CRANFIELD UNIVERSITY

BADER MOHAMMED ALSHAHRANI

A3 THINKING APPROACH TO ENHANCE A COMPLAINTS HANDLING PROCESS IN THE AIRLINE SECTOR

SCHOOL OF AEROSPACE, TRANSPORT AND MANUFACTURING

PhD
Academic Year: 2016 - 2019

Primary Supervisor: Dr Ahmed Al-Ashaab
Associate Supervisor: Dr Patrick McLaughlin
July 2019

CRANFIELD UNIVERSITY

SCHOOL OF AEROSPACE, TRANSPORT AND MANUFACTURING

PhD

Academic Year 2016 - 2019

BADER MOHAMMED ALSHAHRANI

A3 Thinking approach to enhance a complaints handling process in the airline sector

Primary Supervisor: Dr Ahmed Al-Ashaab
Associate Supervisor: Dr Patrick McLaughlin
July 2019

This thesis is submitted in partial fulfilment of the requirements for the degree of PhD

ABSTRACT

A prescription for the business success is a matter of concern for company management, researchers and policy makers. There is an ongoing debate regarding the key tools which can increase business efficiency. For example, one stream of research argued that focusing on short-term goals is enough to boost up business performance. On the other hand, another stream argued that companies should focus on long-term performance by emphasising the importance of continuous improvement to assure the delivery of business sustainability. From this point of view, researchers proposed that problem solving is the key for achieving continuous improvement. Problem solving approaches are essential for maintaining the customer service quality as high as possible given the fact that they (problem solving approaches) focus on preventing the reoccurrence of complaints from customers. However, researcher did not reach a consensus regarding the effectiveness of the 'traditional' approaches of problem solving (e.g. the 5 whys).

As a result, this study develops an A3 Thinking approach for problem-solving in order to enhance the complaints handling process in the airline sector. This approach is validated by using case studies of Saudi Airlines. One of the main advantages of developing such an approach is that it enables the capture of subsequent provision of useful knowledge gained from each complaint, thus enabling the prevention of the reoccurrence of problems, and supporting decision- making. This study provided a valid evidence on the importance of handling customer complaints in different touchpoints during customer journey (pre-flight, on board and post-flight phases). This study found that breaking down customer journey to touchpoints help company management prevent the reoccurrence of customer complaints by increasing the efficiency of responding to customer complaints.

The research contributes to the literature by providing a detailed explanation of the journey encountered by airline customers, and it contributes towards enhanced practitioner outcomes by developing a customised A3 Thinking approach for problem-solving in the airline sector based on a learning cycle.

Keywords: A3 Thinking, Problem-solving approach, Complaints handling, Airlines, Knowledge crating, Knowledge capturing, Knowledge sharing.

ACKNOWLEDGEMENTS

I believe that this work could not have been accomplished without the precious support I received from my supervisors, Dr Ahmed Al-Ashaab, and Dr Patrick McLaughlin, and I want to use this occasion to thank them for being patient, supportive and encouraging throughout my many months of study.

Additionally, I would like to say thank you to all the people who believed and supported me, giving me the motivation to exert more effort for the purpose of meeting their expectations. Special appreciation goes to my parents, my wife (Hessah), my children (Remana, Nader and Talal) and my brothers and sisters.

I also thank my colleagues and the university staff for their kind support that they were always willing to provide to facilitate my research progression.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

Chapter I
Introduction

1.1 Research Background

Improving customer satisfaction is an essential objective which corporations nowadays are striving to achieve (Mahrous and Hassan, 2016; Manhas and Tukamushaba, 2015). Buttle (2009) Finds that companies are able to realise better outcomes if they satisfy customers provided that improved satisfaction leads to higher customer loyalty. However, this is not always an easy task for companies to undertake, since as noted by Liou et al. (2011), different industries provide different kinds of service to pursue the needs of customers, and consequently, each industry operates in unique settings that generate different customer requirements[1]. Moreover, there are variations in customers' needs, resulting in there being no possibility of establishing one set of needs that will satisfy all kind of customer.

At the same time, the globalisation phenomenon brings enhanced competition, meaning that in a way it is more difficult to satisfy customers since there is always another company in the market that tries to provide a better experience, and this rivalry raises customers' expectations of ever-more levels of service.

When these expectations are not met, complaints are usually the outcome, and as noted by Goodman (2006), organisations that are effective in their complaints handling procedures are able to retain their customers, whereas those that pay no attention to customer complaints usually suffer from losing market share which is resulted from losing unsatisfied customers who prefer to switch to company competitors. This shows the extent to which meeting customers expectation is

[1] Additionally, customer satisfaction criteria is different from one customer to another. For example, one groups of customers are interested in having the service at lower price even if the lower price is at the cost of quality. On the other hand, some other groups of customers give high priority to quality no matter what the price is. As a result, provided that customers have different expectations and different needs, the process of improving customer satisfaction is not as easy as it appears to be.

important given the fact that it affects a company market share and the consequences upon which the company overall performance might be affected. In other words, companies with poor systems for handling customer complaints are more likely to be exposed to the risk of reporting negative profits because they are not aware of the link among complaint handling, loyalty and profits.

In today`s highly competitive environment, large companies do seem to concern themselves with the need to collect information about their customer satisfaction level, and how the extent of such satisfaction influences their loyalty to the company (Carvajal et al, 2011). However, this concern does not always translate into effective complaints handling procedures, and in smaller companies, it is difficult to allocate sufficient funding[2] to such efforts. It is, therefore, important, to explore the best way to ensure that complaints handling is managed efficiently and effectively. From this standing point, this research project is motivated by by the need to gain insight into how effective systems for handling customer complaints improves companies efficiency throughout the improvement of customer satisfaction level.

However, such exploration makes more sense in the context of a particular industrial setting, and one industry in which such insight would be useful is the airline industry, since within that industry, safety is of supreme importance, and customer observations and experience are crucial to alert airlines of potential problems that can jeopardise safety levels. As a result, the airline industry is a 'good' industry in which this research can make a significant impact.

Chen and Chang (2005) have identified in the airline scenario, service, aimed at satisfying the customer, is categorised into two separate elements, these being ground services and in-flight services. The former include information gathering, reservations and ticket purchases, airport check-in and post-flight service; the

[2] Another layer of complexity to the customer complaints handling system is coming from the fact of the high price of setting up an effective system for handling customer complaints. Companies should maintain the balance between the benefits of having an effective system of handling customer complaints and the associated costs. The rule of thumb is that benefits should be greater than or at least equal to the costs in order to be beneficial for the companies.

latter refer to in-flight services, and include in-flight seat comfortability, and the quality of meals offered. Baker (2013) has found variations in such customer service, according to Low Cost Carriers and Legacy Carriers, noting for instance that customer service underperforms in the former carriers, yet is considered to be both comprehensive and reliable in the latter (Baker, 2013). The point to be taken from this observation is that whilst cost and resourcing levels are clearly part of the reason for such disparity, as mentioned earlier in the comments about large and small companies, a question can also be asked regarding the types of system appropriate for rendering good service quality and thus customer satisfaction.

Essentially, this question relates to how the knowledge acquired from customers is managed to the benefit of the organisation, and the researcher's previous Master's work in the area of knowledge management is pertinent in this respect. It is this interest in managing knowledge, and the underlying curiosity about how knowledge gained from customers can be systematised for service improvement, that motivates the study, which uses the airline industry as its case.

1.2 The Problem Statement

The argument is put forward by Zomerdijk and Voss, (2010), that a marked gap is seen between the service delivery as designed by the service provider, and the service delivery as perceived by the customer, and for companies wanting to achieve success in a competitive market, this sizeable gap must be diminished. One means of reducing this gap is the provision of a communication system that enables customers to give feedback to organisations on their experience. Indeed Ogbeide et al. (2017) have argued that for retention strategies to be successful and beat off the competition, they must incorporate an effective and efficient customer service system that (i) enables customers to complain, and that (ii) allows the company to manage such complaints and solve them.

However, although it is easy to say that the solution is in establishing an effective system that (ii) allows customers to complain, and (ii) solve and prevent the reoccurrence of customer complaints, but researchers and policy makers did not

reach consensus on one effective system that fits all types of companies. However, provided that problem solving is essential for identifying the sources of the customer complaints as well as working on finding solution for such identified problems, the majority of the proposed customer complaints handling systems use those problem solving techniques to design their endogenous systems. However, given the continuous growing of customer complaints which is evident in many industries (e.g. airline industry), the demand on an effective complaints handling system is still on going and increasing.

Airlines, unfortunately, seem to have an issue with problem-solving and there are recurrent problems. Customers continually complain about in-cabin services (meals and the comfort of seats) (Mason, 2001), about queues at check-in and departure (Kloppenborg and Gourdin, 1992: Liou *et al*., 200l; Martin *et al.* (2011), and in-flight meals (Chang *et al.,* 2002). Such constant complaining testifies to the fact that these problems are not being addressed properly as they do not appear to be being solved. Hence, this study is motivated by the research gap related to the significant lack of an effective customers' complaints handling system especially in the airline industry which is able to increase customers' satisfaction in a way that contributes to an improvement in companies' reported profit. As a result, this study aims to answer the following question:

- ***How can a customized A3 thinking approach reduce the severity of customers' complaints and promote for long-term sustainability?***

1.3 Rationale for the Research

The fact that there is a significant demand on an effective customer complaints handling system which is able to improve customer satisfaction motivates this study. In this direction, this study takes its importance from the significant impact that this complaints handling system can do to the service sector in general and to the airline industry in specific. As revealed later in the literature review, there are several different problem-solving approaches that help to address both the problems themselves, and their root causes. However, the challenge is to work-out the right recipe which can customize, edit and make due changes to the

existing problem solving techniques (e.g. the traditional A3 thinking approach) in order to come up with the perfect system that is able to deliver sustainable high level of customer satisfaction in the service industry.

Problems occur because of a lack of know-how in problem-solving to create knowledge; and this deficiency is made even worse when those responsible for problem-solving do not have an awareness of the knowledge that has been created by the identification of the problem. It is, therefore, crucial that the knowledge generated as a result of the identification of a problem, and of its solution, is effectively captured and managed, with the aim of promoting good practices and preventing the recurrence of problems.

This need provides a strong rationale for a study that uses the latest state-of–the-art problem-solving approach, which focuses on A3 Thinking.

1.4 Research Aim and Objectives

The aim of this research is, therefore, to explore the complaints handling process in Saudi Airlines with a view to improving it through the development of a customised A3 Thinking approach for problem-solving.

From this overarching aim, this study aims to deliver the following objectives:

- Critically evaluate the current problem solving approaches/methods to identify the drawbacks of the existing customer complaints handling systems.
- Identifying the main complaints in the airline industry in a more objective way using the touchpoints of the customer journey.
- Developing an effective customer complaints handling system which takes into consideration the drawbacks of the existing methods. This study proposes a customized A3 thinking approach for problem solving for achieving long-lasting and sustainable improvement in the level of customer satisfaction in Saudi airline industry.

1.5 Research Contribution

This study contributes to the existing literature and policy practice in many ways. From a theoretical contribution point of view, this study provides an empirical evidence on the effectiveness of problem solving methods in improving customer satisfaction level as a platform for achieving long-term business success and corporate sustainability. Furthermore, this study contributes to the growing literature which focuses on the airline industry especially in the Arab gulf counties in the sense of highlighting the special needs of the customers of the airline companies in the Arab gulf area. On the other hand, from a policy implication point of view, this study contributes in two different ways. The first is that this study provided an up-to-date map for the customer complaints in the airline industry at different touchpoints of the customer journey. This enables the policy makers of the airline industry to get more insight to the current needs of the customer of airline industry. As a result, decision makers in airline industry are more able to propose a new range of services that meet the expectations/needs of the airline customers. The second policy impact contribution is the adjusted A3 thinking approach which has been tested and validated by a case study and an expert opinion. This gives more credibility to the results and the insights extracted from this study.

1.6 Methodology

The study adapts a case study methodology to test and validate the proposed A3 thinking approach in problem solving. In Addition, this study exploits the power of questionnaire to collect a primary data on customer needs. The data triangulation which is resulted from the combination between quantitative and qualitative data enriches the findings and gives more credibility to the results of this study. The study focuses on the Saudi airline industry as one of the promising economies in the world according to the economic summit which took place at Davos in early (2019). The case study methodology perfectly fits the nature of the research question (Saunders et al., 2012). Given the nature of this study's main question, other methodologies (e.g. archival research or ethnography) are not able to

collect the data needed to answer the main question of how the A3 thinking approach can improve customers' satisfaction level and promote for long-term business success.

The literature underpinning the thesis, and providing the theoretical basis for the empirical fieldwork covers four main areas. It acts as the basis for the design of the structured questionnaire. These subject areas are: Customer Service, the Customer Journey, Problem Solving Approaches and Learning Cycles, and Complaints Handling. Each of these areas is explored within the context of Airline Operations.

The Customer Service literature is reviewed to identify the importance of providing good customer service, and to recognise the challenges which are presented to organisations in their efforts to be successful in this matter. The Customer Journey is considered from the perspective of mapping its flow, and identifying the importance of ensuring the journey provides a satisfactory experience. In respect of the Complaints Handling literature, this is reviewed to provide insight into the current practices, to identify the best airlines in the world in terms of customer service, to ascertain the challenges, and to report the typical customer complaints encountered. The fourth strand of the literature relating to the Problem Solving Approaches and Learning Cycles, is included to provide a conceptual base for the development of the customised A3 Thinking approach.

1.7 Thesis Outline

The rest of this thesis is structured as follows: Chapter two outlines the literature on customer services, customer journey, and complaints handling in the airline sector. Additionally, it summarises the various problem-solving approaches and learning cycles. The research gaps are also highlighted. Further, chapter three describes the methodology adopted to conduct the industrial field study. It considers the research paradigm, approach, and the instruments used. On the other hand, chapter four is the main empirical chapter where I present, discuss and analyse the findings of the case study and the questionnaire. Chapter five discusses the possibility of providing a customised A3 Thinking approach for the

complaints handling process, and proposes a customer journey for the airline sector. Chapter Six concerns itself with the validation of the research via industrial cases and expert judgements. Finally, Chapter Seven offers a discussion, conclusions, and gives a commentary on the study's limitations, and opportunities for future research work.

Chapter II
Literature review

2.1 Introduction

"*Sorry*" is not enough for making the dissatisfied customers happy, said Smith (2018) in his seminal paper published in the Business Today June 3rd 2018. Customers are the main driver of any business success (Smith, 2018). If a business wants to survive in a competitive business model like the one we are currently experiencing, they need to maintain their market share. As a result, customers should be kept happy with the service level that companies provide as high as possible. Otherwise, and provided that business competition is so high, other competitors might exploit the situation and will try to increase their market share at the expense of other companies who were unable to maintain their customers satisfaction at an acceptable level. From this view point, a natural question arises which is "how can companies maintain the level of customer satisfaction as high as possible"? This question is the centre of attention of researchers, regulators and businesses for decades given the high significance of the link between customer satisfaction and business sustainability (Susanti et al., 2019).

A considerable number of attempts have been put forward to improve the level of customer satisfaction. Customer complaints were used as a proxy for the level of customer satisfaction. There is a negative slope (association) between customer satisfaction and customer complaints; when the first goes up, the second goes down and vice versa. As a result, the key factor of success, as recommended by literature was to find a system which is able to reduce customers' complaints as a means of improving customer satisfaction. From this standing point, literature classifies customers into two groups based on their demands. The first group is the group of customers who concern the price of the service more than anything else. This group of customers are more likely to choose the cheapest airline company no matter what the level of service they receive. The research showed

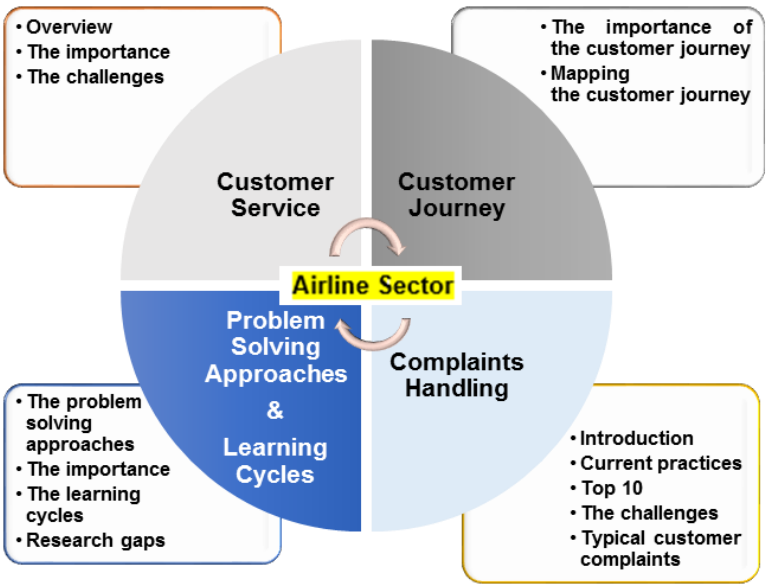
that the satisfaction level of this group of customers is less likely to be affected if the price is at their expectations. As a result, the intuitive assumption is that this group of customers will not complain about any other services if the price of the ticket meets their expectations.

On the other hand, the second group of customers tends to appreciate the quality of the service on anything else, not matter what the price which they pay for the target level of quality of the service. As a result, this group of customers are more likely to complain if there expectations are not met. A recent evidence showed that the first group (passengers of low-cost carriers) has lower expectations towards the service they receive in comparison to the second group of customers (Jocelyn, 2020). However, this does not cancel out the fact that the two groups of customers are still complaining, but in two different patterns. On the other hand, the severe competition experienced in the airline industry encourages the customers who belong to the first group to even increase the ceiling of their expectations which increases the magnitude of complaints coming from that group. This makes the mission for the airline companies even more difficult provided that they are now in a challenge of improving the quality of the service to meet the expectations of all types of passengers. Also, the difference in the ticket price between economy and business classes should be well justified by significant better quality for the business class ticket holders to sustain their satisfaction level.

One can assume that since the problem of customer satisfaction is acknowledged by airline companies and the significance of the link between customer satisfaction and business sustainability is evident, so the intuitive assumption is that airline companies had definitely solved the dilemma and found that magical system that can solve customer problems to make them happy with the level of service they are expecting. However, the market data showed that customer complaints are still there, and for some companies, the volume of complaints is even increasing (see IATA (2020) and Statista (2020) for more information).

From this standing point, the ongoing debate around customer satisfaction and its link with business sustainability is the main motivation behind this study. The rest of this chapter is structured as follows: section two discusses the concept of customer service especially in airline industry in order to understand the ideologies of airline customers and their needs. Section three outlines and criticise the approach of customer journey. The approach of customer journey has been utilised to identify, in a clearer and more precise way, the different touchpoints of a typical airline customer. By doing so, we can get a better understanding on the needs of a typical airline customer. Section four summarizes existing problem solving techniques to show the pros and cons of each method. By doing so, we get a good understanding of the flaws of the current techniques for the sake of developing a new problem solving system which is able to remove the roots of customer complaints. Finally, section five outlines the existing methods (systems) of handling customer complaints to have a good idea about the effectiveness of existing customers' complaints' handling systems. Such an evaluation of the effectiveness of existing systems will help in building a new system that takes into consideration the drawbacks and flaws in the existing systems (if any).

Figure 2-1 Structure of the literature review



Source: adapted by the author

2.2 Customer Services

2.2.1 Overview of Customer Services

In this section, I summarise the literature which discussed the concept of customer service as a means of improving the relationship between service company (in my study, airline industry) and customers. Customer services is a series of actions targeted to improve the customer satisfaction level, meaning that a product or service fulfils customer expectations (Khudhair et al., 2019; Turban *et al.*, 2002). Therefore, customer service is the service that customers expect to receive from vendors or suppliers. There could be a variety of customer services and these services depend on the specific products and services that can be provided by people (e.g., a sales and service representative) or by an automatic system.

However, there are features that describe good customer services. Examples of excellent customer services include: being friendly, being well-mannered, having a positive attitude, providing answers, not making excuses, being consistent, demonstrating good communication, being flexible, giving a quick response to requests, and being sincere (Martinez and Hobbi, 2008). A company's customer service helps to develop a relationship with customers, the main reason for which is the desire to obtain customer loyalty. Companies can achieve better outcomes if they are able to identify, acquire, satisfy and retain customers (Buttle, 2009).

2.2.2 The Importance of Customer Services in the Context of Airlines

It is argued that there is a significant gap between the service delivery designed by the service provider and the service delivery from the customer's perspective, and this gap should be narrowed if companies want to compete in the market (Zomerdijk and Voss, 2010). Customers' needs are different and, accordingly, it is not possible to establish a single set of needs that suits all types of customer. Liou *et al.* (2011) have argued that different industries create different services to address different customers' needs, which means that each industry has its unique operational settings that create different customer requirements. For example, family travellers are more concerned with in-flight services, like the meals provided and types of

entertainment available for children, whereas business travellers are more concerned with business facilities (e.g. Wi-Fi availability) during the journey and the accuracy of check-in times.

Lucini et al. (2020) and Mason (2001) argued that flight safety and in-cabin services, including meals and comfort of seats, are key services that customers in the airline industry care about. However, Chen and Chang (2005) have also suggested that airline services are not simply restricted to safety and the in-cabin experience, but can in fact be classified into two main groups: ground services and in-flight services. Ground services include information gathering, reservations and ticket purchases, airport check-in and post-flight service. In-flight services on the other hand include in-flight seat comfortability, and the quality of meals offered.

Similarly to Kloppenborg and Gourdin (1992), Liou *et al.* (2011), Martin *et al.* (2011) and Lucini et al. (2020) found that timeliness of check-in and departure, along with having adequate room for passengers' legs and knees (seat comfortability), are significant services for customers within the airline industry. And Chang *et al.* (2002) found that in-flight meals play a significant role in the repurchasing decision of airline customers because such meals affect customers' overall satisfaction. Curry and Gao (2012) established that airline companies providing better services enjoy solid competitive advantages that enable them to retain current customers and entice prospective customers, thanks to the strong loyalty that their customers have developed towards their services.

Clearly, customer service in the airline context is simply a number of airline activities that try to enhance the level of customer satisfaction. Pham and Simpson (2006) considered five dimensions for customer services in the airline sector, namely reliability, assurance, tangibles, empathy, and responsiveness. The dimensions are described in Table 2-1.

Table 2-1 Dimensions of services in airlines.

Dimension	Definition
Reliability	The airline's/airport ability to perform the promised service dependably and accurately.

Assurance	The knowledge and courtesy of airline\airport's employees and their ability to convey trust and confidence.
Tangibles	The appearance of the airline/airport's ground facilities, aircraft, personnel and communication materials.
Empathy	The caring, individualized attention the airline/airport provides its customers.
Responsiveness	The airport's/airline's willingness to help customers and provide prompt service

Source: Pham and Simpson (2006).

Customer service in airlines is crucial because of globalisation, high competition and market volatility. The target of airline customer service is to comprehend the profitability of customers and to keep the profitable ones (Liou, 2009). Customer service includes the gaining and exploitation of knowledge about customers to facilitate the airline with a more efficient service leading to more profit (Ahadmotlaghi and Pawar, 2012).

The airlines provide a number of services to customers, like ticket reservation and purchase, baggage service, on-board service, hotel service, taxi service and lost-baggage service (Lucini et al., 2020; Tsaur *et al.*, 2002). According to Cook and Billig (2017), a number of factors influence the service expectations of a customer and a number of criteria influence the decision to book a seat on any flight. It should be noted that price plays a vital role in the selection of an airline. A second important factor is the flight schedule which must be convenient and fit in with passengers' other travel/holiday business plans. Therefore, airlines try to match the best combination of price with other supporting services, such as online purchasing, online boarding pass or complementary beverage. Customer service also varies according to Low Cost Carriers and Legacy Carriers. For example, customer service underperforms in low cost carriers whereas it is comprehensive and reliable among Legacy Carriers (Baker, 2013).

2.2.3 Challenges Facing Airlines in Customer Services

The following challenges have been identified by the author as a means of providing a picture of the challenges that airline companies are facing in customer services (see Table 2-2).

1. Quality of Services and Customer Satisfaction

The determination of service quality is a reflection of the perceptions held by customers about the relative efficiency of the organisation and its services. These perceptions result from the overall impressions gained by customers. Hence, the delivery of high-quality service by an airline organisation is greatly dependent upon management having a total understanding of customers' expectations, which is the most crucial step in the attempt to define what service quality means to them. Meanwhile, passenger satisfaction can be defined as the opinion formed by the customer according to a specific service provided to him/her. Satisfaction does not replace loyalty as the customer is likely to be loyal even if she/he is not highly satisfied and vice versa (Khudhair et al., 2019; Archana and Subha, 2012; Gupta *et al*., 2013; Baker, 2013; Kalaiarasan *et al.*, 2015; Yunus *et al.*, 2013; Manani *et al.*, 2013).

2. Improvement of Safety to Recover Customer Trust in Airlines

The failure of services provided by an airline organisation can result in customer dissatisfaction, negative feeling, loss of trust and confidence, and a change in customer behaviour towards that airline. Service recovery is what is aimed for in such circumstances, and can be defined as the procedures taken by organisations in response to negative perceptions of customers deriving from a service failure(s). Such response includes emotional and real efforts to deal with the service failure in order to return satisfaction and restore relations with frustrated customers (Haliru and Mokhtar, 2015).

Table 2-2 Summary of the challenges facing customer services in airlines

AUTHORS / CHALLENGES	1) Quality of services & customer satisfaction	2) Improvement of safety to recover customer trust in airline	3) Lack of efficient service & effective complaint handling	4) Service environment & workers' satisfaction	5) Improvement of strategies & planning	6) Pricing and customer loyalty	7) Offering of service guarantee	8) Implementation of innovations and new ideas	9) Proper management of customer complaints	10) Adoption of technology
Archana and Subha (2012)	x									
Gupta, Arif and Williams (2013)	x							x		
Baker (2013)	x									
Metwally (2013)			x						x	
Chilembwe (2014)							x			
Kalaiarasan *et al.* (2015)	x			x						
Heracleous and Wirtz (2012)					x			x		
Maishanu and Kadiri (2012)				x						
Ochieng *et al.* (2013)					x	x		x		
Kamau and Kavale (2015)					x					x
Haliru and Mokhtar (2015)		x								
Amiruddin (2013)						x				
Yunus, Bojei and Rashid (2013)	x		x							
Manani *et al.* (2013)	x				x					
Total	6	1	2	2	4	2	1	3	1	1

Source: Adapted by the author

3. Lack of Efficient Service and Effective Complaints Handling

A complaint can be defined as the expression made by customers to reflect dissatisfaction about the product or service provided by an organisation. Effective customer complaints handling can be met by a high level of customers' loyalty towards organisations. According to the ability of the organisation to meet customers' needs and requirements, a decision is made by customers to continue with an organisation or not. Handling of customer complaints is considered as one of the key factors that determine customer satisfaction and formulation of the decision to stay with an organisation (Yunus *et al*., 2013; Metwally, 2013).

4. Service Environment and Workers' Satisfaction

Service environment and conditions as well as worker satisfaction were found to have an important role in building firms' competitive advantage and market share by retaining customer support. Several factors are likely to influence in-service quality and customer satisfaction in low-cost airline industries. Those factors include the environment within which service is provided, the way by which employees deal with customers, proficiency of services provided and customer behavioural intention (Maishanu and Kadiri, 2012; Kalaiarasan *et al.*, 2015).

5. Improvement of Quality Service Strategies and Planning

In their efforts to improve quality services provided to customers, international carriers implement many strategies, hoping to reserve their market positions and increase their market share. Ways of adding value to airline organisations are numerous but the most important ones include branding, building of good public relations and marketing skills, associating with green-field start-ups and understanding the options presented by traditional markets (Ochieng *et al.*, 2013; Heracleous and Wirtz, 2012; Kamau and Kavale, 2015; Manani *et al.*, 2013).

6. Pricing and Customer Loyalty

One of the important requirements for marketers of the airline business is the need to study the effects of airline service quality on customer loyalty in order to develop effective marketing strategies. It has been found that when competing in an uncontrolled airline market, lowering the price alone is insufficient to draw customer loyalty. Consumers' decision-making about airlines is mainly dependent upon the experiences they have encountered, and the perceptions they have about an airline's customer service (Ochieng *et al.*, 2013; Amiruddin, 2013).

7. Offering of Service Guarantee

The provision of service guarantees can enable airlines to meet and even modify customers' requirements. Thus, airlines' survival and competitiveness are greatly linked with the delivery of high service quality through repeated customer support and preferred transportation supplier status (Chilembwe, 2014).

8. Implementation of Innovations and New Ideas

Airline companies are looking to achieve outstanding performance through adopting a dual strategy. Such a strategy is represented as being distinctively different through service excellence and innovation, combined with coincident cost leadership in an airline's peer group; and it requires a focus on the customer experience to achieve service excellence and innovation, in addition to a continuous struggle for competence achievement as a goal (Gupta *et al.*, 2013; Heracleous and Wirtz, 2012; Ochieng *et al*., 2013).

9. Proper Management of Customer Complaints

Handling of customer complaints is considered as one of the key factors in the achievement of customer satisfaction, and the customer decision whether to stay with an organisation or not. However, the strength of the link between complaint handling and loyalty and profits cannot be recognised by decision-makers unless they evaluate the valuable return of

complaint handling and fully understand customer complaints behaviour (Metwally, 2013).

10. Adoption of Technology

In the era of the highly competitive environment in which international airline organisations are operating nowadays, the present day and the future of the airline industry are totally dependent upon the adoption and employment of technologies in order to provide top quality services to customers, and thus retain their loyalty (Kamau and Kavale, 2015).

In the next section, I use the customer journey as a platform to identify the touchpoints of a typical airline customer. This helps obtaining better "in depth" understanding of the needs of airline customers.

2.3 Customer Journey in the Airline Sector

2.3.1 The Importance of the Customer Journey

Despite the lack of the application of a well-established customer journey within the airline sector, this journey is gradually and increasingly gaining recognition in terms of its importance. Being able to focus on the visualisation of potential touchpoints with customers during delivery of the overall service is a crucial objective. According to Holmlid and Evenson (2008), the customer journey is about understanding a customer's experience during the service from beginning to end. Nenonen *et al.* (2008) referred to the customer journey as a cycle of interaction with the customer and a process-oriented approach that can be visualised in order to ensure that customer satisfaction is achieved and, therefore, customer retention can be increased. Richardson (2010) provided a similar definition of customer journey, stating it to describe the steps which customers go through when they are engaged with a company regarding a product, service, an online experience or any combinations of these. Another definition of the customer journey according to Meroni and Sangiorgi (2011) is an "engaging story" regarding a repeated interaction between customers and the service/product provider. The point is made by Polaine *et al.* (2013) that it is crucial for effective customer service to establish a process and model in which

customers can be involved in the planning of the company. Hence, it is important to identify the different touchpoints of the customer journey to help companies plan ahead to meet customers' expectations, and thereby retain customer loyalty in the long run. It is also of interest to note that in some reports, the customer journey mapping was viewed as a type of visualisation (Kimbell, 2011), while other scholars, such as Rasila *et al.* (2009), have referred to it as a flowchart of the customer visit, or an experience sheet. Thus, companies should maintain a good level of communication at each stage of the customer journey to make sure sufficient data has been obtained and those customers' expectations regarding each touchpoint are met. Essentially, they want to align their "needs and expectations with the company brand" (Dent, 2013: p.56). There can be several touchpoints where a customer interacts with the organisation (Rawson *et al.*, 2013).

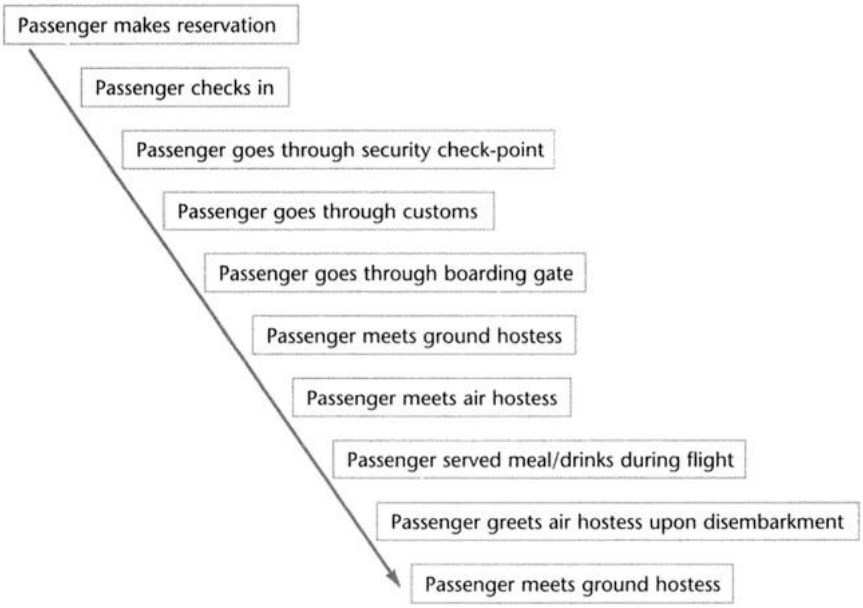
2.3.2 Mapping the Customer Journey

Companies should maintain a good level of communication at each stage to make sure that customers' expectations regarding each touchpoint are met as noted by Dent (2013) above. Figure 2.2 provided by Rawson *et al.* (2013), identifies the various points of customer/organisation interaction. The following simple example of the customer journey illustrates five touchpoints: the customer is engaged by an advertisement, buying of the product or services, using the product or services, sharing the experience of use, and finishing the journey (Richardson, 2010). Bennett and Strydom (2001) identified a number of services that customers may encounter during their journey, as shown in Figure 3.3. The first service encounter is the point when a passenger makes the reservation, but subsequently, from passenger check-in to departing from the airline, there are several occasions when airlines can provide their services to customers, providing opportunities to influence the next reservation by the customer.

Figure 2-2 Airline customer journey

Source: Rawson et al. (2013)

Figure 2-3: Airline company service encounters



Source: Bennett and Strydom (2001)

2.4 Generic Problem-Solving Approaches

2.4.1 Problem-solving Approach

In the establishment of a problem-solving approach for the airline industry, the target is to examine various existing problem-solving approaches regarding their capability

to effectively find answers to problems and create knowledge. Saad *et al.* (2013) have argued that problem-solving is a mental process, which incorporates several stages (steps) starting with the problem identification and ending with the application of the best action to eliminate the root of the problem. The success of the problem-solving approach can be measured by several proxies; for example, the frequency of customer complaints (Brown *et al.*, 2008) and/or the non-appearance of the problem in the future (Alshahran et al., 2017; Mengis and Nicolini, 2010).

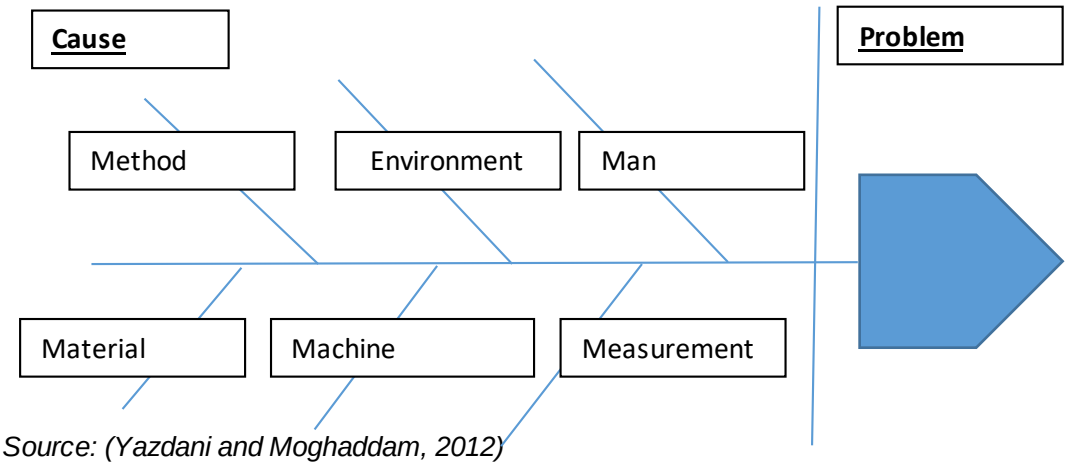
There are many problem-solving approaches that could be used to address customer complaints in the airline sector. These approaches include the root cause analysis (RCA), which is a celebrated approach, capable of diagnosing the real roots of a given problem to ensure that the company is addressing the problem and not just its symptoms (Connelly, 2012). However, many researchers have proposed their own approaches to problem- solving, and a number of these are now illustrated.

2.4.1.1 The 5 Whys

The 5 Whys analysis was originally introduced by the Toyota production system (TPS). It is argued that Ohno (1988), the founder of the TPS, believed the 5 Whys analysis to be a very effective tool to identify the root cause of problems (Alukal, 2007). Saad *et al.* (2013) have suggested that the 5 Whys technique can be easily and effectively integrated with different problem-solving approaches (as for example, the fishbone diagram (see figure 2.5 below[3])) to achieve better outcomes. Although the literature review reveals the wide use of the 5 Whys approach in order to identify problems, no knowledge creation activity is found within it. The reason is that the 5 Whys (asking 'why' five times) is mainly used to identify the causes of a problem, leaving the solutions unexplained in detail and unverified.

[3] Fishbone diagram is one of the celebrated means of identifying problem causes. The fishbone diagram is explained in figure 5-2. The advantage that the fishbone diagram has over other peer methods is that it breaks down the causes of a given problem into smaller parts, so it helps a company management to understand the causes easily and fully.

Figure 2-3 Fishbone diagram of problem solving



Source: (Yazdani and Moghaddam, 2012)

2.4.1.2 Root Cause Analysis

Root cause analysis (RCA) is a management tool that is mainly used to identify and analyse the origins of a given problem (Saad *et al.*, 2013). Additionally, the RCA can deal with problems with multiple root causes and is able to identify the multiple root causes of a problem if they exist (Table 3.6) (Connelly, 2012).

However, the success in knowledge creation is contingent on the documentation and the presentation of the data collected. In other words, some problems might have interrelated causes and roots, and if there is no good documentation and presentation of the data collected, it becomes difficult to understand the causes and related effects of such problems (Kim *et al.*, 2009).

Table 2-3 RCA steps sequence

Steps	Key Task
1. Define the problem	• What do you see happening? • What are the specific symptoms?
2. Collect the data	• What proof do you have that the problem exists? • How long has the problem existed? • What is the impact of the problem?
3. Identify Possible Causal Factors	• What sequence of events leads to the problem? • What conditions allow the problem to occur? What other problems surround the occurrence of the central problem?
4. Identify the root cause(s)	• Why does the causal factor exist? • What is the real reason the problem occurred?
5. Recommend and Implement Solutions	• What can you do to prevent the problem from happening again? • How will the solution be implemented? • Who will be responsible for it? • What are the risks of implementing the solution?

Source: MindTools (2010)

2.4.1.3 Problem Analysis Flowchart (PAF)

The Problem Analysis Flowchart is one of the well-known problem-solving approaches, especially in manufacturing companies, thanks to its ease of use. It is argued that even inexperienced employees are able to understand how to solve a problem listed in the template generated by this method, given the well-structured ten steps on which this method is based (Saad *et al.*, 2013). Table 2.7 shows the 10 steps of the PAF in detail to better understand this method.

However, on checking these 10 steps, it can be seen that the flowchart is not as systemised as other problem-solving approaches, being based more on the trial and error approach in almost all its stages, starting from the identification of the problem to its correction.

Table 2-4 Detailed steps in the PAF

Step	Details
Problem Statement	Considering two different perspectives which are the object and defect. The object will be a process, machine, part and system. The problem statement will ask what, where, when, scope and trend.
Symptoms	Symptoms are faults that need to be observed. This step includes faults, signs of problems.
Changes	The change might have occurred prior to the onset of the problem.
Relevant data	Any relevant information or data that can help to resolve the problem.
Defect free configurations	Helps to eliminate potential problem causes.
Distinction	Always compare the process or object with the problem to the process or object without the problem, not vice versa.
Causal chains	Causal chains are the logical steps from symptoms to the cause of the problem. Each step is the cause of the next step and the effect of the previous one.
Test, corrections, results and conclusion	All these activities will eliminate potential root causes.
Most probable cause	Review all the analysis and discuss the results by listing the underlying causes of the problem.
Short term and long term corrections and controls	The short term action – requires little effort and the problem is fixed on the spot. The long term action – requires more effort and the problem is continuously improved.

Source: Sproull (2001)

2.4.1.4 The 8 Disciplines

Bhote and Bhote (2000, p. 25) argued that the 8 disciplines (8D) problem-solving tool was originally developed by Ford (the American car manufacturer) in the early 1990s to overcome any operational inefficiencies associated with production and customer satisfaction. The 8D technique contains 8 steps (see Table 2.8).

However, Bhote and Bhote (2000) criticised this approach as being ineffective and bringing brand new problems since it does not provide a solid solution to the original problem. In other words, it does not tell the involved team how to solve

the problem because it is highly reliant on conjecture and guessing techniques that have been used for a long time and found to be ineffective.

Table 2-5 The 8 Disciplines problem-solving approach (Arnott, 2004)

Discipline	Description
D1: forming a team	Choose the team members that will be responsible for solving the problem in a systematic way.
D2: identifying the problem	Clearly identify the problem raised by the customers. The team should be aware of the whole situation and the problem background.
D3: problem containment	Provide an immediate solution to the customers until the team finds a permanent corrective action.
D4: root cause analysis	Identify the root causes of the problem of interest.
D5: generating solutions for identified roots of the problem	Analyse the solution proposed to eradicate the root causes and test the effectiveness of the proposed solution in solving the problem.
D6: implementing permanent corrective actions	Undertake the corrective actions proposed and control the potential side effect of the solution.
D7: try preventing reoccurrence	Modify the operations in light of the new proposed solutions to ensure that the problem will not happen again in the future.
D8: congratulating the team	Acknowledge the team and share the knowledge with all individuals inside the company.

2.4.1.5 A3 Report

The A3 report was introduced in the 1960s by the Toyota Motor Corporation to present any potential and probable solutions to an identified problem. It develops a well-defined structure to handle problems, and according to Sobek and Smalley (2008), the A3 report is a mechanism to foster deep learning, engaging collaboration, and thoroughness. A3 paper is applied successfully as a communication tool with evidence and logical structures (Kimsey, 2010). Normally, the A3 report is considered a good visualisation method (Lindlöf *et al.*, 2013) that is found in four minor variations: proposal, problem-solving, status reporting, and competitive analysis (Liker and Morgan, 2006). This systematic A3 report approach not only targets the solution and communication of problems but also presents the process more transparently and comprehensibly leading to 'full on' thinking and learning (Lorenzi and Ferreira, 2018; Jimmerson *et al.*, 2005; Shook, 2009; Sobek and Smalley, 2008). The conventional A3 report is supportive in its inclusion of more detailed knowledge of the problem and the opportunity that brings for possible solutions. In Toyota, the conventional A3 report helped in fostering knowledge development (Sobek and Smalley, 2008).

The conventional A3 report has three major effects: (1) the format needs conciseness and focus; (2) pictures and other visuals make the A3 report easy to learn and it, in turn, supports the realisation of maximum information, and (3) all of the important information is put at the front (Saad *et al.*, 2013). A conventional A3 template for A3 sized paper is shown in Figure 2.6. It consists of seven components which, beginning with background and proceeding to current condition, future goal, root cause analysis, countermeasures, implementation plan, and follow-up action and, the Plan-Do-Check-Act (PDCA) learning cycle (LC), are put on A3 paper (Kimsey, 2010).

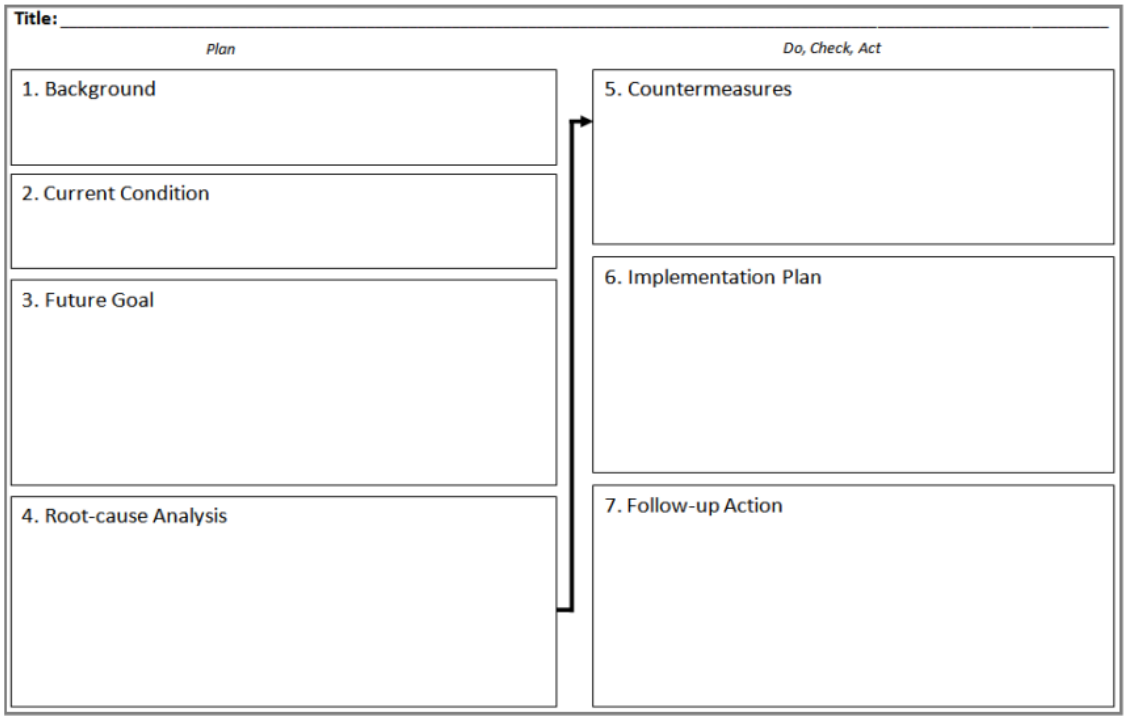


Figure 2-4 Traditional A3 template (Sobek and Smalley, 2008)

The typical approaches and their main phases are shown in Table 2.9. This analysis is done by Saad *et al.* (2013) considering the main phases found on their standard templates. The outcomes of the analysis facilitate the recognition of a number of vital phases and their tools, e.g. including text, diagram, table, graph, sketch, and bullet. Therefore, A3 Thinking is found to be useful for handling problems, and a blend of the problem-solving phases would be a good option for the customised A3 Thinking approach.

Table 2-6 Inter-relation analysis phase-to-phase (Saad *et al.*, 2013)

Key Phases	Problem Solving Approaches				
	8 Disciplines (8D) *Standard*	Traditional A3 Report	5 Whys	Root Cause Analysis (RCA)	Problem Analysis Flowchart (PAF)
	1. Form the team pitfalls				
		1. Background			
	2. Clarify the problem	2. Current condition		1. Define the problem 2. Collect the data 3. Identify possible causal factors	1. Problem statement
		3. Future goal			
	3. Contain the problem pitfalls				
	4. Identify the root cause	4. Root cause analysis	Why 1 Why 2 Why 3 Why 4 Why 5	4. Identify the root cause (s)	2. Symptoms 3. Changes 4. Relevant data 5. Defect-free configurations 6. Distinction 7. Causal chains
	5. Generate solutions	5. Countermeasures			8. Test, corrections, results and conclusion
	6. Implement permanent solutions	6. Implementation plan		5. Recommend and implement solutions	
	7. Prevent recurrence				9. Most probable cause
	8. Congratulate the team (Validation)	7. Follow-up action			10. Short term and long term corrections and controls

Legend:

Text	Diagram	Graph	Sketch
Bullet	Combination	Table	

2.4.2 Learning Cycles

By definition, the learning cycle is the continuous learning process that strengthens the knowledge base of individuals in a way that improves the productivity and efficiency of operations within an organisation (McKee, 1992). Accordingly, the learning cycle involves creating and sharing knowledge among individuals within an organisation, so that these individuals improve their skills

and abilities in addressing situations where there is some operational inefficiency. Oosterwal (2010) argued that the effectiveness of the learning cycle is contingent on the ability of organisations to build knowledge and to re-use this knowledge to address similar problems in the future.

In this part of the research, it is important to outline the different methods that can be applied to contribute to the learning cycle, focusing here on the Plan-Do-Check-Act (PDCA) and Look-Ask-Model-Discuss-Act (LAMDA) models. The researcher limits the methods used in the learning cycle to these two celebrated methods because they were found to be effective and value creators. LAMDA and PDCA are based on learning by failure to adopt the problem-solving approaches to find a solution, which contributes to building a knowledge base for individuals to make sure that they are continuously learning, even by contributing in problem-solving, and/or having access to the previous experience of solved problems so they can address those problems in the future if they recur.

2.4.2.1 Plan-Do-Check-Act (PDCA) Learning Cycle

In principle, the plan-do-check-act (PDCA) approach is a process which is applied for the purpose of quality improvement (Pietrzak and Paliszkiewicz, 2015) but the decisions that are made in light of the outcomes of the PDCA contribute to the learning abilities of an organisation (Sobek and Smalley, 2008). Additionally, the flexibility of the PDCA, brings the potential for it to be used as a framework for any management process (e.g. Hoshin Karni - a Japanese method of strategic management), which increases the importance of the PDCA in any organisation. The origins of the PDCA go back to the 17th century, more precisely when Francis Bacon introduced the deductive approach in understanding the nature and extracting the laws governing this nature (Maruta, 2012). According to the deductive approach, researchers collect data about the phenomenon being studied and use this data to generalise the laws governing the phenomenon. This methodology is exactly the same as the plan-do-check-act process (see Figure 2.7).

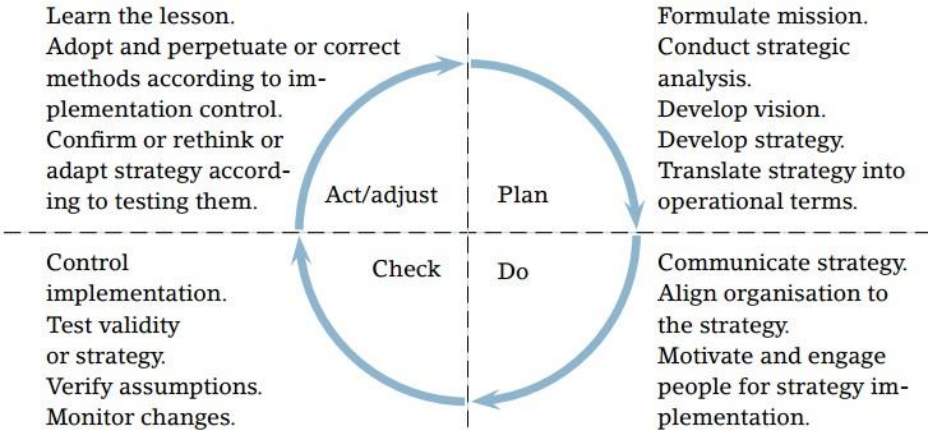


Figure 2-5 The PDCA learning cycle (Pietrzak and Paliszkiewicz, 2015)

One of the most common mistakes in using the PDCA model is to skip the check and act/adjust stages. It is known that because the last two stages are quite expensive and time-consuming, and some companies prefer to omit them in an attempt to save resources. However, this action might cost the company more than would be spent in performing these last two stages, especially when the outcomes of the action plan undertaken are not desirable (All About Lean, 2016). Furthermore, due to the lack of data prior to setting an action plan, companies might develop only one plan to achieve the predetermined objectives. This is a high risk for a company to take because, simply, if this action plan fails to deliver the desired outcomes, the whole process fails. Accordingly, there was a significant demand for a new learning model that enables these difficulties to be overcome, and consequently LAMDA emerged as the answer.

2.4.3.2 Look-Ask-Model-Discuss-Act (LAMDA) Learning Cycle

Due to the shortcomings of the PDCA learning cycle occasioned because companies are not homogeneous in terms of their operational problems and future objectives, the LAMDA model was developed (Radeka, 2012; Saad *et al.*, 2013; Tortorella *et al.*, 2015). Specifically, the problems in the PDCS were discovered when companies (e.g. Allen's American Clients) that applied the model did not obtain the same satisfactory results obtained by other companies (e.g. Toyota) (Saad *et al.*, 2013, p. 61). The LAMDA Learning Cycle embodies a five stage learning model used mainly for creating knowledge (Ward *et al.*, 2014).

One of its advantages over PDCA is that it is more able to visualise the problem in a way that enables individuals to more easily understand the problem and therefore, makes for the possibility of better solutions. Those solutions are expected to contribute to the tacit knowledge throughout the discussion model, which encourages the dissemination of the acquired knowledge within an organisation (Tortorella *et al.*, 2015).

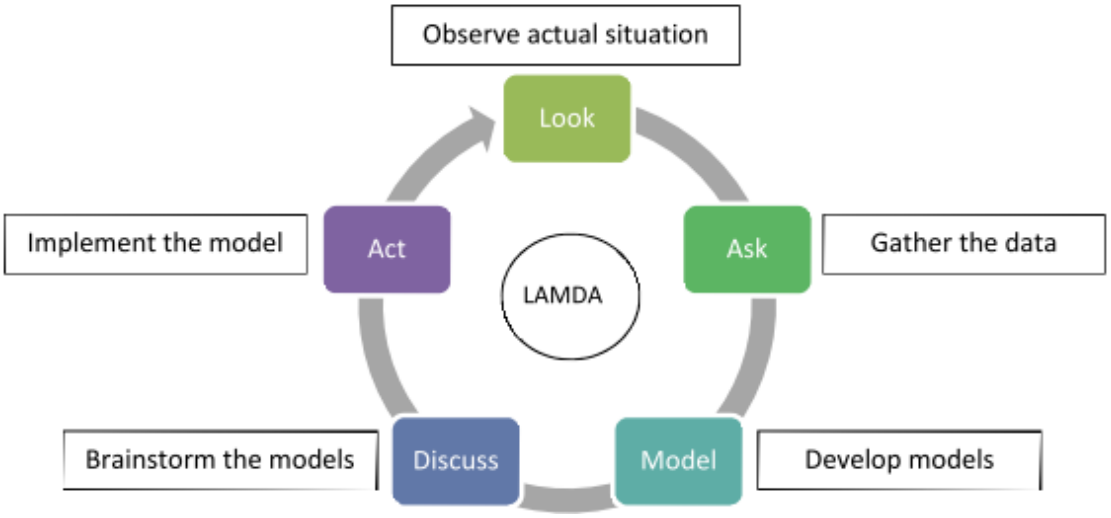
According to Ward *et al.* (2014) and Tortorella *et al.* (2015, p. 233), the LAMDA model is developed from the lean product development tools that involve five combined sequential stages including: recognising the problem, identifying the root cause of the problem, consensus building, self-reflection, and continuous improvement.

Saad *et al.* (2013) and Tortorella *et al.* (2015) summarise the five sequential stages of the LAMDA learning model, and these appear in Table 2.10 and Figure 2.8.

Table 2-7 The LAMDA model of learning (Saad *et al.*, 2013; Tortorella *et al.*, 2015)

Stage	Description
Look	To detect the problem, this stage involves collecting data by talking to people (tacit knowledge) and/or checking documents (explicit knowledge) for the purpose of observing and fully identifying the problem (Saad *et al.*, 2013).
Ask	Root cause analysis is undertaken in this stage; the 5-Whys approach is applied to identify the root cause. Moreover, other questions like who, where, when, what and how will be raised as well for the purpose of collecting as much relevant data as possible to fully understand the problem and its root causes.
Model	The problem-solver tends to visualise the data collected from the first two stages to articulate the problem in a way that helps him/her to propose a model which is able to solve the problem (Tortorella *et al.*, 2015). Graphs, diagrams, drawings and charts are some examples used to visualise the problem (Saad *et al.*, 2013).
Discuss	In this stage, the problem-solver usually tends to discuss the proposed solutions with the people involved. It is an important stage because the problem-solver is able to evaluate the quality of the proposed solutions by brainstorming the ideas with three kinds of people: (i) the people who will be affected by the decision, (ii) the people involved in the data collection method, and (iii) the decision-maker (Saad *et al.*, 2013; Tortorella *et al.*, 2015).
Act	To put the final decision (action plan) into practice.

Figure 2-6 The Look-Ask-Model-Discuss-Act model of learning

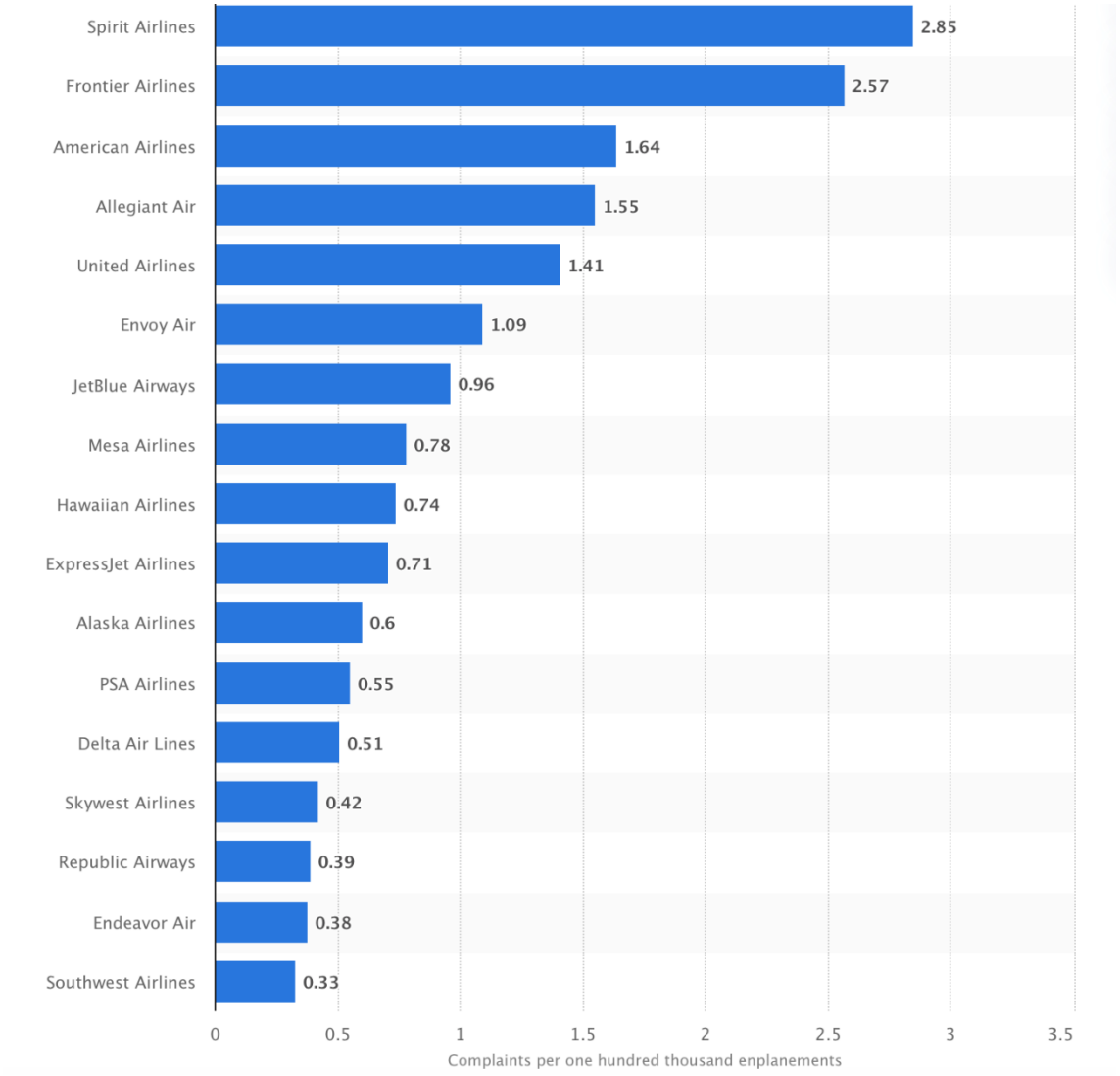


Source: Radeka (2012)

2.5 Research Gap (analysis, discussion and potential contribution)

From a customer satisfaction standing point, literature provided evidence on the significance of the link between maintaining customer satisfaction and business growth and sustainability (see Alshahran et al., 2017; Khudhair et al., 2019, Lucini et al., 2020). In airline industry, given the continuous growth of the magnitude of customer complaints (see figure 2.9), one can conclude that the current methods (systems) of problem solving are not effective to the extent to which it can eliminate, or at least, mitigate the magnitude of customer complaints. As shown in figure 2.9, the magnitude of complaints have been almost tripled for some companies (Spirit airlines reported 2.85X more complaints in 2019 compared to 2018). Such statistics show the disability of the current problem solving in keeping the airline customers happy. As a result, there is a natural need for a more effective problem solving system that is able to (i) identify the problems and its "real" root causes, (ii) provide a 'valid' and 'effective' solution for the identified problem(s), and (iii) sharing the knowledge which has been created from steps one & two so that the company assure that problems which were identified, analysed and solved will not occur in the future.

Figure 2.9: The growth of customer complaints in the US airline companies in 2019.



Source: Statista (2020)

The criticism of the existing problem solving methods (e.g. 5 whys and fishbone diagram) showed that such existing methods are not effective in identifying the needs of airline customers which are evolutionary and changing by nature (Lucini, 2020). In other words, the problem solving system might be successful in identifying the roots of a problem that caused the dissatisfaction of an airline customer, but given the evolutionary nature of the needs of airline customer in the current era, the knowledge which has been created and shared from this

experience will not be effective in preventing the re-occurrence of the problem in the future. Hence, there is a 'real' need for a new problem solving system which is able to (i) identify the problems of airline customer more precisely by 'continuously' capturing the new identified needs. My approach relies on the concept of customer journey to provide detailed information about the needs of airline customer at all available touchpoints. (II) sharing the knowledge that had been created with all company departments, so we reduce the probability of problem reoccurrence in the future. The new approach is discussed in details in the methodology and the empirical chapters (chapters three and four respectively).

2.6 Complaints Handling in the Airline Sector

2.6.1 Overview of Complaints Handling

Customer satisfaction is an essential objective in which corporations, nowadays, are increasingly placing their efforts as they strive to achieve it (Mahrous and Hassan, 2016). However, this achievement can only be accomplished by providing exceptional services and listening to customers through a formal complaints handling process. In fact, the highly competitive market in different industries had made customer satisfaction alone, in many cases, not enough to ensure customer retention. Hence, according to Manhas and Tukamushaba (2015), corporations aim to exceed customer satisfaction in order to achieve customer delight through providing exceptional services, and listening to their customers' complaints by involving them in the process and considering their feedback. Based on this, many researchers have highlighted the importance of complaints regarding the practices of customer satisfaction within companies (Ralston *et al.*, 2015; Basfirinci and Mitra, 2015). The airline industry is no exception; in fact, according to Delbari *et al.* (2016), the competition increases the challenges for customer satisfaction. Hence, airlines have turned their focus on customer experience and satisfaction through ensuring effective customer service, as part of which customer service complaint handling has become a supremely important element.

The following paragraphs discuss the current practices of complaints handling in the airline sector, the top ten airline companies, the challenges that airline companies face when applying the complaint handling process, and the typical customer complaints.

2.6.2 Current Practices of Complaints Handling in the Airline Sector

Identifying and examining the specific practices and processes that airline companies currently apply and use for handling customer complaints is not an easy task. Airlines consider this type of information to be private as it represents their unique internal strategies, which it is not in their interest to make available to their competitors who may use these practices to their advantage. In addition, the way in which airline companies handle customer complaints is not publishable because it represents intellectual capital for those companies and sharing such information will affect their competitive advantage (Chen, 2004). However, the researcher extrapolated what airline companies are doing to handle customers' complaints through articles, customers' reviews and institutional reports.

According to Ogbeide *et al.* (2017), a successful and competitive customer retention strategy requires an effective and efficient customer service system that enables customers to complain, and the company to manage such complaints and solve them. Customer complaints are an attempt by the customer to express their dissatisfaction about a service and/or product they have received. Therefore, companies must take the opportunity to encourage their customers to express their dissatisfaction and complain about the poor experience they have received from a service. This does not only provide indications about the performance of the service but it also forms an important tool that the company can use to show customers they are willing to improve and address their customer complaints in an effective manner. Complaint handling is very important for any organisation; it has an impact on a company's image and reputation as well as customer loyalty, as shown in Figure 2.4 (Metwally, 2013).

Figure 2.10 Importance of complaints handling

Source: Metwally (2013)

The absence of sympathetic listening to customers and the resulting poor handling of their complaints have led many customers to become angry with many airlines, and develop a bad impression of them. Indeed, the sluggish processing and delay in the handling of customers' complaints is likely to result in a complete breakdown of the level of trust between the passengers and even their favourite carrier. On the other hand, speedy resolution and handling of complaints can increase the level of customer loyalty according to Iqbal (2015).

However, although the mechanisms and the processes of complaints handling may vary across the airline industry, the most important objective that companies aim to achieve is to manage customer satisfaction through reducing the risk of service failure that can lead to undesirable results. Customer services could collect relevant information regarding any service issues and act upon that information to prevent complaints happening in the future (Mellat-Parast *et al.*, 2015). Thus, due to the low proportion of customers who complain (cost to benefit trade-off) and because of the importance of information, airlines need to motivate their customers to complain and ensure that there are effective and efficient mechanisms in place to swiftly deal with the complaints and assure customers that their complaints will be recognised.

An example that can be given is the strategy British Airways uses in handling its customers' complaints, as outlined by Ganapathy (2012): apologising to customers, quickly responding to their complaints and assuring them that the problem will be dealt with in a very efficient manner. This process also assures

that the complaint has been resolved and ensures direct contact with the customer informing him/her of the solution to the complaint. Another element in ensuring an efficient response to consumer complaints is the use of computerised technology, such as the system adopted by British Airways, CARESS, which has reduced paperwork by scanning and automatically entering the customer information into the customer complaints database (Ganapathy, 2012).

As another example, Metwally (2013, p. 305) examined how Egypt Air handles customers' complaints and how the airline's approach ultimately influences customer satisfaction. She argued that Egypt Air handles customers' complaints through seven main steps:

(i) Receiving complaints,
(ii) Acknowledging complaints,
(iii) Assessing complaints,
(iv) Investigating complaints,
(v) Responding to complaints,
(vi) Following up, and,
(vii) Considering system improvement.

Important evidence of successful technology integration in customer complaints is the use of an online social network, which forms an effective platform for customers to voice their opinions, complaints, feedback, and enquiries. On the issue of social networks, KLM is an interesting example of an airline that positively exploits these, having almost 1,500,000 followers on Facebook. The applications developed by KLM are now used as an additional tool to increase the level of loyalty and brand awareness among customers. In particular, those applications, which are used for limited promotions, are considered as beneficial for alerting travellers to what is on offer (Amstelveen, 2019).

On the other hand, it seems that British Airways are no better off in terms of handling customers' complaints. According to SkyTrax (2017), one of the most recent complaints (30 November, 2017) was issued by a customer who missed a significant meeting in London as the British Airways flight from Berlin to London

was delayed for more than four hours. Drawing on the complaint, it would seem that there are ineffective communication channels between the company management and customers as customers have to wait for a long time to receive a response from the company. In addition, the British company failed to offer reasonable compensation to the complaining customer; this resulted in the customer's dissatisfaction about the service quality, and his decision not to use British Airways in the future, and to tell his friends about his bad experience. This reinforces the argument that failure to respond to customers' complaints could lead to severe consequences (e.g. losing customer loyalty and acquiring a detrimental company reputation) (Hussain *et al.*, 2015).

Hansen *et al.* (2010) argued that the success of complaints management is dependent on many factors, including; companies' quick response to customers' complaints, reliability, consistency of response, ease of access to the complaints process, ensuring that complaints are informed and, finally, having skilled and well-trained employees who are able to understand the complaints process. One way or another, an effective complaints management process could be a significant source of feedback. This feedback might be useful for companies to achieve customer satisfaction which, in turn, leads to customer loyalty and finally realisation of sustainable profit (Powers and Bendall-Lyon, 2002).

Polaczyk (2016) has argued that the critical thinking approach helps to solve such problems in the airline context. Three rules can help develop critical thinking, these being to:

- Pay attention to the right details.
- Question the source of information.
- Think about who benefits from the statement.

Specifically, constructive controversy can be a good choice for critical thinking. The approach has five main assumptions:

- The decision is made on personal experiences.
- There is an effort to force others to agree with one's opinion.
- There is doubt about others' beliefs.

- There is a search for additional information to strengthen own judgment.
- This search is followed by better decision-making.

Lucini et al. (2020) argue that airline companies use different tools in order to gain a fit with their requirements. For example, they use software systems that improve the scheduling and knowledge base. As Liebowitz (2001) mentioned, TWA, Delta and Air Canada use Montreal-based Ad Opt Technologies' Preferential Bidding System for scheduling flight crews. Each company chooses its preferred options and the software price varies accordingly. SARANI is used by Air India for its scheduling; and American Airlines previously owned the Sabre system that helped it to develop planning, scheduling and other airline-related activities (Liebowitz, 2001). Tsang (1995) compared several flight scheduling systems used in different airlines, finding one of the important conditions of scheduling techniques to be the expert system. Under the expert system, it is considered that domain-specific knowledge is a key contributor to power, and that expert knowledge elicitation is highly important. Another example shows that airlines have implemented dynamic modelling and operations research techniques to predict demand depending on historical travel patterns and present booking trends (Rao, 2012).

However, researchers might be missing an important dimension in the process of complaints handling, which is the role of knowledge in preventing the recurrence of problems in the future. Knowledge creating, capturing and sharing will be useful in the dissemination of information in this regard, since employees can use such knowledge anywhere and anytime to ensure that customers will not be confronted by the same problem in the future. From this perspective, a complaints handling process could be enhanced in the situation where an A3 Thinking approach for problem-solving has been developed. One of the main advantages of developing this approach is that it captures and provides useful knowledge that it then documents in a simple manner, thereby preventing recurrent problems and supporting-decision making.

2.6.3 The Top Ten Airline Companies

It is worth checking the top ten airline companies to see how they deliver the highest quality service that places them at the top of the list of the airline industry. According to The World Airline Awards (2016) website, the world top ten airline companies are:

1. Emirates
2. Qatar Airways
3. Singapore Airlines
4. Cathay Pacific Airways (Hong Kong)
5. All Nippon Airways (ANA) (Japan)
6. Etihad Airways
7. Turkish Airlines
8. Eva Air (Taiwanese international airline)
9. Qantas Airways (Australia)
10. Lufthansa (German airline)

This particular ranking emerged from travellers' voting in 2016. At first glance, one might assume Emirates to be better than Lufthansa because the former has more assets than the latter and, accordingly, the former is more able to meet customers' needs. However, by checking the companies' 2015-2016 financial statements, it is found that the value of the total assets of Lufthansa is nearly $40bn ($36.3bn) while Emirates are reported as only $32bn. In other words, customers' satisfaction is deliverable through managing customers' needs, and it is not necessarily that wealthy companies are more able to deliver better customer satisfaction.

It was not possible to find information about the approaches these companies adopt to deliver high levels of customer satisfaction. However, the researcher has made a comparison between Emirates as the world's best airline carrier, Lufthansa the 10th, Qatar Airways the 2nd and Turkish Airlines the 7th (see Table 2-3).

Table 2-8 Comparison between four different airline companies

Index	Lufthansa	Emirates	Turkish Airlines	Qatar Airways
Customer ratings (third part website)	3.1 / 5	3.9 / 5	3.1 / 5	3.4 / 5
Number of destinations covered	214+	140+	280+	152+
Number of hubs (transfer points)	5	1	1	1
Checked baggage allowance (free)	1	2	1	2
On time flights	78.83%	73.91%	67.35%	82.76%
Delayed flights	21.2%	26.1%	32.65%	17.24%
Frequent flyer programme	Yes	Yes	Yes	Yes
Airline partners	36	12	30	24
Seat space (economy) (legroom and seat width) (inches)	31.04/17.47 inches	32.08/17.42 inches	30.36/17.03 inches	31.69/17.88 Inches

Availability of special items at check-in	No	Yes	Yes	Yes
In-flight meal variety	Standard meal	Standard + Hindu + Vegan	Standard + Vegan	Standard + Low lactose + Hindu + Vegan
Wi-Fi options	Free	Rates vary	Free	Rates vary

According to Chen and Chang (2005), customers' needs are classified into ground and in-flight needs; and customer reviews place check-in time, number of pieces of free baggage allowed, and availability of special items at check-in as the most important 'ground' services. Conversely, seat space, meal variety and Wi-Fi availability are the most significant in terms of in-flight services. It is possible to distinguish some differences among the four carriers but there is no one dominant carrier. For example, Emirates' aircraft have the widest legroom among the four carriers, and it has been argued that seat comfort is something material for passengers, especially for those who travel over longer distances. However, Emirates does not frequently upgrade its planes when compared to Qatar Airways which replaces the fleet 55% more often than the former. Nonethtless, when compared with Lufthansa, Emirates is 82% more likely to upgrade its fleet. In addition, on-time flight is very important in terms of evaluating airline services (Stojkovic *et al.*, 2002), Qatar Airways was found to have the best rate (almost 83%) compared to the others. Since there is no great difference among these four airline carriers, it is argued that these airline companies are customer-driven organisations as they are almost copying one another but each is doing so from its own perspective. For instance, the Emirati national airline has the widest seating and provides more customised meals but has less flying destinations, and only one hub, located in Dubai. This means that the company responded to its customers' reviews and complaints in a way that delivers the highest level of satisfaction to customers. Lufthansa, which has more hubs, more destinations

but the oldest fleet among the rest, it still, however, among the world's top 10 airline companies, possibly because customers attribute more to the number of destinations accessible by the carrier, than to the other facilities it offers (e.g. customisable meals).

2.6.4 Challenges Facing the Airline Sector in Complaints Handling

For the past decade, the level of customer reviews and feedback on services and products has increased significantly due to various factors, in particular the emergence and rapid development of online social networks, such as Facebook and Twitter. In addition to online social networks, online technology allows companies to provide their customers with easy accessible feedback and review facilities to record their opinions and experience from using their products and/or services. However, despite the increase in the level of customer feedback and reviews, the proportion of complaints from unsatisfied customers direct to companies remains very low (Singh *et al.*, 2016); and unfortunately what is happening is that unhappy customers are reporting their poor experience through social networks directly to millions of people before addressing issues directly with companies. This creates a significant obstacle for a company to effectively solve a problem since in voicing his/her dissatisfaction on social media as a first response, a customer does not give the company the opportunity to learn about his/her complaints and try to resolve the problem. In other words, the online social network platforms represent a two-edged sword, since on the one hand they provide a good opportunity for companies to approach customers and to recognise their feedback and reviews, but on the other hand they allow customers to share their dissatisfaction with the public before raising their complaints with the company and giving them the chance to address them. If a company is deprived of such knowledge and opportunity to learn from it, then that same complaint will arise repeatedly from other customers.

This section highlights and discusses the main obstacles and challenges that airlines can face in their attempts to effectively handle customer complaints that occur during the airline journey.

Being the first point of contact: as with other businesses, one major challenge facing an airline company during the process of handling customer complaints, is to be the first point of contact for dissatisfied customers. As mentioned in the previous paragraph, online social networks have provided significant opportunities to businesses to reach their customers and provide valuable marketing information, but they also create a major challenge since customers are a click away from publicising any negative experience through the online platform before complaining directly to the company, which makes a company's efforts to deal with this issue more difficult, particularly when the customers do not report back on how the company dealt with their complaint. Hence, the question that can be raised is: how can companies overcome such challenge?

Low proportion of complaints: To a large extent, this challenge relates to the previous one, where customers are publicising their dissatisfaction through online social networks instead of complaining to the company itself (Choraria, 2013; Haverila and Naumann, 2009). Hence, understanding the consumer complaint behaviour can be a major challenge to airlines when it comes to them actually trying to handle complaints. With the significant increase in competition, both global and domestic, and with limited opportunities for using pricing strategies and costing to create competitive advantage, airlines are faced with a very challenging task in respect of meeting consumers' expectations and bringing about their delight (Delbari *et al.*, 2016). Airline companies find themselves under increasing pressure to understand their customer buying behaviour in order to design and deliver a service that can meet their expectations and reduce the risk of customers complaining and publicising their experience to the public. Yet the task is complex, since companies must attempt to understand customer buying behaviour across a range of variables, since customer expectations and buying behaviour differ depending on age (Badgaiyan and Verma, 2015), gender (Bhat *et al.*, 2016), demographic characteristics, income, and education (Biswas and Roy, 2015).

Minor incidents: Generally, an ability to achieve customers' expectations results in service failure, which can be a process failure or outcome failure. Process

failure is when a problem occurs in the process of delivering the service, and outcome failure is where the service delivered does not meet the customer's expectation. Such failure and influence can be found in all types of businesses and can be a considerable challenge. However, for the airline sector, minor failure (or incidents) can lead to customer disappointment and dissatisfaction and, therefore, it can be considered that dealing with minor incidents is an additional challenge that airlines face (Steven *et al.*, 2012).

To sum up, amongst all industries the service sector is more sensitive to customer complaints than other industries due to the fact that providing service is based on trust and previous experiences. This requires additional effort by companies to reduce their service failures and, in particular, for the airline industry to clearly monitor minor incidents. If employees can interact with customers and intercede in situations where problems are known, such action can positively impact on customer satisfaction and, therefore, lower the risk of complaints and increase the effectiveness of handling such complaints when they appear.

2.6.5 Typical Customer Complaints in Airlines

As Polaczyk (2016) stated, problem-solving is the beating heart of amazing customer service. This is because individuals contact customer services when they face a problem. Problem-solving helps companies to gain the faith of their customers. Customers simply want to resolve their problems with the help of the customer service department. Therefore, such resolution is an essential element of any customer service operation.

Customers make complaints when they are dissatisfied with the service of the company. In the airline industry, customers can complain about services directly to the airline authority or to any regulatory body. Wittman (2014) has classified customer complaints under the following categories: Flight Problems, Customer Service, Over Sales, Disability, Reservations, Ticketing & Boarding Advertising, Fares Discrimination, Refunds and Baggage.

Nadiri *et al.* (2008) have undertaken research work on airline customer complaints, and have mentioned more specific complaints regarding the airline

services, particularly about cleanliness and comfort, terminal facilities, airline personnel, schedules and transportation, and price-service valuation. The categories can be described as follows: complaints about cleanliness and comfort (airline tangibles), complaints about terminal facilities, complaints about personnel and attitude, complaints about the failure to follow advertised schedules and transportation issues, and complaints about the price-service dimension.

Table 2.4 shows the top 10 customer complaints in the airline industry.

Table 2-9 Top 10 complaints from customers of airline companies

Top 10 Customers' complaints in airline industry	
1	Lost luggage.
2	Delayed flights.
3	Aircraft seats
4	Hidden costs
5	Customer service
6	Cabin cleanliness.
7	Refunds.
8	Fare terms.
9	Meals.
10	Aircraft change.

Table 2.5 shows the magnitude of the complaints against service quality of the airline industry in the United States issued by the US Department of Transportation in 2015. From this table, the growth in the complaints from December 2014 to December 2015 is seen. It is obvious that there is a high tendency by customers in the US airline industry to complain, and that the total number of 'reported' complaints increased by almost 50% (from 1,065 in 2014 to 1,565 in 2015). This increase in the number of reported complaints could be interpreted as a positive sign, signalling the existence of effective communication channels as customers are encouraged to express their dissatisfaction in respect of the service quality. On the other hand, it could be a negative sign since it highlights that the airline industry is indeed guilty of providing poor service quality. Lack of information about whether the airline companies successfully handled the complaints of annoyed customers prohibited the researcher from assessing the quality of the handling system of the US airline industry. However, taking the face value of the increase in the number of complaints is a good proxy for the efficiency

and effectiveness of the companies' customer complaints handling systems (Garding and Bruns, 2015). Mattila and Wirtz (2004) argued that the availability of communication channels is essential in evaluating the efficiency of the system of customers' complaints handling.

Table 2-10 Magnitude of complaints of customers of the US airline industry (US Department of Transportation, 2015)

Service provider	Complaints	
	December 2014	December 2015
US Airline	747	1,203
Foreign Airlines	277	302
Travel Agents	28	36
Tour Operators	0	1
Miscellaneous	4	23
Industry Totals	1,065	1,565

2.7 Conclusion

Customer satisfaction is still an ongoing research due to the evolutionary nature of customer needs (Yang et al., 2019). Business growth is a function of market share which, in turn, is a function of customer satisfaction and customer loyalty (Pirporas et al., 2017). As a result, companies are trying hard to maintain the level of customer satisfaction as high as possible in order to keep the loyalty of their customers. Subsequently, one can deduce that customer satisfaction is the main driver of business sustainability and companies' growth. The literature of customer satisfaction in service industries (e.g. airline industry is the main industry of interest in this study) argued that maintaining customer satisfaction level as high as possible is achievable throughout the application of problem solving techniques (e.g. root-cause analysis and 8-Disceplines). The premise is that if companies are able to identify the causes of the customer complaints, companies can find an effective solution for that problem and therefore, they can assure the prevention of the reoccurrence of the same problem in the future. However, statistics on customer complaints (see Statista, 2020 for more information about the magnitude of customer complaints in the US airline industry) revealed that the magnitude of customer complaints is increasing from one year

to another which provides an evidence on the ineffectiveness of the existing customer complaints handling systems.

In depth analysis of the literature showed that one of the possible explanations for the failure of the existing customers' complaints handling systems is that customer needs are not static to be captured. Accordingly, the knowledge which was generated from identifying the roots of the customer complaints and the proposed solutions for that complaint cannot be efficiently re-used. As a result, there is a natural need for a new system (method) that is able to (i) capture the on-going change in the customer needs, (ii) analyse the root causes of the complaints raised by customers, (iii) propose an immediate solution for the identified causes, and finally (iv) create and share the knowledge created from solving the problems led to customer complaints. Such a new method is more likely to provide customers with a plausible level of customer service, which is more likely to improve their satisfaction and loyalty.

This chapter provided an in-depth discussion and analysis for the concept of customer satisfaction, problem solving approaches and the existing customer complaints handling systems. The analysis showed the flaws and drawbacks associated with the existing methods which open the door for developing a new approach that can take into consideration the flaws of existing methods. The new approach relies on the concept of customer journey as a platform for getting more precise information on customer needs by breaking down the customer journey into different touchpoints in three different stages (pre-flight, on board and post flight). By articulating the customer journey, we can better expect the areas where there are high likelihood for customers to complain, which enables companies to be pro-active rather than reactive towards customers complaints. Finally, this chapter provided an in-depth analysis and criticism for the numerous applications of knowledge management including, knowledge creation and sharing.

In the next chapter, I discuss the proposed methodology of this study. The methodology chapter provides good insight into different research methods that have been used to articulate the problem of customer satisfaction and customers complaints handling. In addition, I also discuss the sample of study, rationale

behind choosing the case study methodology as a primary data collection method and the finally how to validate the results obtained from the case study methodology.

Chapter III
Research Methodology

3.1 Introduction

This chapter introduces the subject of research methodology and explains what fundamental beliefs underpinned the gathering of the data by the researcher. It also considers the type of data required in order to meet the aims and objectives of the study and to provide answers to the research questions; and it progresses to discuss the actual methods used. In providing this information, the chapter offers a comprehensive insight into the methodology, which Ishak and Alias (2005) described as the systematic and theoretical analysis of the methods applied to a field of study. Thus, the definition includes principles of methods relative to a branch of knowledge for which the theoretical analysis is performed. Typically, concepts like quantitative or qualitative approaches to research are also contained in this definition. The development of the research study is explained in this chapter and the methodology adopted is described in Section three

3.2 Developing a Research Study

In order to focus on and manage all aspects of a research study, the researcher must be aware of alternative approaches to the collection of data, and of what fundamental principles relate to each of these. Without such understanding, no effective comparison of the available approaches and methods can be made, and the researcher cannot be sure, therefore, that the path followed in the study is the right one. Gray (2009) defines a research study as a systematic investigation of a phenomenon with a view to establishing certain facts about it, and reaching a new conclusion; and a research philosophy as the way in which researchers and respondents perceive what is being investigated and their stance about intervening and believing the results. Thus, a research study is a scientifically organised procedure or activity that is designed to procure suitable responses to the research questions generated in a study. The rigour of such a study depends

upon the right approaches and methods being adopted by the researcher (Saunders et al., 2012).

3.2.1 Research Paradigm

A research paradigm is a model established, accepted, and adopted by a considerable number of people in a research community. Research paradigms differ from one academic discipline to another, according to their suitability for gathering data. Specific components or philosophical assumptions are found to constitute the research paradigm, for example ontology, methods, axiology, methodology, epistemology (Collis and Hussey, 2009). It is extremely important for researchers to consider the reality of a situation as an independent phenomenon that should be detected and discovered. Therefore, encountering the concepts of theory (epistemology), and reality (ontology) are considered to be of major importance for the processing of social research, as the researcher is generally trying to build a theory. These two philosophical views are described as follows:

"*Epistemology concerns what constitutes an acceptable knowledge in a given field of study*" (Saunders et al., 2012, p.112). In research, we distinguish between interpretive and positive research epistemologies. On one hand, interpretivism believes in the fact that building knowledge depends on the angle by which researchers see the phenomenon of study. In other words, interpretivism believes that social science is complex to the extent to which it is difficult to understand it using the methods applied by rocket science . As a result, knowledge can be constructed throughout observing people (social actors) rather than collecting data about objectives. On the other hand, positivism believes in objective reality and as a result, positive researchers believe in maintaining independence between themselves and the phenomenon of study. Positive researchers, also, tend to use big samples, similar to rocket science, for generalizing results (Mertens, 2014).

On the other hand, ontology concerns the nature of reality (Saunders et al., 2012). There are two extreme realities, objectivism and subjectivism. Objectivism believes in the fact that reality has only one representations and accordingly

anyone sees the phenomenon of study should have the same conclusion. On the other hand, the other extreme reality is subjectivism. Under subjectivism, reality can be seen differently depending on the lens of the researcher (Saunders et al., 2012).

3.2.2 Choosing a Qualitative Research Approach

To determine customers' problems and create a simplified and more efficient problem-solving approach, the nature of research (qualitative) is reliant on the data collection method, like interviews. Hence, all the data and objects collected are subjected to revision using documents and texts as an alternative to numerical formats. Qualitative research is found to provide a deep understanding by exploring perceptions. Meanwhile, quantitative research explores generalisable understanding through the measurement of variables, as argued by Creswell and Plano Clark (2011). Despite the statistical analysis made of some of the data collection by using Microsoft Excel, the research cannot declare using a mixed methods approach, as in-depth interpretation is the main purpose of this analysis which aims to provide rich explanations.

3.2.3 Case Study

According to Creswell (2013: p. 97), the case study methodology "explores a real-life, contemporary bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information and reports a case description and case themes".

Recently, Crossman (2017) argued that the type of research method, such as a case study, is considerably dependent on a single case more than a population or sample. When studies focus on a single case, comprehensive observations over a long time can be obtained, whereas such observations cannot be yielded through the study of large samples without a financial impact.

Nonetheless, it is argued by Flyvbjerg (2004) that the case study could be a misleading instrument in analyses of social science scenarios, where misunderstandings can be experienced in some areas of the research. The author also illustrated revisions in respect of five essential misunderstandings, which

are mainly associated with the reviews of social science supported by carrying out a case study. These revisions are presented in Table 3-1.

Table 3-1 Case study: misunderstandings and revisions

No.	Misunderstandings	Revisions
1	General, theoretical knowledge is more valuable than concrete, practical knowledge.	Predictive theories and universals cannot be found in the study of human affairs. Concrete case knowledge is therefore more valuable than the vain search for predictive theories and universals.
2	One cannot generalise on the basis of an individual case; therefore, the case study cannot contribute to scientific development.	One can often generalise on the basis of a single case, and the case study may be central to scientific development via generalisation as a supplement or alternative to other methods. But formal generalisation is overvalued as a source of scientific development, whereas "the force of example" and transferability are underestimated.
3	The case study is most useful for generating hypotheses; that is, in the first stage of a total research process, while other methods are more suitable for hypothesis testing and theory building.	This misunderstanding derives from the previous misunderstanding that one cannot generalise on the basis of individual cases. And because this misunderstanding, we can now correct the third misunderstanding.
4	The case study contains a bias toward verification, that is, a tendency to confirm the author's preconceived notions.	The case study contains no greater bias toward verification of the author's preconceived notions than other methods of inquiry.
5	It is often difficult to summarise and develop general propositions and theories on the basis of specific case studies.	It is correct that summarising case studies is often difficult, especially concerning the case process. It is less correct as regards case outcomes. The problems in summarising case studies, however, are due more often to the properties of the reality studied than to the case study as a research method. Often it is not desirable to summarise and generalise case studies.

Source: Flyvbjerg (2004)

By using the case study method, a researcher can carefully observe the data within a precise situation. In most cases, a small geographic area or a restricted number of individuals is typically selected by a researcher. Case studies, principally, explore the existing phenomenon and its relationships with others.

The advantages and disadvantages of the case study as a research methodology are shown in Table 3-.2.

Table 3-2 Case study: advantages and disadvantages

Advantages	Disadvantages
1. Intensive Study. Deep investigation and exploration of an event can be performed by using case study method. 2. No Sampling. A case study is entitled to study a social unit in its entire perspectives with no sampling. 3. Continuous Analysis. The method is valuable in digging up the facts through continuous analysis of a social unit. 4. Hypothesis Formulation. The method is effective in formulation of hypothesis for future and further studies. 5. Comparisons. Offers the chance for comparing the various types of facts about the study of a unit. 6. Increase in Knowledge. Increases knowledge of the researcher by giving the analytical power about a social phenomenon. 7. Generalisation of Data. Grounds for generalisation of data can be established through using of a case study for illustration of statistical findings.	1. Limited representatives and generalisation due to narrow focuses in a case study. 2. No Classification. No possibility for making classifications due to study of a small unit. 3. Possibility of Errors. Faults may appear in judgment and memory when using a case study method. 4. Subjective Method. It is a subjective method rather than objective. 5. Not Easy. The method is difficult for anyone to conduct it. 6. Bias Can Occur. Discrimination and bias can occur during investigation of a social unit, due to narrow study 7. No Fixed Limits. No fixed limits of investigation can be seen by using this method; it is dependent on the situation.

Source: McLeod (2008)

The researcher found that the exploratory method is the best choice for the case study, using qualitative research. As mentioned by Yin (2003), a case study can cover either multiple studies or a single study and the details of both designs are mentioned in the following Table 3.3.

Table 3-3 Descriptions of single and multiple-case designs

Single-Case Study	Multiple-Case Study
Suitable for representing a critical case. Revelatory case. Extreme and unique case. Rich description and understanding are provided as this offers the chance for in-depth investigation of the phenomena.	Comparison and cross-case analysis are allowed. A particular phenomenon can be investigated in different settings. Prediction of similar results or production of contrasting results.

Source: Yin (2003)

3.2.4 Data Collection Methods

An extensive range of research methods can be used for data collection from various sources including quantitative and qualitative methods (Marrelli, 2007). Concerning this research, four methods are considered as appropriate and adequate to gather data, these being a literature review, interview, direct observation, and documentation review. Some devices and tools are required during the implementation process in order to support the methods, such as documents, recorder, emails, and mobile.

3.2.5 Trustworthiness and Bias

Trustworthiness has been defined as "the way of confirming new information over the course of data collection" (Muhammad, 2016, p. 641). Trustworthiness usually comprises searching various information sources. In addition, researchers can use different types of data collection to find information that discusses the same phenomenon, which helps to ensure accuracy and reliability of the research.

Empirical studies encounter many threats concerning research validity, which have to be minimized by the researcher, and are classified into three types: respondent bias, reactivity, and author bias. The respondent bias and reactivity example can occur during interviews, where some respondents are likely to show a different performance and may hide some information in a trial to follow or satisfy the perceptions of both the researcher and other people involved. The bias of the author is mainly related to the preconditions and assumptions that the researcher may introduce to the situation or may be related to the selection of certain people through data collection and analysis.

It is impossible for bias to be eliminated despite it being essential for the researcher to identify it in a research study (Sica, 2006). However, utilising qualitative research and data analysis can dramatically reduce bias that is likely to appear during research processing (Whittemore and Knafl, 2005). In addition, many core strategies are suggested as ways to deal with different threats in order to reduce bias (Robson, 2011). The most important to include are the field study, case study, and expert judgement.

3.3 The Adopted Research Methodology

The research methodology adopted by the author consists of five phases, key tasks and deliverables, as shown in Table 3-4.

Table 3-4 Research methodology

Phases	Key Tasks	Deliverables
1. Background Theory of Problem Solving Approaches and Complaints Handling	1.1 Perform extensive literature review 1.2 Design questionnaire	Research gaps & Questionnaire
2. Field Study	2.1 Perform the field study 2.2 Conduct face-to-face interviews 2.3 Analyse the current practices, processes and activities	Opportunities for improvement
3. Developing a customer journey	3.1 Understand each stage that customers go through during their flight 3.2 Analyse the typical complaints associated with each phase of the airlines' customer journey	A customer journey with full understanding of the typical customer complaints
4. Development of a customised A3 Thinking approach	4.1 Identify and capture the elements to design an initial A3 Thinking approach 4.2 Develop an A3 Thinking approach for problem solving 4.3 Develop a process for using the A3 Thinking approach	A customised A3 Thinking approach
5. Validation	5.1 Validate the A3 Thinking approach via industrial case studies 5.2 Validate the A3 Thinking approach via expert judgment	Validated A3 Thinking approach

Source: Adapted by the author

The key tasks are briefly described in the following:

Phase 1: Background Theory of Problem Solving Approaches and Complaints Handling

Task 1.1 Perform an extensive literature review to cover a particular subject, area, or theory including reviews of books, scholarly articles, journal papers, dissertations, conference proceedings and any other published material relative to the topic of the research. Such reviewing of literature aims to investigate and finally provide, critical evaluation and summary of the works related to the aim and objectives of the research.

Task 1.2 Design a semi-structured questionnaire based on the literature review, and the information needed to meet the aims and objectives of the study. Different types of question will be included (for example, Likert-scale statements, closed and multiple choice questions, multiple choice questions).

Phase 2: Field Study

Task 2.1 Perform the field study at Saudi Airlines in Saudi Arabia. A qualitative approach will be adopted in which structured interviews using a tightly-designed questionnaire will serve as the data-gathering method. These interviews will be conducted with a selected sample of Saudi Airlines' employees working in the Complaints Handling Department

Task 2.2 Conduct face-to-face interviews with all managers of Guest Relations individually (one-to-one) for the development of a problem-solving approach, and to capture the requirements for the approach.

Task 2.3 Analyse and identify the current practices, actual processes in complaints handling and the knowledge management capability in Saudi Airlines in order to identify opportunities for improvement.

Phase 3: Developing a customer journey

Task 3.1 Understand each stage that customers go through during their flight experience to have a clear understanding of each step a traveller takes to safely reach the final intended destination. This will enable the researcher to gain a clear picture of what services expected by customers are actually

offered by the airline company, and will facilitate an understanding of the potential problems that could occur that would lead to customer complaints.

Task 3.2 Analyse the typical complaints made at the various stages of the airline's customer journey to enhance the understanding of the issue and to find the problems. The stages can be divided into three main ones - pre-journey, journey, and post-journey. Produce a detailed definition of the customer journey in the airline sector associated with the required services.

Phase 4: Development of a customised A3 Thinking approach

Task 4.1 Identify and capture the elements for designing an initial A3 Thinking approach by using the results from the data analysis and the field study.

Task 4.2 Develop an A3 Thinking approach to handle customer complaints. The approach covers the full process from problem identification and suggests a solution to convert the solved problem into articulated knowledge. The approach also provides recommendations where the captured useful knowledge can be applied during the customer journey in order to support decision-taking and prevent the recurrence of problems.

Task 4.3 Develop the processes of using the customised A3 approach and the elements of the customised A3 Thinking based on three basic points: Objective, Process, and Output.

Phase 5: Validation

Task 5.1 Validate the customized A3 Thinking approach via industrial case studies for Saudi Airlines. The customised A3 Thinking approach will use the data that will be collected during the field study and from the interviews.

Task 5.2 Validate the customized A3 Thinking approach via expert judgements. The approach will be presented to five experts in the airline sector. Experts will use their judgment to determine the usability, usefulness and applicability of the approach. Selection of these experts will be on the basis of their accessibility and expertise.

Generally speaking, validation in qualitative research is seen as robustness tests which can be found in quantitative research. Before we can rely on the findings of the case study I undertake, I need to validate the proposed A3 approach. There are many ways to validate the approach. One of the validation method which is proposed by Thomas (2013) is to find an organization which accepts to take the approach and apply it for a plausible period (at least one year). By doing so, we can collect data before and after the application of the approach. This gives the opportunity to test the impact of the application of the A3 approach on the magnitude of the customer complaints. Quantitative methods which are typically used here are (i) difference in differences (Lechner, 2011) and (ii) quasi experiments (Reichardt, 2019).

For difference in differences (diff-in-diff) methodology, we collect data before and after the application of the A3 approach. Given the fact that we are testing the approach on one organization, we can attribute any significant difference we observe on the magnitude of the customer complaints after the application of A3 approach to the A3 approach since all other aspects are kept constant (ceteris paribus).

On the other hand, quasi experiments require researchers to have two identical groups (in our case, two identical organisations, could be two airline companies which are similar in the organizational structure, level of technology, types of services, etc.). Then, we make the manipulation for one group and keep the other group with no manipulation. The manipulation we exercise here is the application of the A3 approach. The organisation which will be kept without manipulation is called control group while the other organisation which will be manipulated is called the experimental group. Then, we collect data on the magnitude of the customer complaints in the two groups and we can attribute any changes in the magnitude of customer complaints in the experimental group to the manipulation which we exercised. In this case, we can conclude that the application of A3 approach was either effective or ineffective depending on the direction of the change in the magnitude of the customers complaints.

However, it is almost impossible to find an organisation that can allow you to test the effectiveness of an approach given the high costs associated with the test especially that the validation test might take a long time (usually one year). The probability of having a business who is willing to take the risks and bear the costs of testing the A3 approach which I am proposing in my study is very minimal. Alternatively, one can validate the findings of the case study by asking experts in the industry. The quality of results of the expert consultation is not as high as the ones obtained by the diff-in-diff and/or the quasi experiments. However, given the cost-benefit approach, and the feasibility of the methodologies, this research relies on the expert consultation method to validate the results obtained from the case study.

3.4 Conclusion

This chapter has introduced the methodology adopted to achieve the aim and objectives of the research. It has briefly discussed the considerations relating to the development of a research study, and proceeded to highlight the importance of opting for a research paradigm that allows for the reality of a situation to be identified. It then turned towards the type of research approach in terms of the data collected, choosing a qualitative method, used within the overall approach of case study, which has been justified on the basis of its advantages and disadvantages in the research context. The four methods of data collection - a literature review, interview, direct observation, and documentation review – are noted.

Issues of trustworthiness and bias, and how these are to be dealt with in the study have been addressed, and the chapter has also detailed the five phases within the research design, and the particular tasks to be achieved during each one. Essentially, a comprehensive literature review is undertaken, together with an empirical study in which Saudi Airlines in Saudi Arabia forms the case supplying qualitative information. Using such data, the remaining objectives are achieved.

Chapter IV
The Industrial Field Study

4.1 Introduction

A qualitative approach was adopted in which structured interviews using a tightly-designed questionnaire served as the data-gathering method. Those interviews were conducted by the researcher with a selected sample of Saudi Airlines' employees working in the Complaints Handling Department. The sample was achieved via a random sampling technique, which resulted in the identification of 87 participants, all of whom agreed to be interviewed. Prior to the structured interview, a questionnaire was designed based on the literature review and the information needed to meet the aim and objectives of the study. The following steps were followed when undertaking the interviews:

- The Complaints handling department was identified as the relevant department within Saudi Airlines from which to obtain information.
- The Senior Director of that department was approached in person for permission to conduct structured interviews with a sample of employees within the department. The aim and objectives of the thesis were comprehensively explained to the director and assurances about anonymity were provided (no names or personal details to be reported). The Senior Director was happy to give consent to the request to undertake the research as described.
- Of the 150 employees in the department, 87 were randomly selected to represent the population within the department (in terms of position, experience, and age).
- Structured interviews with these individuals were held over a 45-day period starting in July 2017. This empirical work was organised for that time because Ramadan (the fasting month) was over and, consequently, employees were comfortable when answering questions, and it was assumed that being comfortable would make them favourably disposed to participation. Interviews were held between 9.00 am and midday each day.

- Employees were not asked to provide personal information. It was important to assure them of anonymity since it was believed that such assurances would encourage full and frank responses, thereby increasing the quality and reliability of the answers given.
- All interviews were conducted by the researcher in a completely private setting and face-to-face with each interviewee. Before the commencement of each interview, the researcher asked for permission to record the proceedings and each of the 87 interviewees agreed to this request.
- The longest interview lasted for one hour and the shortest one for 10 minutes.
- All collected data were stored in a password-protected computer file and computed into tables using Excel.

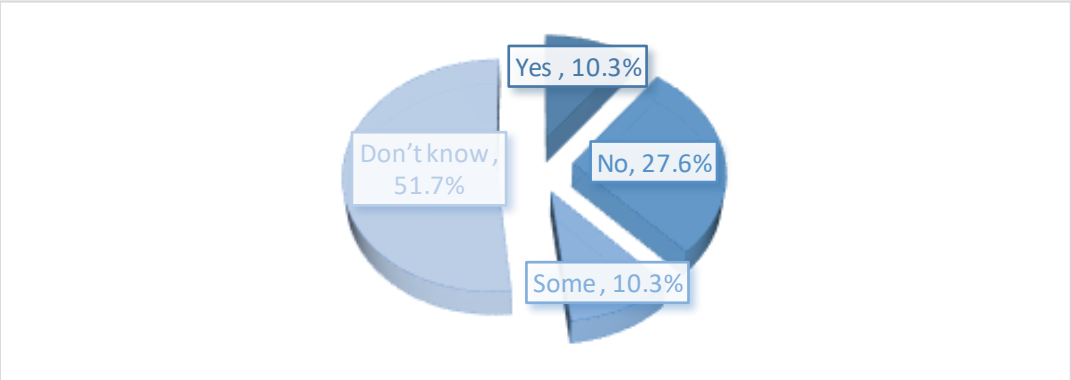
The interview questions focused on the following specific themes:

4.2 Employees' Perceptions of the Customer Journey

The core goal of any company is to maximise the level of customer satisfaction to maintain customer loyalty as high as possible. Accordingly, the Saudi airline should assure that the management team responsible for handling customer complaints is aware of the concept of the customer journey to make sure that the customer is receiving an acceptable level of quality at each stage of this. Surprisingly, the interview data (see Figure 4-1[4]) show that more than 50% of respondents were unsure about what the customer journey involves.

[4] This question captures the awareness of Saudi airline employees about the customer journey. The objective of this question is to evaluate the awareness of the employees about the different touchpoints in the customer journey.

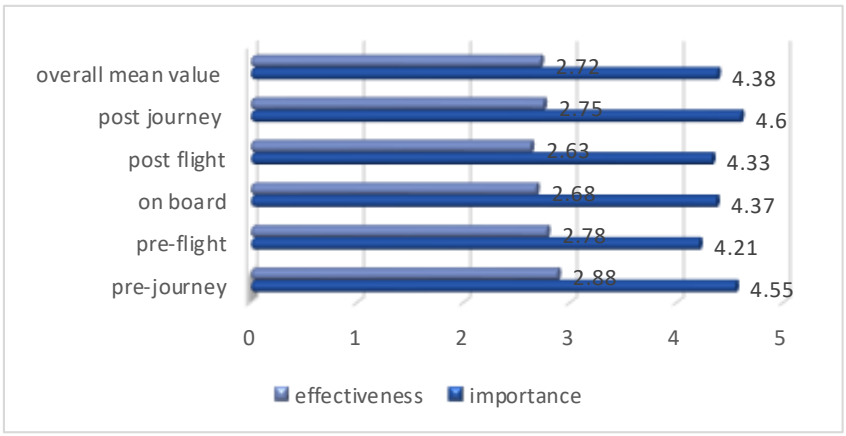
Figure 0-1 Saudi Airlines' customer journey: employee awareness



Source: adapted by the author

To clearly understand the customer journey checkpoints in Saudi Airlines, Figure 4-2 summarises the important checkpoints and their effectiveness from the employees' perspective. The questions covered five different stages in the customer journey: (i) pre-journey, (ii) pre-flight, (iii) on-board, (iv) post-flight, and (v) post-journey. The interview results found a significant gap between what employees believe is important and the effectiveness of the service provided to customers in each checkpoint, as shown in Figure 4-2[5].

Figure 0-2 Processes of customer journey: importance and effectiveness



Source: adapted by the author

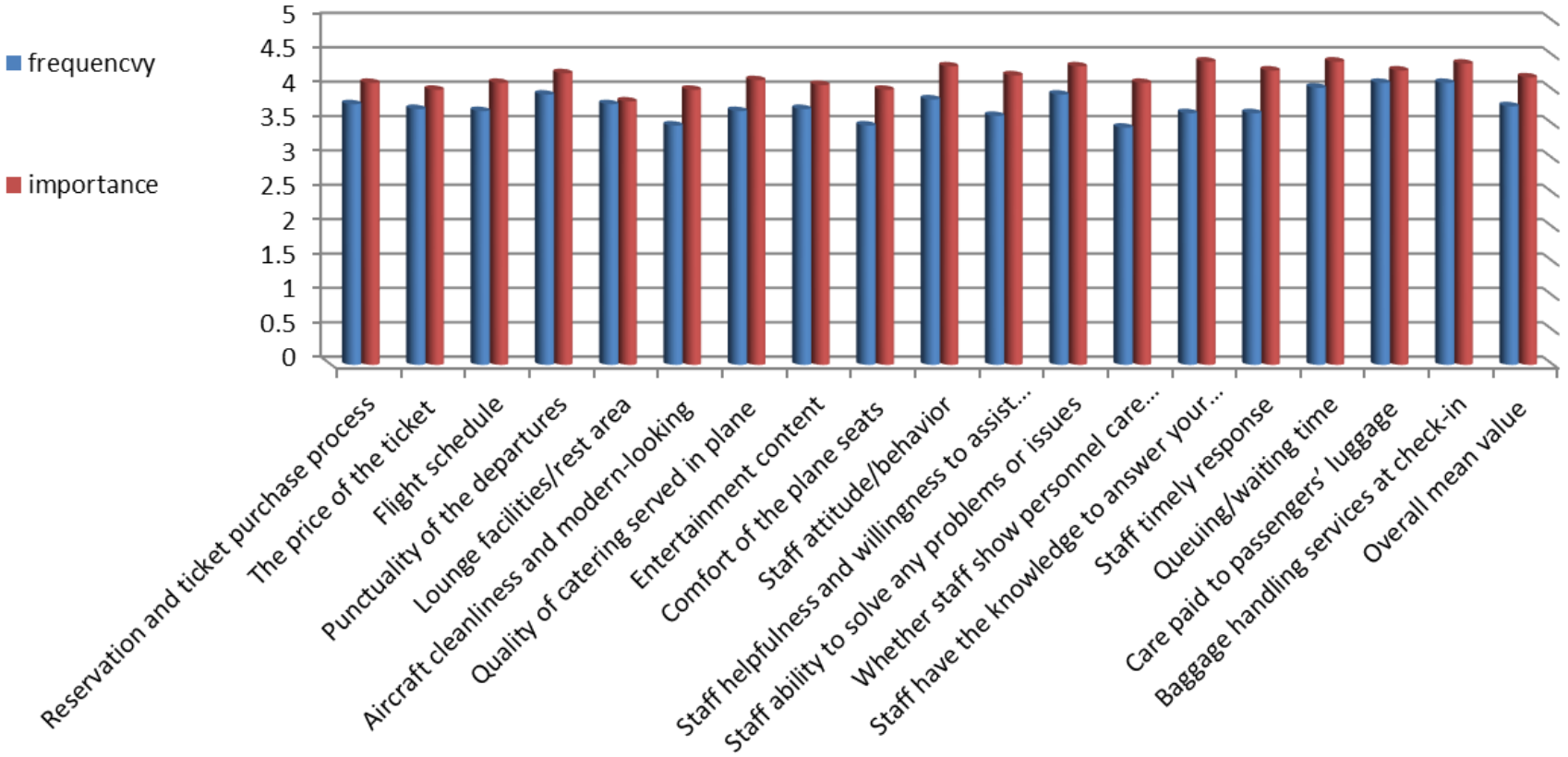
[5] This question captures the perception of the Saudi airline employees about the importance of the stages of customer journey, and the real effectiveness as is in Saudi airline. It shows that there was not effective customer journey, however the employees believe its presence is important.

Furthermore, it could be concluded that there was a very high agreement among participants about the importance of the customer journey. On the other hand, it could be seen that participants felt differently with regard to the effectiveness. Finally, the customer journey was considered very important for the development of the complaints handling process in the airline.

4.3 Customers' Complaints in the Different Stages of the Customer's Journey

In this section of the analysis, the researcher shed light on the perceptions of the interviewees towards customers' complaints to identify the checkpoints that receive a relatively high volume of complaints. In addition, the interview questions explored the extent to which the customers evaluate the importance of each complaint. Figures 4.3 summarises the interviewees' answers.

Figure 0-3 Customer complaints: frequency and importance in Saudi Airlines



Source: adapted by the author

The statistics in Figure 4-3 show the interviewees' perceptions with regard to customers' complaints in Saudi Airlines in terms of their frequency and importance. It was noticed that customers' complaints are made on most occasions and, at the same time, all customer complaints seem to be considered as important by the majority of interviewees.

Furthermore, the most important customer complaints that occur with a high rate of frequency include:

- Punctuality of the departure
- Entertainment content
- Staff ability to solve any problems or issues
- Care paid to passengers' luggage

On the other hand, the results reveal that the most important customer complaints about the staff that need to be discussed and resolved include the following:

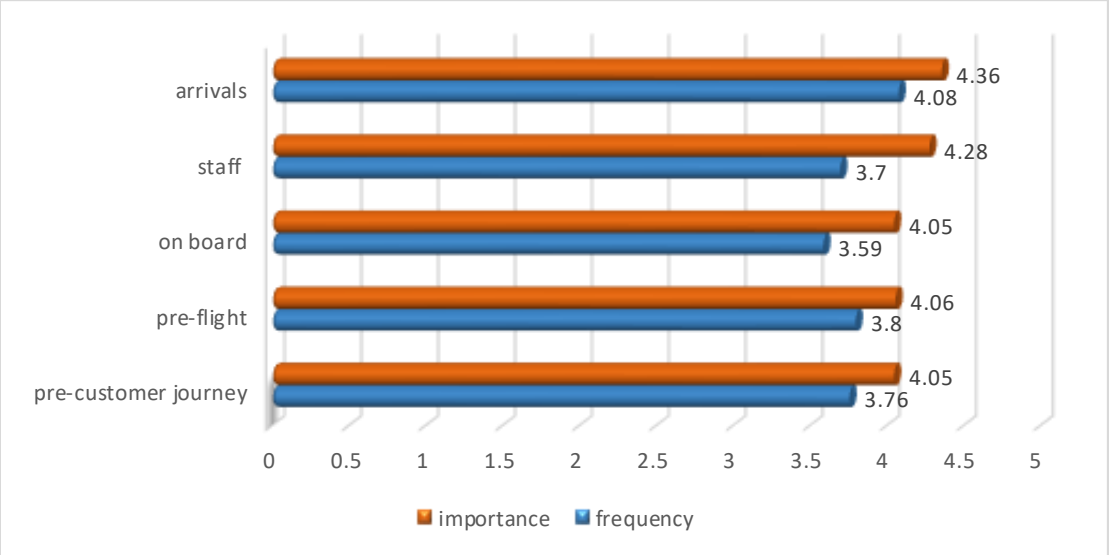
- Staff have the knowledge to answer your questions
- Staff attitude/behaviour
- Staff ability to solve any problems or issues
- Staff timely response

Meanwhile, for customers' complaints regarding checking-in, the study found that they are very important and must be resolved to include the following:

- Queuing/waiting time
- Baggage handling services at check-in

Figure 4-4 illustrates the main areas within customer complaints regarding frequency and importance in Saudi Airlines.

Figure 0-4 Main areas of customer complaints: frequency and importance in Saudi Airlines

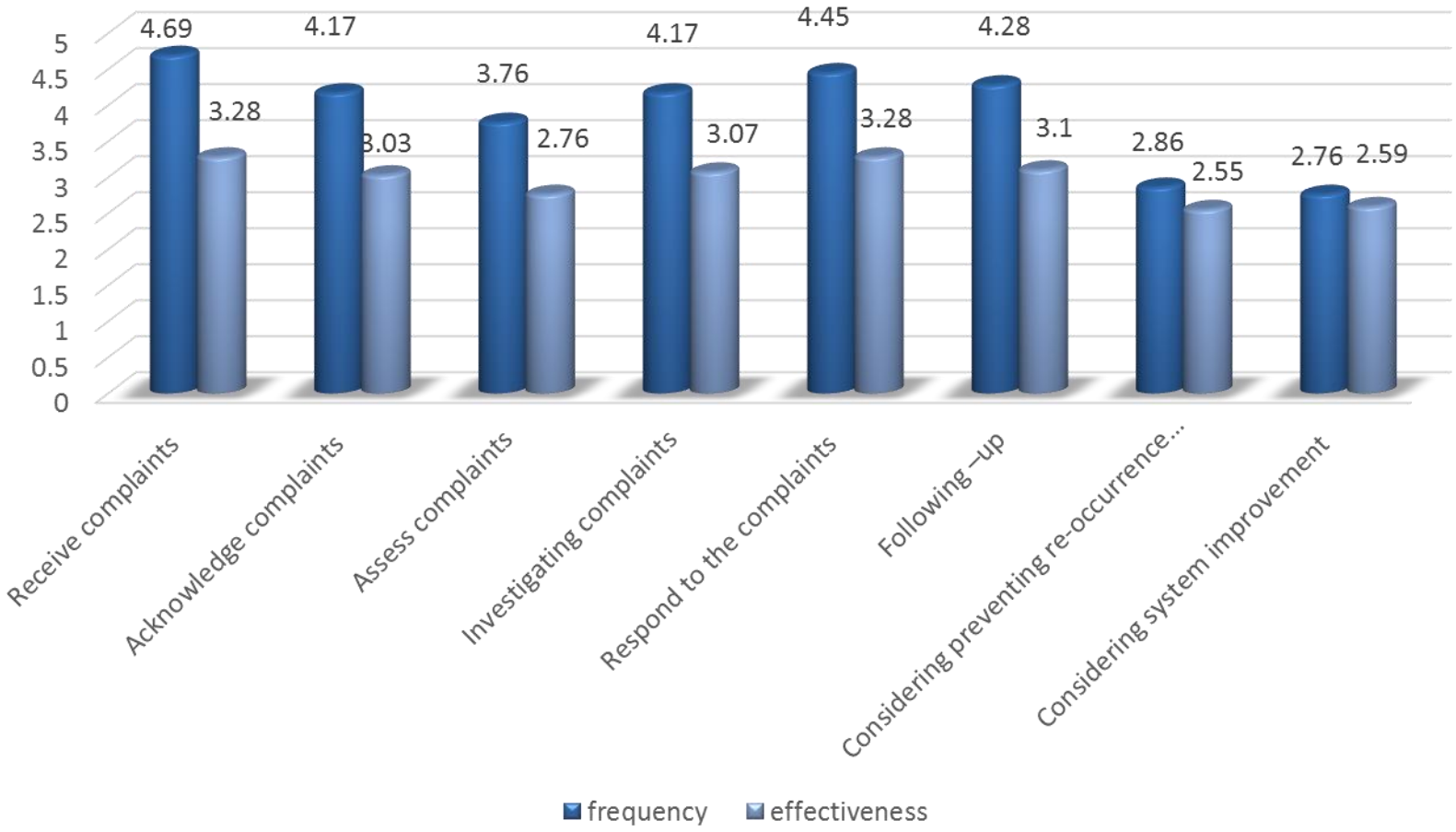


Source: adapted by the author

4.4 The Process of Handling Customers' Complaints

For a better understanding of the process of handling customers' complaints, the researcher examined the perceptions of the interviewees on the frequency and effectiveness of the steps implemented by the Saudi Arabian airline to handle this issue. Figure 4.5 shows the effectiveness of each stage of the complaints handling process according to the employees' opinions. From this table, it can be seen that poor effectiveness is considered to occur in almost all stages, which accounts for the high volume of negative comments about the Saudi Arabian airline. Having a poor customer complaints handling process does not prevent the recurrence of problems, and this serves to increase customer dissatisfaction.

Figure 0-5 Customer complaints handling process: frequency and effectiveness in Saudi Airlines



Source: adapted by the author

The statistics in Figure 4-5 demonstrate that some points within the customer complaints handling process are repeatedly weak, these being in respect of:

- Receiving complaints
- Responding to complaints
- Following–up

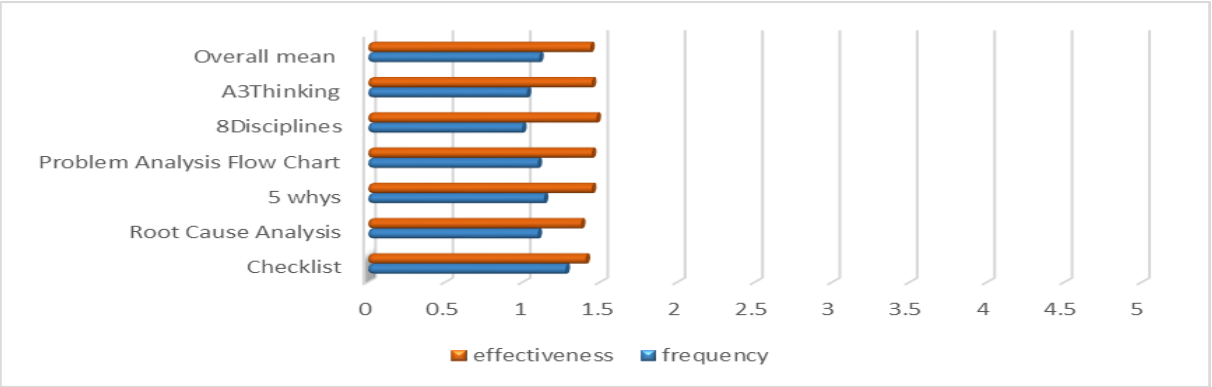
On the other hand, the participants neither agreed nor disagreed with regard to considering preventing the recurrence of complaints or considering system improvement. The mean values in these instances reached 2.86 and 2.76, respectively.

With regard to the effectiveness of the customer complaints handling process in Saudi Airlines, the statistics reveal the process to be insufficiently effective to support improvement.

4.5 Problem-solving Approaches in Saudi Airlines

Given the low effectiveness of most of the stages of the customer complaints handling process, it was important to identify and examine the company's current approach to problem-solving, and in this regard, it was shown by the data that the company is not really applying a problem-solving approach to complaints handling, as shown in Figure 4-6. Consequently, it was not surprising to find that the interviewees believe the effectiveness of the methods that are in operation t be very poor.

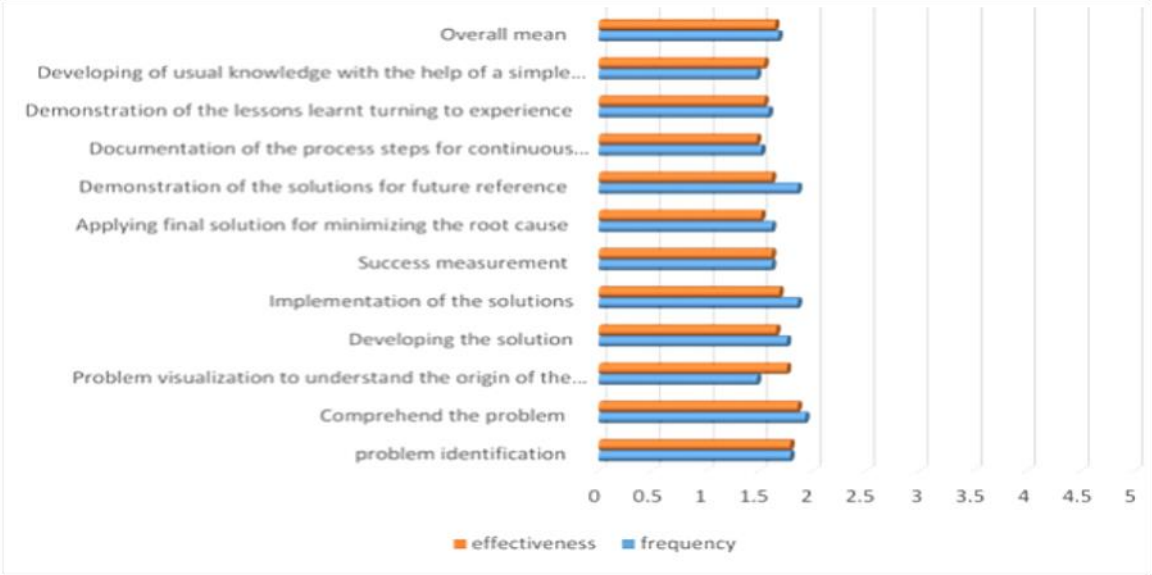
Figure 0-6 Frequency and effectiveness of using problem-solving approaches



Source: adapted by the author

The researcher also collected other evidence on the lack of an effective customer complaints handling process in the Saudi airline. Figure 4-7 shows how the interviewees perceive the frequency and effectiveness of the 11 steps of the process of handling customer complaints, from which is it seen that these 11 steps are ineffective in meeting the aim of the model.

Figure 0-7 Frequency and effectiveness of the 11 steps of the process of handling customer complaints



Source: adapted by the author

The results in Figure 4-7 demonstrate the study subjects' perceptions with regard to frequency and effectiveness of the problem-solving process and the steps implemented in the complaints handling process in Saudi Airlines. It was noticed that the overall mean value was 1.68, thereby confirming that the problem-solving process was not implemented in Saudi Airlines. Consequently, there was no significant effect in the complaints handling process as the overall mean value of the participants' responses is equal to 1.65.

4.6 The Importance of the Elements that are Essential for Problem-Solving

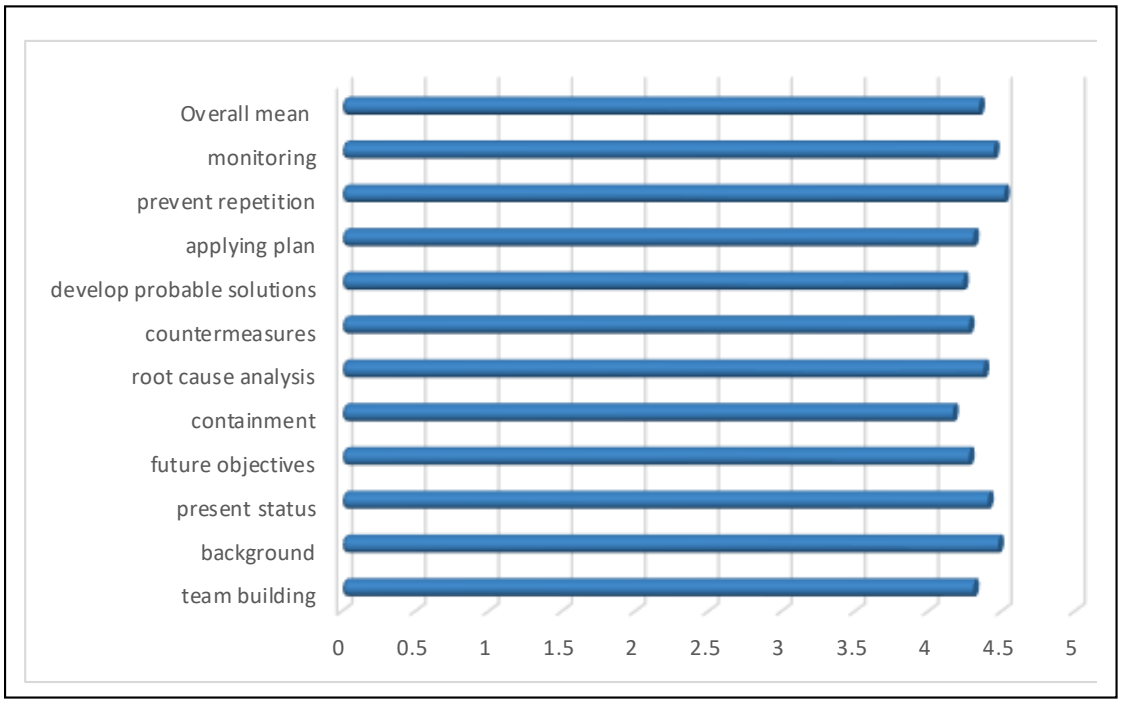
The statistics in Figure 4-8 reveal the participants' perceptions regarding the importance of the elements that are considered essential for problem-solving (complaints handling), and from these it can be seen that the overall mean value

reached 4.35, which indicated that the majority of participants confirmed all elements as being very important and necessary for problem- solving in Saudi Airlines.

It was also noticed that the most important elements regarded as essential and very important for problem-solving include:

- Preventing repetition by making possible changes and managing the performance
- Examining the problem background through obtaining and collecting thorough details of the problem
- Examining any similar issues to minimise possible problems in the future
- Determining the present status of the problem
- Creating a root cause analysis

Figure 0-8 Information elements considered essential for problem solving

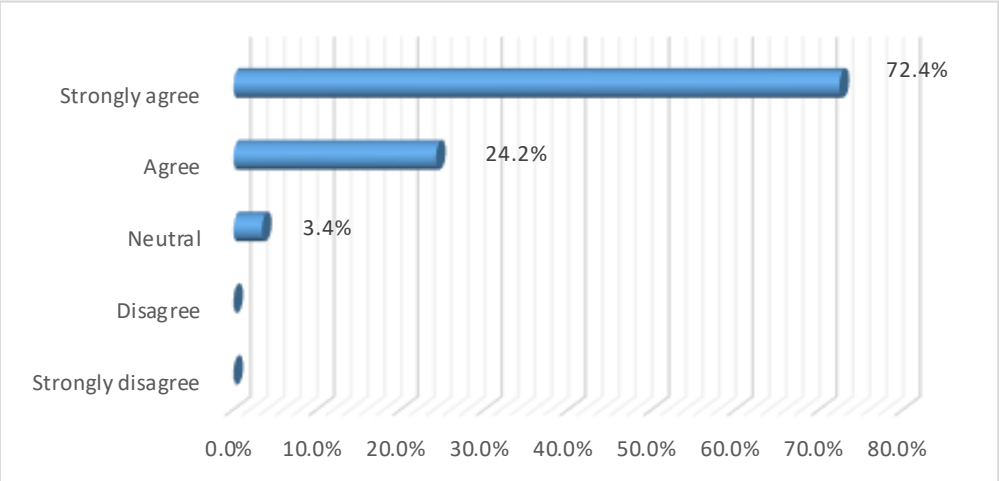


Source: Adapted by the author

4.7 Respondents' Opinions regarding Knowledge Generation

Figure 4-9 shows the participants' agreement about the statement: "the problem-solving approach will generate knowledge, which must be captured and distributed in an easy way to help useful decision making in the future".

Figure 0-9 Participants' agreement - knowledge generation



Source: Adapted by the author

The results reveal that 72.4% of the participants strongly agreed, while 24.2% agreed, and just 3.4% of the participants were neutral.

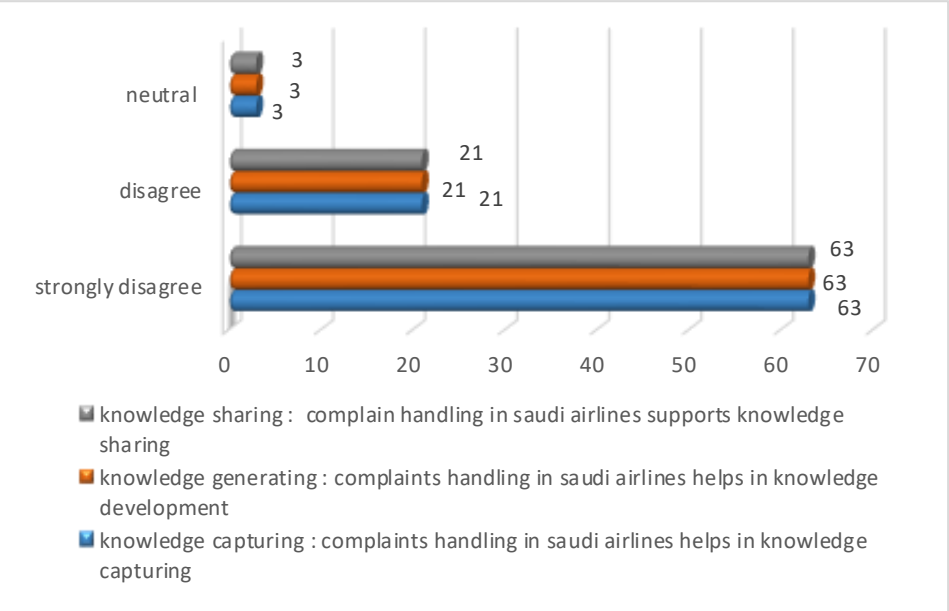
Thus, it could be concluded that the majority of participants strongly agreed that the problem-solving approach would generate knowledge which, in turn, must be captured and distributed in an easy and flexible way to help in making useful decisions in the future. This means that in order to start useful steps in the management of problem-solving that contribute positively in complaints handling, Saudi Airlines must build on that knowledge creation, capture, and distribution in a flexible way.

4.8 The Practices of Knowledge Management in the Complaints Handling Process in Saudi Airlines

The results in Figure 4-10 demonstrate clearly that the majority of the study participants strongly disagree that knowledge management practices in the complaints handling process in Saudi Airlines have an effect on knowledge

capturing, knowledge generating or knowledge sharing. This indicated that knowledge management practices in complaints handling are far from introducing any positive effect on knowledge management building in the company. This result confirmed that knowledge management in Saudi Airlines is not contributing towards the development of a better complaints handling process.

Figure 0-10 Participants' views regarding knowledge management practices in the Saudi Airlines



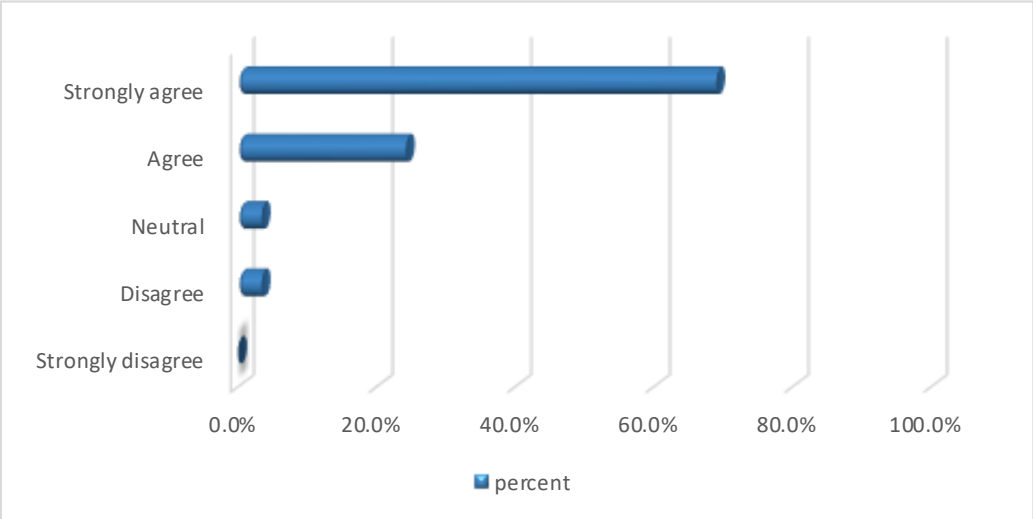
Source: Adapted by the author

4.9 Participants' Opinions regarding Repetition of Complaints

Figure 4-11[6] shows participants' levels of agreement with the statement: "The complaints handling process with the scope of knowledge capturing, creating and sharing will prevent the possible repetition of complaints".

[6] Figure 4.11 shows the results of the question that captures the perception of the Saudi airline employee regarding the repetition of the complaints of Saudi airline customers. In other words, this question captures (indirectly), the evaluation of the Saudi Saudi airline of the customer complaints handling system. If they agree that the complaints are likely to be repeated by the airline customers, this is an indication of a negative evaluation for the current customers' complaints handling system.

Figure 0-11 Participants' views on repetition of complaints



Source: Adapted by the author

The statistics in Figure 4-12 reveal that 69% of the participants strongly agreed, 24.1% agreed, just 3.4% of the participants were neutral, and only 3.4% disagreed.

Hence, it could be concluded that the majority of participants confirmed that a complaints handling process with the scope to capture knowledge, generate new knowledge and share this, would prevent the repetition of complaints. This means that the adoption of knowledge capturing, creation, and sharing was considered a strong mechanism that could be used to prevent the repetition of complaints in the future.

4.10 Practices of Learning Cycles in Saudi Airlines

The researcher examined the interviewees' awareness of the concept of a learning cycle for continuous improvement that the Saudi airline company has adopted. Table 4-1 shows that there is a lack of common agreement about or detailed definition of the customer journey associated with customer complaints in the Saudi airline. All (100%) of the interviewees said they had not heard about the concept of a learning cycle. Basically, there are two possible explanations for this observation; (i) either the company, in reality, does not apply any learning

cycle approach at all, or (ii) the employees are not aware of the terminology of learning cycle.

Table 0-1 Application of the concept of learning cycles at Saudi Airlines

Application of the Concept of the Learning Cycle	Yes	No
Do not know about LCs and never used any of the LCs	100.0	0.00
Heard about LCs but not yet implemented	0.00	100.0
Planning to use one of the LCs in the future	0.00	100.0
Partially applying one of the LCs at present	0.00	100.0
Applying one of the LCs at present	0.00	100.0
Fully applying a number of LCs at present	0.0	100.0

Source: adapted by the author

4.11 Conclusion

In this chapter, I captured the perception of the employees of Saudi airlines towards the customer complaints handling system and whether they are aware of the concept of the customer journey. As explained in the methodology chapter, the concept of the customer journey has been articulated by this study as a platform to obtain a clearer picture about the airline customer needs and the areas in which there are high likelihood of having complaints. This encourages company management to have a proactive approach in dealing with the customer complaints rather than a reactive one. Primary data has been collected by interviewing 87 employees in the Saudi airline. The questions of the structured interviews are divided into five main groups of questions which cover the following disciplines:

1- The concept of customer journey.
2- Customer complaints (frequency and potential areas).
3- Customer complaints handling systems in Saudi airlines.

4- Problem solving methods in Saudi airlines.
5- The application of Knowledge management at Saudi airlines.

The data showed that the concept of customer journey is not absorbed by the employees of Saudi airline company. One where another, this can echoes that the company management did not give enough training to its employees and hence the poor perception of the concept of customer journey. On the other hand, the data showed a high expectations from the employees of Saudi airline that customers are high likely to complain against all the touchpoints of a typical customer journey. In addition, the employees gave high importance to all customer journey touchpoints. From my perspective, this echoes lack of awareness from the employees and lack of training from the Saudi company management.

Further, the data showed that the employees of Saudi airline company reckon that the most two important stages in the process of customer complaints handling systems are (i) receiving customer complaints, and (ii) responding to the customer complaints. In addition, the data showed that A3 thinking, the 8-deciplines and the 5-whys are the top three frequently used and most important problem solving methods in the company.

On the other hand, the data showed that the employees see that both (i) the implementation of the solution and (ii) the demonstration of the solution for preventing future reoccurrence of the problem are the most two significant steps in the customers' complaints handling system. However, they give equal weights for the importance of the eight steps of problem solving method which is applied by the Saudi company.

Finally, despite that the data showed that the employees of the Saudi airline company see that the application of knowledge management and knowledge sharing are paramount for the Saudi airline company, they believe that the Saudi courier does not support and implement any of the knowledge management applications.

The findings of the structured interviews showed that the current customers' complaints handling system of Saudi airline company is not effective enough to improve the level of customer satisfaction for many reasons. First, there is an evidence on the lack of training for the employees of the Saudi airline courier . Such a lack of training will result in negative consequences on the outcome of complaints handling system. Second, the lack of awareness about the customer journey model will reduces the chances of understanding the needs of a typical customer of airline company. Third, the evidence that the Saudi airline management does not support the applications of the knowledge management will also increase the likelihood of the problem reoccurrence in the future which will deteriorate the level of customer satisfaction.

As a result, in the next chapter I discuss the proposed A3 approach whose main objective is to improve the quality of outcomes of the customers' complaints handling system by giving recommendations on how to improve the previously mentioned weak points in the Saudi airline customer complaints handling system.

Chapter V
Development of a customised A3 Thinking Approach for Airline Sector

5.1 Introduction

This chapter discusses the possibility of providing a customised A3 Thinking approach for complaints handling and the proposed customer journey for the airline sector. The development of the A3 Thinking approach was enabled by addressing the limitations of the traditional problem-solving approaches (see Section 3.5). Section 5.2 outlines the proposed customer journey for the airline sector. Section 5.3 discusses the definition of the customised A3 Thinking approach. Section 5.4 illustrates the created knowledge from a customised A3 Thinking approach. In-depth capture and sharing of knowledge are summarised in Section 5.5. Finally, the chapter describes the process of using the customised A3 Thinking approach in Section 5.6.

5.2 Proposed Customer Journey for the Airline Sector

A customer journey has been developed by the author, as illustrated in Figure 5-1, to have a clear understanding of each step a traveller will go through until reaching the final intended destination safely. This is to gain a definite picture of what expected services are offered by the airline company as well as to understand the potential problems that could occur that would lead to customer complaints.

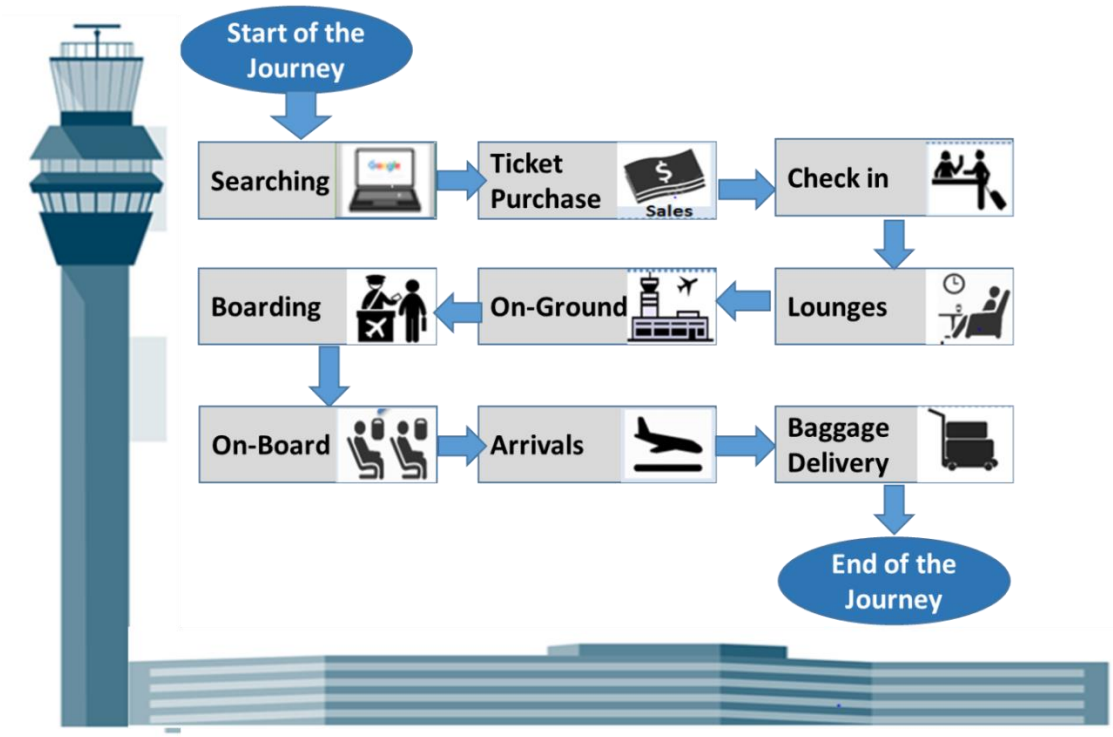
The customer journey is the process that outlines the phases through which customers pass during their flight experience. The process can be divided into three main stages:

1. Pre-Journey; represents the actions taken by the customer during the decision-making process to book the flight ticket, which includes searching the company's website to find the right price and convenient flight time, and eventually to book and pay for the flight.

2. Journey; the departure and the arrival points, considered as the main journey. From passenger check-in to departure via the airline, there are several occasions when airlines can bring various services to customers, and it is the provision of those services that will influence customers' next reservations.
3. Post-Journey; the customer provides feedback and possibly plans for his/her next trip with the same airline.

Customer satisfaction and delight are achieved when the customer receives all the expected services in each of the phases without any problems, as shown in Figure 5-1. Contrarily, customers may encounter problems that negatively impact upon their journey, which leads to complaints affecting the airline's business and reputation.

Figure 5.1: Generic customer journey in a typical airline company



The study identified that little awareness exists about the typical customer complaints associated with the phases of a customer journey and the expected services offerings (see Section 4.2). Consequently, the author has adopted (from the literature review and field study) a table that illustrates all the phases of a customer journey, service offerings and customer complaints, as shown in Table 5-1. Additionally, this will help to find problems (potential customer complaints) that must be solved and, furthermore, identify opportunities for improvement.

Table 0-1 Touchpoints of customer journey associated with service offerings and typical customer complaints

<table>
<tr><th colspan="5">Customer journey</th></tr>
<tr><th colspan="2">Phases</th><th colspan="2">Service offerings</th><th>Typical complaints</th></tr>
<tr><td rowspan="8">Pre-journey</td><td rowspan="6">Searching</td><td colspan="2">Promotion & Advertising</td><td rowspan="6">• No clear conditions
• Problems with websites
• Expensive tickets
• Not on time</td></tr>
<tr><td colspan="2">App</td></tr>
<tr><td colspan="2">Ticket Price</td></tr>
<tr><td colspan="2">Flight Schedule</td></tr>
<tr><td colspan="2">Destination</td></tr>
<tr><td colspan="2">Non-stop Flight</td></tr>
<tr><td rowspan="3">Ticket Purchase</td><td rowspan="2">Direct Sales</td><td>Call Centre</td><td rowspan="3">• Location of offices
• Busy
• Difficulties using websites
• Refunds</td></tr>
<tr><td>Website (Online)</td></tr>
<tr><td>Indirect Sales</td><td>Travel Agency</td></tr>
<tr><td></td><td rowspan="2">Check-in</td><td colspan="2">Pre-Flight</td><td rowspan="2">• Transfer service
• Lounge facilities
• Queuing – waiting time</td></tr>
<tr><td colspan="2">Immigration Service</td></tr>
</table>

Journey		Security Service	• Number / Baggage weight allowance • Aircraft clean and modern-looking • Quality of catering served on the plane • Entertainment content • Cleanliness of the aeroplane toilets • Comfort of the aeroplane seats • Quality of air-conditioning in the aeroplanes • Staff attitude / behaviour • Baggage handling
		Lounge	
	On-Board	Cabin Comfort	
		Catering	
		Entertainment	
		Wi-Fi	
		Sky Sales	
	Post-Flight	Immigration Service	
		Arrival Lounge	
		Baggage Delivery	
		Customs Service	
		Transfer Service	
Post-Journey	Customer Feedback	Suggestions	• Unclear channels or ways to receive suggestions or complaints • Long survey • No occasions greeting
		Compliments	
		Complaints	
	Customer Engagement	Survey	
		Occasions Greeting	

5.3 Knowledge Creation through the A3 Thinking Approach

The first section in the A3 Thinking approach, known as problem-solving, is comprised of seven elements as follows: (1) Team, (2) Background, (3) Current condition, (4) Root cause analysis, (5) Proposed solutions, (6) Implementation plan, and (7) Prevent recurrence and Follow-up actions (see Figure 5-3). However, this section also inspires complaints handlers to reflect on their actions prior to developing the solution. The elements in the A3 Thinking approach, and the provision of the recommended tools, must be considered as essential in order to reap the benefits of the approach. These elements are now explained:

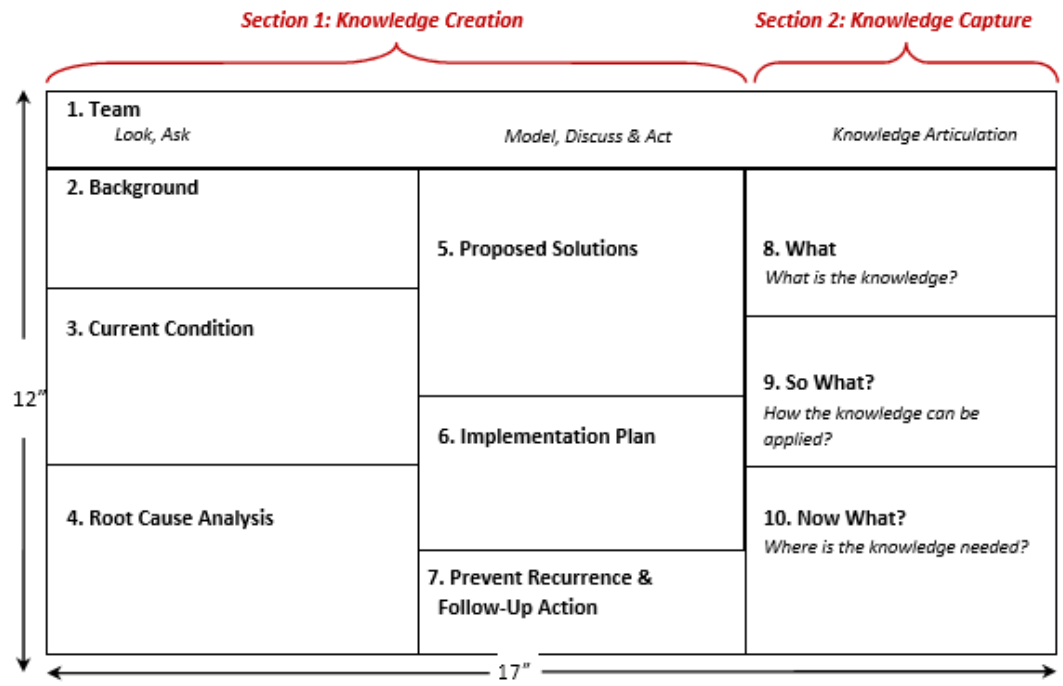
1. **Team:** Involves responsible people working with the complaints handler and process; the A3 Thinking author, date, title, and A3 Thinking report reference number.
2. **Background:** Facts of the problem are shown in this section, such as customer satisfaction. The goal of the current state of the problematic can also be mentioned.
3. **Current Condition:** Documentation and validity of the observations are needed in order to understand the complaint. In addition, clarification of the problem description and visualization of the necessary data should be performed.
4. **Root Cause Analysis:** This element takes into consideration the most useful way through which identification or explanation of the root cause for the current state can be obtained visually. Also, the element can make a diagnosis of the problem and discover the types of customer complaint and the deficiencies associated with them. These activities are performed to discover the potential root causes and explain the reasons behind each cause.
5. **Proposed solutions:** Explore a set of prospective solutions that directly challenge the root causes. This element also tends to ensure that the solutions manage the root cause of the complaint.

6. **Implementation Plan:** This element carries out the corrective actions by focusing on the basic actions and outcomes, as well as monitoring the potential effect and determination of the required persons, and deadlines.

   Recommended tools include a Gantt chart that helps display actions, roles, outcomes and timelines. Also, graphs and tables, flowcharts, check sheets and control plan are required.

7. **Prevent Recurrence:** This can be performed through identifying the results that have an effect on other processes in complaints handling.

Figure 0-1 A3 Thinking template



5.4 Knowledge Capture and Sharing through the A3 Thinking Approach

The section of knowledge capture and sharing implementation follows on from the completion of the first section of knowledge creation in the A3 Thinking approach. Illustration of the final integrated action to create the useful knowledge captured in the knowledge articulation section is clarified in Table 5-3. Hence, this can be used as a complaints handling reference point in the future. The details of

identified questions in each section of knowledge articulation, as structured in the A3 Thinking approach, are explained as follows:

A. What? – What is the knowledge?

The complaints handler must know the type of knowledge required such that the lessons learned can be captured and documented. The following consideration must be given when the lessons learned are represented and captured:

- Reflection in action: tacit knowledge may be unintentionally developed whilst solving the complaints, such as that created during brainstorming activity or when the complaints handler starts solving the problem within the complaints handling team. This activity can happen whilst attempting to solve the problems (complaints).
- Reflection on action: depending on the verified solution, this activity captures the lessons learned and is performed after solving the problem identified in the complaints handling system.

B. So What? – How can the knowledge be applied?

When knowledge is built through learning in the complaints handling process, the complaints handler is required to choose the lessons learned that have been captured in the 'What?' element. This process is considered essential as a reference for future complaints handling. The lesson learned is then formulated by the A3 Thinking team as a complaints handling rule or complaints handling recommendation.

The complaints handling rule is considered as a main reference and highly recommended when there is a need to make a decision to create complaints handling in the future. Meanwhile, the complaints handling recommendation is a general piece of advice or suggestion made by the complaints handler based on his/her experience.

C. Now What? – Where is the knowledge needed?

The complaints handlers usually tend to identify which complaints handling rules or complaints handling recommendations are functioning in the complaints

handling development. The aim of this action is to provide useful knowledge in the right place and for the right people.

Creating knowledge is considered as the final aim of the A3 Thinking approach. It is the last action during which the complaints handler tries to create useful knowledge acquired through the prior actions of the problem-solving. Useful knowledge that has been derived from the complaints handling rules and complaints handling recommendations in the knowledge articulation section should be used as a complaints handling reference. Thus, the useful knowledge captured in this research is not only based on the complaints handling question checklist but on the complaints handling statement checklist taken directly from the complaints handling rules or complaints handling recommendations stipulated in the knowledge articulation section after having been reviewed by knowledge experts in service provision.

5.5 A Customised A3 Thinking Approach for the Airline Sector

In Chapter Three, the researcher discussed different problem-solving approaches and pointed out the limitations associated with the traditional ones, namely their inability to create, capture, and share knowledge. To these shortcomings may also be added: (i) lack of sharing the causes of and solutions to problems; and (ii) waste of resources resulting from the recurrence of problems, which requires companies to repeat the whole process more frequently. Such inefficiencies might also promote a significant deterioration in customer satisfaction resulting from the recurrence of problems, and/or delays/ignoring the response to customer complaints.

Figure 5-4 illustrates the proposed A3 Thinking approach to handle customer complaints in the airline sector. The approach covers the full process from problem identification and suggests a solution to convert the solved problem into articulated knowledge. The approach also provides recommendations where the captured useful knowledge can be applied during the customer journey in order to support decision-taking and prevent the recurrence of problems. Two important functions of the knowledge are recognised in the A3 Thinking approach. Firstly, there is the capturing, creating, and sharing of useful knowledge (see stage 3 in

the case study); and secondly, there is the ability for the knowledge to be used as a complaints handling reference point. The complaints handling personnel can use the knowledge as a complaints handling reference point in two situations:

- Problem prevention: helping the complaints handlers to avoid the problems likely to occur in service provision through consideration of the customer journey (see Table 5-1 Touchpoints of customer journey, service offerings, and typical customer complaints).
- Problem solving: helping the complaints handlers to identify and suggest the solutions necessary for addressing problems. This can be accomplished through the root cause analysis (see stage 3.4 in the case study).

The development of the A3 thinking approach in the Saudi Airline industry

Supported by the findings in chapter four, this section provides a proposed A3 thinking approach which is expected to improve the quality of the customers complaints handling system in the Saudi airline industry. As shown in the findings, the company needs to reconsider the following weak points in the existing system of the customer complaints handling system:

- Training for Human Resources.
- The articulation of the concept of customer journey to identify the different touchpoints of a typical customer of airline company.
- The applications of knowledge management and knowledge sharing.

The proposed A3 thinking approach is comprised from five main stages as shown in figure 5.3 below. As discussed in the literature review chapter, there is no consensus on one system and/or method that has endless power in problem solving or handling customer complaints. I also concluded in the literature review chapter that the fact that companies are different in terms of operational structure and/or culture, so, there is no one system that fits all types of companies. As a result, this customised A3 thinking approach was developed after the evaluation of the current situation of the quality/effectiveness of the existing system of

handling customers' complaints. Below is a demonstration for the five steps of the proposed A3 thinking approach.

Stage1: The preparation of the airline company for the A3 thinking approach

Given the lack of the culture of problem solving in general, and customer journey in particular, it was important to provide the necessary training for the company human resources in order to assure the delivery of the desired outcomes of the proposed A3 thinking approach. However, before providing the training, it is essential to obtain an endorsement from the company top management on the application of the A3 thinking approach. The endorsement from the top management provides a written commitment from the management that they are happy to spend some resources on the new system of handling customer complaints.

Stage 2: Identifying and understanding customers' problems by using the concept of customer journey

The success of this stage is contingent on the success of the training received by the human resources who are responsible for working on the system of handling customers' complaints. After the delivery of sufficient training for the team of the complaints handling system, the team will be more efficient in identifying the problems according to the touchpoints of a typical airline customer journey.

Stage 3: Fill in the A3 thinking approach

In this stage, the team responsible for of the complaints handling system will fill the template of A3 LAMDA which includes five main sections : Look, Ask, Model, Discuss and Act as shown in the figure 5.3. The success of this stage depends on the precise identification of the problems and their corresponding roots because the proposed solutions are based on the identified roots of the problem. Any mistake in the process of identifying the root causes of customer problems will result in implementing the wrong solution which might end up with a poorer level of customer satisfaction.. The final step in the third stage is to articulate the

knowledge created from solving the problems which are identified according to the customer journey. The objective of this step is to make sure that the team has successfully absorbed the knowledge they created from solving the identified problems by asking three consecutive questions (i) what? (ii) so what?, and (iii) now what?

Stage 4: Circulating the A3 thinking template

The objective of this stage is to ensure that the A3 Thinking report is finalised when submitting to the A3 team for distribution. In addition, to gain knowledge from the customised A3 Thinking approach and shared within the company by:

a) Distributing the A3 Thinking report through emails and meetings whether as a soft copy or hard copy.

b) Keeping the A3 Thinking report updated through the addition of feedback and opinions provided by the A3 Thinking team.

Furthermore, the knowledge created is efficiently distribute to the right persons in their rightful positions and at the right time. Copies of the report should be distributed to departments and teams, and done so by all means possible: e-mail, social media, Ethernet, and in brochures.

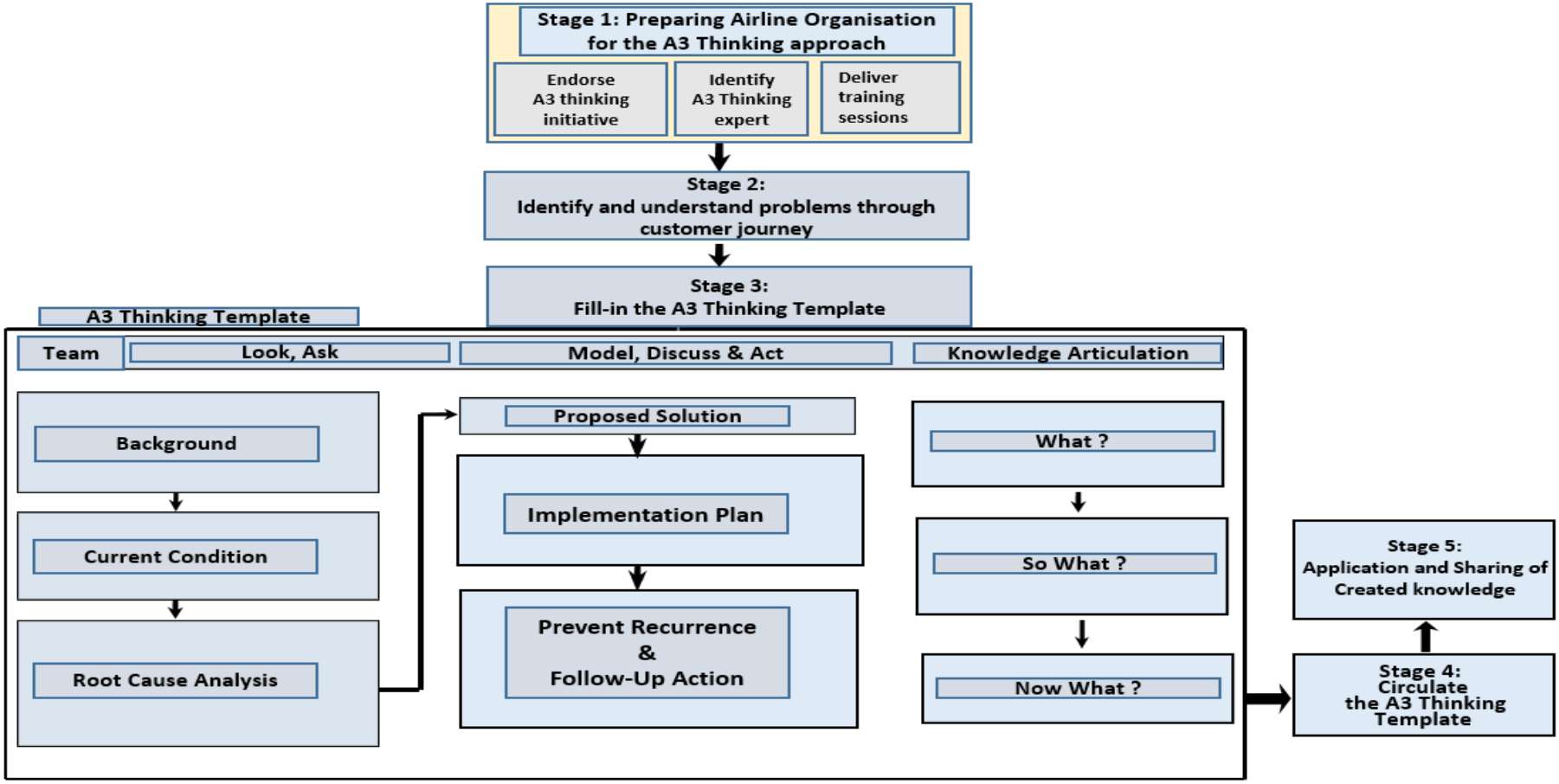
Stage 5: Application and sharing of created knowledge

The two stages are interrelated. Their main objective is utilise the knowledge that has been created in step three to the maximum by circulating the template of the successfully solved problems to all company departments. By doing so, we make sure that the return on the solved problem in one department will increase as other departments can benefit from the successful solutions. Such a tacit knowledge is considered a company asset (intangible asset) which is expected to have a positive impact on the company performance throughout the following channels:

- Improving customer satisfaction level by reducing the likelihood of raising more complaints in the future.

- Improving the company reputation as a result of the improved customer satisfaction and improved operations.

Figure 0-1 Proposed A3 Thinking approach for the airline sector



The implementation process of the proposed A3 thinking approach

In this section, I provide a detailed prescription for the implementation of the A3 thinking approach. The prescription includes three main points (i) the objective of each step, (ii) the procedures for a successful implementation, and (iii) the potential output(s). By doing so, you give a full picture for the top management as well as for the team of the problem solving and customers' complaints handling about the new approach.

<u>Stage 1</u>: Preparing the Airline Organisation for the A3 Thinking Approach

- **Objective:** To build a good understanding and awareness among employees about the A3 Thinking approach. In addition, to develop adequate training sessions and teaching materials required for the development and improvement of skills during the implementation of the approach. This results in raising efficiency and enabling employees to experience the process of complaints handling and solving the problems successfully.
- **Process:**

a) Endorse A3 Thinking initiative by the top management.
b) Assign the job to a person or hire a new person with relevant background and skills.
c) Deliver training sessions as follows:
   I. Train the trainers in order to build a team of people who are expert in the customised A3 Thinking approach.
   II. Provide training to all employees who are or will be involved in complaints handling. This should be compulsory training for customer-facing employees.
   III. Provide awareness training to the top management.

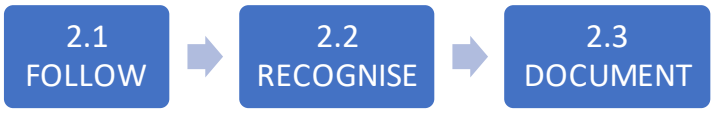
- **Output:** Well-prepared organisation, well-trained employees with high skills, A3 Thinking experienced(s), training materials and standardised A3 Thinking approach.

<u>Stage 2</u>: Identify and understand Problems through the Customer Journey

- **Objectives:**

  Quick identification and understanding of where the complaint in the customer journey is located; consequently the company can accelerate improvement of the services (see Proposed Customer Journey, Section 5.2).

- **Process:**



a) Follow the customer journey to guarantee that the complaints have been identified accurately.
b) Identify the location of complaints in the customer journey.
c) Classify the important and relevant information about the identified complaints.

- **Output:**
  - The customer complaints data are documented in detail.
  - In-depth understanding of the identified complaint is manifested.

- **Template:** Complaint Identification Template, see Figure 5-4.

Figure 0-1 Complaint identification template

Complaint Identification Template

Name:

Date:

Position:

Importance:

☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

Least >> Most

Customer journey related:

☐ Searching ☐ Ticket Purchase ☐ Check-in ☐ On-Board

☐ Post-Flight ☐ Customer Feedback ☐ Customer Engagement ☐ Other

Short Description:

……………………………………………………………………………………………………

…………………………………………………………………

☐ Solved locally, How:

……………………………………………………………………………………………………

………

…………………………………………………………………

☐ Issue Closed

Signature

Stage 3: Fill-in the A3 Thinking Template

- **Objective:** To go through a process of complaints handling by using the A3 Thinking approach.

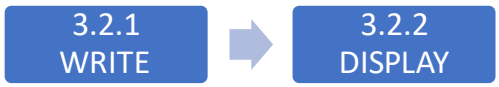
- The complaints handler begins to fill-in the A3 Thinking approach as follows:

Stage 3.1: Team

- **Objective:** To assign a person (A3 Thinking Author) and a team to handle the specific customer complaint and to follow the A3 Thinking approach to solve the problem and generate the A3 Thinking report.
- **Process:** Assign (A3 Thinking Author) who has responsibility for constituting the team to solve customer complaints through the A3 Thinking approach.
- **Output:** A3 Thinking Team.

Stage 3.2: Background

- **Objective:** To understand and document the important information from the customer complaints.
- **Process:**



a) Write the statement of complaints.

b) Display information visibly (tables, charts).

- **Output:** Complaints background definition.

Stage 3.3: Current Condition

- **Objective:** Describe the customer complaints by simplifying the representation of the problem by visualising the information (e.g. drawings, diagrams) and highlighting those issues that may also be presented numerically.
- **Process:**

a) Illustrate the current condition of the complaint.

b) Describe the impact of the complaint.

- **Output:** Description of current condition at the time of complaint.

Stage 3.4: Root Cause Analysis (RCA)

- **Objective:** To examine the root causes of the identified complaints.
- **Process:**

a) Analyse the complaints with RCA.

b) Use the convenient methods to identify the root cause of complaints (e.g.: fishbone diagram).

c) Outline the findings visually.

- **Output:** Complaint causes are identified.

Stage 3.5: Proposed Solution

- **Objective:** To develop an effective solution for the root cause of the complaint.
- **Process:**

a) Create a proposed solution.

b) Address the root cause of the customer complaint.

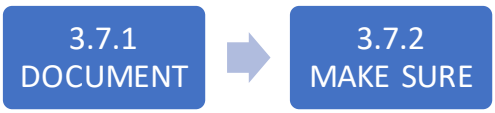
- **Output:** Potential complaint solution that addresses the current condition in stage 3.3.

Stage 3.6: Implementation Plan

- **Objective:** To provide a plan that outlines the various phases that must be followed to fully implement the proposed solution.
- **Process:** Define a plan of the application by using project plan, Gantt chart or timeline.
- **Output:** Detailed Gantt chart of implementation plan.

Stage 3.7: Prevent Recurrence and Follow-up Action

- **Objective:** To address customer complaints and sustain improvements while avoiding recurrence of the complaints.
- **Process:**



a) Document the findings.

b) Make sure to prevent the same complaint.

- **Output:** Solutions to the problem and maintain continuous improvements to prevent recurrence of the problem in the future.
- **Template:** Follow Up Template, see Figure 5-5.

Figure 0-2 Follow up template

Follow Up Template

Name:
Date:
Title:

Complaints	Before Resolution	After Resolution
No clear conditions		
Problems with websites		
Expensive tickets		
Lounge facilities		
Queuing – waiting time		
Number/Baggage weight allowance		
Baggage handling/lost		
Entertainment content		
Cleanliness of the aeroplane toilets		
Comfort of the aeroplane seats		
Catering		
Staff attitude/behaviour		
Other		

Signature:

Stage 3.8: Knowledge Articulation – What is the knowledge?

- **Objective:** Capturing and creating knowledge and experience through the complaint solving activities.
- **Process:** Capturing the lessons learned.
- **Output:** The result is a reference point of the lessons learned.
- **Template:** Lesson learned template, see Figure 5-6.

Figure 0-3 Lesson Learned Template

Lesson Learned Template

Name:

Date:

A3 Thinking Report Title:

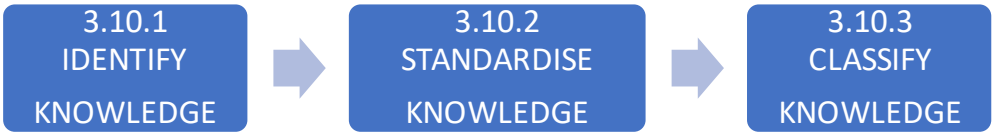
Description:

Signature:

Stage 3.9: Knowledge Articulation – So What?

- **Objective:** To regulate the knowledge in an efficient way and provide them in the form of a complaints handling rule or recommendation, making it useful for future application and sharing in other projects.

- **Process:**



a) Identify the knowledge which is necessary to positively affect the company, process and people.

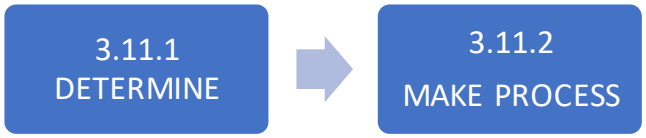
b) Standardise the knowledge by creating a complaints handling rule or recommendation to enable applications in the future.

c) Classify the useful knowledge related to complaints handling problems.

- **Output:** Complaints handling rules or recommendations are revealed in order for use with specific complaints handling issues.

Stage 3.10: Knowledge Articulation – Now What?

- **Objective:** To distribute the useful knowledge and share it among the right people who can apply it at the right time.
- **Process:**



a) Determine starting points.

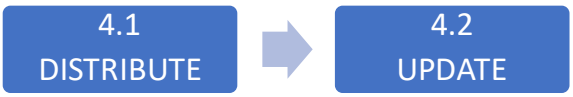
b) Make the process, functions or activities well known and familiar while practicing.

- **Output:** Standardisation of knowledge is revealed.

<u>Stage 4</u>: Circulate the A3 Thinking Report

- **Objective:** To ensure that the A3 Thinking report is finalised when submitting to the A3 team for distribution.

- **Process:**



a) Distribute the A3 Thinking report through emails and meetings whether as a soft copy or hard copy.

b) Keep the A3 Thinking report updated through the addition of feedback and opinions provided by the A3 Thinking team.

- **Output:** The A3 Thinking report to be verified within the A3 Thinking team.

Stage 5: Application and Sharing of Created Knowledge

- **Objective:** To ensure that useful knowledge is being provided and can be shared in an efficient way in order to enrich the knowledge environment, giving support to decision-makers when adopting future projects.
- **Process:**

a) Enhance the knowledge environment by the provision of the A3 Thinking approach (e.g., café or informal meeting).

b) Collect the complaints handling rules and recommendations to be retained together as a complaints handling reference point.

c) Provide the complaints report with useful knowledge as needed and distribute it.

d) Expert people are held responsible for verification of the knowledge.

e) Top management is held responsible for ensuring that the complaints handling process is effectively shared and applied.

- **Output:** The proposed A3 Thinking approach now is likely to be a complaints handling reference point of useful knowledge, which was developed using five stages of detailed processes, and which has been clearly described as a result of creating and capturing valuable knowledge in order to facilitate decision-making in the airline sector.

5.6 Conclusion

This chapter main objective was to discuss the proposal of the A3 thinking approach as a solution for the failure of the existing system of handling customers' complaints at the Saudi airline. As evident in chapter four, the results of the interviews with the employees of the Saudi airline company revealed that there are some issues with the current system. The issues were summarized in three main areas including (i) lack of training for the team responsible for the handling customers' complaints, this lack of training, as shown in the discussion, is the product of the poor culture of the company management towards the matter of customer complains. (ii) lack of understanding and therefore poor implementation for the concept of customer journey as a platform for better identification of the needs of a typical airline customer at different touchpoints during his/her journey. (iii) poor applications of knowledge management and knowledge sharing which causes a significant loss in terms of time, resources and the intangible assets (the tacit knowledge generated from solving previous problems at different departments).

As a result, in this chapter, I propose a customised A3 thinking approach in an attempt to get rid of the flaws in the existing system of handling customer complaints at the Saudi airline company. This A3 thinking approach consists of five main steps. The five steps include: (i) preparing the management of the airline company for the culture of problem solving, (ii) teaching the team of handling customer complaints the concept of customer journey which will help them understand and predict the needs of a typical airline customer at different touchpoints, (iii) Putting the A3 thinking approach into action by asking the team responsible for handling customer complaints to fill the A3 template. The A3 template was designed in a way that allows the team for using the customer journey to identify the problems and the causes of the identified problems of the dissatisfied customers. It also helps the

team propose solutions for the problems identified by tackling the causes of the problems but not the symptoms. Before we move to the fourth step, the implantation of the A3 template requires the team responsible for handling customer complaints to assure that the causes of the problems have been addressed and the likelihood of the reoccurrence of the customer complaints are minimised. Step (IV) time now comes to increase the return on the investment made on the customer complaints handling systems. In this stage, the A3 template should be circulated on all departments after we assured its efficiency in identifying and tackling problems and customer complaints. Finally, stage (V), in this stage the company share the tacit knowledge created from stages 3 and 4 with all the company departments. By doing so, the company can save a lot of time and resources by applying the recommendations generated from stages 3 and 4 at all departments without the need of going through the entire process from scratch if the other departments encounter any issue with customers.

In the next chapter (chapter six), I validate the A3 thinking approach by interviewing (consulting) experts in the airline industry. The experts who I had met and consulted have significant experience in the airline industry. As a result, they are eligible for providing such a 'valuable' and 'plausible' evaluation for the proposed A3 template of this research. As mentioned in the methodology chapter, the reasons behind choosing 'asking the expert' as a validation method for my proposed approach are coming from two main standing points: (i) the cost-benefit approach, and (ii) the inapplicability of testing my approach in real life at a sample of companies to see the impact of the application of my approach on the magnitude of customer complaints as a proxy for customer satisfaction. This validation method was articulated and implemented in previous research (see for example, Saad et al., 2013).

Chapter VI
Validation of the A3 thinking approach

6.1 Introduction

In Chapter Five, using the customer journey as a platform, the researcher explained the development of a customised A3 Thinking approach for problem-solving in the airline sector (see Section 5.5). The proposed approach is based on a process that consists of five different stages. Breaking down the customer journey into touchpoints provides in-depth understanding of the place and root causes of the complaint, which contributes to better analysis and solution of a problem (see Section 5.2). The researcher conducted case studies at one of the international airlines in Saudi Arabia (Saudi Airlines), specifically in the complaints handling department of the Guest Relations Unit. Case studies and expert judgement evaluations were implemented in order to validate the customised A3 Thinking approach of problem-solving.

Before we can rely on the proposed customised A3 thinking approach which I explained in chapter five, one has to validate the approach. The validation process includes two dimensions; (i) the theoretical validation, and (ii) the practical (professional) validation. The theoretical validation has been conducted already throughout the thesis, specifically, in the literature review chapter and the methodology chapter. The theoretical validation included the criticism of the existing problem solving systems together with the criticism of the customer complaints handling systems. By doing so, I showed the drawbacks of the existing systems (methods), and from there I proposed the customised A3 thinking approach. The proposed thinking approach has been developed in a way that addresses the flaws of the existing methods (for more details, see sections (2.4 and 2.5 in the literature review chapter & Notes on the validation of the A3 thinking approach in the methodology chapter). The theoretical validation has been, also, tested by collected simulated data about a customer who has submitted a complaint stating that his/her luggage was lost. The A3 customised template was used to solve this problem and the discussion is provided in section 6.2 of this chapter.

The second dimension is the to consult an expert in the airline industry. As I explained in the methodology chapter, reasons related to (i) the inapplicability of testing the A3

approach in real organisations for a sufficient time and (ii) cost-benefit approach, the expert consultation was an acceptable compromise for validating the A3 thinking approach. The expert validation is discussed in section 6.3 in this chapter.

The rest of this chapter is structured as follows. Section 6.2 discusses the case studies, and Section 6.3 describes the expert judgment to validate the customised A3 Thinking approach. Finally, section 6.4 concludes.

6.2 Case Studies

In this section, two case studies that were performed as a means of validating the approach proposed for handling customer complaints are discussed. In conducting these case studies, the customised A3 Thinking approach used the data collected during the field study and from the interviews. Due to the fact that most of the data are confidential and must remain so, the data presented in this chapter have been simulated. The two case studies are described in the following sub-sections.

6.2.1 Case Study 1: Solving Actual Customer Complaints

The aim of this case study is to resolve a real customer complaint. Therefore, it utilises the process of the customised A3 Thinking approach proposed in Section 5.6. The study focused on one example of a customer's complaint. The customer had an issue with luggage, as shown in Table 6.1.

Table 0-1 Customer complaint

CASE STUDY 1 **"I did not get my luggage"** *Sher Afzal Khan (Pakistan) 11th January 2018* ✓Trip Verified | *Jeddah to Peshawar via Riyadh. I came from Jeddah on January 5, 2018 via Riyadh to Peshawar. At the airport of Peshawar, I did not get my luggage. I wrote a complaint, the authorised person told me that I will receive it within two days. It is now 10th January. Today I came to the airport, the same situation. The most strange thing is they told me that they had received the remaining bags on 27 December flight and my flight was on 5th January. Also, they had no idea when they*

will receive. I came for two weeks to Pakistan, so this made my vacation one of the most stressful.

This case study was performed in accordance with the customised A3 Thinking approach, as explained in Section 5.5. In addition, consideration was given to the phases of the customer journey, as explained in section 5.2, in order to facilitate the effective handling of the customer complaint. The following stages were carried out for this case study:

Stage 1: Preparing the Guest Relations of Saudi Airlines for the A3 Thinking Approach

It was ensured that the employees were well informed of the process of using the customised A3 Thinking approach. The employees involved were a group of individuals representing the different departments that are directly and indirectly involved in customer complaints of one person from Guest Relations. This individual or the group of people comprise the A3 Thinking problem-solving team.

Stage 2: Identify and understand the Problems through the Customer Journey:

To ensure that the issue has been managed accurately through the customer journey, as proposed in Section 5.2, the author has marked on the customer journey to indicate where the customer complaint arose, see Figures 6-1 and 6-2.

Complaint Identification Template

Name: **A3 Thinking Team**

Date: **11/01/2019**

Importance:

[ ] [ ] [ ] [ ] [ ] [ ] [ ] [X]

Least >>Highest

Customer journey complaint reason:

[ ] Searching [ ] Ticket Purchase [ ] Check-in [ ] On-Board

[X] Post-Flight [ ] Customer Feedback [ ] Customer Engagement [ ] Other

Short Description:

Sher Afzal Khan (Pakistan), 11th January 2018,

Customer did not get his luggage; the flight was from Jeddah to Peshawar via Riyadh.

[X] Solved locally, how? Saudi Airlines has apologised to the customer for the delay with his luggage.

Also, he was informed that the luggage will be delivered in two days' time. Reason: due to the delay that happened during the flight and short connection time.

[X] Issue Closed

Signature:

Figure 0-1 Complaint identification template

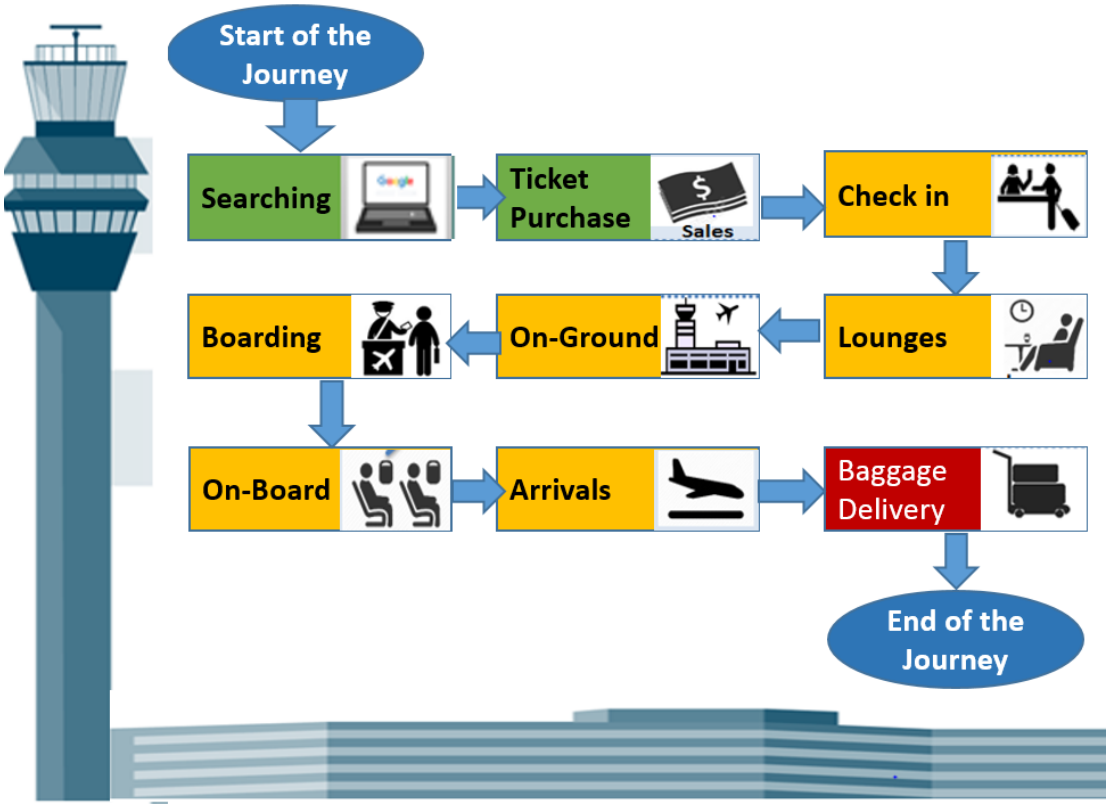


Figure 0-2 Customer experience

Stage 3: Fill-in the A3 Thinking Template:

Stage 3.1: Team

- People from Guest Relations have been assigned as A3 Thinking team members to solve the complaint and generate the A3 Thinking report.

Stage 3.2: Background

- Saudi Airlines has recently been saddled with complaints from different customers regarding lost luggage and customer dissatisfaction.

Stage 3.3: Current Condition

A rise in the amount of mishandled luggage means increased customer dissatisfaction and more complaints. Figure 6-2 shows the proportion of customer satisfaction in the key stages of a customer journey. It is obvious from the figure that the lowest customer satisfaction is in Post Flight (2.9 out of 5).

Figure 0-3 Customer satisfaction

Stage 3.4: Root Cause Analysis (RCA):

The identified complaints have been analysed through fishbone diagram, see Figure 6-4.

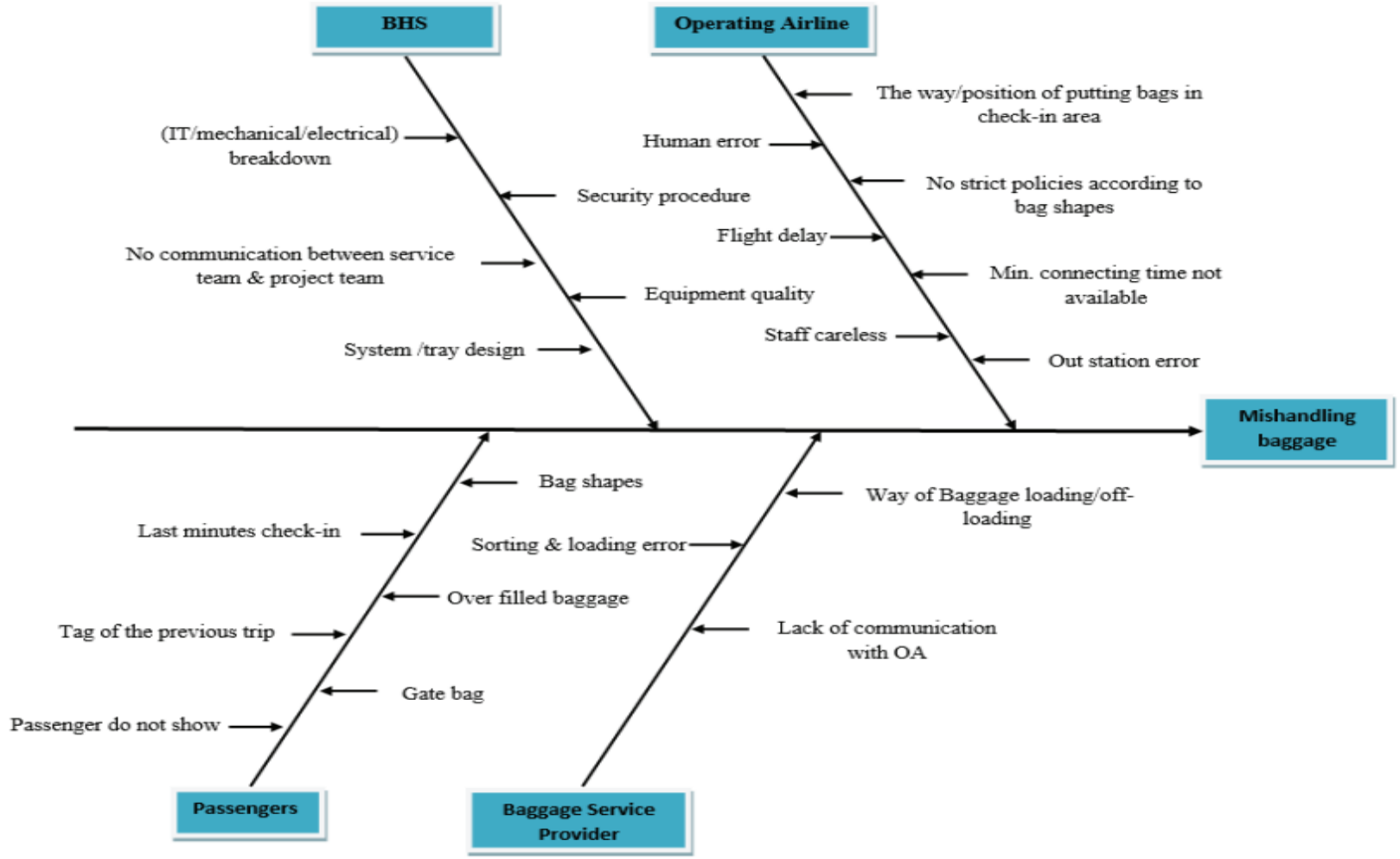


Figure 0-4 Root Cause Analysis

Stage 3.5: Proposed Solution:

Table 6-2 illustrates the potential complaint solution that addresses the current condition.

Table 0-2 Potential complaint solution

Counter-measures	Expected impact on target	Types of solution	
		Contemp	Perm
- On-time luggage delivery **-Increasing the check-in counters and minimise the staff error** **-Training employees**	• Increase the awareness of the importance of baggage handling and customer satisfaction. • Understand the customer journey. • Training for the check-in counter employees.		✓
Building effective communication channels: **a- Between customers and the company (i.e. social media)** **b- Across company managerial structure and between different departments (i.e. strong networks and social media)**	• Reduces the severity of the mishandled luggage Problem. • Increase the efficiency of processing the customer complaint handling. • Contribution to the employees' awareness of the critical causes for these problems.		✓

Link management's compensation plans (i.e. stock options) with long-term target rather than short-term	• Motivate managers to allocate more resources to training, invest in learning cycles and pay more attention to the customer satisfaction level by promptly and equally responding to all customer complaints. • Incentivise managers to spend more resources on long-term value creation activities (e.g. knowledge management and learning cycles).		✓
Regularly measuring customer satisfaction (i.e. online survey)	• Keep tracking the improvement of the complaints handling process for continuous improvement plans.		✓

Stage 3.6 Implementation Plan:

Table 0-3 shows a plan that outlines the various phases that should be followed to implement the proposed solution.

Table 0-3 Implementation phases for proposed solution

No.	Tasks	Actions to implement proposed solutions	Responsibility
1	Train employees	• Provide training sessions to employees in different managerial levels	Complaints handling team
2	Implement effective problem-solving approach	• Invest in hardware and software solutions	IT department

3	Evaluate efficiency of communication channels	• Undertake periodic evaluation of the effectiveness of the communication channels including the customer journey	IT department
4	Measure customer satisfaction level	• Online survey • Over the phone survey • Paper survey	Complaints handling team
5	Link management compensation with performance	• Switch from direct compensation (salary/bonus) to stock options.	Management Board

Stage 3.7 Prevent Recurrence and Follow-up Action:

Table 6-4 illustrates the solutions arrived at in order to maintain continuous improvements to prevent the recurrence of problems in the future.

Table 0-4 Solutions to maintain continuous improvements

Prevent Recurrence and Follow Up Template

Name: **A3 Thinking Team**

Date: **11/01/2019**

Title: **Mishandled Luggage Problem**

Complaints	Before Resolve	After Resolve
"I did not get my luggage"	Complaint is caused by flight delay and short connecting time.	- Customers should be informed beforehand of any flight delays. - Strict adherence to flight schedule. - Increase the time of connecting flight. - Re-training of staffs in baggage handling.

Signature:

6.2.2 Case Study 2: Knowledge Articulation

As a result of the first case study described in the previous section, knowledge was created. To ensure that the knowledge created is efficiently captured, the second case study was performed as a means of articulating the knowledge through three stages, namely: what is the knowledge? so what? and now what? Its goal is to prove that the knowledge from the customised A3 Thinking approach is well captured and, hence, will be of great use in the provision of solutions to future complaints and simultaneously prevent recurrences. The stages in the second case study are described as follows:

Stage 1: What is the knowledge?

Table 6.5 shows the lessons learned.

Table 0-5 Lessons learned template

Lessons Learned Template

Name: **A3 Thinking Team**

Date: **11/01/2019**

A3 Thinking Report Title: **Mishandled Luggage Problem**

Description:

- Need to pay more attention to the baggage handling.
- Careful consideration of the effect of mishandled luggage problem that negatively affects customer satisfaction.
- Bringing alignment of interest between the top management and complaints handling department is one of key requirements to incentivise the top management to invest more resources in customer complaints. This will increase the customer satisfaction level and consequently improve customer loyalty and market share.
- Need to have a clear understanding of each step of the customer journey that customers go through during their flight experience.
- Always have open, active and effective communication channels with customers in order to solve problems and increase the level of satisfaction.
- Continuous training of employees improves the effectiveness of the customer complaints handling, which reflects a good reputation.

Signature:

Stage 2: So What?

Tables 6-6 and 6-7 illustrate the recommendations in respect of the complaints handling and the opportunities for improvement.

Table 0-6 Recommendations to manage complaints

Recommendation (Rec)		Issues			
		System	Environmental	Policies / procedures	Staff / people
	REC1		✓	✓	✓
GR Dep	Apply the customised A3 Thinking Approach process	✓			
	REC2	✓	✓	✓	
Communication channels	Apply the Customer journey				✓
	REC3	✓	✓	✓	✓
Complaints handling team	Training programmes for The A3 Thinking				

Table 0-7 Opportunities for improvement

Opportunities for improvement
• Improved operational efficiency. • Enhanced baggage handling system. • Enhanced tracking baggage accuracy. • Reduced baggage delays. • Improved baggage handling throughput. • Expanded Saudi Airlines' brand position and reputation. • Increased customer satisfaction through problem solving

Stage 3: Now What?

Table 6-8 shows the useful knowledge to be shared among the right people who can apply it at the right time.

Table 0-8 Sharing of knowledge gained

Issues	Statement
Environment	• Motivate top managers to pay more attention to the customer satisfaction level by promptly and equally responding to all customer complaints. • Link management compensation plans with actual performance and with the customer satisfaction.
System	• Using an A3 Thinking approach for problem-solving. • Applying a customer journey. • Applying a learning cycle for continuous improvement.
Staff/people	• Provide training programmes
Rules/Policies/Procedures	• Incentivise employees with target-based incentive plans.

Stage 4: Circulate the A3 Thinking Report

The knowledge has been gained from the customised A3 Thinking approach and shared within the company. Furthermore, the knowledge created is efficiently distributed to the right persons in their rightful positions and at the right time. Copies of the report should be distributed to departments and teams, and done so by all means possible: e-mail, social media, Ethernet, and in brochures.

Stage 5: Application and Sharing of Created Knowledge

The useful knowledge was provided and then shared in order to enrich and enhance the knowledge environment. In addition, the visualisation of appropriate data has been structured to identify and resolve the customer complaint. Complaints handling rules and recommendations have been provided for retention as a reference point and to give support to decision-makers. Finally, the top management is held responsible for ensuring that the complaints handling process is effectively shared and applied.

The completed A3 Thinking Report is shown in Figure 6-5.

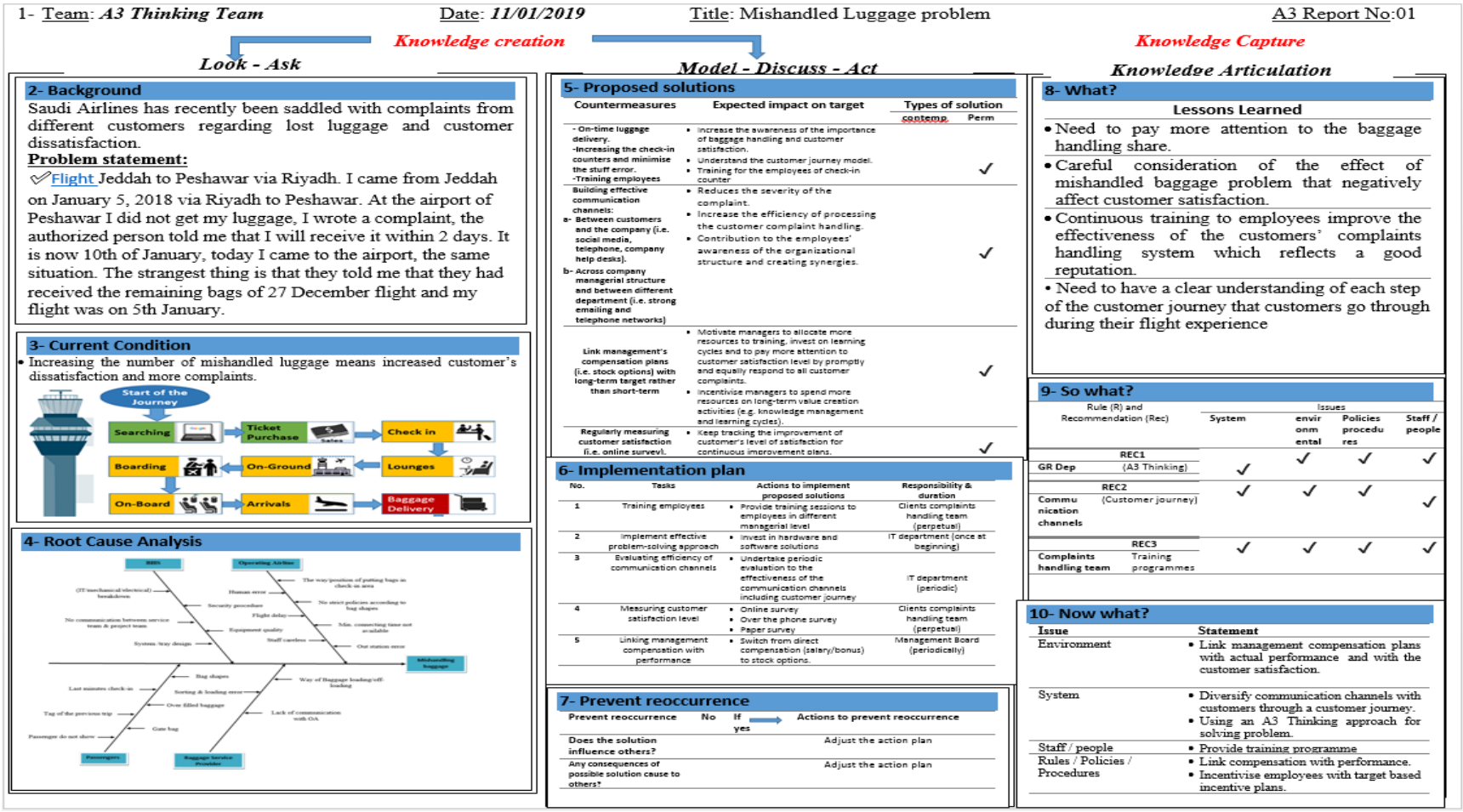


Figure 0-5 Completed A3 Thinking report

6.3 Expert Judgement

In attempting to validate the customised A3 Thinking approach, an evaluation based on expert judgment was undertaken. The approach was presented to five experts in the airline sector, and these individuals exercised their judgment to assess the usability, usefulness, and applicability of the approach. The experts were selected according to their accessibility and expertise, and came from professional and practitioner backgrounds, including consultants and senior management, with over twenty five (25) years' experience of working in the airline sector.

The proposed customer journey and the customised A3 Thinking approach, as defined in Chapter Five, were extensively explained to the experts who, in turn, found the approach and the customer journey to be simple and easy to follow. The experts also expressed the opinion that the approach is a direct one and a good example of what should be encouraged as good practice in the airline sector.

The discussion with the experts covered the five main steps of the proposed A3 thinking approach. The results of the discussion is summarized below:

- They emphasized on the importance of that the management has to acknowledge that there is a problem in the existing complaints handling system. This acknowledgement is translated into the management pledge and endorsement of adopting the new culture of improving customer satisfaction throughout the improved customer complaints handling systems.
- They also emphasized on the significance of providing a sufficient training for the team who will be in charge of handling the customer complaints. The training should cover:
    - Behavior
    - Commitment and motivation (incentive).

What the experts meant here is that the team of the customer complaints handling should be well-trained to the extent that they should mitigate customer anger level by showing good consideration to his/her complaint. By showing good listening to the complaint, the company could mitigate up to 50% of the magnitude of the problem.

On the other hand, the commitment of the customer complaints handling team reflects the fact that the team should show a professional due care towards the customers complaints given the high impact that the unsatisfied customers have on the company sustainability. The experts also proposed that the company should provide good incentive plans for the complaints handling team so they exert the maximum they can to increase their bonus throughout increasing the customer satisfaction throughout the reduced reported number of complaints.

- The experts also emphasized the importance of the concept of the customer journey. They said that the customer journey model makes it easy for the complaints handling team to understand the needs of a typical airline customer. They resemble the customer journey model with the road map that can be used to see the potential bottlenecks (obstacles) that can lead to customer dissatisfaction.
- The experts had positive impression regarding the A3 template which the complaints handling team have to fill. However, they raised the point that the team should meet more frequently, especially in the stage where they have to analyse the situation to identify the root causes of the complaints. They proposed brainstorming as one effective method for finding the root causes together with the scientific methods which airline companies usually used such as the 5-whys, and the 8-disciplines.
- The experts also emphasized on the significance of having enough data on the problem under investigation before the team of complaints handling decide on the real root causes of the problem. In other words, the experts recommended that the team of complaints handling take enough time and not to rush before they say their verdict on the root causes of the problems.

They said that the cost of rushing the outcomes at this stage might have negative consequences on the company performance.

- The experts also raised the point of having enough brainstorming on the recommendation of the solutions for the customer complaints.
- The experts also emphasized the importance of undertaking enough tests on the solutions proposed by the complaints handling team before they are authorized and generalized to the rest of the company departments. They argued that any mistake in this stage will cost the company a high price because the cost of reversing the impact of the mistake will be very high.
- Finally, the experts highlighted the importance and the benefit that the company can get from capturing the knowledge obtained from the problem solving in stage 2 and 3 and sharing it with the rest of the company departments. This is a great benefit which increases the return on the company investment on the customer complaints handling systems.

In addition, the experts stated that it was important to invest in complaints handling to maintain the loyalty of customers, and felt that this approach would help to solve customer complaints and eventually lead to customer satisfaction and loyalty. The experts also found the most important factor in the approach to be its ability to capture and provide useful knowledge created from the act of problem-solving. However, one of the experts had a different opinion about applying the approach to the sector, believing it to be good but appearing to be too academic, and thus in need of some additional attention to make it more suitable for the airline sector. He also believed there was a potential risk in applying a new complaints handling process that would need to be identified and mitigated in order to be really effective in a real-life environment.

6.4 Conclusion

In this chapter, I validated the A3 thinking approach which I proposed in chapter five. The A3 thinking approach is the product of understanding the current situation in the airline industry in Saudi Arabia and addressing the flaws and drawbacks of the existing customers complaints handling system. For the validation of the A3 thinking approach, I used two methods, namely (i) case study based on simulated data, and (ii) an expert judgement on the effectiveness and applicability of my A3 approach of thinking.

The results from the case study showed that the A3 thinking approach which I proposed has the strength needed to identify the problem raised by customers, identify the root causes and suggest effective solutions to assure that the problem will not reoccur in the future. The case study showed that the steps proposed are easy to implement given the fact that it is only one simple A3 page template that the complaints handling team has to fill. Subsequently, the knowledge that has been created from stage 2 and 3 can be shared with the rest of the company departments so we increase the return the investment of the company on the complaints handling systems.

On the other hand, the interview with the airline industry experts showed that the A3 thinking approach is applicable and efficient in handling customer complaints but in certain conditions. In other words, the experts argue that the success of the proposed A3 thinking approach is contingent on some conditions including, to name but few, (i) the company management has to be serious and has to show good commitment towards investing on the new complaints handling systems. (ii) the culture of the company towards customers complaints and customer satisfaction has to change. (ii) the complaints handling team has not to rush before they decide on the root causes of the problems raised by customers given the sensitivity of this stage in the process of customer complaints handling. (iv) The team of complaints handling has to take their time to test the applicability and the efficiency of the solutions they propose for handling the customer complaints before they share them with other departments.

Chapter VII
Discussion, Conclusion, limitations and Future Research

7.1 Discussion

In the business world, the appreciation of the need to understand customer experience has been on the rise in recent decades, and it continues to attract the interest of many companies at all levels (Homburg *et al.*, 2017). Certainly, there are obstacles to fully appreciating the customer experiences, and the existing literature has highlighted these, but has done so without clearly dealing with the issues presented, or providing a definite formal problem-solving approach. Responding to this shortcoming, this study has developed a customised A3 Thinking approach as a major milestone in the resolution and mitigation of issues causing problems, and therefore, customer complaints in the airline sector. It is important to note that the implications of the A3 Thinking approach are not solely concerned with theory. Rather, the literature explored and the field study conducted in this research will have important implications for practice that can benefit many airline companies.

It can be observed that customer satisfaction comes at the top of the hierarchy of the drivers for investing in managing customer complaints. This finding is in line with the study of Metwally (2013) who argued that complaints handling has an impact on customer satisfaction, a company's image and reputation, as well as on customer loyalty.

The field study revealed that the formal approach to solving customer complaints is ineffective due to the fact there is a lack of documentation being made available, thereby minimising the opportunities to capture and share knowledge. This information highlighted the failures in the current process and promoted the need for a customised A3 Thinking approach, which can contribute towards

remedying such shortfalls. In addition, the obstacle of poor circulation of information/knowledge is addressed by the proposed A3 Thinking approach since this consists of guiding components that ensure knowledge circulation, thereby ensuring knowledge creation from the problems that may occur. Hence, there is the huge potential brought by the approach for increasing the chances of customer satisfaction. In their research on customer satisfaction in the airline industry, Khan and Khan (2014) found that due to competitiveness, customer satisfaction has become a priority asset alongside that of enhanced service quality. Furthermore, according to Davidow (2003), the capture of customer complaints and the process of dealing with such complaints are essential in order to achieve customer satisfaction and customer retention.

A recent report by KPMG (2017) has revealed that airlines generally, are struggling to keep pace with the increase in customer expectations. This increases the importance of understanding customer satisfaction, and of using this appreciation to design an effective strategy to meet such expectations and to respond effectively to complaints. Therefore, involving customers in the design of a process for complaints handling through the customer journey can positively contribute to the success of dealing with such complaints. The current situation mainly follows the top-to-bottom style, where decisions are made at the senior managers' level, without taking into account customers' views, perspectives, and complaints. The customised A3 Thinking approach considers the value that customer involvement can add, which also helps in knowledge creation. In addition, it increases awareness of current issues, capturing knowledge, and sharing across the company.

7.2 Contribution to knowledge

My research contributes to knowledge by two different ways; first, by proposing a new A3 thinking approach which addresses the flaws and drawbacks of the existing complaints handling systems. Second, providing an evidence from the Saudi airline industry on the importance of the problem solving methods and the application of knowledge management and knowledge sharing in improving customer satisfaction. The matter of customer satisfaction and its role in

maintaining market share of businesses is a growing concern for modern businesses. The ongoing increasing competition due to globalization opened new markets for the airline industry. Such new markets can be seen as an opportunity and/or a threat depends on the lens through which you are watching the matter. For companies with poor customer service, this new one "big" market will be a threat as companies with positive customer service can take over the market share of other companies with poor customer service. As a result, this research is considered as a new evidence on the effectiveness of the complaints handling systems and knowledge sharing in improving customer satisfaction level in the Saudi Airline industry.

7.3 Policy implications (Recommendations for the Saudi policy makers)

The results of my research might be of interest to the Saudi Government given that the latter is encouraging the service sector to grow according to the Saudi vision 2030. Provided that the current economy of Saudi Arabia is still, heavily, relying on the petrol, the Saudi vision 2030 emerged to diversify the resources of the Saudi economy. The findings of my research might help the policy makers at Saudi Arabia improve the service quality in the airline industry. The recommendations addressed for the Saudi policy makers include:

- Encouraging service companies to invest on customer complaints handling systems.
- Encouraging companies to invest in the applications of knowledge management and knowledge sharing.
- Encouraging business environment which adopts the culture of valuing the customer satisfaction as a driver for business growth and business sustainability.

7.4 Conclusions

The literature on problem-solving reveals various approaches that organisations and businesses adopt to manage issues and problems that arise from their

operations. However, only a handful of these approaches can be used to deal with the problems in the airline sector. Consequently, this research aimed to develop a customised A3 Thinking approach that can involve and ensure the capture and provision of useful knowledge, created and documented in a simple manner. With such a resource, previously recurrent problems can be prevented, and decision-making in respect of new problems can be effectively supported.

The approach developed resulted from a detailed review of the literature and a field study involving face-to-face interviews with Guest Relationship managers in order to identify and analyse the present practices, the actual process in handling customer complaints, and the knowledge capability of that process, was conducted. In order to validate the approach subsequently developed, industrial case studies and expert judgement have been used.

The following bullet points outline the conclusions:

1. Customer complaints are a continuous and challenging risk that airlines face and need to address them urgently.
2. The literature addresses the issue of customer complaints in the airline sector without providing a significant proposal solutions, and therefore there is a need for more investigation in this area. This study makes a contribution in that respect.
3. The customer journey is an important concept that should be clearly defined in any airline company with much detail about all the activities it involves, and the typical and unusual customer complaints that arise in connection with it.
4. Although there is much literature about problem-solving approaches in general, there is a need for a comprehensive and robust approach to support the handling of customer complaints in the airline sector.
5. The A3 Thinking approach has been customised to provide the right problem-solving model to address customer complaints in the airline sector, as it is graphical, simple and logical, and could also be modified to suit other companies.

6. The proposed A3 Thinking approach represents a step forward in addressing the airline sector's need for a comprehensive complaints handling process.
7. The proposed A3 thinking approach involves converting the solved problem into useful knowledge that can be shared to prevent the recurrence of problems.

7.5 Research Limitations

The outcomes of this research represent a sound contribution to the knowledge. However, like any other studies, this one embodies some limitations that are now acknowledged:

- The research mainly focused on the airline industry using case studies. This can limit the opportunity to generalise the findings to apply to other sectors or even to other airlines.
- The research mainly used a qualitative method, which can have a level of bias. Some actions were taken to reduce this limitation; field study, cases and expert judgements were conducted and these contributed towards mitigating any bias in this research, but all such risk may not have been eliminated.
- In terms of data collection methods, the research adopted a closed questionnaire and interviews with managers. Although interviews are very valuable and a useful data collection tool, they may have provided limited information based on the questions asked. Hence, a focus group and open questions would have provided more in-depth information.
- Another limitation is that the research only used the perspective of employees. Perhaps using customers' views as well as those of employees could have provided more findings and observations.
- The A3 Thinking approach developed is only aimed at airlines without involving other stakeholders who can also have an impact on the experience of airline customers.

7.6 Future Research

Based on the conclusions and limitations of this research, a number of recommendations for future research have been highlighted, as follows:

- The research can be progressed in the future as a conceptual idea for the implementation of a software system in the management of complaints.
- The inclusion of other stakeholders in the analysis rather than solely focusing on airlines would be beneficial. For instance, looking at the supply chain analysis to identify any issues that are not directly related to the airline service would reveal new information.
- The use of several case studies and from different regions rather than focusing on only one region would yield more detail. This will provide a wider understanding of the current practices and benefits for more companies.
- An exploration of the influence of social media network and online advertisements, which can contribute to managing customer expectations would be useful. Future research could be conducted to investigate what options airlines have to reduce the risk of their customers sharing their bad experience on social media before complaining directly to the airline.

7.7 Final Word

The opportunity to complete this personal research journey is one I have been grateful for as it has given me great insight into the world of research. At the same time, however, I have welcomed the opportunity to make a difference not only to the literature, and to the airline industry generally, but specifically to the national carrier of the Kingdom of Saudi Arabia, and it is my great hope that the customised A3 Thinking Approach is adopted for the betterment of Saudi Airlines.

REFERENCES

Ahadmotlaghi, E. and Pawar, P. (2012) 'Analysis of CRM Programs Practiced by Passengers' Airline Industry of India and its Impact on Customer Satisfaction and Loyalty,' *Researchers World*, 3(2-2), pp. 119-126.

All About Lean (2016) *Common mistakes with the PDCA (and some history)*. All About Lean website. Available at: http://www.allaboutlean.com/pdca-history/ (Accessed: 26 February 2017).

Alukal, G. (2007) 'Lean kaizen in the 21st century', *Quality Progress*, 40(8), pp. 69-70.

Amiruddin, N. H. (2013) 'Price service quality and customer loyalty: A case of Air ASIA', *South East Asia Journal of Contemporary Business, Economics and Law*, 2(1), pp. 34-40.

Archana, R. and Subha, M. V. (2012) 'A study on service quality and passenger satisfaction on Indian airlines', *International Journal of Multidisciplinary Research,* 2(2), pp. 50-63.

Arnott, B. (2004) *The 8 Disciplines approach to problem solving*. Working Paper. Ontario, Canada: Infraspection Institute. Available at: http://www.irinfo.org/articleofmonth/pdf/article_9_1_2004_arnott.pdf (Accessed: 01 February 2017).

Badgaiyan, A. J., Verma, A., (2015) 'Does urge to buy impulsively differ from impulsive buying behaviour? Assessing the impact of situational factors', *Journal of Retail Consumer Service*, 22, pp. 145–157.

Baker, D. M. A. (2013) 'Service quality and customer satisfaction in the airline industry: a comparison between legacy airlines and low-cost airlines', *American Journal of Tourism Research,* 2(1), pp. 67-77.

Basfirinci, C. and Mitra, A. (2015) 'A cross cultural investigation of airlines service quality through integration of Servqual and the Kano model', *Journal of Air Transport Management*, 42(January), pp. 239-248.

Bennett, J. A. and Strydom, J. W. (2001) *Introduction to travel and tourism marketing.* Lansdowne: Juta & Company Ltd.

Bhat, S., Naik, Y. and Shethia, K. (2016) 'Impact of Brand Ambassador on Consumer Shopping Behaviour', *Journal of Management*, 5(January).

Bhote, K. and Bhote, A. (2000) *World class quality, using design of experiments to make it happen.* 2nd edn. USA: American Management Association.

Biswas, A. and Roy, M. (2015) 'Green products: an exploratory study on the consumer behaviour in emerging economies of the East', *Journal of Clean Production*, 87, pp. 463-468.

Brown, A., Eatock, J., Dixon, D., Meenan, B. and Anderson, J. (2008) 'Quality and continuous improvement in medical device manufacturing', *The TQM Magazine*, 20(6), pp. 541-55.

Bueno, O. and Zalta, E. N. (2017) 'Object Theory and Modal Meinongianism', *Australasian Journal of Philosophy*, 95(4), pp. 761-778.

Buttle, F. (2009) *Customer relationship management: concepts and technologies*. Abingdon: Routledge.

Chang, D., Lim, S., Jeon, S., Ji, H. and Seo, H. (2002) 'Measuring Airline's Service Quality: SERVQUAL or SERVPERF?', *Proceedings of Decision Sciences Institute 2002 Annual Meeting.* Houston: Decision Sciences Institute, pp. 2137-2142.

Chen, F.-Y. and Chang, Y.-H. (2005) 'Examining airline service quality from a process perspective', *Journal of Air Transport Management,* 11**,** pp. 79-87.

Chen, M. (2004) 'Intellectual capital and competitive advantages: the case of TTY Biopharma Company', *Journal of Business Chemistry*, 1(1), pp. 14-20.

Chilembwe, J. M. (2014) 'Assessment of Customer Service and Service Guarantee Impacts for Airlines in Malawi: The Case of Ethiopian Airlines, Kenya Airways and South African Airways', *International Journal of Business Quantitative Economics and Applied Management Research*, 1(3), pp. 82-103.

Choraria, S. (2013) 'Exploring the role of negative emotions on customer's intention to complain', *Vision: The Journal of Business Perspective*, 17(3), pp. 201–211.

Collis, J. and Hussey, R. (2009) *Business research: a practical guide for undergraduate & postgraduate students*. 3rd edn. Basingstoke, UK/New York: Palgrave Macmillan.

Connelly, L. (2012) 'Root Cause Analysis', *Medsurg Nursing*, 21(5), pp. 313-326.

Cook, G. N. and Billig, B. G. (2017) *Airline operations and management: a management textbook.* New York: Routledge.

Creswell, J. W. (2013) *Qualitative inquiry and research design: Choosing among five approaches*. Thousand Oaks, CA: Sage.

Creswell, J. W. and Plano Clark, V. L. (2011) *Designing and conducting mixed methods research*. 2nd edn. Thousand Oaks, CA: Sage Publications, Inc.

Crossman, A. (2017) *The case study research method*. ThoughtCo. Available at: thoughtco.com/case-study-definition-3026125 (Accessed: 23 March 2017).

Curry, N. and Gao, Y. (2012) 'Low-cost airlines: A new customer relationship? An analysis of service quality, service satisfaction and customer loyalty in a low-cost setting', *Services Marketing Quarterly*, 33(2), pp. 104-118.

Davidow, M. (2003) 'Have you heard the word? The effect of word of mouth on perceived justice, satisfaction and repurchase intentions following complaint handling', *Journal of Consumer Satisfaction, Dissatisfaction and Complaint Behavior*, 16(1), pp. 67-80.

Delbari, S., Ng, S., Aziz, Y. and Ho, J. (2016) 'An investigation of key competitiveness indicators and drivers of full service airlines using Delphi and AHP techniques', *Journal of Air Transport Management,* 52, pp. 23-34.

Dent, J. (2013) 'Customer Journey Mapping: A Walk in Customers' Shoes', *Ascend Industry*, 2(1), pp. 52-56. Available at: http://www.ascendforairlines.com/sites/default/files/article_0.pdf (Accessed: 23 March 2017).

Flyvbjerg, B. (2004) 'Five misunderstandings about case study research', in Seale, C., Gobo, G., Gubrium, J. and Silverman, D. (eds.) *Qualitative Research Practice*. London: Sage, pp. 390–404.

Ganapathy, V. (2012) Customer complaint handling in British Airways (BA). Available at: https://www.slideshare.net/pankajsoni007/customer-complaint-handling-in-british-airways (Accessed: 12 October 2017).

Garding, S. and Bruns, A. (2015) *Complaint Management and Channel Choice: An Analysis of Customer Perceptions*. London: Springer.

Gray, D. E. (2009) *Doing research in the real world*. Thousand Oaks, California: SAGE Publications.

Gupta, A., Arif, M. and Williams, A. (2013) 'Customer service in the aviation industry–An exploratory analysis of UAE airports', *Journal of Air Transport Management,* 32(September), pp. 1-7.

Haliru, M. and Mokhtar, S. S. M. (2015) 'The Mediating Effect of Perceived Safety and Trust on the Relationship between Perceived Justice and Customer Loyalty in the Nigerian Airline Industry', *International Journal of Management Sciences and Business Research,* 4(10).

Hansen, T., Wilke, R. and Zaichkowsky, J. (2010) 'Managing consumer complaints: differences and similarities among heterogeneous retailers', *International Journal of Retail and Distribution Management*, 38(1), pp. 6-23.

Haverila, M. J. and Naumann, E. (2009) 'Customer satisfaction and complaints: Is there a relationship?', *Review of Business Research*, 9(1), pp. 73–78.

Heracleous, L. and Wirtz, J. (2012) 'Strategy and organisation at Singapore Airlines: achieving sustainable advantage through dual strategy' in Inderwildi**,** O**.** and King, Sir D. (eds.) *Energy, Transport, & the Environment.* London: Springer, pp. 479-493.

Holmlid, S. and Evenson, S. (2008) 'Bringing service design to service sciences, management and engineering', in Hefley, B and Murphy, W. (eds.) *Service*

science, management and engineering education for the 21st century. US: Springer, pp. 341-345.

Homburg, C., Jozié D. and Kuehnl, C. (2017) 'Customer experience management: toward implementing an evolving marketing concept', *Journal of Academy of Marketing Science*, 45(3). doi:10.1007 /s11747-015-0460-7.

Hussain, R., Al Nasser, A. and Hussain, Y. K. (2015) 'Service quality and customer satisfaction of a UAE-based airline: an empirical investigation', *Journal of Air Transport Management*, 42, pp. 167-175.

Iqbal, M. F. (2015) *Customer service best practices for airline industry*. Available at: http://www.customerservice.ae/author/farrukh (Accessed: 12 March 2017).

Ishak, I. S. and Alias, R. A. (2005) 'Designing a strategic information systems planning methodology for Malaysian institutes of higher learning (ISP-IPTA)', *Issues in Information Systems*, 6(1), pp. 325-331.

Jimmerson, C., Weber, D. and Sobek, D. K. (2005) 'Reducing Waste and Errors: Piloting Lean Principles at IHC', *Journal on Quality and Safety*, 31(5), pp. 249-257.

Kalaiarasan, K., Appannan, S. and Doraisamy, B. (2015) 'A Study on Service Quality on Customer Satisfaction in Low Cost Airline Industries', *International Journal of Science, Environment and Technology*, 4(4), pp. 1126–1138.

Kamau, M. W. and Kvale, S. (2015) 'Factors Affecting Strategic Choices in Airlines in Kenya: A Case Study of Kenya Airways', *The International Journal of Business & Management*, 3(5), pp. 86-97.

Khan, U. and Khan, N. (2014) 'Customer Satisfaction in Airline Industry'. Available at: http://www.ipedr.com/vol76/012-ICEFR2014-F105.pdf (Accessed: 15 February 2018).

Khudhair, H., Jusoh, A., Mardani, A. and Nor, K. (2019) 'Quality Seekers as Moderating Effects between Service Quality and Customer Satisfaction in Airline Industry', *International Review of Management and Marketing*, 9 (4), pp74-79.

Kim, S., Aurisicchio, M. and Wallace, K. (2009) 'Towards Automatic Causality Boundary Identification from Root Cause Analysis Reports', *Journal of Intelligent Manufacturing*, 20(5), pp. 581-591.

Kimbell, L. (2011) 'Designing for service as one way of designing services', *International Journal of Design*, 5(2), pp. 41-52.

Kimsey, D. B. (2010) 'Lean Methodology in Health care', *Quality in Health Care*, 92(1), pp. 53-60.

Kloppenborg, J. and Gourdin, K. (1992) 'Up in the Air about Quality', *Quality Progress*, 25(2), pp. 31- 35.

KPGM (2017) *Airlines struggle to keep pace with rising customer expectations*. Available at: https://home.kpmg/uk/en/home/media/press-releases/2017/12/airlines-struggle-with-rising-customer-expectations.html (Accessed: 14 January 2019).

Liebowitz, J. (2001) *Knowledge management: Learning from knowledge engineering.* Florida: CRC Press LLC.

Liker, J. K. and Morgan, J. M. (2006) 'The Toyota Way in Services: The Case of Lean Product Development', *Academy of Management Perspectives*, 20(2), pp. 5-20.

Lindlöf, L., Söderberg, B. and Persson, M. (2013) 'Practices Supporting Knowledge Transfer – An Analysis of Lean Product Development', *International Journal of Computer Integrated Manufacturing*, 26(12), pp. 1128-1135.

Liou, J. J. (2009) 'A novel decision rules approach for customer relationship management of the airline market', *Expert Systems with Applications*, 36(3), pp. 4374-4381.

Liou, J., Hsu, C., Yeh, W. and Lin, R. (2011) 'Using a modified grey relation method for improving airline service quality', *Tourism Management*, 32(6), pp. 1381-1388.

Lorenzi, C. I. and Ferreira, J. C. E. (2018) 'Failure mapping using FMEA and A3 in engineering to order product development', *International Journal of Quality & Reliability Management*, 35(7), pp. 1399-1422.

Lucini, F., Tonetto, L., Fogliatto, F. and Anzanello, M. (2020) 'Text mining approach to explore dimensions of airline customer satisfaction using online customer reviews', *Journal of Air Transport Managemen*t, 83 (1), pp1-12.

Mahrous, A. and Hasan, S. (2016) 'Achieving Superior Customer Experience: An Investigation of Multichannel Choices in the Travel and Tourism Industry of an Emerging Market', *Journal of Travel Research*, 56(8), pp. 1049–1064.

Maishanu, M. M. and Kadiri, I. B. (2012) 'Promoting Workers Satisfaction for Productivity in the Service Sector: A Case Study of Arik Air Nigeria', *Kuwait Chapter of Arabian Journal of Business and Management Review,* 2(4), pp. 73-79.

Manani, T. O., Nyaoga, R. B., Bosire, R. M., Ombati, T. O. and Kongere, T. O. (2013) 'Service Quality and Customer Satisfaction at Kenya Airways Ltd', *European Journal of Business and Management*, 5(22), pp. 170-180.

Manhas, P. and Tukamushaba, E. (2015) 'Understanding service experience and its impact on brand image in hospitality sector', *International Journal of Hospitality Management*, 45(1), pp. 77-87.

Marrelli, A. F. (2007) 'Collecting data through case studies', *Performance Improvement*, 46(7), pp. 38-44. doi: 10.1002/pfi.148.

Martin, J., Roman, C. and Espino, R. (2011) 'Evaluating frequent flyer programs from the air passengers' perspective', *Journal of Air Transportation Management*, 17(1), pp. 364-368.

Martinez, M. and Hobbi, B. (2008) *Building a customer service culture: The seven service elements of customer success.* Charlotte, N.C.: Information Age Publishing.

Maruta, R. (2012) 'Maximizing Knowledge Work Productivity: A Time Constrained and Activity Visualized PDCA Cycle', *Knowledge and Process Management*, 19(4), pp. 203–214.

Mason, K. (2001) 'Marketing low-cost airline services to business travellers', *Journal of Air Transport Management*, 7(1), pp. 103-109.

Mattila, A. and Wirtz, J. (2004) 'Consumer complaining to firms: the determinants of channel choice', *Journal of Services Marketing*, 18(2), pp. 147–155.

McKee, D. (1992) 'An organizational learning approach to product innovation', *Journal of Product Innovation Management*, 9(3), pp. 232-245.

McLeod, S. A. (2008) *Case study method*. Available at: www.simplypsychology.org/case-study.html (Accessed: 12 December 2017).

Mellat-Parast, M., Golmohammadi, D., McFadden, K. L. and Miller, J. W. (2015) 'Linking business strategy to service failures and financial performance: empirical evidence from the US domestic airline industry', *Journal of Operational Management*, 38, pp. 14–24.

Mengis, J. and Nicolini, D. (2010) 'Root cause analysis in clinical adverse events', *Nursing Management*, 16(9), pp. 16-20.

Meroni, A. and Sangiorgi, D. (2011), *Design for Services*. Farnham, UK: Gower.

Metwally, D. (2013) 'Complaint Handling in the Airline Industry: The Way to Enhance Customer Loyalty', *Mediterranean Journal of Social Sciences,* 4(10), pp. 299-311.

MindTools (2010) *Root cause analysis - Tracing a problem to its origins*. Available at: http://www.mindtools.com/pages/article/newTMC_80.htm (Accessed: 2 April 2017).

Muhammad, A. H. S. (2016) 'Ensuring rigour and trustworthiness of qualitative research in clinical pharmacy', *International Journal of Clinical Pharmacy*, 38(3), pp. 641-646.

Nadiri, H., Hussain, K., Haktan Ekiz, E. and Erdoğan, Ş. (2008) 'An investigation on the factors influencing passengers' loyalty in the North Cyprus national airline', *The TQM Journal,* 20(3)**,** pp. 265-280.

Nenonen, S., Rasila, H., Junnonen, J.-M. and Kärnä, S. (2008) 'Customer Journey–a method to investigate user experience', *Proceedings of the European Facility Management Conference Manchester*. Manchester, 10-11 June 2008. pp. 54-63.

Ochieng, I., Riwo-Abudho, M. and Njanja, L. W. (2013) 'Key Success Factors in Airlines: Overcoming the Challenges', *European Journal of Business and Management,* 5(30), pp. 84-88.

Ogbeide, G., Böser, S., Harrinton, R. and Ottenbacher, M (2017) 'Complaint management in hospitality organizations: The role of empowerment and other service recovery attributes impacting loyalty and satisfaction', *Tourism and Hospitality Research*, 17(2), pp. 204 – 216.

Ohno, T. (1988) *Toyota production system: Beyond large-scale production.* Cambridge, MA: Productivity Press.

Oosterwal, D. P. (2010) *The lean machine: How Harley-Davidson drove top-line growth and profitability with revolutionary lean product development*. USA: AMACOM.

Pham, K. and Simpson, M. (2006) 'The impact of frequency of use on service quality expectations an empirical study of Trans-Atlantic airline passengers', *The Journal of the American Academy of Business*, 10(1), pp. 1-6.

Pietrzak, M. and Paliszkiewicz, J. (2015) 'Framework of Strategic Learning: The PDCA Cycle', *Management*, 10(2), pp. 149-161.

Polaczyk, J. (2016) *Customer service problem-solving techniques: Critical thinking*. Available at: https://www.livechatinc.com/blog/problem-solving-techniques-critical-thinking/ (Accessed: 16 May 2017).

Polaine, A., Løvlie, L. and Reason, B. (2013) *Service design: From insight to implementation.* New York: Rosenfeld Media.

Powers, T. and Bendall-Lyon, D. (2002) 'Using complaint behaviour to improve quality through the structure and process of service delivery', *Journal of Consumer Satisfaction, Dissatisfaction and Complaining Behaviour*, 15(1), pp. 13-21.

Radeka, K. (2012) *The mastery of innovation – A field guide to lean product development.* New York: CRC Press.

Ralston, P., Blackhurst, J., Cantor, D. and Crum, M. (2015) 'A Structure–Conduct–Performance Perspective of How Strategic Supply Chain Integration Affects Firm Performance', *Journal of Supply Chain Management*, 51(2), pp. 47–64.

Rao, M. (2012) *Knowledge management tools and techniques.* Abingdon: Routledge.

Rasila, H. M., Rothe, P. and Nenonen, S. (2009) 'Workplace experience - a journey through a business park', *Facilities*, 27(13/14), pp. 486-496.

Rawson, A., Duncan, E. and Jones, C. (2013) 'The truth about customer experience', *Harvard Business Review,* 91**,** pp. 90-98.

Reichardt, C. (2019) *Quasi-Experimentation: A Guide to Design and Analysis*, Guildford, Guildford publications

Richardson, A. (2010) 'Using customer journey maps to improve customer experience', *Harvard Business Review,* 15.

Robson, C. (2011) *Real world research*. 3rd ed. Chichester: Wiley.

Saad, N., Al-Ashaab, A., Maksimovic, M., Zhu, L., Shehab, E., Ewers, P. and Kassam, A. (2013) 'A3 thinking approach to support knowledge-driven design', *International Journal of Advanced Manufacturing Technology*, 68(1), pp. 1371–1386.

Saunders, M., Lewis, P. and Thornhill, A. (2012) *Research Methods for Business Students*, London, Pearson Publications.

Shook, J. (2009) 'Toyota's Secret: The A3 Report', *MIT Sloan Management Review*, 50(4), pp. 30-33.

Sica, G. T. (2006) 'Bias in Research Studies', *Radiology*, 238(3), pp. 780–789.

Simons, P. (2015). *Ontology*. Britannica Ontology. Available at: https://docs.google.com/viewer?a=v&pid=sites&srcid=ZGVmYXVsdGRvbWFpbnxwZXRlcm1zaW1vbnN8Z3g6Njg2ZTViNzkyNzUwNWMxZA (Accessed: 25 August 2016).

Singh, V., Jain, A. and Choraria, S. (2016) 'Exploring the Role of Complaint Handling among Complaining Consumer', *The Journal of Business Perspective*, 20(4), pp. 331-344.

SkyTrax (2017) *British Airways customer reviews.* Available at: http://www.airlinequality.com/airline-reviews/british-airways/ (Accessed: 30 November 2017).

Sobek, D. and Smalley, A. (2008) *Understanding A3 thinking: A critical element of Toyota's PDCA management system.* New York: CRC Press.

Sproull, B. (2001) *Process problem solving - A guide for maintenance and operations teams*. Portland: Productivity Inc.

Statista (2020) *U.S. airlines by rate of customer complaints 2019*, Statista website, available at https://www.statista.com/statistics/539278/customer-complaints-by-us-airlines/ [accessed 23/02/2020].

Steven, A. B., Dong, Y. and Dresner, M. (2012) 'Linkages between customer service, customer satisfaction and performance in the airline industry:

Investigation of non-linearities and moderating effects', *Transportation Research Part E*, 4(8), pp. 743–754.

Stojkovic, G., Soumis, F., Desrosiers, J. and Solomon, M. (2002) 'An optimization model for a real-time flight scheduling problem', *Transportation Research Part A: Policy and Practice*, 36(9), pp. 779-788.

The World Airline Awards (2016) *Top 10, the world airline awards website*. Available at: http://www.worldairlineawards.com/Awards/worlds_best_airline.html (Accessed: 11 March 2017).

Thomas, G. (2013) *Case Study Methods in Education*, London, SAGE Publications.

Tortorella, G., Viana, S. and Fettermann, D. (2015) 'Learning cycles and focus groups A complementary approach to the A3 thinking methodology', *The Learning Organization*, 22(4), pp. 229-240.

Tsang, E. (1995) 'AIP scheduling techniques-A comparative study', *British Telecom Technology Journal,* 13**,** pp. 16-28.

Tsaur, S.-H., Chang, T.-Y. and Yen, C.-H. (2002) 'The evaluation of airline service quality by fuzzy MCDM', *Tourism Management,* 23**,** pp. 107-115.

Turban, E., King, D., Lee, J. and Viehland, D. (2002) *Electronic commerce: A managerial perspective 2002*. USA: Prentice Hall.

U.S. Department of Transportation (2015) *Air travel consumer report*. Available at: https://cms.dot.gov/sites/dot.gov/files/docs/2016FebruaryATCR.pdf (Accessed: 12 November 2017).

Walshe, C., Ewing, G. and Griffiths, J. (2012), 'Using Observation As A Data Collection Method To Help Understand Patient And Professional Roles And Actions In Palliative Care Settings', *Palliative Medicine*, 26(8), pp. 1048-1054.

Ward, A., Shook, J. and Sobek, D. (2014) *Lean product and process development.* 2nd edition. USA: The Lean Enterprise Institute.

Whittemore, R. and Knafl, K. (2005) 'The integrative review: updated methodology', *Journal of Advanced Nursing*, 52(5), pp. 546-553.

Wittman, M. D. (2014) 'Are low-cost carrier passengers less likely to complain about service quality?', *Journal of Air Transport Management,* 35**,** pp. 64-71.

Yazdani, A. and Moghaddam, T. (2012) 'Integration of the fish bone diagram, brainstorming, and AHP method for problem solving and decision making—a case study', *International Journal of Advanced Manufacturing Technology*, 63(1), pp. 651-657.

Yin, R. K. (2003) *Case study research: Design and methods*. Thousand Oaks, CA: Sage.

Yunus, N. S. N. M., Bojei, J. and Rashid, W. E. W. (2013) 'Service Quality towards Customer Loyalty in Malaysia's Domestic Low Cost Airline Services', *International Journal of e-Education, e-Business, e-Management and e-Learning*, 3(4), pp. 333-336.

Zomerdijk, L. and Voss, C. (2010) 'Service design for experience-centric services', *Journal of Service Research*, 13(1), pp. 67-82.

APPENDICES

Appendix A Structured Questionnaire

Structured Questionnaire

Dear Participants,

Your kind participation and experience provide valuable knowledge to this research in order to develop an A3 Thinking approach for Problem Solving to Create Knowledge-Driven Guest Relations for Saudi Airlines.

Please note that all the information collected will be kept confidential and strictly used for the sole purpose of PhD Academic research.

Thank you in advance for your cooperation.

Regards,

Bader

Brief of the project

Name of Project	**:**
Name of Researcher	**:**
Academic Supervisor	**:**
Industrial Supervisor	**:**

A.1 Interviewee details

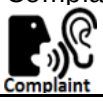
1.1 Name	
1.2 Position	
1.3 Describe your position in short	
1.4 Experiences in present position (in years)	❑ Under 5 years ❑ 5-10 years ❑ 10-20 years ❑ Over 20 years
1.5 Previous positions (if applicable)	
1.6 Experiences in previous positions (if applicable)	❑ Under 5 years ❑ 5-10 years ❑ 10-20 years ❑ Over 20 years

A.2 Customer Journey

Please choose the importance and effectiveness for the following customer Journey.

Customer Journey	Importance					Effectiveness				
	Not imp.	Slightly imp.	Moderately imp.	Imp.	Very imp.	Very poor	Poor	Neutral	Good	Excellent
Pre-journey										
• Marketing Communication	O	O	O	O	O	□	□	□	□	□
• Reservation & Ticket Purchase 	O	O	O	O	O	□	□	□	□	□
Pre-flight										
• Check-in 	O	O	O	O	O	□	□	□	□	□
• Immigration Services 	O	O	O	O	O	□	□	□	□	□
• Security Services 	O	O	O	O	O	□	□	□	□	□
• Lounge 	O	O	O	O	O	□	□	□	□	□
On-board										
• Cabin Comfort 	O	O	O	O	O	□	□	□	□	□
• Catering 	O	O	O	O	O	□	□	□	□	□
• Sky Sales 	O	O	O	O	O	□	□	□	□	□
• Entertainment 	O	O	O	O	O	□	□	□	□	□
• Wi-Fi 	O	O	O	O	O	□	□	□	□	□
Post-Flight										
• Immigration Services 	O	O	O	O	O	□	□	□	□	□

Customer Journey	Importance					Effectiveness				
	Not imp.	Slightly imp.	Moderately imp.	Imp.	Very imp.	Very poor	Poor	Neutral	Good	Excellent

Customer Journey	Importance					Effectiveness				
	Not imp.	Slightly imp.	Moderately imp.	Imp.	Very imp.	Very poor	Poor	Neutral	Good	Excellent
• Arrival Queuing/Waiting Time 	O	O	O	O	O	□	□	□	□	□
• Baggage Delivery 	O	O	O	O	O	□	□	□	□	□
• Transfer Services 	O	O	O	O	O	□	□	□	□	□
Post-journey										
• Customer Comments 	O	O	O	O	O	□	□	□	□	□
• Customer Survey	O	O	O	O	O	□	□	□	□	□
• Customer Complaints 	O	O	O	O	O	□	□	□	□	□
• Other (please specify) ……	O	O	O	O	O	□	□	□	□	□

A.3 Customer Complaints in Saudi Airlines

A.3.1 Please choose the frequency and importance for the following customer complaints.

Customer Complaints	Frequency					Importance				
	Never	Hardly ever	Some times	On most occasions	Always	Not imp.	Slightly imp.	Moderately imp.	Imp.	Very imp.
Pre-customer journey										
• Reservation and ticket purchase process	O	O	O	O	O	□	□	□	□	□

Customer Complaints	Frequency					Importance				
	Never	Hardly ever	Some times	On most occasions	Always	Not imp.	Slightly imp.	Moderately imp.	Imp.	Very imp.
• The price of the ticket	O	O	O	O	O	□	□	□	□	□
Pre-flight										
• Flight schedule	O	O	O	O	O	□	□	□	□	□
• Punctuality of the departures	O	O	O	O	O	□	□	□	□	□
• Lounge facilities/rest area	O	O	O	O	O	□	□	□	□	□
On-board										
• Aircraft cleanliness and modern-looking	O	O	O	O	O	□	□	□	□	□
• Quality of catering served in plane	O	O	O	O	O	□	□	□	□	□
• Entertainment content	O	O	O	O	O	□	□	□	□	□
• Comfort of the plane seats	O	O	O	O	O	□	□	□	□	□
Staff										
• Staff attitude/behaviour	O	O	O	O	O	□	□	□	□	□
• Staff helpfulness and willingness to assist guests	O	O	O	O	O	□	□	□	□	□
• Staff ability to solve any problems or issues	O	O	O	O	O	□	□	□	□	□
• Whether staff show personnel care equally to everyone	O	O	O	O	O	□	□	□	□	□
• Staff have the knowledge to answer your questions	O	O	O	O	O	□	□	□	□	□
• Staff timely response	O	O	O	O	O	□	□	□	□	□
Arrivals										
• Queuing/waiting time	O	O	O	O	O	□	□	□	□	□

Customer Complaints	Frequency					Importance				
	Never	Hardly ever	Some times	On most occasions	Always	Not imp.	Slightly imp.	Moderately imp.	Imp.	Very imp.
• Care paid to passengers' luggage	O	O	O	O	O	□	□	□	□	□
• Baggage handling services at check-in	O	O	O	O	O	□	□	□	□	□
• Other (please specify) ……	O	O	O	O	O	□	□	□	□	□

A.3.2 Please select the frequency of use and effectiveness of the customer complaints process.

(Please add any other steps, if required)

Complaints handling process	Frequency					Effectiveness				
	Never	Hardly ever	Sometimes	On most occas.	Always	Very poor	Poor	Neutral	Good	Excellent
1. Receive complaints	O	O	O	O	O	□	□	□	□	□
2. Acknowledge complaints	O	O	O	O	O	□	□	□	□	□
3. Assess complaints	O	O	O	O	O	□	□	□	□	□
4. Investigate the complaints	O	O	O	O	O	□	□	□	□	□
5. Respond to the complaints	O	O	O	O	O	□	□	□	□	□
6. Follow-up	O	O	O	O	O	□	□	□	□	□
7. Considering preventing re-occurrence complaints	O	O	O	O	O	□	□	□	□	□
8. Considering system improvement	O	O	O	O	O	□	□	□	□	□
Other:	O	O	O	O	O	□	□	□	□	□

Complaints handling process	Frequency					Effectiveness				
	Never	Hardly ever	Sometimes	On most occas.	Always	Very poor	Poor	Neutral	Good	Excellent
Other:	O	O	O	O	O	□	□	□	□	□

A.4 Problem-solving Approaches in Saudi Airlines

A.4.1 Please select the problem-solving approaches from the following table that you have applied in the complaints handling process. Please include problem-solving approaches (if required).

Problem-solving approaches	Frequency					Effectiveness				
	Never	Hardly ever	Sometimes	On most occas.	Always	Very poor	Poor	Neutral	Good	Excellent
Checklist	O	O	O	O	O	□	□	□	□	□
Root Cause Analysis	O	O	O	O	O	□	□	□	□	□
5 Whys	O	O	O	O	O	□	□	□	□	□
Problem Analysis Flow Chart	O	O	O	O	O	□	□	□	□	□
8 Disciplines	O	O	O	O	O	□	□	□	□	□
A3 Thinking	O	O	O	O	O	□	□	□	□	□
Other:	O	O	O	O	O	□	□	□	□	□
Other:	O	O	O	O	O	□	□	□	□	□

A.4.2 Please select frequency and effectiveness of the problem-solving process and the steps implemented in the complaints handling process in Saudi Airlines.

Problem-solving approaches	Frequency					Effectiveness				
	Never	Hardly ever	Sometimes	On most occas.	Always	Very poor	Poor	Neutral	Good	Excellent
1. Problem identification	O	O	O	O	O	□	□	□	□	□
2. Comprehend the problem	O	O	O	O	O	□	□	□	□	□
3.Problem visualisation to understand the origin of the problem	O	O	O	O	O	□	□	□	□	□

Problem-solving approaches	Frequency					Effectiveness				
	Never	Hardly ever	Sometimes	On most occas.	Always	Very poor	Poor	Neutral	Good	Excellent
4. Developing the solutions	O	O	O	O	O	□	□	□	□	□
5. Implementation of the solutions	O	O	O	O	O	□	□	□	□	□
6. Success measurement	O	O	O	O	O	□	□	□	□	□
7. Applying final solution for minimising the root cause	O	O	O	O	O	□	□	□	□	□
8. Demonstration of the solutions for future reference	O	O	O	O	O	□	□	□	□	□
9. Documentation of the process steps for continuous improvement	O	O	O	O	O	□	□	□	□	□
10.Demonstration of the lessons learnt turning to experience	O	O	O	O	O	□	□	□	□	□
11. Development of useful knowledge with the help of a simple template based on above process and sharing of that knowledge	O	O	O	O	O	□	□	□	□	□
Other:	O	O	O	O	O	□	□	□	□	□

A.5 Learning Cycles and Knowledge Management in Saudi Airlines

A.5.1 Have you implemented learning cycles (LCs) for continuous organisational improvement in Saudi Airlines? Please select one from the following table.

1	Do not know about LCs and never used any of the LCs	O
2	Heard about LC but not yet implemented	O
3	Planning to use one of the LCs in future	O
4	Partially applying one of the LCs at present	O
5	Applying one of the LCs at present	O
6	Fully applying a number of LCs at present	O

A.5.2 Please select learning cycles and their effectiveness from the following table that have helped in continuous improvement in Saudi Airlines.

(Please add learning cycles if they are not mentioned in the table).

Learning cycles	Frequency					Effectiveness				
	Never	Hardly ever	Sometimes	On most occas.	Always	Very poor	Poor	Neutral	Good	Excellent
Plan-Do-Check-Act (PDCA)	O	O	O	O	O	□	□	□	□	□
Look-Ask-Model-Discuss-Act (LAMDA)	O	O	O	O	O	□	□	□	□	□
Six Sigma	O	O	O	O	O	□	□	□	□	□
Design for Six Sigma	O	O	O	O	O	□	□	□	□	□
Other:	O	O	O	O	O	□	□	□	□	□
Other:	O	O	O	O	O	□	□	□	□	□

A.5.3 Please choose the information elements that are essential for problem solving.

(Please add additional elements if you find it very important for the problem solving).

Information Elements	Details	Importance				
		Not important	Slightly important	Moderately Important	Important	Very Important
Team building	Team selection for the problem solving	O	O	O	O	O
Background	Background details of the problem	O	O	O	O	O
Present status	Present status of the problem	O	O	O	O	O
Future objective	Description of the organisation goals	O	O	O	O	O
Containment	Primary action before the full solution is available	O	O	O	O	O
Root cause analysis	Identification of origin of the problem based on present status	O	O	O	O	O
Countermeasures	Possible actions to deal with the issue	O	O	O	O	O
Develop probable solutions	Examine possible solution and respective success of the solution	O	O	O	O	O
Applying plan	Plan for future measures and examine the effectiveness	O	O	O	O	O
Prevent repetition	Take possible changes and manage the performance	O	O	O	O	O
Monitoring	Examine any similar issues to minimise possible problem in future	O	O	O	O	O
Other:		O	O	O	O	O
Other:		O	O	O	O	O

A.5.4 What do you think about the following statement?

"The problem-solving process in complaints handling will generate knowledge. The knowledge must be captured and distributed in an easy way to help useful decision making in the future."

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
O	O	O	O	O

A.5.5 Please write your opinion regarding knowledge management practices in the complaints handling process in Saudi Airlines.

Complaints handling and knowledge management in Saudi Airlines	Your opinion				
	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
a) **Knowledge capturing:** Complaints handling in Saudi Airlines helps in knowledge capturing	O	O	O	O	O
b) **Knowledge generating:** Complaints handling in Saudi Airlines helps in knowledge development	O	O	O	O	O
c) **Knowledge sharing:** Complaints handling in Saudi Airlines supports knowledge sharing	O	O	O	O	O

A.5.6 What do you think about the following statement?

"The complaints handling process with the scope of knowledge capturing, creating and sharing will prevent the possible repetition of complaints."

Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
O	O	O	O	O

Thank you

Appendix B A Customer Journey

A Customer Journey associated with Service Offerings and typical Customer Complaints