VAASAN AMMATTIKORKEAKOULU
UNIVERSITY OF APPLIED SCIENCES

Eugenia Antwi

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VAASAN AMMATTIKORKEAKOULU
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Tässä tutkimuksessa tarkastellaan palvelumuotoilun käsitettä ja miten palvelumuotoilu voisi parantaa asiakkaiden kokemuksia Kotoka International Airport, KIA, lentokentällä, Accrassa, Ghanassa.

Palvelumuotoilu on luova ja käyttäjäkeskeinen liiketoiminnan kehityksen käsite, joka pystyy luomaan arvoa ja kilpailuetua palveluntarjoajille. Tämän tutkimuksen tavoitteena on selvittää tekijöitä, jotka vaikuttavat matkustajien tyytymättömyyteen ja ongelmiin KIA:n lentokentällä, selvittää mikä on perusteena matkustajien tyytyväisyyteen lentokentillä ja suunnitella matkustajien käyttökokemuksia uudelleen käyttäen palvelumuotoilun menetelmiä ja työkaluja.

Palvelumuotoilun käsitettä ja menetelmiä tutkitaan olemassa olevan kirjallisuuden kautta. Jotta saadaan ymmärrys lentokenttien tilanteesta, hyödynnetään kirjallisuutta, joka käsittelee lentokenttien palvelua. Tämän lisäksi käsitellään palvelun laatua ja palveluliiketoiminnan strategioiden kehittämistä antamaan suunnitteluprosessille liiketoiminnan näkökulmaa.

Empiirinen osuus perustui syvähaastatteluihin valittujen matkustajien kanssa sekä internetissä olevien arvostelujen analyysiin. Koska kyseessä on palvelumuotoilun aihe, järjestettiin palvelumuotoilun työpaja palvelumuotoilussa käytettävien menetelmien ja työkalujen avulla. Lisäksi kyselylomakkeiden avulla kerättiin tilastotietoja antamaan tutkimukselle enemmän syvyyttä.

Opinnäytetyön tulokset osoittavat, että lentokenttä KIA:n tarjoamissa palveluissa on aukkoja. Matkustajat ovat enimmäkseen tyytymättömiä lentoaseman palveluihin ja haluavat muutoksia. Työpajan osallistujien avulla on tehty joitakin ehdotuksia. Näihin ehdotuksiin sisältyvät palvelutarjonnan muutokset, lentokentän henkilökunnan asenteiden muuttuminen, useampien mukavuuksien ja logistiikkatukityökalujen käyttöönotto.

Näiden tulosten tulisi ohjata tulevaisuuden taktisia ja strategisia aloitteita, jotta saavutettaisiin matkustajien yleinen tyytyväisyys.

Avainsanat: Palvelumuotoilu, palvelutarjonta, kontaktipisteet, palveluaukko

VAASAN AMMATTIKORKEAKOULU
UNIVERSITY OF APPLIED SCIENCES
International Business

ABSTRACT

Author	Eugenia Antwi
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This study examine the concept of service design and explores how its approach can enhance customer experiences at the Kotoka International Airport, KIA in Accra, Ghana.

Service Design is a creative and user-centered business development concept that is able to create value and competitive advantage for the service provider. The objective of this research was to determine factors contributing to passenger discomforts and discontent at KIA, discover what constitutes passenger satisfaction at airports and redesign the passenger experience using service design methods and tools.

Based on existing literature the concept of service design and its methods was explored. To give an understanding of the situation at airports, literature on airport service was explored. In addition, some literature on service quality and service business development strategies were examined to give some business perspective to the design process.

The empirical contribution was founded on in-depth interviews with selected passengers as well as some online reviews. Being a service design subject, a service design workshop was organized to implement some of the methods and tools used in designing a service. A questionnaire was also administered to add some statistical data to the depth of the study.

The Findings in the thesis have proven that there are service gaps in the services provided at KIA. Passengers are mostly dissatisfied with the airport service and desire a change. With the help of workshop participants, certain suggestions have been made. These suggestions include changing the servicescape, changing attitudes of airport staff, introducing more amenities, and introducing high technology logistical support tools.

These findings should guide future tactical and strategic initiatives in order to achieve overall passenger satisfaction.

Keywords Service design, service concept, touchpoint, servicescape

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1 INTRODUCTION

Passenger demands on airports in general are regardless of price or service quality. This is particularly the case for many international airports. Regardless of price and service quality levels, passengers more often than not have no choice between airports. A country could have many international airports in different locations, but these airports most likely do not compete with each other; Passenger itinerary is often decided by geography rather than the quality level of airports. Nonetheless, a passenger's lasting impression on a country is in most instances dependant on their first or last encounter, which is usually at the airports. That is why airport services should be managed properly in order to leave a good impression with passengers. This is particularly the case for countries that have part of their GDP dependant on such industries as tourism.

The Kotoka International Airport, later referred to as KIA, is a major transit point in West Africa. It is Ghana's premier international airport. The Ghana Airport Company estimated that by 2013 the airport should see about 5million travellers annually. This projection was based on a scheduled renovation project slated for completion in 2013. Ghana Airports Company Limited, a state owned company is charged with a mandate to operate and manage all airports in Ghana. GACL has contracted Avaince Ghana to take charge of the ground handling services at the airport. Aviance Ghana's services include passenger check-in, baggage handling and lounge service. (Aviance 2015).

1.1 Background of Study

Ghana's crusade for economic and social advancement predates the colonial era. Ever since the Europeans knocked on the doors of Ghana with western civilization, Ghana has pioneered and been at the forefront of many developmental initiatives in Africa. The early European explorers made constant visits to the country upon the discovery of such resources as gold, diamond, bauxite, manganese, timber, and cocoa. This paved the way for the development and building of several transportation and communication infrastructures. Sea ports, rail networks and

airports were primarily built for the hauling of the above mentioned resources to Europe and elsewhere in the world. (Jedwab & Moradi 2013).

From its use as a military aerodrome in 1946 by the Royal Air Force (British) during the WWII, developmental process was initiated to transform the aerodrome into a proper international airport in January 1956. This is what birthed what is today known as the Kotoka International Airport, with the capacity to host a Boeing 747-8 (GACL 2013). Facilities designed to cater for passenger and cargo needs that existed in the late 1950s and early 1960s would not be suitable for the needs of today. Kotoka has therefore undergone several renovations and redesigning over the years to accommodate some of these increasing demands. (GACL 2013).

However, with the world as a whole leapfrogging in technological advancements, globalization and global economics fuelling cross-border and international trade, the movement of people across the globe is becoming increasingly rapid whilst demands on airports across the world has become ever more stringent. This phenomenon has rendered the current capacity of KIA inadequate.

The mid to late 2000s saw Ghana discovering crude oil in commercial quantities off its shores. The addition of this commodity to the country's trade-stock makes for an explosion of passenger and cargo volumes through the only international airport in the country especially. It has also seen the influx of expatriate professionals directly and indirectly involved in the oil and gas industry as well as other mining sectors across the economy. (Ghana Policy Journal 2010).

Ghana has over the years been touted as the Gateway to Africa, this may be due in part to its geographical location which makes it ideal for transiting to other parts of Africa as well as the relatively stable political and economic climate.

Tourism, which has become one of the cornerstones of the Ghanaian economy brings in several tourists into the country annually. Most of these tourists make their entry into the country and their exit out through the KIA.

With the increasing demands on airport facilities around the world and airport services becoming more defined and specialized, airports and airlines around the world have resorted to retaining the services of ground handling companies. These companies are specialized in various aspects of air transportation operations such as landing, take-off, embarking, disembarking, luggage handling, catering, loading, and offloading. In keeping with this new tradition, the KIA has engaged the services of Aviance Ghana Limited, a ground handling company. Aviance offers to KIA and the various airlines operating at KIA among other things passenger check-in, baggage handling, loading and unloading of cargo, catering for first class and business class passengers and executive services to corporate customers. From their over 20 years' experience, Aviance has positioned itself as delivering Service Excellence as captured in their corporate goals.(Aviance Ghana 2015).

This study with a service design approach, takes a look at how best to assist Aviance enhance customer experiences. It will examine aspects of Aviance's operations that directly affect or interact with passengers going through KIA and how best to improve upon them. These would include check-in procedures, security checks, gate area and baggage.

1.2 Research Problem and Objectives

The main objective of this thesis is to examine the new and growing business development concept; service design, and sees how best Avaince Ghana, using service design, can transform the services it offers at KIA. Service Design is used for planning and organising service components in order to improve service quality for the benefit of both service users and providers. Service Design is a creative and user-centred business development concept that is able to create value and competitive advantage for the service provider. To transform KIA's services, this research will seek to answer the following questions:

- What factors contribute to passenger discomforts and discontent at KIA?
- What do passengers expect of the services of KIA?

This thesis will also assist Aviance Ghana to identify some deficiencies in their service and make suggestions to improve on their services in accordance with customer expectations. This thesis aims at enhancing customer satisfaction level at KIA with a newly designed service blueprint.

1.3 Outline of Thesis

This thesis is divided into five chapters. The first chapter contains the introduction. It looks at the background of the study, objectives and research problem and outline the thesis structure.

The second chapter forms the theoretical part of the thesis. It looks at the concept of service design in detail as well as some service business development principles. Airport services are also reviewed alongside customer needs and expectations in such an environment.

Chapter Three discusses the research methods employed and the reasons for choosing these research methods. The research methods include service design methodologies as well as some traditional research methods to examine the passenger experiences and expectations at KIA.

Chapter Four analyses the findings into a service blueprint based on the experiences, expectations and reviews from previous customers of KIA.

Chapter Five sums the thesis up with conclusions drawn, discussions and recommendations to the service providers as well as suggestions for further studies into the subject.

2 THEORETICAL ANALYSIS OF SERVICE DESIGN

This chapter is divided into three sections. The first part examines service design and how it is implemented. The second section discusses airport services, passenger processes, quality, and passenger expectations. The chapter concludes with some theories on service quality.

2.1 The Concept of Service Design

Evolving from disciplines such as service business development, service marketing, industrial design, graphic design, over the past 20 years, service design has come to be a discipline of interest to many. In spite of the fact that many believe that service design dates back to the 1970s, it was not until in the year 1984 did Shostack put together the words service and design in his article in the Harvard Business Review. Later Hollins and Hollins included a design management perspective in service design in their book Total design in 1991. (Moritz 2005)

Today it has become necessary that businesses find creative processes to innovate aspects of their business in order to stay appealing to their customers and stay competitive. Service design has become even more useful to businesses that operate across multiple platforms, delivering services across many touchpoints such as an airport setup for example. Lately, the growing emergence of new technologies have inspired a growing interest in the field. Generally, products have started to have more functions and features. As we keep gravitating towards the “internet of things” with devices and appliances growing ever smarter, gadgets integrate electronics and connect wirelessly to networks. This makes the integration of various touchpoints and components of a service smoother and seamless, mimicking a fluid and effective ‘assembly line’ of a service. These developments have encouraged interactions between organisations and customers about their services rather than the mere products or individual touchpoints. This has impacted the popularity and essence of service design. (Jana 2007).

2.1.1 What is Service Design

Service design is a new and evolving field. “If you would ask ten people what service design is, you would end up with eleven different answers – at least”. (Stickdorn & Schneider 2010, 29). Pinning a single definition on it might limit its intrinsic evolving nature. That notwithstanding, certain experts in the field have given their own views. According to Mager (2008), service design is the application of design thinking and design methodology to improve and innovate service in a way that it really make sense to the users, in that they are easy to use and enjoyable to use. Design thinking is basically focused on humans and their needs rather than a specific technology or other conditions. Mager’s definition implies that service designers apply design methods, the focus however is on satisfying the users of the service. On the other hand, the service has to be profitable for the provider as well. Fritsche (2010), in her interviews with a sample of service designers captured these definitions of service design: Kulonen, one of the interviewed designers stated that service design is “a new emerging field of design, which focuses on developing existing services and innovating new ones from the customers’, receivers’ or users’ point of view’’. Kulonen also said, service design utilizes the methods and principles of design thinking and emphasizes the meaning of customer experience. In another interview, Verho explains service design as “making something invisible and abstract as service to be visible and understanding. It helps people to use services and gives something extra to the everyday life’’. Keränen, also describes service design as “a way of thinking and a way of developing service concepts.” According to Keränen, one can develop these service concepts, through innovative and customer oriented methods. (Fritsche 2010, 12-13).

According to Moritz (2005), service design is the overall experience of a service as well as the process and strategy to provide that service. He says service design is about understanding clients, the organisation and market, developing ideas and translating them into feasible solutions and help implement them. Service design is better explained when contrasted with product design. Just as product designers create tangible things like airplanes, bags or toothbrush, service designers create

the intangible experiences like the various interactions involved when getting a bank loan, when getting a hotel service or when booking a flight.

Simply put and comprehensively, service design is the activity of planning and organizing people, infrastructure, communication and material components of a service in order to improve on its quality, and the interactions between service providers and customers. (Service Design Network 2008). The function of service design and its methods is to design according to the needs of customers. The involvement of the users of the service makes the service user-friendly, competitive and relevant.

2.1.2 Why Services Need Designing At All

For an organization to maintain its competitive edge, and keep growing its revenue, it is important that it not only meet customer expectations but also exceed them. One sure way to ensure customers keep returning to a brand, service, or company is to consciously and carefully design service experiences. Besides, everybody enjoys a great service: on-time delivery, impeccable customer service and so on. Every organization would want to be the one associated with all these qualities. To ensure that your service has a certain value, a sense of purpose and making people's lives easier and better, they need to be strategically planned.

Service organizations often view their services as a combination of components. However, it is not the same with their customers. Customers often view their service as an outcome rather than a combination of components. When customers use the service of a hotel, they expect a particular outcome: The internet interface for booking the hotel, parking; whether valet or not, the reception area, the front desk person, and so on. The whole experience is viewed as one component. Every activity that takes place from booking online until the customer checks out is lumped up as the hotel service. If one or two components of the service malfunctions or fall out of sync, it affects the whole service outcome which mars the customer's service experience. (Goldstein, Johnston, Duffy & Rao 2002). Service design ensures that the individual components of a service are creatively planned and organised in such a way that the customer has a fulfilling experience, to which

they would like to come back and even recommend to others. According to a survey by Allen, Reichheld, Hamilton & Markeyk (2005) amongst 362 firms indicated that 80% of firms believed they delivered a superior experience to their customers. However, when customers were asked about their own perceptions about the same service, they had very variant views from that of the service providers. The survey revealed that only 8% of companies were really delivering superior experiences to their customers. With service design, this gap between what a company intends to offer and what the customer actually receive would be none existent.

Fritsche (2010) identifies three main areas in which service design can be employed in an organization. They are innovation, growth and quality. Figure 1 shows a mind map of why a company should employ service design.

Figure 1. Mindmap on why to use service design (Fritsche 2010, 25)

Yale Information Technology Services (2015) defines innovation as "the process of implementing new ideas to create value for an organization." This may mean

creating a new service, system, or process, or enhancing existing ones." This value created is beneficial to the organization, its customers as well as other firms. Today, innovation has very little to do with technology unlike in the 1990s where it used to be that innovation was associated with sleek and user friendly products. The European Commission as part of the policy 'Innovation Union' has broadened the definition of innovation beyond traditional R&D and technology to include service innovation, social innovation and user-centered innovation. (Dervojeda, Verzijl, Nagtegaal, Lengton, Rouwmaat, PwC Netherlands, Monfardini, Laurent, Frideres & PwC Luxembourg 2014). Service design has been identified by the EU to be the key driver of innovation in service innovation, social innovation and user-centered innovation sectors. Innovation is more about reinventing business processes and building entirely new markets that meet untapped customer needs (Bloomberg Business 2006). This implies that innovation is much more service focused than product focused. It is becoming obvious that service innovation is the next big thing. (Jana 2007). Research has shown that consumers are not only interested in the sleek products but also the services that come along with it. Service design would grant an organization the opportunity to emerge out of its old service molds and reinvent itself into new service molds that will enable them survive and thrive in these times of ever emerging consumer demands. A constant metamorphosis through user-centric service design methods is thus a central requirement for service providers to remain relevant and competitive.

Bringing together multi-disciplinary expertise of designers, researchers, developers and users, as the 'experts of their experience', can create competitive, desirable, flawlessly running services that directly translate into increased customer satisfaction and organizations being more efficient and effective. (Dervojeda et al 2014). This translates into tailored and/or specialized solutions that attract new customers. Implementing service design can grow a company's margins and increase profit. When smaller companies adopt service design, it allows them to compete rather fairly with bigger companies on service and its delivery. Designing service allows them to develop services that better correspond to customer needs. Service design enables both the user and the provider to have greater ownership of a service. (Dervojeda et al 2014).

Service design improves the fluidity and efficiency in an organization, ensuring that the processes within the organization are synchronized. It allows the company to make better decisions and eliminate or in the least reduce failure through innovations. This in turn reduces cost, speeds up operations, thus ensuring quick delivery of service. The customer sees a more differentiated and specialized service. (Dervojeda et al 2014).

Moritz (2005) identifies certain attributes that differentiate service design. These attributes are; Service design represents client's perspective, it addresses unique features of service, it integrates expertise from diverse disciplines, it is interactive and it is on-going.

When designing a service, designers establish a good understanding of the goals, motivations and the latent needs of the customer. Therefore instead of designing the service from the organisations point of view, the focus is on the organisations client. (Moritz 2005).

Customers encounter a variety of touchpoints while purchasing a service. It is these individual touchpoints that form the components of a service which is deemed as one service encounter in the eyes of the customer. Service design involves aligning all the individual touchpoints to form the complete service that appeals to the customer. (Moritz 2005).

Service designers work with experts from diverse fields to ensure a holistic end-result. By involving experts, various design challenges are eliminated. Service design recognizes both internal and external customers of an organisation and ensures that everyone's needs are met. (Moritz 2005).

Service design makes it possible to provide all resources and components that are necessary for a client to do whatever they want to do as the client is a central and an integral part of the service performance. (Moritz 2005).

Service design continues even when the service is in use. The service is monitored and is improved constantly. (Moritz 2005). A constant and never ending improvement is made during the use of the service.

2.1.3 How is Service Designed

Service Design places the user of the service at the centre. (Sabroe and Schulze 2014). Assessing the customer experiences to gain insight into user behaviour, needs and their underlying drivers are fundamental to the success of service design. It is therefore important to look at service holistically from all the processes involved in the production of the service in order to get an accurate picture of what is to be focused on when designing a service.

Analysing the whole service journey is usually the first step. This would according to Sabroe and Schulze (2014) “identify where you do too little or perhaps do too much, where to begin and where to end your service, what you should do yourself and what you should leave to others.” This is done by assessing the existing customer experiences to gain insight into user behaviour, needs and underlying drivers. Service designers generate a journey map through the service with the results highlighting key needs and issues at each step of the service journey. (Engine Group 2013).

The focus is not on what happens only on the front stage which is where the consumer is in direct contact with a service, but also on the backstage where the underlying processes occur before the service reaches the end user. This prevents a one-sided focus on users of the service and increases designer’s ability to see significant development potential. To gain insight into backstage activities, designers need to involve back-end system operators as well. Of course, if the service is new designers then have to create it from scratch based on research and what the values of the organisation is. (Sabroe and Schulze 2014).

Every service designer have their own approach to designing. There are however some similarities.

According to Moritz (2005), Mager developed a model which contains nine segments; Service environment analysis, customer typology, service testing, service performance development, service modelling, strategic positioning, service experience specification, service innovation process, and interface analysis. The model

shown in Figure 2 provides a systematic view of the service design process. Environmental analysis and customer typology form the basis of this model. Based on the results from analysing the service interface, new ideas are developed and more strategic solutions are found. Moritz (2005) is however of the view that this model although a useful overview, is tailored more for insiders of service design rather than general practitioners and decision makers. This model does not show how the various stages link or merge into each other and which areas iterate.

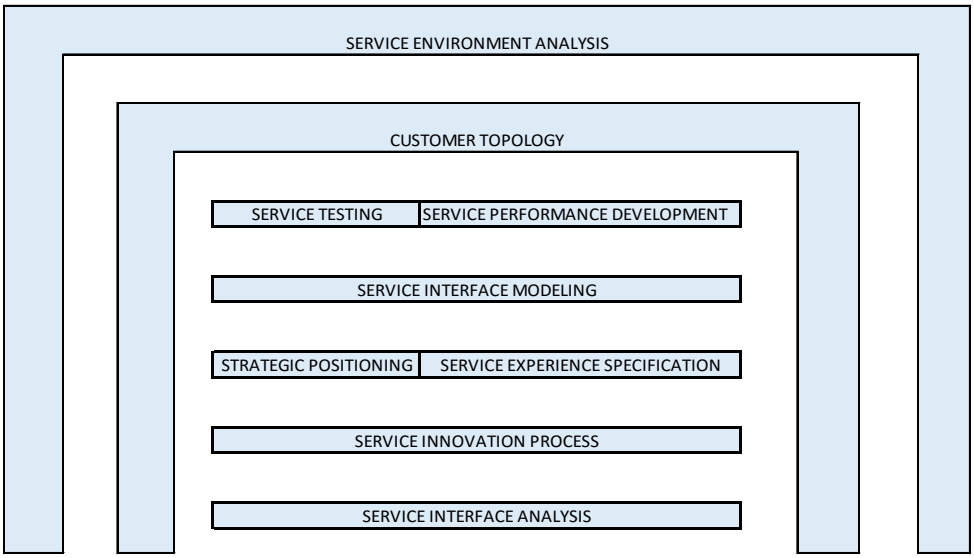

Figure 2. Mager's service design methodology (Moritz 2005).

According to Moritz (2005) IDEO, an innovation and design firm, has a model different from that of Mager. IDEO's model is divided into three stages. Observing and understanding people, business, and technology is the first step. Insights from the first stage goes into developing a strategic framework for the second stage. Ideas are developed and prototypes are made to help develop the final concept. Stage two involves the principle of iteration. The third stage is where the outcome of the second stage is translated into the service solution. (Moritz 2005).

Comparing all these models discussed by Moritz (2005), there is an emerging pattern in the processes. The pattern is summed up in the Design Council's double diamond structure, (see Figure 3). The design process has been divided into four phases: Discover, Define, Develop and Deliver.

Discover phase is the first part of the service design process. Here, designers gather inspiration and insights on the project. They identify user needs and conceive initial ideas on how to proceed on the project. The focus here is to be innovative, therefore designers work on noticing new things in order to get inspired.

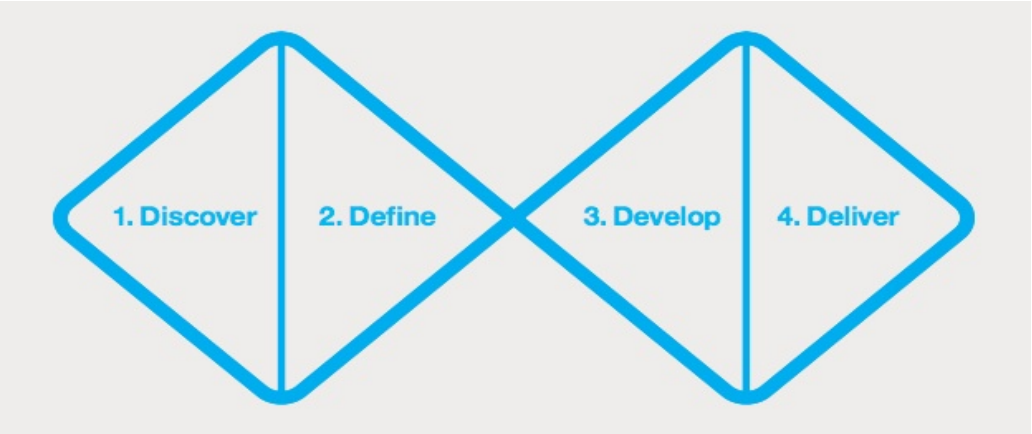

Figure 3. The double diamond design process.

They gather insights and opinions about what they see and what is interesting. The objective here is to identify problems, opportunities or needs to be addressed. Both qualitative and quantitative research could be used in this phase and can also involve analysis of social and economic trends as well as end user opinions. The success of this stage has a great impact on the rest of the design process. (Design Council 2015).

Define phase is where designers try to make sense of all possibilities identified in the discover phase. The mass of ideas and findings of the discover phase is analysed and findings are structured into a set of problem statements. These are measured against the organisation's needs and business objectives to identify which ideas to take forward. The define phase results in a clear challenge or problem to be addressed through the design process. The key activities during this stage is brainstorming, prototyping, multi-disciplinary team-working, visual management, development methods and testing. (Design Council 2015).

At the develop phase the solutions are created. Here, each service component is designed in detail using design and creative techniques while ensuring that these

components are linked together to form a holistic experience. In this phase the design team and other partners work through an iterative process of developing and testing with end users until a refined service concept is ready for implementation. (Design Council 2015).

Deliver phase is the last phase of the design process. The final concept is taken through final testing and launched. This phase also points out feedback and lessons from the process to colleagues and partners, making new knowledge, insights, tools and other ways of working available. (Design Council 2015).

At the different stages of service design, Moritz (2005) points out certain tasks that need to be undertaken. These tasks have been grouped into six categories. They are, understanding, thinking, generating, filtering, explaining and realising.

Understanding involves finding out about client's latent and conscious needs, contexts, the service provider's constraints and resources, exploring possibilities and providing insights. Understanding generates insights that identify areas that the company should be going for. It goes beyond what people are already familiar with. It explores user wants, needs, motivations and contexts. This task ensures that results are true to reality, relevant and appropriate. This is because it seek to understand users, values, goals, needs, behaviour, problems, group dynamics, demography and psychographics. Understanding also extends to the service provider; knowing the depth of their resources and other issues concerning short term goals, constraints, politics, processes and stakeholder's interests. There is a third dimension of understanding which has to do with context. Here, legislation, economic, socio-cultural and political environment has to be understood. Then also opportunities as well as other providers need to be taken into account. (Moritz 2005).

Thinking is based on information gathered from the task of understanding. This process involve giving strategic direction to the facts gathered. Here category, criteria, problems, focus and underlying motives are identified. Strategic framework is developed, that is, the project's objectives, goals and vision are laid out. Details regarding time-plan, design guidelines, team setups and specifications are put into

their appropriate scope and finally insights are gathered from complex data after analysis. It also sets the parameters for the other categories; it often play a transitional role. For example before the task of understanding, it is necessary to identify which elements to use as well as which direction to be pursued. Thinking is giving guidelines and direction to service design. (Moritz 2005).

Generating involves developing relevant intelligent and innovative ideas. This category is very active. Designers are tasked with creating and coming up with ideas and solutions to problems identified in the earlier stages. The service experience is designed in every detail, as well as objects, spaces and all other elements related to the service. The process involves developing ideas, solutions and processes, creating concepts and scenarios, finding inspiration and ways to work, implementing corporate design and finally crafting evidences, touchpoint interface and experiences. (Moritz 2005).

Filtering is basically selecting the best and most relevant ideas and concepts after evaluating results and solutions. The process involves selecting ideas, solutions and concepts, testing or measuring performance and quality, and finally evaluating the outcome subject to legal, technical, economic and other relevant criteria. (Moritz 2005).

Explaining is where the whole concept is brought to the understanding of stakeholders. That is overviews of ideas, concepts, processes, potential scenarios and future possibilities are explained. This category provides a discussion-base that is accessible to people of various backgrounds and of different levels of imagination. (Moritz 2005).

Realising is where all the solutions are made to happen. It involves implementing the solutions, prototypes and processes. It also involves writing business plans and guidelines as well as conducting training. Basically it includes everything necessary to roll out the service. The process therefore involves testing models, experiences and prototypes as well as developing blueprints, touchpoints and providing training. (Moritz 2005).

2.1.4 Tools and Techniques for Service Design

Service design uses certain tools and methods in the research and designing process. Most of these tools and methods are not rigid and can be adapted by altering the level of details depending on the desired outcome. These tools and methods are simply frameworks that can be adapted to each design task. Some of the tools work best at 'big picture' thinking while others are better on specific projects. It is important to know which tools and methods can give the best outcome on which project. Some service design tools are customer journey map, issue cards, role-play, touchpoint matrix, blueprint, offering map, character profiles and so on.

The customer journey map is a tailored graph that describes the journey of a user by representing the different touchpoints that marks his interaction with the service. The interaction is described step by step and with strong emphasis on some aspects depending on the activities. (Paul Boag 2015).

Issue cards are used as a peg to encourage interactive dynamics inside a team. Each card could contain an insight, a picture, a drawing or a description. Everyone is able to suggest new interpretations of the problem and to induce the assumption of different viewpoints. The result is the identification of new criticalities and opportunities in the context of reference. (Tassi 2009).

During role-play, some actors, the sample users or the designers themselves perform a hypothetical service experience. Actors are to think that the service really exist and then build a potential journey through some of its functions. In using this tool it is possible to perform the same scene several times, changing the character profiles on each scene in order to understand how different users would act in the same situation. (Simsarian 2003).

"The basic idea of touchpoint matrix is to provide a visual framework that enables designers to connect the dots of the user experience in order to see the different configurations, interfaces, contexts and results of the interaction with a specific service system." (Tassi 2009).

Blueprint is an operational tool that describes the nature and the characteristics of the service interaction in enough detail to verify, implement and maintain it. It is based on a graphical technique that display the process functions above and below the line of visibility to the customer; all the touchpoints and the back-stage processes are documented and aligned to the user experience. (Tassi 2009).

The aim of an offering map is to describe in a systematic way what the service offers to its users. There is no standard format for this tool; the offering could be described by words or could be illustrated by images, but in most instances it is visualized through a graph. (Tassi 2009).

Character profile is a tool for the creation of a shared knowledge about the service users inside the team. In order to build these character profiles, it is required that identification is created for some significant fictitious characters and then images and a textual description are made for them. The character profiles offer a clear and visible picture of the different kinds of users that are the centre of the design activities. (Tassi 2009).

2.1.5 The Role of Service Concept in Service Design

Service concept is the way in which an organization would like to have its services perceived by its customers, employees, shareholders and lenders. (Goldstein, Johnston, Duffy & Rao 2002). Services as structured by an organization are made up of components. These components are usually not physical entities, but rather a combination of processes, human resources, and materials that must be appropriately integrated to result in the 'planned' service. In order for a service to appeal to its stakeholders, managers and designers must make decisions about each component of the service, from seemingly insignificant decisions such us color of napkins to quite significant decisions such as location. In other words, service concept should be one of the key drivers in decision making at all levels of planning or designing a service.

Edvardsson and Olsson (cited in Goldstein et al 2002, 123) refer to service concept as the prototype for service and define it as the "detailed description of what

is to be done for the customer and how this is to be achieved." (Goldstein et al 2002, 123). 'What' here refer to the needs and wishes that must be satisfied while the 'How' refer to the processes involved in satisfying those needs and wishes. (See Figure 4).

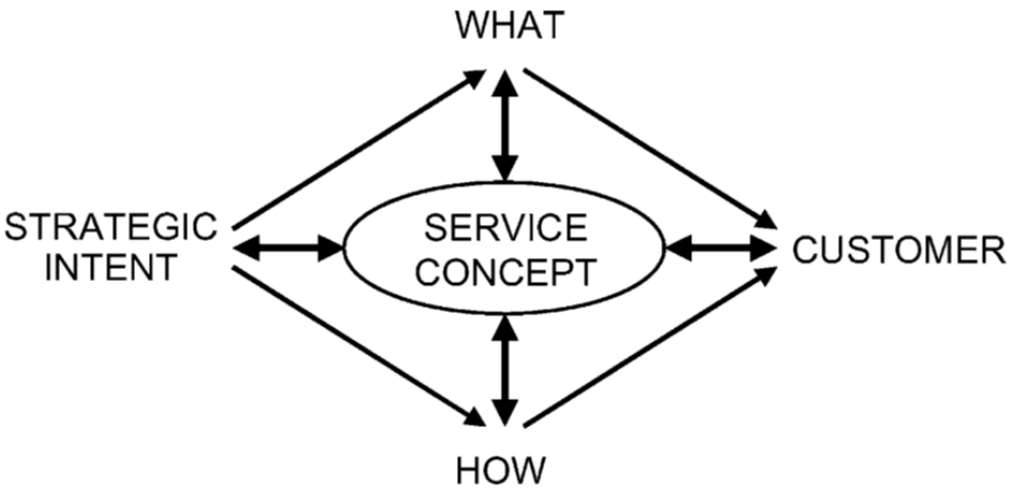

Figure 4. The basic structure of service concept (Goldstein et al. 2002, 123).

Service concept requires that service organizations set customer expectations before, during, and after service delivery. This is depicted in Figure 4 as the strategic intent. These expectations relate to the nature of the service package, duration, and customer flexibility during the moment of truth. Service concept not only define the 'How' and 'What' of a service but also ensure their integration. Bridging the gap between what the customer expectation in relation to the service, and the customer's perception after the service has been offered, determine if the service offered has been successful.

Lally & Fynns (2006) identified five elements of service concept. These are service benefit, people, process, physical and perception. Service benefit is the benefits to be made available to the customer in order to satisfy their identified needs and desired outcomes. People is the human resources and skills needed to deliver the customer's desired outcome of the service. The physical is the environment where the service takes place. The process is the organizational functions that are put together to deliver the desired outcome of the service. His is what Goldstein et

al. (2002, 123) referred to as the ‘how’ of service concept. Finally the perception is ‘what’ customers actually receive as the outcome of the service.

Clearly defining what customers ‘consume’ when they buy a service in order to organize resources to achieve the delivery of the defined ‘consumable’ is the focus of service concept. It is also important that the people and processes within the organization work together in delivering to the customer their desired outcome.

In linking it to service design, the following questions should be answered. How can the service concept be used to link the needs of customers and the design of the service with the strategic intentions of the organization? How can service concept be used to define the differences between design and capability? (Goldstein et al. 2002).

“How can service concept help designers and operations managers identify and deal with the consequences of change, such as re-configuring their operational resources? If the service concept is central to service design planning, how can it be used to develop and assess a service? How can service concept be used to drive strategic advantage? How can service concept be used to design the components of service encounters?” (Goldstein et al. 2002).

2.1.6 Why is Design Thinking Necessary in Service Design?

Design thinking according to Lockwood (2015) is a human-centered innovation process that emphasizes observation, collaboration, fast learning, visualization, and rough prototyping. He also states that the objective of design thinking is to solve the real problems behind the obvious. This means that all stakeholders such as consumers, designers and researchers would have to be involved in the process. Just like service design, design thinking is user centered. Therefore “the first step to design thinking is to develop a deep understanding of the consumer.” (Lockwood 2015). Collaborating with both users and multidisciplinary teams is also necessary in design thinking and is usually the second step, then prototyping and implementing situations follow to complete the process. (Lockwood 2015). Again,

design thinking offers a powerful, effective and broadly accessible approach which can be integrated into many aspects of business and society. (Brown 2008).

Service design and Design thinking seem to have many similarities. However Thurston and Marsh (2010) points out the differences in these two concepts. (see Figure 5). According to them, Service design is ‘doing’ and design thinking is a process or strategy.

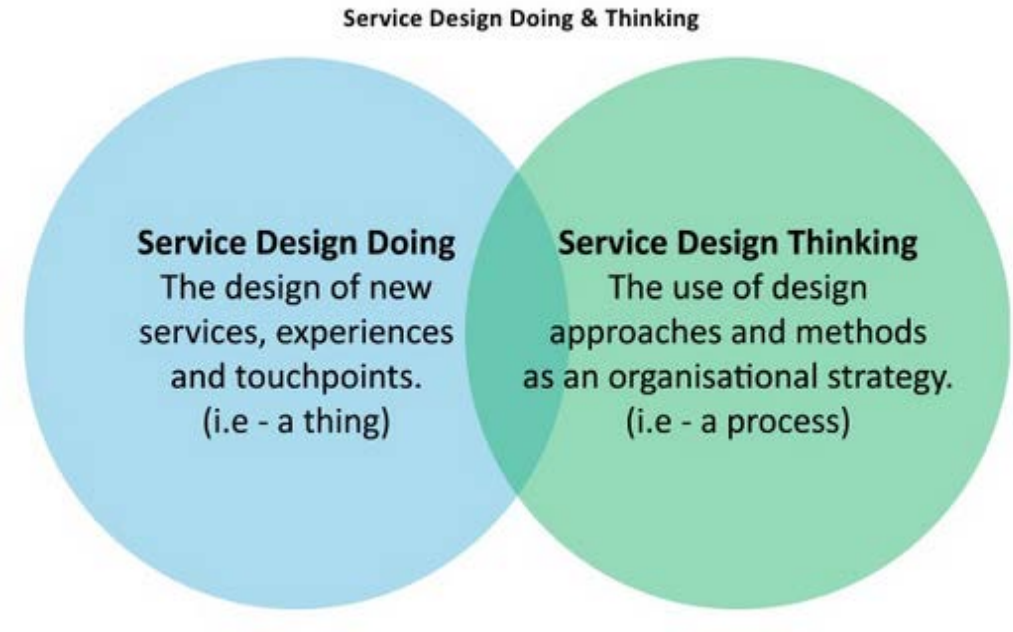

Figure 5. Service Design versus Design Thinking (Thurston and Marsh 2010).

Service Design involves designing new or improving old services, experiences and touchpoints. Design thinking is the use of approaches and methodologies as a strategy. Design thinking is considered a method or a process of getting new ideas by combining human empathy, originality and a good sense of judgement. (Fritsche 2010). Design thinking is more of a term to describe how designers should think outside the traditional design. This method of thinking can be applied in service design.

2.2 Airport Service

The previous analysis has focused on the elements and phases of service design. This section examines the nature of airport service in general, passenger processes as well as what makes up airport service quality.

2.2.1 Overview of Airport Service

Airports, especially international airports, being the entrance and exit points to and from countries, makes for the best place for people to have their most lasting and memorable impressions of a place. A person's experience of an airport on arrival or departure will determine if they would want to use or recommend the service to another person. The quality of service and the overall passenger experience is therefore crucial. Airport service quality could be measured by access, services and facilities, service personnel and security, environment, immigration and customs. These aspects have direct and significant impact on a customer's overall perception of the airport service.

Airports are generally one of the most complex systems in modern society, requiring diverse facilities and resources to support it. (Brown & Pitt 2001). An airport brings together people, processes, technologies, government agencies, private companies, spaces, artifacts and information to coordinate the arrival and departure of aircrafts on schedule. There are two main fronts of airport operations. These are aeronautical and non-aeronautical. (Brown & Pitt 2001). This research focuses only on the non-aeronautical front.

According to Kirk (2013) a passenger spends over 60% of their travel time in an airport terminal on average. While in an airport passengers undertake two main activities. Processing activities and discretionary activities. Processing activities include any activity mandatory before a passenger is allowed to board their flight. (Livingstone, Alison, Popovic, Vesna, Kraal, Ben, & Kirk 2012). Depending on the airport, processing activities could be check-in, security, customs and boarding. Discretionary time in an airport is the time during which a passenger can undertake a range of non-processing activities while waiting to board a flight.

(Kraal, Popovic & Kirk 2009). Another research by Kirk (2013) shows that a passenger spends 36% of their overall time within the airport terminal undertaking processing activities. The remaining 64% is spent on non-processing activities. Therefore as much as it is relevant to focus on making processing activities as easy as possible, it is even more important to focus on a passenger's experience during their discretionary time at the airport terminal.

2.2.2 Passenger Related Processes in an Airport

A general flow of activities for a passenger within an airport terminal can be seen in Figure 6.

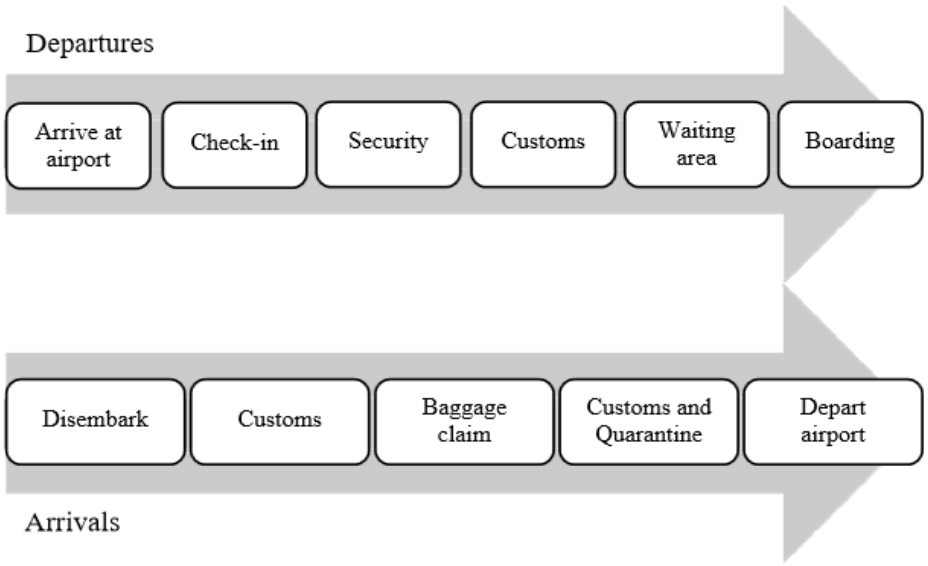

Figure 6. General flow of activities for passengers with an airport terminal (Adapted from Popovic et al. 2010, 3).

When a passenger arrives at an airport, check-in is usually the first procedure. Check-in involves obtaining a boarding pass and dropping off luggage intended to be carried in the belly hold of the aircraft. Lately, a significant cross-section of passengers check-in using online platforms before arriving at the airport terminal. This category of passengers bypass the ticketing and check-in stand and proceed directly to the security check point. Passengers who have not checked-in in advance would either walk to the ticketing and check-in stand to do so or use the self-serve kiosk. (Cassidy, Marymount University & Navarrete. 2009). It is today

more preferable to passengers to check–in before arriving at the airport and only drop off their luggage intended for the belly hold of the airplane.

Security is usually the next procedure after check-in. This procedure is focused on reducing and if possible eliminating potential safety threats. Both the passenger and their luggage are screened concurrently. Passengers enter a divesting area where they place their carry-on personal effects on a feed belt that transports the items through an x-ray machine. They then continue through a metal detector into the secure area of the airport and collect their belongings. “Should an alarm sound or a suspicious item be observed, the passenger and/or their belongings would be moved to a secondary screening area where he/she is searched further with a portable metal detector, and their bags would be hand inspected and/or be further analyzed with trace detection procedures”. (Cassidy et al. 2009), (see Figure 7).

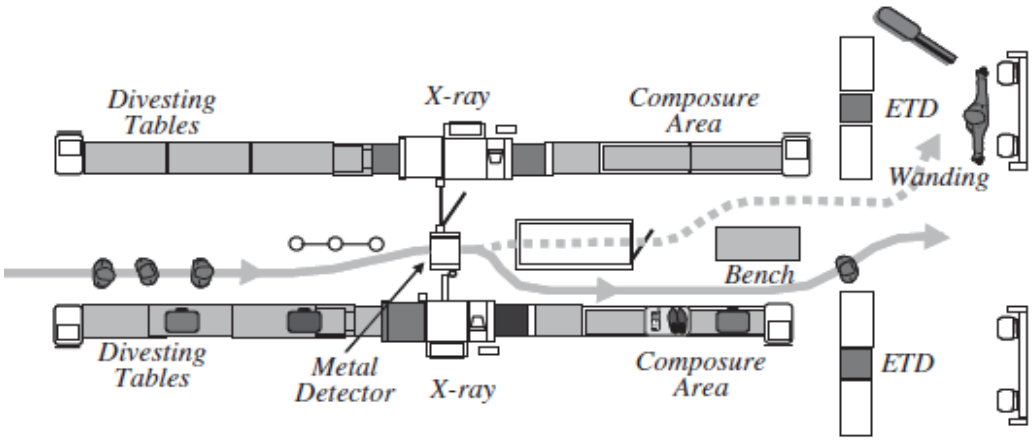

Figure 7. Passenger security screening process (Cassidy et al. 2009).

Both the security protocols and technologies are continually evolving at the checkpoint and passenger response to these changes is ongoing as well. (Cassidy et al. 2009). Security has continued to increase and have become more complex especially after the Twin Towers attack in New York on September 11, 2001 (9/11). The complexity of security at airports around world has added increased processing discomforts for passengers. (Kirk 2013).

To pass through customs, a passenger presents their passport, boarding pass as well as their completed outgoing passenger card to the customs officer. The passenger then proceed to the waiting area and board the scheduled aircraft when the gate is open. (Kirk 2013).

After disembarking at an international destination, passengers are generally required to go through customs and immigration inspection. Some airports are so planned that passengers go through immigration immediately after deplaning. Others pick up their luggage first and then go through immigration. Usually the procedure at this point is to submit travel documents for review. At some airports passengers are also photographed and finger-scanned. “Concurrent with passenger inspection, international passengers’ luggage is offloaded and transported to baggage claim devices.” (Cassidy et al. 2009). Passengers pick up their luggage and proceed to the customs service for further inspection. This process may also involve baggage inspection or payment of import duty and/or allied taxes. (Cassidy et al. 2009).

The baggage claim process may vary by the size and activity levels of an airport. In general, the longer the distance a baggage travel between the arriving aircraft and the baggage claim device, the longer it will take for a passenger to receive their bag at the carousel. “The key factors typically observed at baggage claim include baggage feed rate onto the carousel, number of bags that can be presented on a carousel or carousel capacity, and number of passengers in the active claim area.” (Cassidy et al. 2009).

2.2.3 Understanding Passenger Experience

Airport Cooperative Research Program (2013) outlined certain methods which could be used to investigate customer experiences at airports. These include benchmarking the customer experience, questionnaires and interviews with passengers, questionnaires with stakeholders/interested parties, modelling of the experience and direct observation of the experience. These are the five most used methods of investigating customer experiences, only questionnaires and interviews with passengers will however be discussed.

Questionnaires and interviews have been used in airport research to understand the varying demographics of passengers; for example, the nationality, age, reason for travel, and frequency of travel. It has also been an efficient method of directly determining passenger needs as well as being the solution to illustrating the key issues in the overall departure and arrival experience; this is not without pitfalls however. In a BAA survey for example, passengers were asked how long they had waited. The answers were mostly different from the actual. This could be due to difference in passenger recall, or a difference in where the measurement starts and finishes. This could also be due to actual times and perceived time comparison. It may seem to a passenger that they have been waiting for about twenty minutes when in reality they have been waiting for five minutes. Observation is a better method to use in such instances. (Kirk 2013).

The backbone of the questionnaire and interview methods is the structure and design of the questions. If the right questions are asked, this method can provide a great deal of feedback which can be used for improvements. Passenger surveys via questionnaires and interviews for example led to the prioritization of customer service issues such as acceptable queuing times at check-in and security at British Airport Authority (BAA) airports. (Kirk 2013).

2.2.4 Ground Service Quality

Airports have been classified as complex service settings because passenger satisfaction is influenced by various dimensions of service packages. Airport management teams have however relied on benchmarking to measure service quality while mostly ignoring passenger perspectives which have proven to be one of the key factors in driving airport service satisfaction. (Bogicevic, Yang, Bilgihan & Bujisic 2013).

Fodness & Murray (2007) relying on passenger perceptions, used questionnaires and interviews to construct themes of airport service quality which was later developed into a preliminary conceptual model of airport service quality expectations. This model is composed of three primary dimensions; servicescape, interaction of service personnel and services. (See Figure 8).

Figure 8. Preliminary conceptual model of airport service quality.

Each of the dimensions have three sub dimensions. Servicescape consists of spatial, layout and function. "Servicescape includes all the objective factors controllable by the service provider that facilitate customer actions during the service encounter and enhance their overall service quality perception.'' (Fodness & Murray 2007, 496). According to Airport Cooperative Research Program (2010), how passengers perceive their experience of transiting an airport in terms of comfort and convenience counts a great deal, therefore the physical layout of the airport and the ease of navigation through the airport accounts for airport service quality. Jeon and Kim (2012) in their evaluation of servicescape in relation to passengers' state and emotional intentions revealed that airport functionality, aesthetic, and safety elicits positive emotions from the passenger and is strongly connected to their behavioural intentions.

Rowley and Slack (1999) focusing their research on the hospitality and retail amenities within the departure lounges revealed that spaciousness, lighted and clean lounges with branded retail stores and restaurants positively influence passenger experience.

Like Zeithaml (1988) said when it comes to any type of service, customers are no longer only interested in the service outcome, but also in the process of service delivery. This means that everything and everyone counts in giving the customer

the perfect experience. The attitudes, behaviours and expertise of service personnel make up the interaction sub dimension.

Gupta, Arif and Richardson (2014) argued that a complete customer satisfaction is only possible when every influencing member of the organization has a complete understanding of customer needs and requirements. The ability of the service personnel to make positive impressions on a passenger in their attitudes, behaviours and professionalism is part of the passenger's quality expectations.

The third dimension is service. It measures productivity, maintenance and leisure. The airport experience demands a significant time commitment – the one resource that passengers do not seem to have enough of. The extent to which the airport activities facilitate or frustrate passengers' use of time can have a significant influence on perceptions of the overall quality of the service encounter. (Fodness and Murray 2007).

2.2.5 Passengers' Expectations of Airport Service

Bogicevic et al. (2013) studied factors that are enhancers of passenger satisfaction at airports. According to their findings, key satisfiers in the airport context are usually the cleanliness and pleasant environment. Passengers on the other hand are mostly dissatisfied with security-checks, confusing signage and poor dining options.

Airport Cooperative Research Program (2010) also identify three factors which account for passenger inconveniences at an airport terminal:

- the associated ease or difficulty involved in a passenger's journey within the airport
- how a passenger feel about the terminal facilities and ambiance
- the time it takes to move through the terminal

Airport Cooperative Research Program (2010) also identify that both tangible and intangible factors affect a passenger's perception of an airport. By tangible factors the report refer to temperature of the terminal, the availability and cleanliness of

restroom, availability and cleanliness of baby care facilities, adequate seating in common areas, and a good variety of reasonably priced retail and food and beverage options. The intangible factors are; helpfulness and friendliness of staff, ambient noise levels, and level of stress involved in moving through the various processing functions. (Airport Cooperative Research Program 2010). A research by Bogicevic et al. (2013) also indicate that in airport characteristics and organization, the most relevant factors such as dining options, shopping and security-check are essential for airport experience, while check-in, accessibility, parking, adequate seating, internet kiosk, device charging stations and Wi-Fi receive a small level of positive or negative consideration. Nonetheless, these account for passengers' overall satisfaction level at the airport.

2.3 Service Business Development

The most important and unique characteristic of service is the fact that services are processes, not things. This mean service firms only have interactive processes and not products. It is the interactions between customers and the value generating resources controlled by the service provider that forms the heart of service. (Grönroos 2001).

This section explores how service providers can increase their value to customers in terms of satisfaction levels.

2.3.1 Service Quality

Service quality is needed for creating customer satisfaction, it is however closely connected to customer perceptions and customer expectations. (Kabir & Carlsson 2010). Service quality has very little to do with what an organization intends to offer its customers, it is rather what the customer perceives of the service offered. In their gap model, Berry, Zeithaml, and Parasuraman (1990) explained that quality service is the gap between a customer's expectations for the service and the customer's perceptions of what was actually delivered. They also came out with ten dimensions of quality service which were later narrowed to five. These dimensions are known as the SERVQUAL dimension - reliability, responsiveness, as-

surance, empathy, and tangibles. Tangibility here is in relation to physical facility, equipment, and appearance of personnel. Reliability is the ability to perform the promised service dependably and accurately. Responsiveness is the willingness to help customers and provide prompt service to them. Assurance relates to the knowledge and courtesy of employees and their ability to inspire trust and confidence in service users. Empathy relates to the care and individualized attention the firm provides its customers. Assurance and empathy contain items representing seven original dimensions – communication, credibility, security, competence, courtesy, understanding/knowing customers and access.

According to Grönroos (2008) customers are not primarily interested in what they buy or consume as service but also the value they derive from the service. He suggests that a customer should feel better off after the consumption of a service than they did before using the service. That is the value a service should bring to a consumer.

2.3.2 Service Quality Improvement Strategies

To improve service quality, Stewart (2003) identifies four primary themes: culture-based, design-based, variation-based and failure-based improvement strategies.

Culture-based improvement as a strategy operates on the basis that a customer's perception of a service is usually formed during the service encounter. A service provider's ability, willingness and flexibility in responding to the customer's needs and resolving them promptly and smoothly is a function of their customer service training and the organizational culture. Customer service is a competitive weapon that can easily differentiate one service from another. (Buchichi 2013). According to Stewart (2003), Heskett's system dynamic model indicates that poor service culture within an organization results in service failure. To improve service culture means that the organizational structure, management style, incentive system and group dynamics must be revised.

Stewart (2003) under his design based approach mentioned linking the design to customer needs. In strategic service vision, Heskett suggests that service businesses should begin with understanding the target market. By understanding their target market, businesses would derive their service concept and a strategy for delivering the concept. Another aspect of linking design to customer needs is by adopting Behara and Chase's House of service which they put together by combining quality function deployment (QFD) with SERVQUAL. House of service is a matrix that links the needs of the customer to operating design variables under the control of the system designer. (Behara and Chase 1993).

Producing pleasure for the customer through the design of the service environment can have direct effect on customer satisfaction. (Stewart 2003). The tangible characteristics of the servicescape can impact customers' attitude towards the service. Customer attitude can be manipulated to elicit appropriate behaviour by the design of the service environment. Prompt and favourable social interaction also help shape expectations for the service. (Stewart 2003).

Variation-based improvement is built on the success of statistical process control (SPC). SPC is an industry-standard methodology for measuring and controlling quality during the manufacturing process. (InfinityQS 2015). To adapt this approach to service, businesses would be simplifying work processes, mistake-proofing, making clear communications, training and automating processes. (Stewart 2003).

Providing incentives for customers to register their displeasure by giving information about service failure would lead to service recovery. Service providers would then be able to identify the problem and try to make amends to the customer. This approach is likely to retain the customer's business and avoid negative word of mouth. Service providers could also anticipate service failure and take steps to prevent it from reaching the customer. Service providers could rely on the use of special procedures and technology to anticipate, eliminate, or at least preventing service failures from reaching the customer. (Stewart 2003).

2.4 Summary of Theoretical Framework

In this chapter we have discussed service design in detail. As stated above, service design is necessary for innovation growth and quality improvement in today's business world. According to Design Council (2015), there could be several approaches to designing services. One model is to follow the Double Diamond Design Process, which is discover, define, develop and deliver. (see Figure 3, page 21). We also discussed Moritz's (2005) tasks that need to be undertaken at different stages of service design. These are understanding, thinking, generating, filtering, explaining and realising. These tasks would have to be performed using certain service design methodologies and tools. Service design tools are flexible and could be adapted to various projects.

The chapter also discussed the role of service concept in service design. "Service concept is the way in which an organization would like to have its services perceived by its customers, employees, shareholders and lenders." (Goldstein et al 2002, 123). Therefore when designing a service, designers should bear in mind the strategic intent of the organization. Without service concept, service design would be without focus.

We also discussed design thinking and mentioned that design thinking is a process that can be adapted in service design.

In section 2.2 we discussed the airport experience. We stated that airports are extremely complex due to the number of interactions occurring to ensure their efficient running. We discussed the passenger related processes at the airport in order to understand passenger expectations with regards to airport quality. With regards to customer expectations, both Bogicevic et al. (2013) and (Airport Cooperative Research Program 2010) confirm Fodness and Murray's (2007) preliminary conceptual model of airport service quality (see figure 6, page 30). Passenger expectations are informed by servicescape, interaction with personnel, and the service in general.

In section 2.3 we explored how service organizations can improve on the value they offer to their customers. We discussed some primary themes for improving service. These were “culture-based, design-based, variation-based, and failure-based improvement strategies.” Stewart’s (2003).

Some theories will be tested in the empirical study and will be evaluated in the conclusion. This research will lean more toward Mager’s (2008) definition of service design. The focus will be to use design thinking and design methodology to improve and innovate the service of KIA in such a way that it would make sense to the users. Mager’s definition is selected because it tend to focus on the user of the service. Since this research will have no input from the service provider, it makes sense to focus on Mager’s definition. In accordance with Dervojeda et al (2014), this study will test the theory of bringing together multi-disciplinary experts of designers, researchers, developers and users to design the service of KIA. A design workshop will be organized to put together individuals with diverse expertise and backgrounds to design the airport service. Dervojeda et al.’s (2014) perspective was selected because it is relatively recent. In addition, many service design companies have incorporated a design workshop in their service development process; these companies include IDEO and UX consultancy. Design Council’s double diamond structure will be followed in the design process. The design process will be divided into the four phases: Discover, Define, Develop and Deliver. The double diamond model is quite a widely used design approach. It has also been used by Engine group, one of the big names in the service design industry; this makes it a relatively reliable approach. Fodness and Murray’s (2007) sixty-five airport service quality themes have been widely used by many airport quality researchers. It will be adopted as the questionnaire for the airport service development. Their Preliminary conceptual model for airport service quality will also be used as a benchmark for categorising KIA’s service.

3 DESIGNING THE CUSTOMER EXPERIENCE AT KIA

In this chapter, the study will focus on passenger experiences at KIA and using the already discussed theories to develop a redesign of the passenger experience at the airport. The chapter will begin with an explanation of the methodology used in gathering the data and how these methods are implemented. The chapter continues with an analysis of the data sampled. The analysis begins with an assessment of the current situation at KIA and later the experiences of passengers. These are then developed into a service blueprint for the case company.

3.1 Research Methodology and Implementation

The research methods used in this study are both qualitative and qualitative in nature.

Quantitative research focuses on numeric and unchanging data. Quantitative research methods afford the researcher the possibility to organize the data into a statistical view. The data is usually gathered using structured research instruments such as questionnaires. The results are also based on larger sample sizes that are representative of the population being researched. (Babbie 2010).

Qualitative methods afford the researcher the opportunity to understand the underlying reasons, opinions, and motivations of the respondents and delve deeper into their experience, ideas, beliefs and values. It also provides insights into the problem or helps to develop ideas or hypotheses for potential quantitative research. Qualitative data collection methods can be unstructured or semi-structured techniques. Some common methods include focus groups discussions, individual interviews, and observations. (Wyse 2011).

In this research however, the researcher places more emphasis on qualitative data. This is because a fair understanding of the sample is needed rather than mere statistics. The nature of service design which is the focus of this study makes it such that qualitative data is much more useful.

In this thesis, a questionnaire was used to sample data on customer expectations at airports. This questionnaire was administered online through the emails of the respondents. The questionnaire was made up of sixty-six closed-ended questions, and one open-ended question. In the closed-ended questions, respondents were to check boxes by the questions if they agreed to the questions. Usually respondents do not have time to complete long questionnaires by having to write down their own answers so the check boxes were used to make answering a lot easier. The structure of the questionnaire also works to the benefit of the researcher. The questions were structured as closed-ended in order to be easily interpreted. The opened ended question was to provide the respondents the opportunity to express their own opinions.

This sample was chosen because each one of the samples has an airport environment experience.

An online method of distribution was used because it is fast and versatile. Data obtained is conveniently transferable to SPSS, the software used in analysing the data. Another advantage of the online medium is that anonymity is assured. Respondents are therefore more honest with their responses. Online distribution however limits the researcher to people access. In total, eighty-four people responded to the questionnaire.

As a second research method, in-depth interviews were used to sample first-hand passenger experiences at KIA. Five passengers who have used the airport in 2015 were interviewed. The questions were very different from the ones in the questionnaire, as the expected results were different. The questionnaire sought to sample expectations at airports while the interviews were seeking to sample experiences at Kotoka. The respondents are four Ghanaians living abroad and a Polish national who visit Ghana frequently for business. These respondents were selected because they are widely travelled and are more likely to give an international perspective while bearing in mind their cultural biases. The interviews were recorded using a Samsung smartphone as a voice recorder.

As a third research method, the study also sampled data from airport review websites in order to identify what constituted customer dissatisfaction and discontent at KIA. The researcher read fifty reviews on KIA and three blogs. The researcher chose www.airlinequality.com which allow flyers from all over the world to post their comments about airports and airline companies. Being a part of Skytrax airlinequality.com is the largest airline review website that includes reviews of over seven hundred airports. Other sources included google reviews, www.modernghana.com, www.thechronicle.com.gh and ghanacelebrities.com.

The fourth research method used is quite unconventional. A creative workshop was organised to analyse the data collected from the above methods. This method was chosen in order to create the opportunity and atmosphere to co – create and use some of the service design tools discussed above. Twelve participants attended the workshop. These participants were all Ghanaians. The invitation was not targeted at Ghanaians only, it however turn out that only people from Ghana were able to attend the workshop. Although some respondents were not able to attend the workshop they answered the basic questions that were in the workshop presentation. Five respondents contributed in this manner. The goal of the workshop was to review the field data, understand passenger situations and to develop relevant intelligent and innovative ideas. The expectation was for participants to discuss, share insights, come up with ideas, and to create solutions to the issues identified. During the workshop participants learnt about service design and some of its methodologies and tools. Participants watched videos of good and bad depiction of airport services. Some information on the field data gathered was also shared to give participants a background. Participants created and used word and phrase cards to describe their ideal airport and touchpoints.

At the workshop, participants used ideating techniques as well as some design tools in the developing process.

An ideating technique called WHYs was used. This technique was pioneered by Sakichi Toyada. It applies the concept of a five year old asking the question of “why” until a true reason is found. Another technique employed was “What if”.

What if involves trying to play different roles or thinking how other people would have solved a problem. (Michanek & Breiler 2009).

In this research four research methods were used mainly because of the subject being studied, which is service design. In service design, assessing the customer experiences to gain insight into user behaviour, needs and their underlying drivers and/or motivations are fundamental to the success of the design process. More than one research method was therefore necessary to ensure the reliability and a deeper understanding of the situation. Design workshops are quite typical with service design projects because it affords the use of design tools and the involvement of experts from diverse backgrounds. It therefore became necessary to add a workshop to the research methods. It was necessary to use questionnaires to augment the information gathered and also reaffirm the findings.

3.2 Kotoka International Airport

Kotoka International Airport is Ghana's only international airport and is located in Accra, the capital city. The airport currently has the capacity of hosting large aircrafts such as the Boeing 747-8. As to passenger capacity, the airport sees about 2 million passengers annually. (Business Day 2015).

The airport is operated by Ghana Airports Company Limited, (GACL) and has charged Aviance Ghana with the responsibility of undertaking ground handling services at the airport. For the purposes of this thesis, Aviance's services would be limited to passenger handling, baggage services and lounge services.

KIA currently has two passenger terminal labelled Terminal 1 and Terminal 2. Terminal 2 caters for international and long haul operators while Terminal 1 serves domestic and regional operators. There is also a terminal used for diplomatic flights and a military terminal for military operations. Terminal 2 houses the international departure and arrival facilities. The departure area has three restaurants, a duty free shop and a bar which also is a gallery and two business class lounges managed by Aviance Ghana and Menzies Aviation Ghana Ltd., another ground handling service company engaged by the GACL. The restaurants are lo-

cated outside the secured area of the airport – thus one can only access them before going through airport security procedures. A passenger who wishes to eat would have to go back through security to access the restaurants and then go through the security procedures again before boarding. There are two departure lounges after the secured area. There is also a general sitting area by the duty free shop and bar/gallery. Terminal 2 also has the state protocol lounge which is used by senior government officials and diplomats. The airport also has round-the-clock carpark with a capacity for 1,000 cars. The departure area is also said to have ten self-check-in kiosks which were installed in August 2011. (GACL 2015).

A release from the GACL (2015) revealed that the airport is undergoing improvements starting from June 2015. The existing arrival hall which is about six thousand square meters would be expanded with an additional five thousand square meter space. The arrival hall which is currently usually congested around the baggage claim area would also see some improvements. At the moment, there are only two baggage conveyor carousels which often break down. According to the release, new baggage handling equipment would be installed. Other improvements include additional immigration booths, new air conditioning system, refurbishment of toilets, replacement of broken escalators, installation of elevators and CCTV cameras. These improvements are ongoing and are scheduled to be completed in December 2015.

3.3 Validity and Reliability

Broadly defined, validity has to do with whether the researcher is studying the intended subject without deviation. Validity can be said to be impaired if the methods employed in the research are such that the researcher is unwittingly covering more or less than the subject intended from the beginning. To avoid validity impairment therefore, the researcher should endeavour to capture the subject to be studied as comprehensively as possible and ensure that only that subject is captured. Various types of validity can be identified. These are, content validity, internal validity, utility criterion and external validity. To ensure content validity, different elements, skills and behaviours are adequately and effectively measured. In addition, the research instruments and the data are to be reviewed by the ex-

perts. Internal validity is achieved when research findings are in congruence with the reality. The third type of validity is utility criterion. Utility refers to the degree of usefulness the findings have for administrators, managers and other stakeholders. External validity measures how generalizable the research is to other contexts or subjects. (Zohrabi 2013).

Reliability is also generally related to whether the data obtained can be relied on. Reliability is again impaired if the data collected is not independent of the circumstances under which it was gathered and can be said to be biased in one way or another. To avoid the impairment of reliability, the design of questionnaire should be such that there are checks on individual responses for consistency. This ensures the avoidance of circumstances of lack of concern or care on the part of respondents that may prejudice the credibility of the responses. There are four types of reliability. These are test-retest reliability, parallel forms reliability, inter-rater reliability and internal consistency reliability. Test-retest reliability is a measure of reliability obtained by administering the same test twice over a period of time to a group of individuals. Parallel forms reliability is used to assess the consistency of the results of two tests constructed in the same way from the same content domain. Inter-rater reliability is used to assess the degree to which different raters give consistent estimates of the same phenomenon and internal consistency reliability is used to assess the consistency of results across items within a test. (Phelan and Wren 2005, & Trochim 2006). Although the researcher has ever used KIA, her experiences there and opinions were not included in this research. This is to ward off any biases and the avoidance of subjective analysis. The lenses of objectivity of the researcher cannot thus be said to have been tainted by personal prejudice and/or opinions.

To ensure the reliability of this research, the objectives have clearly been stated to keep the researcher focused. Two methods were used to sample customer experiences at the airport to ascertain the consistency of the information. The methods used were interviews and web reviews. In addition, the interviews were recorded to ensure its reliability. The interviews have been excerpted into the write – up to boost reliability.

The researcher did not visit the research setting during the research period. This could constitute a threat to validity and reliability, this however lessen the potential for observer biases. This research being a case study, the researcher was careful to refrain from being subjective. The design workshop ensured that diverse opinions were collected rather than exclusively tabling the researcher's ideas. To boost internal validity the data collected from the interviews were confirmed by the web reviews. The researcher has neither professional nor personal connections whatsoever with the case company. Although the researcher has personal relationships with two of the people interviewed, one of the interviewees was a complete stranger; this was to enhance the validity of the study. The findings of this research are comparable to other research conducted on airports. These include Bogicevic et al.'s (2013) research on "airport service quality drivers of passenger satisfaction" and Kirk's (2013) research on "passenger experience at airports". Barford (2015) in her article in the BBC News on "Why do so many people hate US airports?" also confirm some of the problems identified by respondents in this study. The questionnaire used for this research was adopted from Fodness and Murray's (2007) sixty-five airport service quality themes. The validity of this research is further buttressed by the findings of earlier research which underscore how generalizable the study is; which is a measure of external validity. A core product of this research is the service blueprint that supports the usability of the research findings.

The reliability of this research had a few drawbacks. Firstly, the sample for the interviews was relatively small. The online reviews may not be as reliable since it is limited to those passengers who have access to the internet and wanted to share their experiences. The design workshop was very subjective to the researcher's knowledge of service design. No design experts were present at the workshop. Lastly the questionnaire were closed ended and respondents had only to agree or disagree. Although there was room for respondents to write down other opinion, not many people did. These drawbacks notwithstanding, the chosen research method provided answers to the research questions and the objectives of the research were met.

4 ANALYSIS OF FINDINGS

In this chapter the data collected through questionnaire, interviews, online reviews and the workshop will be analysed. The analysis begins with a journey map of an average passenger at KIA. The subsequent analysis is based on the four phases of the double diamond design process by the Design Council (2015). These four phases are discover, define, develop and deliver.

4.1 Customer Journey Map

According to Sabroe and Schulze (2014), analysing the entire service journey is usually the first step in service design. The insights generated by the in-depth interviews were visualized into a customer journey map which highlights the key needs and issues at each step of the airport service. To fly from KIA a passenger gets off at the drop-off point, finds baggage trolley shed where you can pick a trolley for your luggage as needed. You then proceed to the entrance of the departure lounge, show your passport and ticket to the security staff posted at the door to confirm that you are indeed traveling, as non-travellers are prohibited from entering the departure lounge. You then proceed to weigh your luggage if there is no queue of other passengers waiting to do same. At the weighing station, the weight of your luggage will be written on a tag or with chalk on your baggage. You then proceed to a counter with personnel who will inspect your passport and ticket once again before you proceed to the check-in counter. At the check-in counter, your passport and ticket will be inspected again, this time by airline personnel and upon weighing your luggage again, will issue you with a boarding pass. Your check-in luggage will then be sent to the luggage hold area and subsequently carted to the belly hold of the aircraft.

You then climb upstairs to the security and immigration control area where you complete an immigration form, and then proceed to the entrance of the security section. You show your passport, ticket and boarding pass to the security stationed there and enter. You join a queue if there is one, after which you will be directed to which immigration hatch to go to by an immigration officer stationed at the beginning of the queue. Next, you hand your passport, ticket, boarding pass, com-

pleted immigration form to the immigration officer in the hatch. He/she will then examine your documents and when satisfied, will stamp your passport to indicate you are cleared to depart the country. You then proceed to the security scan area, join the queue till you are at the beginning of the queue, you will be directed to which scanner to go through. After passing your carry-on luggage and other personal effects through the scanner, and then walking through the millimetre wave scanner, you are frisked or wanded down and then free to pick your belongings from the conveyor. This marks the end of your passage through security. You then proceed to the designated gate and wait for boarding. Before boarding, you might be questioned by a personnel from the Narcotic Control Board stationed at the gate. After your boarding pass is checked by the airline personnel, you proceed to a waiting shuttle which will ferry passengers to the waiting aircraft. Your boarding pass is once again checked by a personnel at the foot of the airstair or mobile stairway before boarding the aircraft.

After disembarking at KIA, a shuttle takes passengers from the plane to the entrance of the arrival hall. You then join a queue to go through an Ebola screening process after which you fill out an immigration form. You then join another queue to go through immigration control. When at the beginning of the queue, you will be directed to an immigration hatch or booth. After your passport and immigration form have been checked by the immigration officer in the hatch, the passport is stamped to indicate that you have arrived in Ghana on that date. Your biometric data may be collected as well. You then proceed to the baggage claim area where you can find trolleys for your luggage. You pick your baggage from the carousel and then proceed to customs for a physical search in the luggage. You then proceed towards the exit of the arrival hall. You show your passport to a personnel to compare your name to the tags on your luggage and then exit the arrival hall. (See Appendix 1 for graphic journey map).

4.2 Discover and Define Phase of the Service Design Process at KIA

In this phase, insights and opinions are gathered about the service. The objective is to identify the problems and opportunities to be addressed. In gathering insights into the passenger experiences at KIA, the researcher used interviews and online

reviews. These insights from the discover phase are structured into a set of problem statements. By the end of this section there would be a clear challenge or problem to be addressed through the design process.

4.2.1 Interviews

The first interview was with a Ghanaian national. He had visited Ghana through KIA in January, in April and also in June 2015. He travelled on each occasion alone. He arrived in Ghana on two occasions at 21:00 GMT in the evening, but on his last trip he arrived at 15:00 GMT in the afternoon. On all three occasions he left Ghana in the evening at 22:00 GMT. The purpose of each visits was business. According to his account, for each of the time he arrived in the evenings, he spent about 90 minutes to 120 minutes within the airport terminal going through the arrival procedures. In his words, there were very long unnecessary queues, excessive checks tailored to solicit money and 'gifts' from passengers. He complained about how long he had to wait to get his luggage because the baggage carousel were broken. His other problem has to do with customs officials who go through your luggage with their hands, item by item and at several counters. This according to him made his luggage very messy. Departure was equally time consuming and stressful. He had to arrive at the airport at least four hours before the scheduled departure time. He counted about four check-in counters which did the same thing. Each one checked passport, luggage weight and inquired about the contents. This is unnecessary and waste of human resource, he said, because each counter had at least three staff just looking on. This made the check-in hall even more congested. He had to go through about three to four counters before his luggage could be checked-in. Check-in could take about ninety minutes to one-hundred-and-twenty minutes depending on the time of arrival at the airport. After the security check point, there are staff positioned en-route the waiting area, who would stop people at random and ask questions. He was upset when he was pulled over and asked what he had eaten for dinner that evening. Another staff asked him to offload every Ghanaian currency he had on him since it was the last security check point. For this interviewee, it seemed to him that the purpose of the questioning was to solicit money and nothing else. Rating the facilities at the airport

categorised into servicescape, personnel and service. The ratings were from a scale of 1-5, 1 being least and 5 being the highest. (see Table 1 for the ratings). When this respondent was asked if there were facilities in the airport terminal that met his expectation his answer was an emphatic no. He is of the view that the airport needs to do more to meet the international standards. This respondent has incidentally visited about nine airports in Europe; Frankfurt in Germany, Schiphol in the Netherlands, Brussels in Belgium, Kastrup airport in Copenhagen in Denmark, Vantaa in Finland, Arlanda In Sweden, Charles de Gaulle in France, Tegel in Berlin, Billund in Denmark, the Vaasa airport and Riga airport in Latvia. He has also used the Murtala Mohammed airport in Lagos, Nigeria. Amongst all these airports, he rates KIA as the least in service quality and overall experience.

Table 1. Rating of KIA facilities.

	Rating		
Respondents	**Servicescape**	**Personnel**	**Service**
First	2	1	2
Second	3	1	2
Third	3	2	2
Fourth	3	2	2
Fifth	1	2	1

The second respondent was in Ghana in September 2015. He is a Ghanaian and has visited Ghana two times this year with the first time being in January. Both visits were for the purposes of business. This respondent was more concerned about passenger comfort at the airport. Arriving to Ghana from London, he expected a change of temperature but expected also that the airport would have adequate cooling measures in place. He was upset that a shuttle had to convey the passengers to the arrival hall and not a jet bridge. The shuttle was so loaded with passengers that one could barely find his feet. In addition to their discomforts there was no cooling system in the shuttle. The arrival hall was very hot as the cooling system was broken. He however noted on his second visit that one air-conditioning system had been installed; it was however woefully inadequate for

the size of the hall. His other issue with the facility had to do with baggage claim service. He had to spend about ninety-minutes waiting for his baggage but the bags never came. Not until he lodged a complaint with the airport staff was he told that the airline had informed that the baggage did not arrived to KIA with his flight. He expected that the airport staff upon receiving that information would take proactive steps and notify him about the development so he did not have to wait for over an hour for his baggage. In addition, when he came the following day to pick up the bags the airport staff were inattentive to him. He was ignored for about 90 minutes and it was only after complaining about their attitude was his baggage finally delivered to him. This respondent also rated the facility. (see Table 1)

The third respondent is a lady with her eight-year old son. They returned from Ghana in July 2015. Her primary concern was with check-in. First of all her husband and parents were not allowed to come into the check-in hall. Her eight-year old son had to stand on his feet for about ninety minutes waiting their turn. She did not also understand why an airport staff should call out other passengers behind her in the queue and have them checked-in before their turn. She complained about the arrival hall size and the length of time she had to wait to pick up her baggage. Her rating of the airport facilities is shown in Table 1.

The fourth respondent is a Polish national who frequents Ghana for business. His Last visit to Ghana was in August 2015. According to his account, passport is checked too many times by too many officials. “Endless passport checks by every uniformed and non-uniformed person you meet on your way”, he lamented. He said every facility at KIA needs to be improved upon. Check-in desks, passport control (immigration area), especially into the country. Restaurants before departure hall, VIP lounge, departure lounge, departure flight information display units were among the facilities that needed urgent attention, according to this respondent. About check-ins, he said the procedure is relatively faster for him lately. This is because he holds a good frequent flyer card with his airline. He however mentioned that the state of the check-in facilities are frustrating; the scales are not working, and often boarding passes hand-written because the systems are either

broken or malfunctioning. His worst experience at KIA is when electricity goes off and the generator does not pick up, and when he shows up at check-in two hours before a flight and he is told check-in is closed. He acknowledged that the attitude of the staff of the airport were mostly friendly towards him. His rating of the facility is shown in Table 1.

The fifth respondent is a Ghanaian living in Denmark. This respondent was actually in Ghana when he was interviewed. His main concerns were with time and attitudes of airport officials. He also complained about long queues due to excessive checks tailored to solicit money and 'gifts' from passengers. He complained about how long he usually had to wait to get his luggage especially when he arrive at the airport in the evenings. His other problem has to do with harassments by customs officials looking to extort some money for themselves. Having travelled quite widely, this respondent thinks KIA is a long way from reaching an international airport standard. His rating of the facilities are shown in Table 1. According to this respondent, there seem to be a deliberate attempt to build artificial checkpoints by both uniformed and non-uniformed personnel designed to frustrate passengers and extort or in the least solicit. In his opinion, the attitudes of security personnel especially leaves a lot to be desired. These are the people employed to ensure that the actual airport facility is safe for passengers, aircraft and the actual airport building. This respondent suspects that criminals could easily escape the attention of the security personnel because their primary focus and objective seems to be soliciting money from passengers. Criminals could therefore bribe their way through.

An analysis of the interviews show that the respondents are least satisfied with the personnel of KIA followed by the service and then the servicescape at KIA. The highest rated service at KIA was servicescape which received 2.25 approval rating out of 5 points, service was next with 1.75 approval out of 5, while personnel had only 1.5 points out of 5. Figure 9 below shows that although the approval rating of all the three dimensions of airport service quality received less than average approval rating, personnel at KIA would have to do a whole lot more to win the trust, confidence and approval of passengers of KIA.

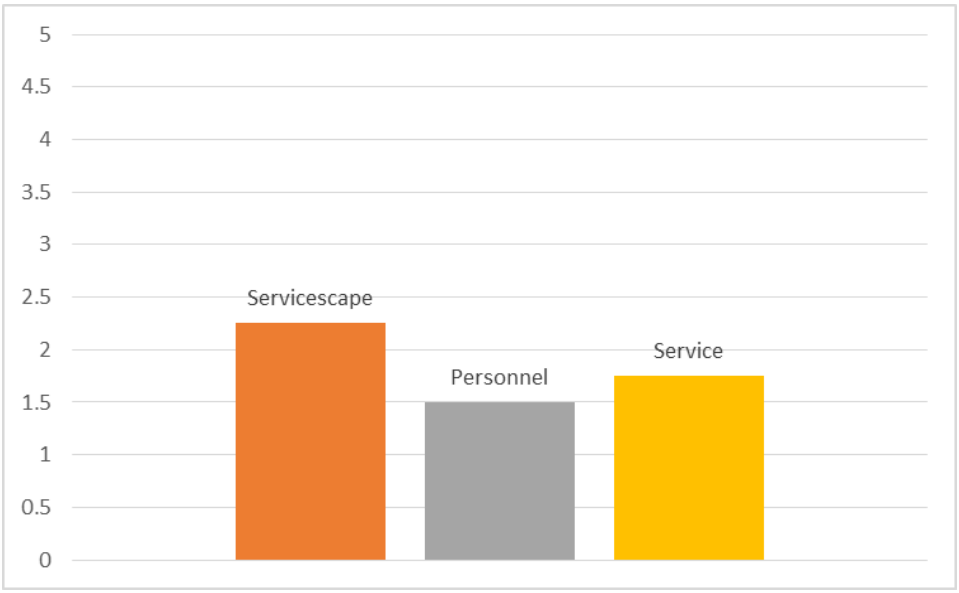

Figure 9. Passenger rating of airport service at KIA

4.2.2 Online Reviews

Still in the discover phase, data sampled from 50 online reviews between the period 2004 to 2015 gave some insight into passenger experiences at KIA. Reviews described the temperature in the arrival hall as extremely hot. There are too many counters manned by airport officials doing basically the same thing at each counter. Reviews have mentioned check-in hall as a place that is usually chaotic. The check-in area also has many counters doing the same thing, that is, each counter checking the weight of bags and checking passports. It is only at the final counter that the boarding pass is printed and the bags tagged and checked-in. This procedure according to the reviews makes the place congested and the check-in procedure unnecessarily longer than it should be. Limited shopping options as well as limited dining options are part of the problems mentioned. The airport has only one duty free shop which is stocked with very few items and often sub-standard goods. The restaurants serving lunch and dinner are all located at the land side of the airport. Passengers who would want to have lunch or dinner after check-in and security procedures would have to go back through security to access the restaurants. This is quite a discomfort for many passengers who have already passed through security and are on the airside of the airport. The reviews show that passengers are not happy about the fact that there is not a single jet bridge at the air-

port. Passengers are transported by a shuttle from the gates to the aircraft. Passengers are transported the same way when they arrive at the airport. Passengers often express their frustration with the ride in an overcrowded shuttle in often very hot and humid weather conditions that causes them to sweat even before their entry into the arrival hall, which is equally badly ventilated and causes passengers to sweat even more. Transiting passengers are especially inconvenienced, as there are no showers in the airport for them to freshen up before their connecting flights. Figure 10 is a compilation of words and phrases passengers used to describe their experiences.

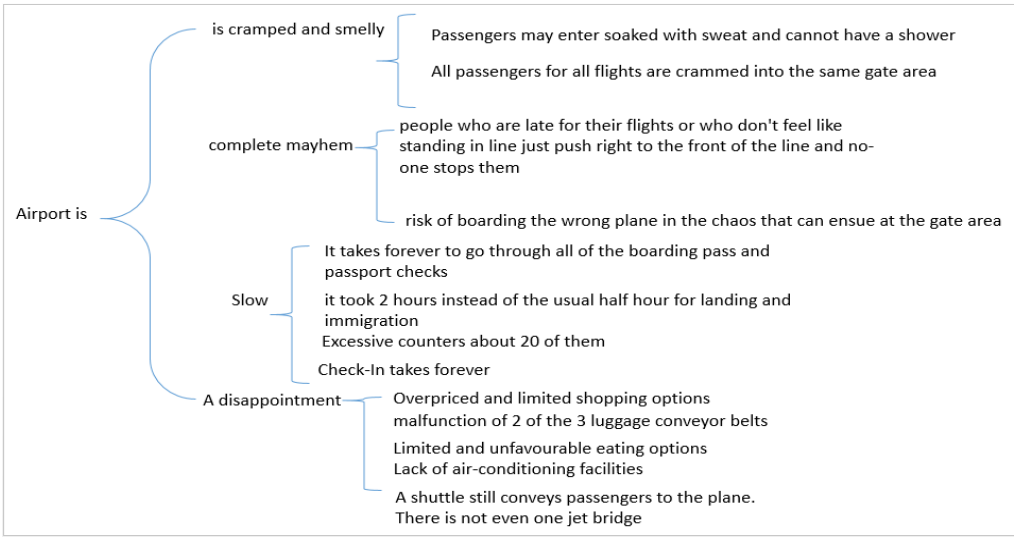

Figure 10. A word tree of online reviews on KIA.

The data sampled from the reviews and interviews are categorized according to the preliminary conceptual model of airport service quality by Fodness and Murray (2007) reviewed in the theories.

The first categorization is servicescape. Comments and reviews that fall under the spatial layout of the airport, the ambient condition as well as signs and symbols are categorized under servicescape. Reviews said the temperature in the airport could sometimes reach 40 degrees celsius. The counters are excessive and they are basically doing the same things. Security controls protocols are tedious, time consuming and frustrating. The environment is noisy and dirty. Figure 11 is a summary of this categorization.

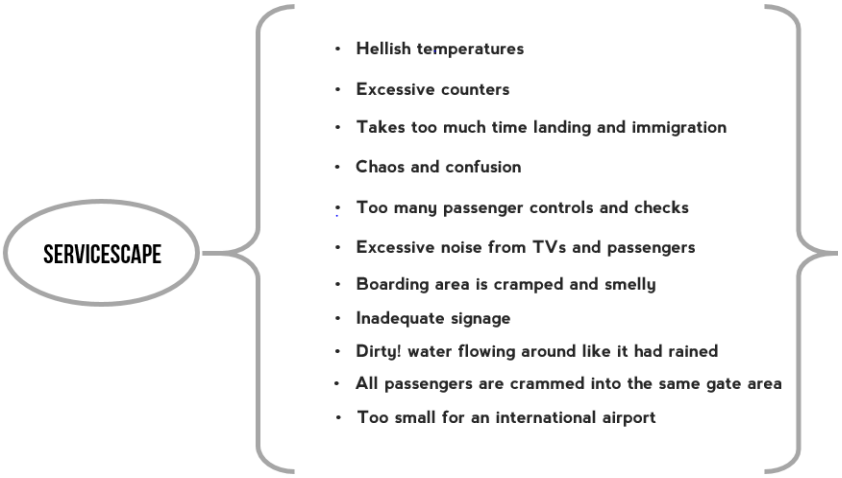

Figure 11. Comments and reviews on servicescape.

The second categorization is service personnel. Some reviews complained about unhelpful and inattentive staff. Some referred to them as rude and unfriendly which is contrary to what generally pertains in the general Ghanaian culture, Ghanaians are known to be very hospitable. Ghanaians are generally welcoming, friendly and helpful. Another key disappointing factor is soliciting money from passengers by airport staff. Comments and reviews that fall under attitudes of personnel, behaviour of personnel and their competence or the lack thereof are summarised in Figure 12.

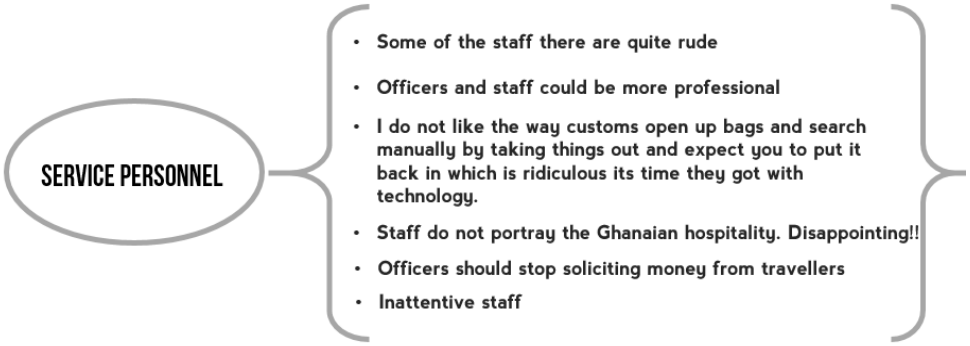

Figure 12. Summary of comments and reviews about personnel.

The third categorization was services. By services, Fodness and Murray (2007) referred to productivity, maintenance and leisure. Broken air-conditioning systems, escalators, elevators and baggage carousel are among the things mentioned. Unlimited leisure options which has become the trend among airports are missing at KIA. Reviewer also mentioned limited shopping and dining options. Reviews and comments under this category is depicted in Figure 13.

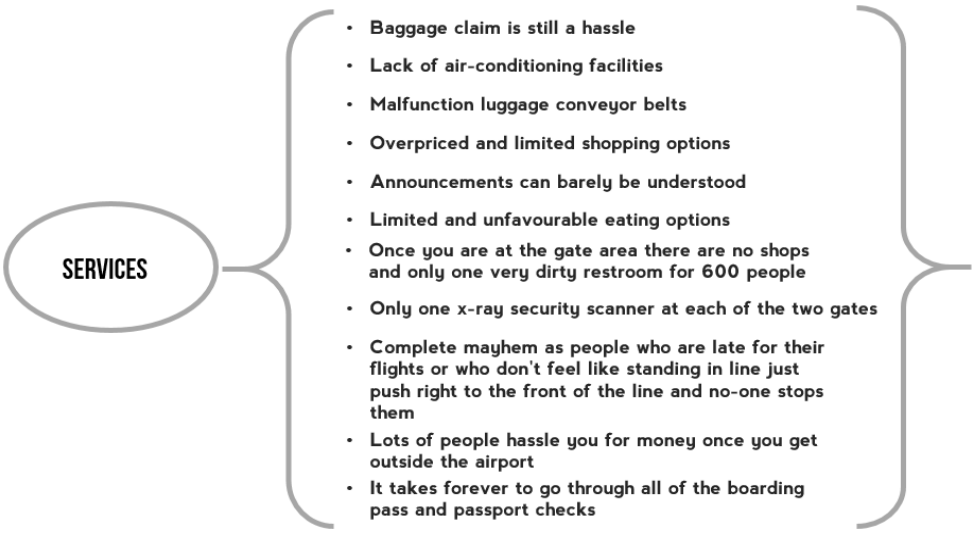

Figure 13. Reviews and comments categorized under services.

These categorizations conclude the discover and define phases of the analysis. The problems to be addressed in the design process have been identified. The next section seek to address these problems.

4.3 Develop and Deliver Phase of the Service Design Process at KIA

At the develop phase, the solutions to the identified challenges are created. Here, each service component is designed in detail using design and creative techniques. In this research, the participants at the design workshop implemented this phase. Participants were to conduct themselves as hand-picked experts selected to fix the issues at KIA.

4.3.1 Workshop

Participants were asked for why each of the summarized problems occur by using the ideating technique “WHY”. The participants were divided into three groups. Each group was responsible for the problems summarized in Figures 11, 12 and 13 above.

Reasons that participants gave for the WHYs technique include: The airport is too small; A bigger airport would allow enough space for passengers to move freely and it would also afford management ample space to add on certain facilities to increase passenger comfort at the airport. The service culture at KIA needs a lot of improvement. Service personnel need to be much more attentive and responsive to passenger needs and requests. Another reason was that there are no entertainment options available for passenger. If there were at least free Wi-Fi for passengers for example, they could be entertained and engaged on their portable devices. It was also observed that the recruitment system is not good enough so it appears that ill-qualified, ill-trained and often incompetent staff are hired for the jobs. Service personnel are bored because they are not doing the jobs they love to do.

Besides not having adequate logistics for their jobs, airport personnel have no knowledge of what is expected of them. Participants believe that the self-check-in kiosks available at the airport are either broken, invisible to passengers or the passengers do not know how to operate them. If that were not the case passengers would be using them. Others believe that the use of the check-in kiosks is not encouraged by the current check-in procedures at the airport which does not recognize check-in done online. The use of the self-check-in machines at an airport is comparable to checking-in online. Passengers observe however that, though they check-in online before going to the airport so as to drop their luggage and save time, the airport and airline personnel insist on these passengers going through the same procedure again at the airport, negating any self-check-in previously done. There are no proper ventilation systems available at the airport. Staff are poorly remunerated thus the pestering of passengers for ‘tips’. The airport operating system is not automated thus service personnel have to manually do things that could be done with automated machines. Management does not listen to employee com-

plaints. There is no feedback system to relay passenger experiences to management, making them operate without knowing what the passenger thinks or what they expect from the service.

Participants were also charged with suggesting solutions to the problems identified from using the 'WHY' technique. Among the solutions proposed, the airport needs a complete renovation and a much bigger space than it occupies now in order to make more facilities available to passengers. The layout of the airport facility should allow for passengers to have access to such facilities as shopping and dining options. The hot temperatures can be reduced by installing good ventilation systems within the airport. Lean six sigma can be adopted in the airport's operations to make maximum use of the resources available. Lean six sigma is a set of powerful tools and techniques that is used to help any organisation to improve its efficiency and productivity. Participants suggested staff re-training and job rotation to other airports, especially western as well as some Asian airports where facilities and services are state-of-the-art. The service personnel would learn from these personnel exchange programmes and come to implement their discoveries when they return. Passengers would then be motivated to check-in online in order to avoid the long queues that attend the check-in hall at the airport at the moment. An organizational cultural change and some state-of-the-art airport equipment were suggested. A free and reliable Wi-Fi as well as charging units for laptops and phones would reduce the anxiety associated with waiting at airports.

4.3.2 Facility Designing Process

Next, participants were made to watch a video of Munich airport. Munich airport won the third best airport in 2015 based on 2014 rating (Skytrax 2015). Participants were to identify what makes up the passenger experiences at Munich pleasant to warrant such high and coveted rating. Participants identified certain characteristics and facilities. Table 2 is a compilation of attributes sampled.

Table 2. Attributes of an ideal airport.

Modern facilities	Free charging units
Easy to get around	Staff on hand to assist
Speaks clear English	Not crowded
Visible and meaningful signage	Great shopping possibilities
Audible announcements	Well maintained
On schedule flights	Visible flight information display
Fast service	Friendly staff
Adequate security	Easy to access train
Good restaurant options	Free Wi-Fi
Clean and nice design	Not too big

Participants were asked to describe their ideal key areas at the airport. These key areas are to reflect the areas that online reviews and interviews complained about. They were to bear in mind some of the reviews and passenger experiences shared while undertaking this exercise. The areas to consider were selected to be check-in, security check, arrival hall and the departure hall. Participants were not to describe the facility alone, but the kind of overall experience they would wish for passengers to have as well.

Among the responses for check-in, participants would want to have the processing time fast-tracked, spacious departure and arrival halls as well as walkways, visible, legible and meaningful signs as well as serene environment among other answers. Figure 14 shows answers sampled. The answers have been re-worded to avoid repetition and they are not in order of importance.

Figure 14. Ideal check-in area and procedure.

In describing the ideal security check, participants expect that the security system is reliable. The equipment should be state-of-the-art to avoid augmenting with human hand. This answer was against the backdrop that passengers complained that security official search their luggage by hand. If there were a good enough scanner, searching by hand would not be the first option but may be necessary when security official have found reason to conduct further search based on some suspicions triggered by the scanner. Figure 15 shows the suggestions put up. These answers have also been re-worded to avoid repetition and they are not in any order of importance.

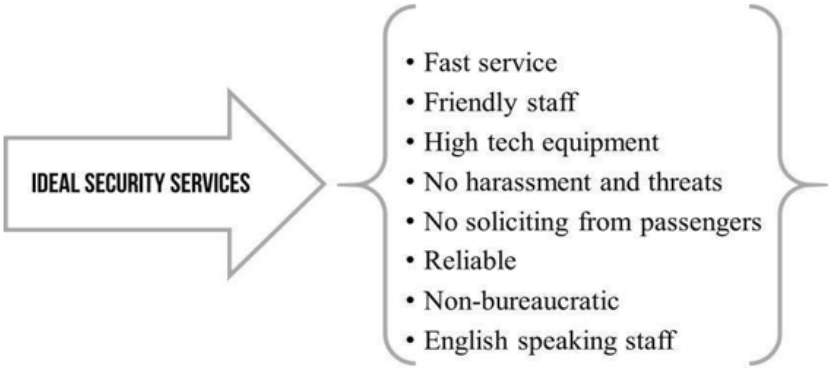

Figure 15. Ideal security service and procedure.

An ideal departure area should have more shopping options than one. Passengers should be able to eat a good meal in the area without having to move across the security area. The space should be large enough to avoid crowding. Passengers should be able to hear the announcements from the airport PA system clearly. Flight information screens should be large enough to read and should only display relevant information. The space should have comfortable seating areas with available charging units for phones and laptops. Figure 16 shows a summary of views sampled by workshop participants in no particular order.

Figure 16. Ideal departure area.

The arrival area is a passenger's first point of contact with the country and the impression passengers get is likely to last the rest of their stay. Participants expect an arrival hall to be spacious, clean and have a relaxing atmosphere. There should be staff available to assist passengers who may need assistance. (see Figure 17).

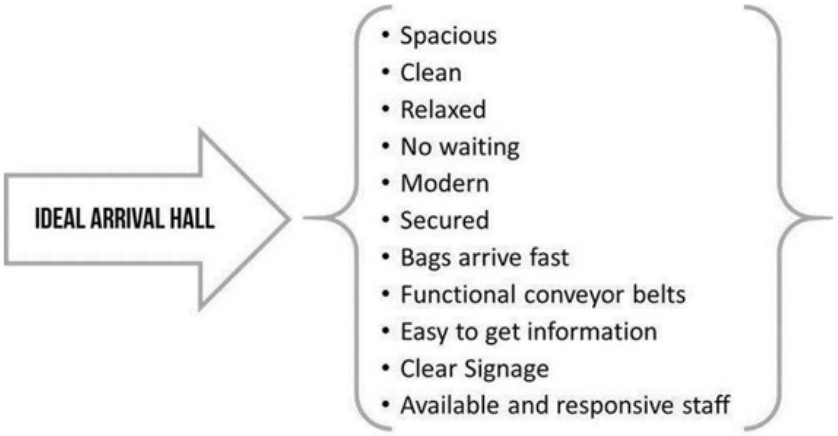

Figure 17. Ideal arrival area.

Another technique used in the designing process at the workshop was the "what if" technique. It involves trying to play different roles or thinking how other people would have solved a problem. Personas were assigned to participants and they were to state what their needs would be if they were that persona. These personas were selected by the researcher because they represent personas that would re-

quire some extra services or assistance at an airport. There were three personas. The first persona was a disabled in a wheel chair and traveling alone. The second was a single parent traveling with young children. The third was a transiting passenger. The participants were again put in three groups. Each group represented one persona. Figure 18 shows the personas and their needs.

According to participants, the disabled would need the whole airport facility to support movement with a wheelchair. Washrooms, lounges or seating areas, announcement systems and signage are among things to help make the airport disabled friendly. The disabled in a wheel chair could have other challenges besides not being able to walk. The airport should be able to work with the airlines to assist the disabled.

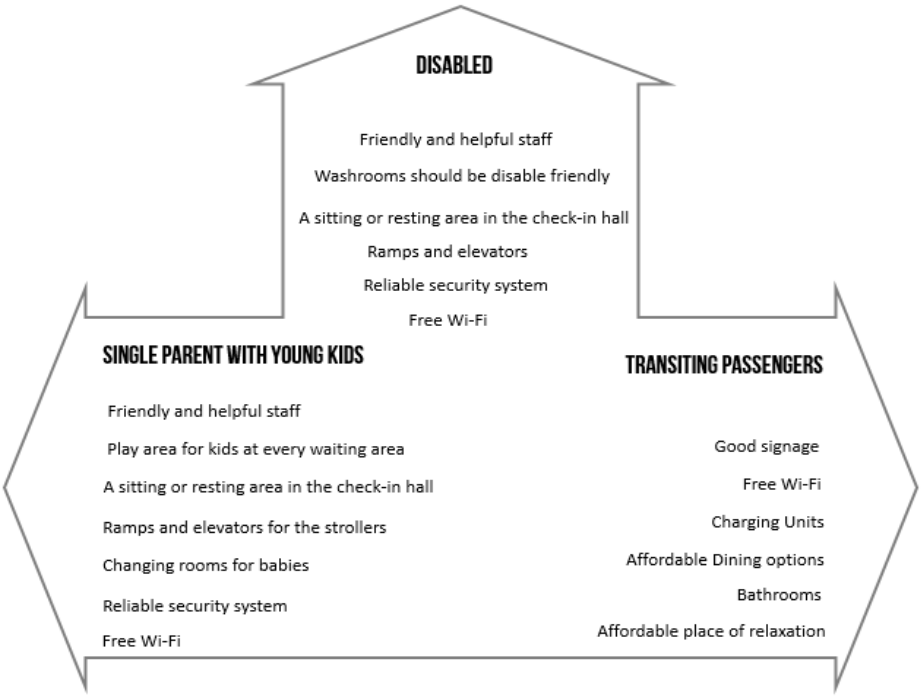

Figure 18. Personas and their needs at the airport.

A single parent traveling with young children would require that the airport facility has play and seating areas at every waiting area. They would expect that the airport is secure and safe for children. Elevators and ramps should be available for

strollers, and there should be special washrooms with changing tables and baby toiletry and other supplies even if they come at a fee.

A passenger transiting in a very humid country would need a clean washroom to freshen up. There should be enough dinning as well as shopping options to choose from. Free Wi-Fi and charging units would be very necessary for transiting passengers. Nap kiosk would be a very useful resource, participants suggested.

4.3.3 Experiences and Facilities Passengers Expect at an Airport

Still in the develop and deliver phase of the design process, the results of the questionnaire administered were analysed to sample what experiences and facilities passengers expect at airports. The questionnaire was adopted from Fodness and Murray's (2007) sixty-five airport service quality themes. They are made up of statements about airport facilities and respondents were to select statements they agreed to. Overall, there were eighty-four respondents to the questionnaire.

Fodness and Murray's (2007) sixty-five theme questionnaire used in this research gave quite some interesting findings. Respondents agreed overwhelmingly on certain specific themes in the questionnaire while they agreed that some themes were not at all important. There were some issues that the respondents were almost evenly divided on. Using SPSS to process the data, the frequency of respondents answering YES or NO to a particular theme was then observed. Percentages were striked for the YES and NO answers to each of the sixty-five themes on the questionnaire.

From the responses, it was observed that two statements were very important to respondents:

An airport's physical layout should make it easy for passengers to find what they need (i.e. restaurants, restrooms, gate areas and so on)

Conference facilities should be available to me at an airport so that I can conduct meetings.

Over 90% of respondents answered yes to these statements. (see Appendix 4 for response percentages).

The answers to the first question confirm Fodness and Murray's (2006) model of airport quality. The airport layout has a lot to do with customers' experience. An airport should be spacious but not be too big or too small. It should be just the ideal size that would allow passengers to access all other parts of the airport within reasonable time and effort. Respondents gave similar response to a conference facility in an airport. 91.7% of respondent thought it was a must have.

Interestingly not many passengers are unhappy about moving across security back and forth to access such facilities as shopping, dining, and so on. Respondents were somewhat divided about crossing airport security to access other areas of the airport. While 59% of respondents did not mind going back and forth security, 41% however thought otherwise. Again, using Fodness and Murray's (2007) preliminary conceptual model, the researcher grouped the sixty-five themes under these three dimensions; servicescape, service personnel and services.

A few themes on the questionnaire were considered very important to respondents, while some of them were considered to be not important at all. Overall, respondents think that airport personnel is the most important element in the three dimensions. Respondents 49.13% importance rating to everything that has to do with airport employees. This was followed by the servicescape which received 43.06%, while services received 39.75 importance rating.

Respondents also had certain expectations with regards to servicescape. About 70% of respondents have the following expectations about airport servicescape.

- All airport facilities should be within short walking distance
- Airport decors should match local culture
- Restaurants, restrooms and shops should be close to gates
- Public announcements should be audible in all areas
- Readable or legible flight information display
- Neatly dressed employees
- Conveniently located baggage trolleys
- Natural lighting through windows and skylights as much as possible

- Waiting time for check-in and baggage pick up should be about ten minutes

Regarding service personnel, respondents were to agree or disagree with the following statements.

- Airport employees should show an interest in solving my problems.
- Employees at the airport should be neatly dressed.
- Employees at an airport should never be too busy to respond to my requests promptly.
- I trust airport employees.
- Employees at the airport should be able to direct me to any airport service.
- Employees at an airport should keep me informed of any changes that may occur.
- I expect employees at an airport to be courteous.
- Employees at an airport should be knowledgeable about local areas of interest.

Over 70% of respondents agree that employees should show interest in solving customer problems. The same percentage of respondents however did not mind if service personnel are ignorant about local areas of interest. Regarding the remaining questions, differences in opinions were quite obvious. Approximately 50% of respondents agreed while the other half disagreed. This could mean that facilities with such figures are not of primary importance to passengers, at least not at an airport.

Regarding services, 92% of respondents agree that security checks at airports are absolutely necessary and not a waste of time. They also agree that other services such as retail shopping, restaurants, massage booths, salons, gyms and recliner lounges are also very necessary at airports except that respondents do not want to pay more for such services than they would outside of the airport.

Other services such as business centres, which provide personal computers, phones and faxes, automated means of obtaining information on local hotels at an

airport, educational museums for passengers to enjoy during layovers were not as important to respondents. These services received 40% approval. This may also mean such facilities are not as essential to passengers.

Respondents absolutely agreed that airports should be clean. An airport's waiting areas should provide comfortable seating. An airport's rest rooms should offer baby changing tables, plenty of open spaces to prevent crowding, banking services, a variety of ground transportation options to the nearest city, and designated smoking areas.

4.4 The New Service for KIA

Based on user experiences gathered from internet reviews, interviews, the design workshop and questionnaire responses, we can conclude that there are several areas requiring improvements at KIA.

The entrance of KIA currently has security agents inspecting passports before allowing passengers in. This is to prevent none passengers from entering the check-in hall. Although this security measure is necessary, security personnel could however be a bit more friendly and polite to none travellers who are mostly close families of the passengers wanting to accompany them and say their final goodbyes. There could be an additional hall housing some retail services and airline companies situated close to the check-in hall. This hall could be called the departure hall. Close families wanting to accompany passengers could wait in here but could see passengers through a glass wall that separate the hall from the check-in hall. This hall could have similar amenities as the gate area lounges and also have a play area for kids. It should also have as much natural lighting as possible, and kept very clean.

The check-in hall at KIA currently houses some resident airline offices. These offices could be moved to the new departure hall. The check-in hall should be equipped with functional user friendly self-service baggage drop and check-in kiosks. This will reduce the number of waiting time considerably. These self-service check-in kiosks should be positioned in a circular fashion to minimise the amount

of space used. Passengers have complained about excessive counters with lots of idle staff around. With these self-service kiosks, about two-three staff could be standing around to assist passengers having difficulty in operating the equipment and directing passengers to their respective check-in counters.

These personnel would be useful to first time travellers, children traveling alone and the disabled. These personnel are supposed to be uniformed with name tags, should be extremely friendly, helpful, and should not solicit from passengers. They are not to sell anything to passengers. In addition, the check-in hall should be spacious and clean. Signage should be very clear, visible and displaying only relevant information devoid of any airport company or airline logos, directing passengers to their next procedure, washrooms, exits, elevators stairways and so on. After checking in baggage, there should be a place where passengers can drop off the baggage carts and it should be cleared as regularly as possible to avoid congestion.

Previous users have complained about how much time being wasted at this point because officers at the immigration try to make small talk and in the end solicit from passengers. If the immigration process were automated for Ghanaians for instance, and passengers do not have to show their passports to any immigration officer after the check-in procedure, the long queues could be shortened quite considerably. Passengers would only scan the barcode on their boarding pass at a scanner operated gate, and they move on to the security check area. Here, there should be clear instructions as to what to do on a signage. There could also be assigned personnel assisting passengers who might be having difficulties using any of the equipment. The equipment should be configured and made functionally relevant to ensure that the procedure is not a waste of time.

Passengers who have to be searched further should be handled with respect as well. Frisking should be done by a male officer if the passenger is a male and vice versa. Until there is good enough reason, officers should not hand search passengers' bags. They should also not solicit from them either.

From the security check area, there should be multiple retail services that passengers could choose from. These should include duty free shops, local and international retail brands and shops, restaurants and bars, souvenir shops, etc. This area should be accessible to both departing and arriving passengers. There should be relaxation facilities such as hair salons, massage booths and recliner lounges. Washrooms should be fitted with changing areas for babies, should be disabled-friendly and very tidy at any given time. The area should have free Wi-Fi and charging units. There should be enough security to help make passengers calm and be at ease.

The arrival hall is the first point of contact to the country. It is therefore very important that the best impression is made. Currently the impression is not the best according to passengers who have used the facilities, and they would wish to have better experiences in future. The atmosphere is mostly chaotic, the air quite stale, and the interior temperature far above room level. The condition in the room could benefit from good ventilation and air cooling system. There should be adequate signage showing passengers where to go as well as airport personnel welcoming passengers and assisting them where necessary. The room should have some indigenous Ghanaian and/or African art work showing that passengers have arrived in Ghana.

The immigration process should be very swift. For instance, instead of having passengers complete forms and manually checking their passports, they could have their passports scanned as they walk through a booth.

Baggage claim is one place where many previous travellers have had very negative experiences. The design of the baggage carousel is such that luggage often fall off of them, and personnel have to stand by and put them back on the belt. In addition to acquiring more conveyor belts, the construction should be designed so that luggage do not fall off of them. There should be a service counter close to the baggage claim area so that passengers can file their requests and complaints regarding their baggage. Baggage carts or trolleys should be located in the same area so passengers are able to have easy access. (See Appendix 2 for service blueprint).

5 CONCLUSION

So far, passenger challenges at KIA have been identified and suggestions have been made to resolve them. This chapter now evaluates the research process, states the limitations of the study, and discusses the central issues. The chapter concludes with suggestions for future study.

5.1 Summary and Evaluation

This research explored the new discipline of service design, its processes, and how it could be applied to an airport service. The literature reviewed were under three themes. These were service design, airport service and service business development. These three themes were relevant to the study in the sense that the first part being service design was needed to give an understanding of what the main objective of the study was. The second part being airport service, gave an understanding of an airport service and what earlier studies have advanced about airport service quality and passenger expectations. This was necessary because it gave the researcher a background which aided in framing the interview questions in order to get the needed answers for the service design process. The third theme about service business development strategies was to give the design process a business perspective. It highlights service quality, strategic service vision as well as house of service as important concepts to look at when designing a service.

The research methodology discussed were in line with the service design concept. The interviews gave an understanding into the situation at KIA but the online reviews confirmed many of the data from the interviews. This was in line with the service design process. More than one method is usually used to collect field data. This is because the data has to be detailed and reliable. Another reason for the need for multiple methods is that the success of the design process depends heavily on the quality of data and insights collected. The two methods used in this research proved to be every effective. The two methods complemented each other and authenticated the data. However, observation is another method that could have added an additional perspective to the data collected.

The findings concerning passenger discomforts at airports seem to be similar in many other airports. A report on US airports by Barford (2015) confirmed many of the problems identified by this research on KIA. Other research on airports, for example the one by Bogicevic et al. (2013) and Kirk (2013) also confirm many of the findings. It could be concluded that passengers require similar services and facilities at airports irrespective of the location of the airport.

The workshop as a research method was also very relevant, in that it allowed the use of the service design tools and methods and practicalized them. It also created the platform to access the input of people from various academic backgrounds and disciplines. This was also very important in achieving the research aim which was to use service design tools and methods to design the services of KIA.

The outcome of the workshop was very successful. All the suggestions given to improve the services of KIA were very relevant, however there are two suggestions that in the researcher's opinion would make a significant difference in the services offered by KIA. These are the organizational cultural change and the adoption of lean six sigma.

The holistic approach of this thesis made it rather difficult to exhaustively cover each one of the service interfaces at KIA in enough detail and depth. However, it highlights to management the overall passenger experience and the problems that needs to be addressed at each touchpoint. It also provides an awareness of the various service gaps and insights that could affect future airport service design projects at KIA.

The focus of this study has been on passengers of KIA. The design process has been user centric as captured in Mager's (2008) definition of service design. The research methodologies used being interviews, online reviews, workshop and questionnaires allowed the researcher to stay focused on users. They provided information on passenger experiences and expectations. These information were useful in the drawing of the passenger journey map and the service blueprint. The journey map made it easy to identify touchpoints that needed attention and the service blueprint will serve as a manual for management. In addition, journey

maps and service blueprints are significant tools in a service design process. The involvement of individuals from diverse backgrounds as proposed by Dervojeda et al (2014) added more depth to the results and gives an assurance that passengers would be satisfied since ideas come from very diverse backgrounds and disciplines who incidentally form part of the passenger cross-section of KIA. In addition, putting together people afforded the researcher the platform to explore design tools and techniques.

The use of Design Council's (2015) double diamond structure kept the design process in structure and easy to follow.

Fodness and Murray's (2007) sixty-five themes of passenger expectations made it easy to assess user opinions about airports. An experience recounted by the second respondent in the interview section typifies a theme in the questionnaire. Question number 56 which addresses informative staff and how they should be proactive in updating passengers with information about changes that may occur indicates that the themes are quite practical in the real passenger experience in airports. More than half of respondents in the survey agreed that proactiveness of airport staff is key to passenger satisfaction and overall experience. Fodness and Murray's (2007) model for airport service quality was widely used in this thesis. It served as a standard for categorizing findings, thus making it easy for workshop participants to understand the problems to work on.

5.2 Research Limitations

A research of this depth require constant visits to the site, meeting and observing passengers and other stakeholders. However, constraints of resources, access and time did not allow for that to be possible. The sample size is relatively small. Many of the samples are all previous users of the airport, however the research could have used more. The concept of service design require the use of experts in the design process; no design experts were however involved in the creation of the service due to time and other resource constraints.

Service design also looks at the whole service, both backstage and on-stage activities. This research focused only on areas visible to passengers. The study is also focused on check-in procedures, security checks, gate area and baggage services and not the overall ground handling services of Aviance Ghana.

The thesis also had no official input from Aviance Ghana, and therefore may be lacking some internal information that could improve its usability.

5.3 Recommendations for Aviance Ghana on KIA

This research could serve as a new lens through which Aviance Ghana could view the services they offer at KIA. It is quite obvious that the strategic intent of KIA management is not properly carried out and thus passenger experience at the airport is very different from what management intends it to be. Since its establishment, there has been a series of renovations and redesigning, however, the services continue to receive negative reviews from users. This was what Berry, Zeithaml, and Parasuraman (1990) discussed in their gap model. Passengers do not use the term quality in the same way as the airport management do. Of course, there were some positive reviews but these reviews were mostly unsubstantiated as these positive reviews came from non-users of the airport. People who have never travelled out of Ghana but have only observed the exterior of the airport and are impressed about the architecture.

In agreement with Stewart (2003), a service provider's ability, willingness and flexibility in responding to customers' needs and resolving them promptly and smoothly is a function of their training and the organizational culture. Until this culture is engraved in the organizational culture of KIA, no amount of redesigning will meet passenger's expectations. Understanding the target market is the initial step in the strategic service vision. Although the target market for an airport is very wide and diverse, this study proves that passenger expectations are similar. A good understanding of the passengers, their needs and preferences will enable the service provider derive their service concept with a clear and concrete strategy for delivering it.

To ensure that the service package and service encounter meets the expectations of the customer, all stakeholders including the service organization itself, organizations must focus on the design and delivery of their service concept.

The study revealed that KIA employees would have to do a whole lot more to bridge the service gap since they are the face of the airport service and by extension ambassadors of the entire nation. Employees should have regular and scheduled training and retraining about customer service and how to execute their allocated tasks most effectively and efficiently. The management should have strict rules and be more vigilant on staff who do not follow through with their professional codes of ethics or flout them. Employees should wear their assigned uniforms in order to make them easily identifiable by passengers. Soliciting from passengers and frustrating them in order to get money and other items from them should be eliminated by introducing extreme punitive measures against the perpetrators. There should be better security, including CCTV cameras to bring out all these evidence of corruption and punish their culprits.

An analysis of the web reviews and the interview also suggest that the departure and arrival halls are often congested with a lot of personnel. This may be an indication that management perceive that personnel is important to their operations. However their perception of the importance of personnel might be in the number of personnel employed as against the quality of employees. Lean six sigma could be used in streamlining the number of personnel and build the capacity of the relevant number of employees with the requisite skills and competencies to deliver quality service to passengers. One great feature of lean technology in general is that it works to eliminate waste, and when waste is cut in the right place it has the propensity of having ripple effect on other areas of operation and thereby saving money and resources while delivering quality service. In the case of KIA for instance, identifying and eliminating idle and redundant personnel will provide the funds to retrain the critical employees. Eliminating the redundant personnel will also clear up the halls and create additional space to allow for the provision of some of the critical resources needed to provide passengers with relevant ease and comfort. The less people there would be in the halls of arrival and departure, the

more freely these halls would be aerated with minimal air-conditioning. Savings from cutting the employment of the redundant airport staff and security personnel could also be used to raise the salaries of the remaining staff. This will in effect boost their morale and make them stick to their core operational mandate. This could also be one way of dissuading airport staff and security personnel from taking bribes and engaging in other corrupt practices by frustrating passengers. This positive ripples will eventually bring passengers the all-important service satisfaction and increase passenger traffic through the airport and thereby increasing the profitability of the airport's operation to its shareholders.

A team of real-life and experienced design experts were needed to draw up the service design blueprint. It was however impossible to do this with actual experts and therefore a team of mostly students from diverse disciplines had to improvise and simulate the process of designing the service for KIA. To implement the findings of this research, it will be quite imperative for the service provider to use this thesis as a template. It will then require that Aviance Ghana put together a team of experts, a fair cross section of the users of the service, as well as representatives from different departments or units of the service provider's outfit to design the service at KIA from bottom-up. "WHYs" and "WHAT IF" techniques can be employed to seek to understand some of the underlying problems as well as use different scenes and scenarios or personas to fine-tune the blueprint to derive the best service experience set-up for users of the service.

5.4 Suggestions for Future Research

As mentioned in the limitations, this research did not cover the entire perspective that service design requires. Apart from the physical touchpoints, the backstage operations and their drivers also need to be covered. Service design also require the input of the service provider as well as all other stakeholders. Service design could as well be done with a design team, a team of technical experts as well as the users of the service. Further research should involve the above mentioned inputs.

This research topic was quite wide in scope. Further research could be limited to a single facility at the airport instead of tackling several at a time. For example, further research could focus on designing a check-in experience.

This research identified that a change in organizational culture could transform the services at KIA. Further research could look at how to use service design to restructure the organizational culture of KIA.

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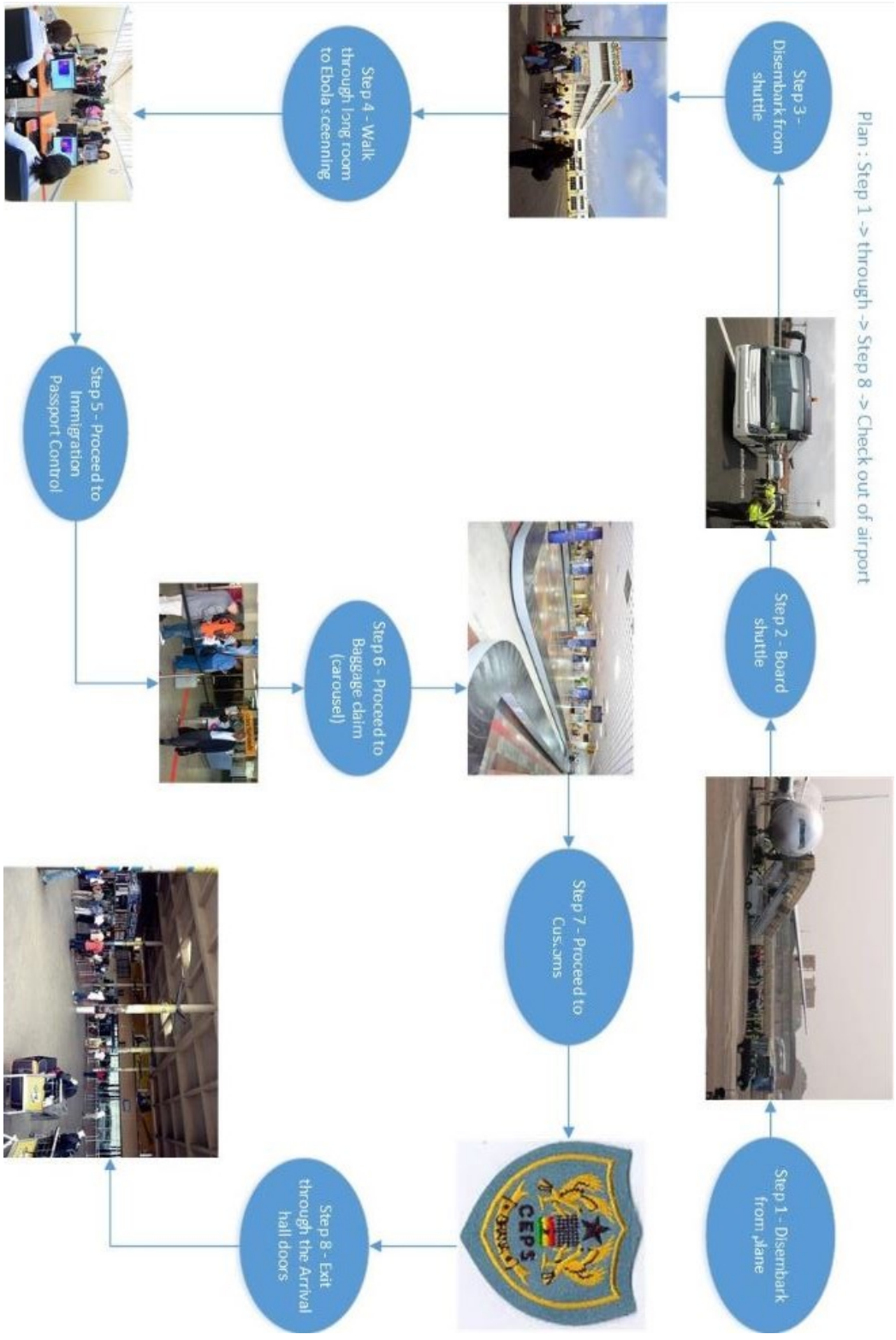
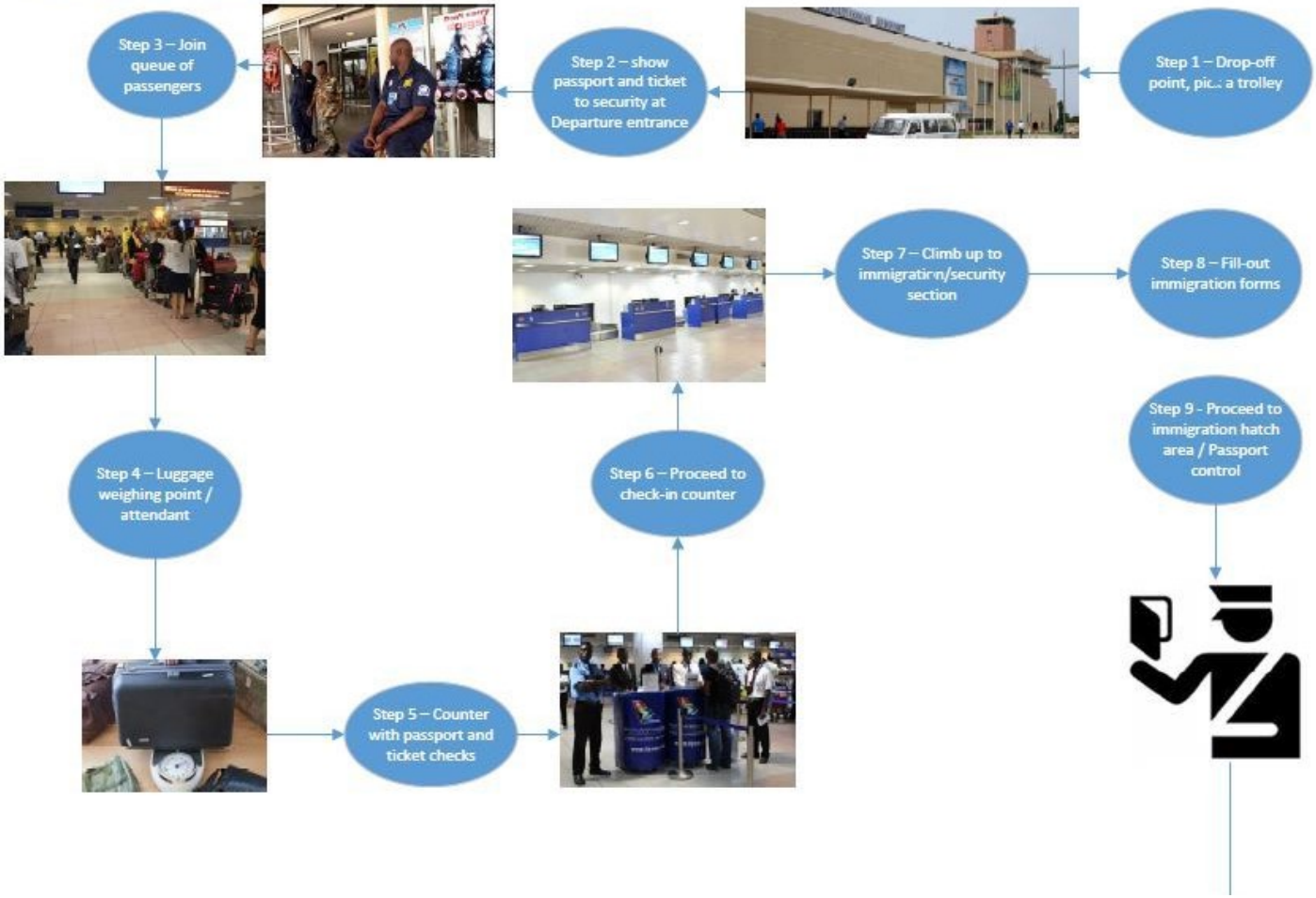
APPENDIX 1. Passenger Journey Map



Plan 1 -> through -> 14 -> check-in to take-off



Step 11 – Proceed to Gate waiting area

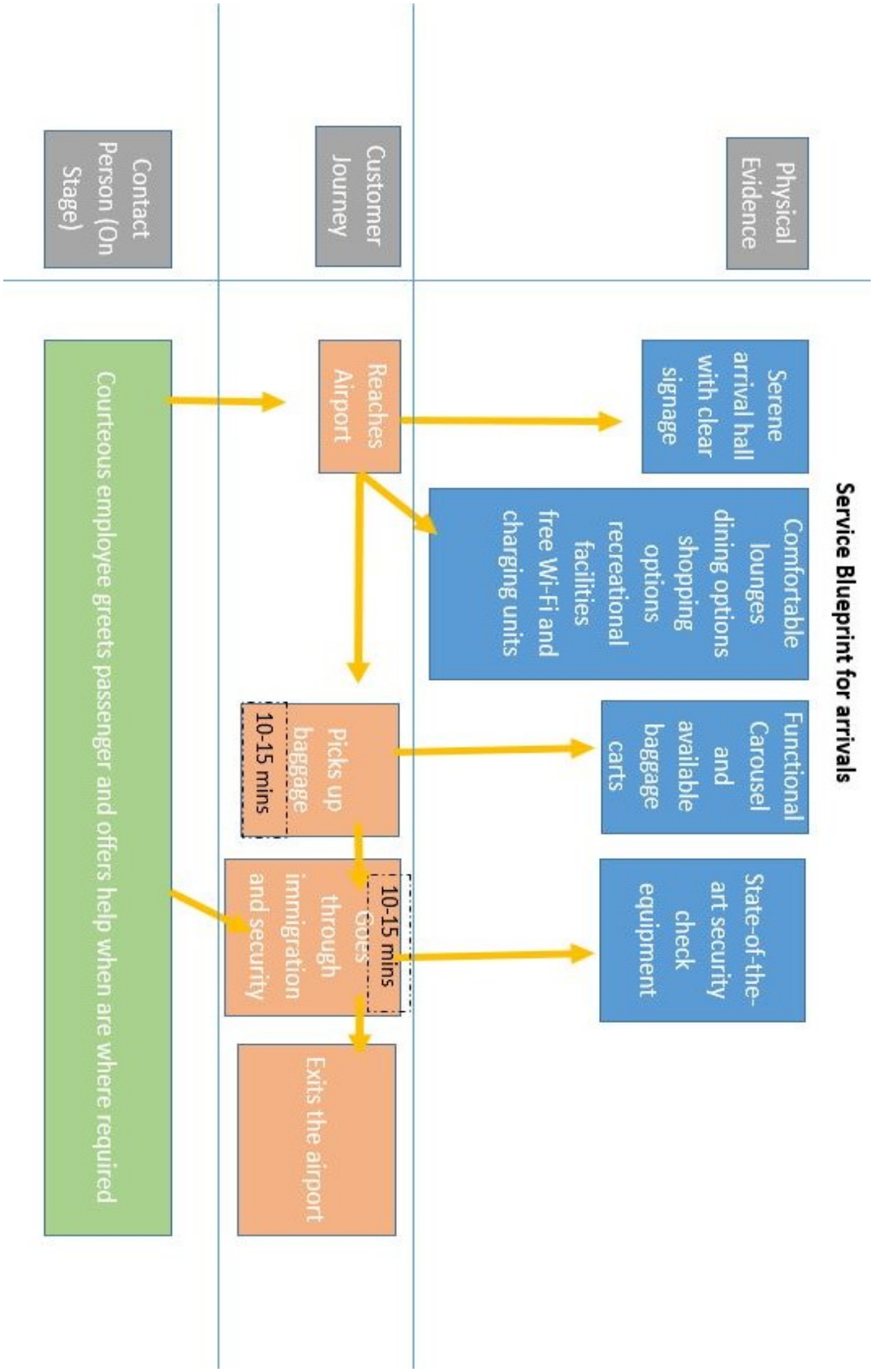
Step 10 – Proceed to security control

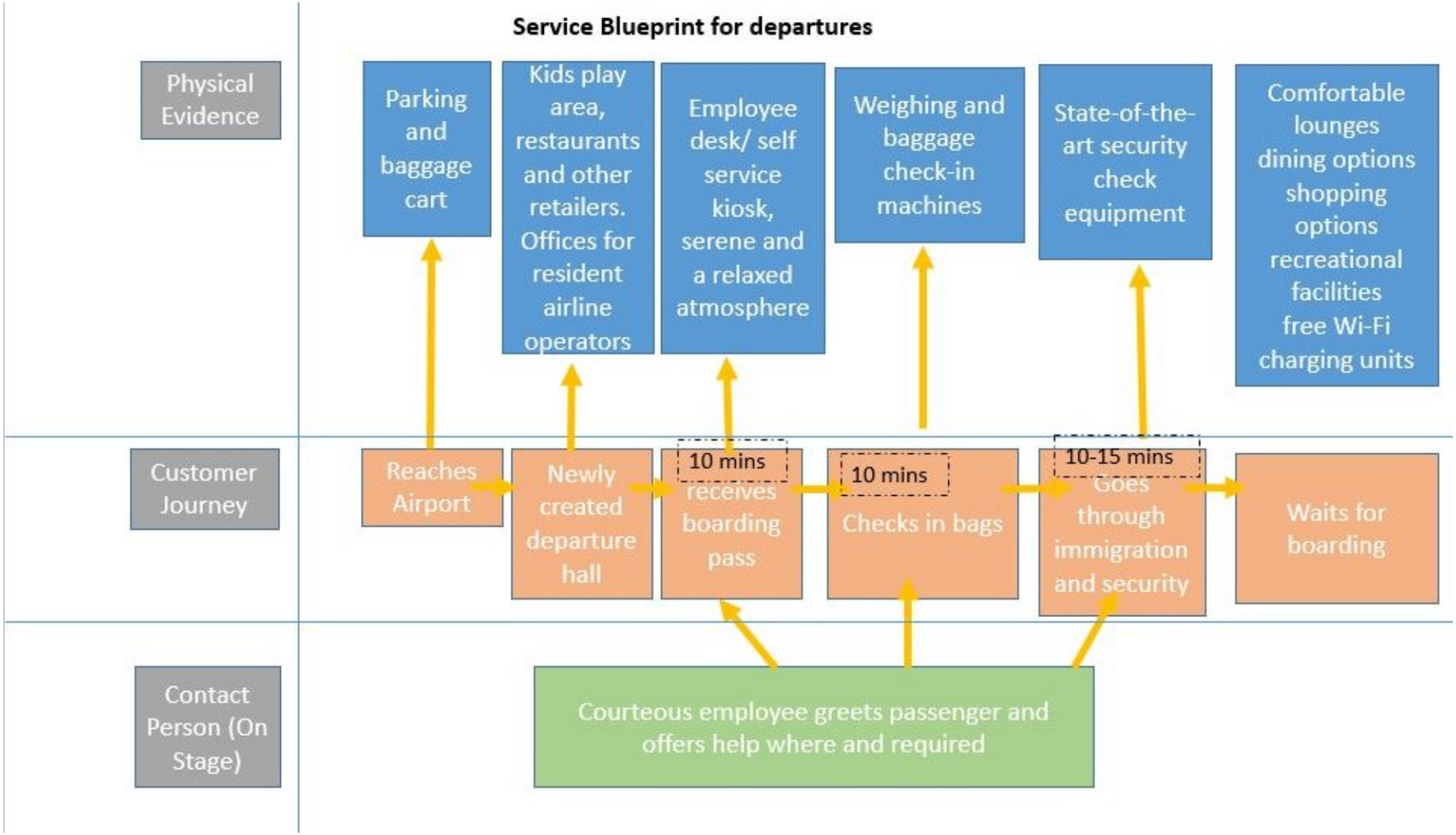
Step 12 – Go from gate to shuttle

Step 13 – From Shuttle to boarding

Step 14 – Take-off

APPENDIX 2. Service Blueprint




Service Blueprint for departures
Physical Evidence
Parking and baggage cart
Kids play area, restaurants and other retailers. Offices for resident airline operators
Employee desk/ self service kiosk, serene and a relaxed atmosphere
Weighing and baggage check-in machines
State-of-the-art security check equipment
Comfortable lounges dining options shopping options recreational facilities free Wi-Fi charging units
Customer Journey
Reaches Airport
Newly created departure hall
10 mins
receives boarding pass
10 mins
Checks in bags
10-15 mins
Goes through immigration and security
Waits for boarding
Contact Person (On Stage)
Courteous employee greets passenger and offers help where and required

APPENDIX 3. In-depth Interview Questions

The objective of these questions is to gain an understanding of the passenger experience at Kotoka International Airport (KIA)

Description of Respondent

Gender: A. Male [ ] B. Female [ ]

Age: A. 20-30[ ] B. 31-40[ ] C. 41-50[ ] D. 50 and above [ ]

Nationality:

Questions about the Airport Experience

How many airports have you been to in your life time?

How do you get to the airport?

Can you describe your journey through the airport?

Can you describe an experience at the check- in counter?

How long did it take you to check-in?

How easy was it to locate the security check point from the check –in area?

What was it like at the immigration and security check area?

Do the activities of airport employee ensure the seamless airport experience you desire?

How would you describe these facilities?

- Check-in time

- Security – check
- Signage
- Personnel
- Accessibility
- Cleanliness
- Toilet
- Charging units
- Wi-Fi
- Parking
- Baggage claim
- Shopping options
- Dining Facilities

Within a scale of 1 – 5, 1 being the least and 5 being the most, how will you rate the services of the airport under servicescape, service personnel and service?

Which facilities in the airport terminal meet your expectation?

What do you have to say about the flight information display?

What facilities in your opinion should be included or improved upon in the terminal to improve the airport experience?

Have you ever noticed the customer service / info desk at the airport? If yes have you ever visited it and what did you go there for?

How would you rate the understanding level of staff? Was the staff able to help you?

Have you ever encountered a challenge with a staff?

Can you please share your worst or best experiences?

APPENDIX 4. Service Development Questionnaire with Response Percentages

Adopted from Fodness Murray's Passengers' expectations of airport service

Have you ever used an airport		
An airport's physical layout should make it easy for passengers to find what they need (i.e. restaurants, re-strooms, gat	92.9	7.1
I do not expect to walk long distances to get where I am going in the airport terminal.	27.4	72.6
Conference facilities should be available to me at an airport so that I can conduct meetings.	8.3	91.7
I would use a church/chapel in an airport during a layo-ver.	2.4	97.6
An airport should display art	22.6	77.4
It upsets me when I have to go back-and-forth through security to access airport services (retail shops, food outlets, e	40.5	59.5
An airport should have quiet areas in which to nap, read, or do business.	76.2	23.8
Airport employees should show an interest in solving my problems.	75	25
I should expect to pay more in restaurants and snack bars at an airport.	13.1	86.9
Banking services should be available at airports.	58.3	41.7
A variety of ground transportation options to the nearest city should be available.	76.2	23.8
Airport security measures are a waste of my time.	6	94
I expect to pay more at retail outlets at an airport.	13.1	86.9

An airport's decor should match the local culture of the city at which it is located.	53.6	46.4
Airport facilities and amenities (i.e. restaurants, restrooms, and shops) should be conveniently located near gates and	57.1	42.9
It is important to me for the public announcement /paging system to be audible in all areas of an airport terminal, incl	59.5	40.5
I feel airports should have more flight information displays in the terminals.	40.5	59.5
A variety of food choices should be available at airports.	59.5	40.5
I find electric passenger transfer carts to be convenient when changing planes.	36.9	63.1
There should be an automated means of obtaining information on local attractions at an airport.	25	75
Opportunities to enjoy the local cuisine should be available at airports.	44	56
Nationally known retail outlets should be available at airports.	26.2	73.8
It upsets me when I have to wait more than ten minutes to receive my baggage after a flight.	27.4	72.6
I should be able to walk to the parking lot from the terminal at an airport.	44	56
Children's play areas should be available in airport terminals.	42.9	57.1
An airport's terminal should be designed so that waiting lines are minimized.	65.5	34.5
An airport should have business centers, which provide personal computers, phones, and faxes.	32.1	67.9
An airport should offer services such as massage booths, salons, and recliner lounges.	13.1	86.9

Employees at the airport should be neatly dressed.	51.2	48.8
There should be an automated means of obtaining information on local hotels at an airport.	44	56
An airport's external signs should clearly direct me to airport services such as parking, car rentals, terminals, etc.	65.5	34.5
I like many signs to be visible throughout an airport directing me to airport facilities (baggage, ticket counters, security etc.	61.9	38.1
Employees at an airport should never be too busy to respond to my requests promptly.	53.6	46.4
I expect baggage carts to be conveniently located.	51.2	48.8
It upsets me when I have to wait in line more than ten minutes during the check in process.	28.6	71.4
I trust airport employees.	57.1	42.9
I should be able to exit the airplane within ten minutes of landing.	36.9	63.1
Moving walkways and escalators should be located throughout the terminal.	35.7	64.3
An airport should have current decor.	19	81
Employees at the airport should be able to direct me to any airport service.	51.2	48.8
There should be employees at an airport available to offer me individualized attention.	22.6	77.4
National chain restaurants should be available at airports.	15.5	84.5
An airport should be clean.	86.9	13.1
I am often confused by flight information displays.	13.1	86.9

An airport's waiting areas should provide comfortable seating.	70.2	29.8
An airport's rest rooms should offer baby changing tables.	51.2	48.8
I expect to find a variety of specialty retail stores that portray the local culture at the airport.	32.1	67.9
I feel airports should have flight information displays outside of the terminals (i.e. parking lots, access roads).	46.4	53.6
An airport should have soothing music playing throughout its facilities and terminals.	23.8	76.2
The way an airport employee is dressed should easily identify their function.	57.1	42.9
I would use a gym during a layover at an airport.	11.9	88.1
I expect employees at an airport to be courteous.	48.8	51.2
Airports should house educational museums for passengers to enjoy during layovers.	14.3	85.7
Employees at an airport should keep me informed of any changes that may occur.	56	44
At airports, the excessive number of signs often confuses me.	11.9	88.1
An airport should offer as much natural light through windows, skylights, etc. as possible.	56	44
I expect my complaints to be responded to immediately at an airport.	39.3	60.7
An airport should have many windows to view airplanes taking off and landing.	53.6	46.4
An airport should have plenty of open spaces to prevent crowding.	65.5	34.5
Employees at an airport should be knowledgeable about local areas of interest.	28.6	71.4

An airport should have designated smoking areas.	42.9	57.1
I expect employees at the airport to greet me with a smile.	61.9	38.1
I expect to find baggage claim services close to the gate.	61.9	38.1
Mail facilities should be available at airports, including postage machines and drop boxes.	33.3	66.7
I should be able to easily reach my connecting flight.	69	31