td>-1.35</td>
<td>-1.11</td>
<td>-1.24</td>
<td>-1.28</td>
<td>-1.28</td>
<td>-1.24</td>
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</tr>
<tr>
<td>Virgin America</td>
<td>-1.40</td>
<td>-1.35</td>
<td>-1.11</td>
<td>-1.24</td>
<td>-1.28</td>
<td>-1.28</td>
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</tbody>
</table>

The airline industry AQR increased from -1.24 in 2014 to -1.21 in 2015. Results improved in three areas: on-time arrival percentage, mishandled baggage rate and involuntary denied boardings per passenger served. The passenger complaint rate for the airline sector rose to 1.90 per 100,000 passengers in 2015. There were 15,260 complaints recorded for all U.S. domestic carriers. The 72.6% were related to flight problems, baggage problems, reservation, ticketing and boarding issues, or customer service problems. The 37% increase in passenger complaints in 2015 over 2014 proves that the sector's overall improved performance does not by any means guarantee improvement on airlines’ delivery of service.

More detailed tables and graphs are provided per “element”. For example, according to AQR the US industry’s rate of on time arrival rose to 79.9% in 2015 as shown in the following table:
The ratio of mishandled baggage was 3.07 / 1000 passengers last year, which was a considerable improvement from last year’s 3.35. There was a negativity increase also as the “involuntary denied boarding” increased from 0.78 /1000 passenger complaints also shot up a lot recording a 20% increase in 2012 to 11,445 (AQR; 2016).

6.4 GCAA

The General Civil Aviation Authority (GCAA) was established in 1996 (https://www.gcaa.gov.ae) to regulate civil aviation & to provide aviation services with prime importance to aviation security & to solidify the airline sector within the UAE. The main office is located in Abu Dhabi with one regional office in Dubai.

GCAA is the only authority for the control of civil aviation in UAE, it comprises of the provision of air navigation and all the parts of flight safety. In 2009 the GCAA inaugurated its new Navigation centre, it is considered as the biggest and the busiest air traffic managing centre in the Middle East.

GCAA in 2009 adopted the OTP program; it was executed as early as 2010. It was aimed at reformulating the governmental and corporate body of the Air authority. It enabled the development of the aviation sector around the world and aligned UAE with international standards.

6.5 Quality Account Manager’s Responsibilities

Account manager takes the full responsibility of implementing the quality management system, organizational structure or regulation in term of internal evaluation and take the right action if needed. He works as well to maintain that organization is following the right regulation from head office or the main authority (Sciarra; 2012).

All these responsibilities hold by the accounts manager who delegates the post holder quality to work on after the authority agreements.

Post holder quality then takes his extreme work to ensure that safety is functioning in right way in the organization, all procedures are followed by employees and implemented correctly, ensure that operational activities in the organization are monitored and controlled and consistently working toward improvement, after all these done the post holder quality provide the feedback to the Account manager for evaluation and take action in case there is shortage in work (Sciarra 2012).

The quality management system is fully responsible for minimizing defects in the organization, working right from the first time by learning and training the staff to avoid mistakes, feed them about customer satisfaction.

6.4 Safety and quality policy

Every organization has a safety management system (SMS) because it’s the most important key in operation, so most of organization is following certain regulations.

The safety management system has some ways to implement safety in compliance with country regulation and policy (Sciarra; 2012).

From upper management the point of Chief executive officer (CEO) to lower levels, all staff and managers are responsible for implementing the safety, mostly accountable is the manager who must make sure the safety regulation is followed properly.
Just culture and Non-reprisal Policy

The common issue in every firm that when any issue or problem or error happens that results from people’s mistakes or misunderstanding to use or follow the system. these outcomes might due of shortage in training or misuse from the individuals, so in this case the origination should take action after getting the report of that error, which will give them opportunity to study the factors for that error, how they solve it and how to avoid it in the future and get better environment(Sciarra;2012).

In some organization the safety and quality are integrated to work together and achieve secure operational. Also the safety and quality are reviewed consistently to ensure that all levels of operation are functioned under control and safety.

In some firm they support safety by hiring appropriate people who specialist in delivery safety to the organization, maintain high safety at all levels and provide a report on safety to evaluate the performance. Managers are the top accountable for management safety as one of their responsibilities (Sciarra; 2012).

Period Review of organization safety, quality and security Policies
The period review completed by quality assurance which plays a vital role to ensure that all safety regulation are followed and implanted in the right way and to ensure the improvement in the organization are followed and to evaluate how is the control run.

8. Quality Managerial Systems

Most organizations in the airline's industry use quality managerial functions to ensure that operational activities cater to customer’s needs. Managerial functions such as the organizational structure, responsibilities, quality policies, training requirements, documentation, communication, record systems, processes and procedures are the reason behind performing activities that satisfy customer's needs and requirements. Other than satisfying the customer requirements only, these quality managerial systems must satisfy the requirements of national and international authorities and regulations, international standards and internal standards. Normally quality managerial systems goals are linked to the managerial safety systems because they determine a sense of responsibility, accountability, deployment of resources, better monitoring and analysis of the effectiveness of the organization’s activities(Sciarra; 2012).

To develop, implement and improve the effectiveness of a managerial system a certain approach must be implemented, in the airline's industry case a process approach, to enhance the satisfaction of the external customers and meet the requirements (Sciarra;2012). Due to the fact that the inputs and outputs are interchangeable since in some cases the output of one process is directly transformed to the input of the next process, the organization must have effective process management.

The usage of a systematic approach such as the process approach in a quality managerial system can help achieve a better observance level, a better performance system, add value and strengthen procedures and processes (new and existing), promotes a cooperation culture and is continuously improving based on the objective measurement of processes.

This application of the system, identification of the link between processes, the management of the processes is called the process approach. The process approach is effective because there is an ongoing control over the individual processes and the linkage between them, this is called process mapping where they identify and link the processes to keep in control and avoid mistakes. The methodology mostly used to implement and control processes are the Deming Cycle, PDCA. Figure (1) explains the cycle and its components (Sciarra; 2012).
7.1 External Customer Requirements

The quality requirements in the airline industry as in any other industry are clearly defined by the authorities and also very easily measurable. The phrase quality might mean a different thing for authorities but it is a completely different assent by the consumer, so the authorities have to look at safety and experience to satisfy the varying needs of each and every individual (Sciarra, 2012). The passenger’s relation to quality is normally translated into various characteristics which can be classified into aesthetics, economics, appearance and performance.

It is a strong target of each and every airline to standardise the quality in order to have the full effect of the quality management systems in place. If that is done correctly it becomes a measurable system, and the then long term consumer satisfaction can be achieved.

7.2 Organisational Structure of an Airline

![Figure 12: Operations management Structure.](http://www.ijmsbr.com)

7.3 Quality Specific Organisational Structure
7.4 The corrective preventive actions

Prevention of non-conformance should be pursued as an objective proceeding correction for more than one reason. First, to serve safety needs they must be targeted through prevention not correction. As you wouldn’t want to risk safety but prevent any unsafe activities to avoid needing to correct it. In addition to this reason succeeding from the first attempt in a task is far cheaper and efficient than failing and having to repeat the attempt. Here precaution and prevention objectives are effective.

To achieve effective prevention, people in charge must come up with clear objectives and great planning systems, high managerial effectiveness and constant improvement. This is where the difference between preventive and corrective action lies. Preventive actions are a response to an observation while corrective actions happen after the task is done.

In this context the accountant manager (most probably the CEO) is accountable for resourcing the preventive and corrective action plans. But department managers are responsible for carrying out actions in their departments. They are expected to isolate the problem when possible, take observations and errors seriously and conduct immediate corrective or prevention actions. In order to fully execute the action plans they must identify the root cause of each negative observation or problem and then develop the action plan appropriate to eliminate every root cause and make sure the same issue doesn’t reoccur. As in any action plan, there must tell me a timeframe and by specifying corrective/preventive deadlines the problem will be isolated and dealt with. After identifying and developing the root causes and the action plans they must be submitted to the auditors for review and acceptance. Once the acceptance is made individuals/team must be assigned to foresee that the action plans are executed, follow up is necessary then evaluation of the action plan effectiveness. (Sciarr; 2012)

Root Cause Analysis (RCA)

The root cause analysis (RCA) is a systematic approach to find out the true root causes of problems. (Sciarr; 2012) This analysis strategy is considered one of the best strategies for preventive and corrective actions because it solves the problem by addressing, correcting and eliminating the root causes instead of addressing the directly visible reasons for example the band-aid approach which hides problems instead of fixes them. Using the root cause analysis will more likely lessen the chances of problem recurrence yet one corrective/preventive action plan is not enough. The RCA should be understood to be a repetitive process and continuous improvement. Even though this strategy is a reactive method yet is should be used as a pro-active method and forecast/predict events before they occur. By using the bow tie diagram to brainstorm possible causes and consequences to avoid reoccurrence is what makes the RCA effective. (Sciarr; 2012)
8. Quality Assurance and Risk management

Etihad plays vital role in implementing Risk management under department called safety and quality policy and its roles specifies in some areas where the operational activities should be monitored and controlled, make sure there is conformation of the activities to the rules, polices and Etihad regulation and also quality assurance strongly evaluate how the safety and quality team work and how effectively do they work to implement and action toward any issue.

Safety and quality policy also do a kind of assessment to evaluate how it is the roles run and its evaluation based on some criteria such as how the factor affecting Human resources and how much the operational activities being affected.

The monitoring helps to ensure that all the plans set by the audit are followed, developed and mostly are beneficial, all these of various aspects of developing a plan are controlled by Quality managers who have the areas that low risk or high risk.

8.2 Audit Process

A. Audit Process overview

The chart starts with a senior manager who audits the plan for the quality manager, this plan approved and adjusted through vice president corporate safety and quality that after approved senior manager sends this plan to GCAA. Afterward the senior manager takes the place of assigning auditors who set the plan for auditing and implement it and later sends the audit report and issue the action need.

The audit program office, quality manager, quality assurance and VP corporate safety and quality set follow up and review the report and adjust it if required to make another process and approve it.

B. Detailed Audit Process

The audit team start in the beginning to set the monthly plan, next time is to implement the plan by holding a meeting to see the differences between what they found and the standard. In this way they will commence the following up on the issue to prevent it happen later.
The final step that Audit does in closing is to escalate the finding to the quality manager and their recommendations.

8.3 Key Performance indicators

An audit notice is issued 14 calendar days prior to the audit and in the reporting phase the report is discussed with the auditee. A draft operations audit report is issued with no need for a technical draft report. 15 days after the audit is completed a final audit report is released. When the audit report is released contains final corrective and preventive actions as suggested and agreed by the audited (Sciarrà; 2012). Here the quality manager of Etihad comes into play with the things that need immediate attention are to be solved in 7 days. There are various levels of findings in Etihad, level two is to be solved in 30 days and level 3 in 90 days (Sciarrà; 2012). The Caps with are provided are acted and responded to by the quality department some of them are accepted by the safety department. The audit is finally closed by the safety and quality department 7 calendar days later than the date last findings have been declared.

8.4 Audit Escalation Process

The audit escalation process in Etihad is a very complex procedure. After the final audit report is issued by the safety and quality department of Etihad a monthly finding report is issued. Then the various findings are relayed to the respective departments and changes are asked to be made (Sciarrà; 2012). The quality department reminds them of the changes if no changes are observed they are reported in the SAG and PH meeting. The process flow of the audit escalation process is presented in the following flowchart:

Figure 15: Audit process
8.5 Case Study Benefits

The case study of Quality management in the airline sector: Etihad has helped us in a great way to understand the working of an airline and the importance of a good quality department in the service industry. It shows how an efficient quality department can lift a new entrant such as Etihad to a major player in a very short span of time. Correcting the errors made and streamline processes so that errors don’t occur again are the main focuses of the quality department in Etihad. This report sheds light on the contribution of the quality department in the success of a huge company, and also highlights the need for a quality department in growing and ambitious organisations. Quality management is growing as a field and the awareness and importance given by Etihad to it are huge. They realise the importance of it and are ready to invest in Quality management. This report also shows us that quality management is not only for the big players but also small organisations can also benefit from having a quality department.

9. Conclusion

The role of quality is often understated in today’s world but with the growth of the airline's sector and also with small companies growing competition is getting intense so therefore elimination of errors is as important as some core activity like production or distribution. Some companies think that having a quality department is increasing expenses but what they fail to realise is that it helps eliminate the errors not only towards the consumer but also within the organisation. In airlines quality management becomes of prime importance because they are into the most safety conscious and the most frequently long distance travel, here any error can be the source of drop in demand for airline

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tickets and if an error occurs on the operational side of the flight can be fatal. Airlines have the many awards and winning awards is not only having something to attract people with, it means that a company is error free and quality management is of the highest level. A high rating means a quick response to a problem and uniformity in processes. A quality management system helps an organisation process and supports each and every department to streamline their processes. Quality management brings the lean framework into an organisation, which states that elimination of the unwanted processes and keeping only the direct things in line. The lean framework simply means getting rid of the unwanted fat an organisation is carrying to help it function in a healthy way. Quality has moved on from the traditional philosophies, now there are quality audits in place as we have seen in the above flowcharts but traces can be found in existence in smaller organisations. All in all Quality management is a growing and rapidly creating awareness and need for a quality department across all organisations.

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References


lxxii. http://eyintranet/Pages/default.aspx password protected (Etihad Airways Intranet)

Books:


2. IOSA Standards Manual, ISM Ed6, April 2012

Image References:


http://www.emeraldinsight.com/content_images/fig/0400190103003.png

http://www.emeraldinsight.com/content_images/fig/1570010305002.png


http://2.bp.blogspot.com/-oA88yYreYS0/TsTyZarUC4I/AAAAAAAAYs/f-9DNYxHR6I/s1600/Deming%27s+14+Points.jpg


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