

**Elevating the Perception of the Strategic Use of Design
For An Airline Through the Design Management
Conceptual Framework (DMCF)**

A thesis submitted for the degree of Doctor of Philosophy

by

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October 2015

Author's Declaration

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Abstract

This dissertation evaluates and elevates the perception of the strategic use of design for airlines, especially a Silent Design airline like Saudia Airlines. Saudia Airlines is an international airline located in the Gulf region in the Middle East. In comparison to some other Gulf state airlines, Saudia Airlines benefits from its large geographical coverage, and is considered to be one of the richest and longest established carriers in the industry. However, the rapid growth during the past few years of other Gulf carriers (e.g. Emirates Airlines, Etihad Airways and Qatar Airways) highlights the necessity for improvements to be made by Saudia Airlines so that it can sustain its position in the global market. These three mega Gulf airlines have shown major developments in their strategic use of design in delivering innovative and differentiated design touch points in their customer journeys.

The purpose of this research is to ‘create a design management conceptual framework (DMCF) to assist Saudia Airlines in evaluating and elevating the perception of the strategic value of design.’ To date, airlines adopting a Silent Design approach have rarely been addressed in empirical studies. To achieve this, secondary research investigated several topics, mainly the perception of the strategic use of design, the operational use of design and how design was managed based on design management evolution. Furthermore, design outcomes are presented after implementing the strategic use of design, to deliver innovative and differentiated results. Moreover, the case studies of several companies are presented that use design at a strategic level, especially in the airline industry.

The primary research investigated key stakeholders’ views (customers, design experts and Saudia Airlines’ employees and design consultants). The findings from these investigations, and emergent key themes and sub-themes created the prototypes that led to the formulation of the DMCF, which is the main contribution of this study. The DMCF was developed and tested with experts in the field. The proposed framework is considered a significant starting point for airlines that want to evaluate and elevate their perception of the strategic use of design. The DMCF addresses the significant results of this study and key points are made, as follows:

- 1) Four key dimensions are identified: a) organisational mind-set, b) structure and design capabilities, c) design process and communication, and d) customer experience, which could evaluate and elevate the strategic use of design.
- 2) The Silent Design culture is identified as pertaining to Saudia Airlines in this study. This culture emphasises the moderate ambition of the strategic use of design by using it at an operational level. It also includes an ill-defined structure for

managing design and a lack of design capabilities. In addition, it has an unclear design process and ad hoc cross-departmental collaboration. The overall result is that the Silent Design organisations' customer experiences are characterised by undifferentiated products and services.

3) The Strategic Design culture is identified and addresses the airlines that make good use of design. This culture emphasises the strong ambition of the strategic use of design by using it at a strategic level. It also includes a systematic and clear structure for managing design. It has a clear design process and clear cross-departmental collaboration. The overall result is that Strategic Design organisations maintain their position as innovators and differentiators within the airline industry.

4) Some recommendations are made that target how to bridge the gap between these two cultures, including appointing a design leader within a Silent Design culture airline. This would elevate the airlines' perceptions of the strategic use of design.

Acknowledgment

This study would not have developed and come to fruition without the help, concern and love of many people in my life.

First, I would deeply like to thank my primary supervisor, Dr Busayawan Lam, for her confidence, support, input and encouragement during my academic pursuits. She is always a patient listener and encourager.

Thanks must also go to my second supervisor, Dr Ray Holland. He has always given me insights and constructive suggestions that have helped me find new directions.

I am thankful to all the interview participants and the survey respondents. I am especially grateful to Saudia Airlines' employees and design experts in the airline industry, without whom this research would not have been possible.

I can never thank my parents (Dr Mohamed Shams and Khadijah Bushnaq) and sisters (Manal, Mona and Maey) enough for their constant support, encouragement and advice. They have always believed in me and in my abilities, and they have never let me give up. I also would like to thank my brother, Alwaleed Shams, who became very ill during this period, and who always gave me the drive to succeed to be able to provide him with all the care he needs. This thesis is dedicated to them.

My thanks must also go to my close friends in UK and at home for their support and encouragement.

Finally, I wish to express my appreciation to King Abdullah bin Abdulaziz Al Saud (may he rest in peace) for his sponsorship and financial support during my research.

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1. Introduction

This research aimed to investigate the perceived strategic value of design in the airline industry in order to recommend a design management conceptual framework to help elevate the awareness of the values of strategic design in this sector. To ensure that output would be well-focused, specific and practical, Saudia Airlines was selected as the main research subject. This chapter describes in 1.1) the strategic value of design, in 1.2) the design contribution in the business context, and in 1.3) the dynamics of the airline industry and, the pressing need to improve the perception of strategic design in the focal company, Saudia Airlines. Next, in 1.4) the gap in the literature is identified and in 1.5) the aim and objectives of this study are covered. Then, in 1.6) the research contribution is addressed. Finally, in 1.7) the structure of the thesis is presented.

1.1 Strategic Value of Design

‘Success does not happen by accident, it happens by design...design is not incidental to industry, it is absolutely integral in the new economy, design will be more important than ever.’ The Rt Hon Gordon Brown (2000; cited in Bruce and Bessant, 2002, p.2)

Design has been widely recognised to contribute to business success (Cooper et al., 2003). The Chief Design Officer of the Design Council, Hunter (2014) claimed that everything man made has been designed, explaining that design is all around us, either we are conscious of it or not. Moreover, Bruce and Bessant (2002) contended that design is considered a powerful means of delivering persuasive ideas, values and attitudes.

Drawing on empirical studies, an increasing amount of literature on the strategic value of design for businesses targeted at increasing productivity and performance for companies has emerged. In 1974 the former Chief Executive Officer of IBM, Thomas J. Watson, pointed out that ‘*good design is good business*’ (Song and Chung, 2008, p.32) and more recently, the Design Council (2011) confirmed the importance of good design for good business, as it turns new ideas into concrete products, services and environments, which can satisfy the changing needs of users.

In the 21st century, businesses are becoming more complex, as they need to be dynamic to meet customers’ demands. Although over two hundred thousand novel products and

services are introduced each year worldwide, the vast majority are destined to fail, causing companies to go out of business and people to lose their jobs (Berger, 2011). It is due to these failures and high levels of risks that design particularly of products is now receiving attention from many business people, including those situated outside of what has been traditionally considered the design departments of an organisation (Kotler and Rath, 1984, cited in Cooper, Juninger and Lockwood, 2011).

In support of the argument that design is beneficial for business, the British Design Council (2007b) pioneered a ‘design index’, tracking the financial performance of the sixty-three most design-driven companies in the UK. Over ten years of performance, from 1995 to 2004, the design-driven companies outperformed the FTSE 100 and FTSE All Share index by more than 200 per cent (see Figure 1.1). With regards to the message emerging from the index, George Cox, Chairman of the Design Council (2007b, p. 14) stated ‘The Design Index proves that companies which make effective use of design outperform their peers, and it confirms design to be an integral part of good management.’

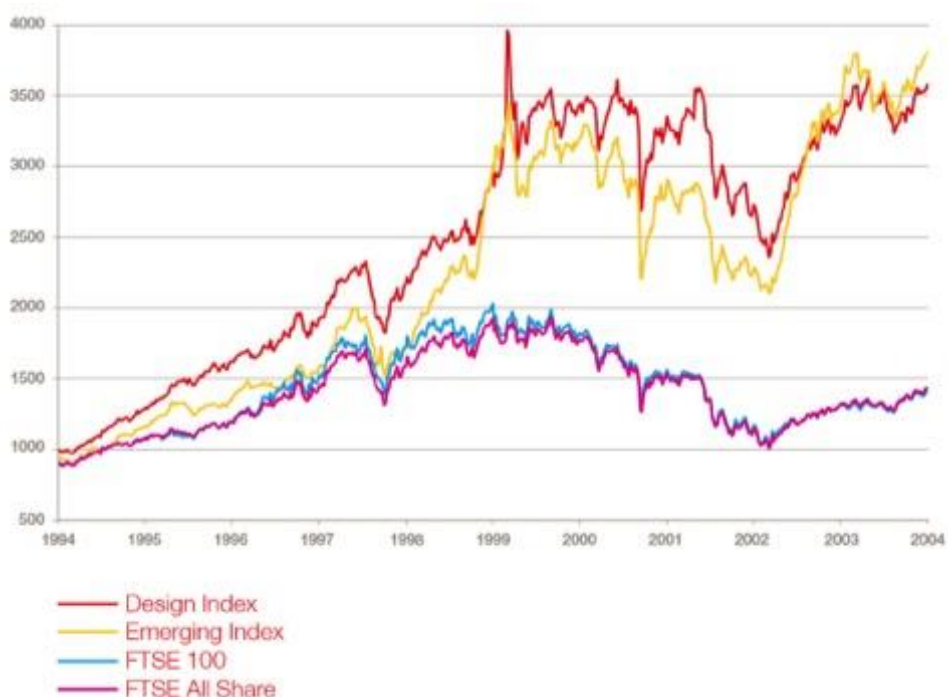


Figure 1.1 Design outperforms the FTSE100. Source: Design Council (2007b)

The next section examines design contribution in the business context with particular reference to the airline industry. Three major business performance areas are covered, namely 1) improving customer satisfaction and experience, 2) strengthening financial performance and 3) increasing the competitive advantages of a company.

1.2 Design Contribution in the Business Context

1.2.1 Design Contributions to Customer Experience

Some of the relevant literature has emphasised that businesses that strategically value design have noticed increases in customer satisfaction and quality of experience (Press and Cooper, 2003). Bruce and Cooper (1997) believe the objective of design is to increase the level of satisfaction for customers and the company's profitability, therefore it is a very important issue for a business to keep trading. Christensen (2013) stated that customers are important to businesses because without customers there is no money being generated for the business. A study 'Design in Britain 2004 – 2005' carried out by the Design Council (2005) identified that the main source of inspiration for improving or changing a business was the customers (see Table 1.1). As a result, understanding the customer is considered to be at the centre of good design processes and is an important source of ideas for almost all growing business. Therefore, in this study the researcher chose to investigate customers as one of the key stakeholders to understand the strategic value of design for the selected airline company (see Chapter 04).

Table 1.1 Design in Britain 2004-2005 by Design Council (2005)

	In the past year our turnover has						
	All companies	Got Smaller	Not changed	Grown moderately	Grown Rapidly	Manufacturi	Retail, wholesale and leisure
Main sources for ideas to improve or change a business							
Customers	60	81	56	58	97	81	57
Internal discussions with staff/management	32	14	28	40	55	28	36
Suppliers	19	16	17	24	20	36	18
Others	14	10	13	15	4	13	12
Competitors' action/plan	11	3	7	16	35	9	11

To take an example of this from the airline industry, regarding Singapore Airlines, Chan (2000) stated that the 'Singapore Girl' was adopted by the airline as a symbol of customer

service. It focuses the company on being superior in customer service and the airline's corporate culture is geared towards excellence in terms of providing the best possible customer experience.

1.2.2 Design Contribution to Financial Performance

The strategic value of design enables organisations to open a new market or have a lasting impact on an existing one, capture market share and present strategic advantages (Bruce and Bessant, 2002). For example, businesses sometimes can increase the length of the product life cycle and retain customers' interest in the product or service by modifying the packaging. In the field of groceries, the ketchup bottle was reshaped with new modified upside down plastic bottles replacing the old glass bottles (see Figure 1.2). Not only did it extend customer interest but the change of packaging allowed the company to cut its costs because the glass was more expensive to produce and ship due to its weight (Brown, 2011).



Figure 1.2 Ketchup bottle old glass bottles and new modified plastic bottle. Source: Witiger (2010)

In regards to the airline industry Heracleous, Wirtz and Johnson (2005) reported that Singapore Airlines has never suffered from a loss on an annual basis, and has always made healthy returns since it was established in 1972 (see Figure 1.3).

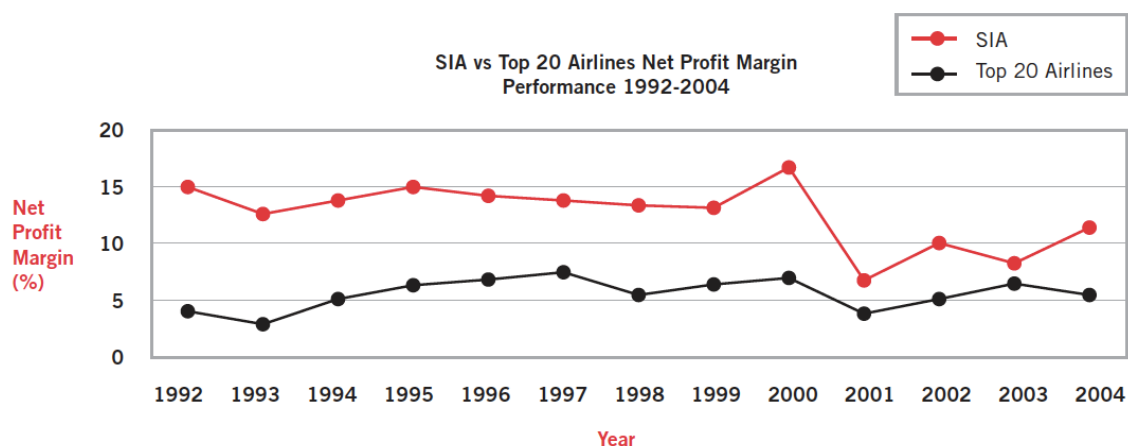


Figure 1.3 Singapore Airlines vs top airlines net profit margin performance 1992-2004. Source: Heracleous, Wirtz and Johnson (2005)

Singapore Airlines, through its unique customer service has been able to sustain its position in this highly competitive market. Senior Vice President of Products and Services, Mr Tan Pee Teck stated, ‘many of our customers tell us that the moment they step on board a Singapore Airlines aircraft, they feel an immediate sense of home’ (Cook, 2012). This is in line with Singapore Airlines’ aim to replicate that ‘home away from home’ experience for customers (Cook, 2012). In addition, Senior Vice President, Cabin Crew, Mr. Sim Kay Wee stated, ‘Profit is the applause you receive for serving your customers well’ (Wirtz and Johnston, 2003). Furthermore, when British Airways was facing tough times a long with the rest of the airline industry, it did not stop investing in design and continued to invest in airport lounges, training people and in offering the best quality of products and services. As a result, it seems that passengers preferred to travel with British Airways and were willing to pay slightly more for superior services. The previous chairmen of British Airways Sir Colin Marshall (Prokesch, 1995, p.102) commented that ‘it all comes back in the end to value for money. If you can deliver something extra that others are not or cannot, some people will pay a slightly premium for it.’ He further explained that for British Airways this was an average of 5% p.a. increase. The airline revenues were £5 billion at that time, therefore, the ‘5% translates into an extra £250 million, or \$400 million, a year’ (Prokesch, 1995, p.102).

1.2.3 Design Contributions to Competitive Advantage

Design has become a competitive tool for business success (De Mozota, 2003; Best, 2010; Holm, 2011). According to Acquaah (2006), companies that differentiate themselves are able to achieve advantage over their competitors because of the perceived uniqueness of

their products and services. Differentiation can be based on design or brand image or delivery (Frambach et al, 2003). Companies that are differentiators create customer value by delivering high-quality products supported by good service at premium prices (Walker and Ruekert, 1987).

To this end, The Design Council (2008) advised UK companies to add value in designing products and services instead of cutting prices in order to survive in challenging economic circumstances and to be ahead of the competition. Companies that have a competitive advantage, when they are ahead of their rivals in securing customers and able to survive against fierce competition (Collins and Porter, n.d.).

In support of this, the CEO of P&G, Lafley stated that fundamental competitive advantage in the 21st century lies in design, and not price or technology (Reingold, 2005). This means that companies need to be flexible to be able to survive and valuing design can create bottom line benefits through ensuring that the firm can cope with the ever changing marketplace. Organisations that understand and act on this insight have a competitive advantage over their competitors (Porter,1996). Furthermore, the late CEO, Steve Jobs, and the Senior Vice President of Design, Jonathan Ive by their design-led approach managed to turnaround Apple from a loss-making company in the mid-90s to the second biggest company in the world (Design Council, 2011). As explained above, design is strategically important because it directly impacts the quality of the customer experience.

In sum, according to the literature covered above in sections 1.2.1, 1.2.2 and 1.2.3, design can help enhance business performance. In general, the Design Council (2002) reported that design can directly and significantly improve communications with customers, increase profits, increase market share, reduce costs and increase competitiveness. These advantages are summarised in the table below (see Table 1.2), which demonstrates the contributions that design has made to a range of companies (by size).

Table 1.2: Percentage of all companies (by employment size) highlighting design contributions.
Source: Design Council National Survey (2002)

	Size - number of employees			
	0-19	20-49	50-249	250+
Increase competitiveness	25	75	82	80
Increase profits	22	79	78	76
Better communications with customers	26	80	83	87
Reduced costs	6	62	64	54
Improved quality of products & services	26	69	87	78
Increase market share	16	70	83	83

The next section investigates the dynamics of the airline industry and outlines why there is a need for Saudia Airlines to re-examine its existing perception of the strategic value of design and its design management practices.

1.3 Dynamics of the Airline Industry

As this study investigates the perception of the strategic value of design in airline companies the focus in this section is dynamics within the industry. This industry has been selected as the subject of this study is because hardly any previous studies have investigated the strategic importance of the value of design in airline companies. Moreover, it can be assumed that design is important to the airline industry because this is a highly competitive market and airlines must constantly be on the lookout and act in order to sustain their position in the market. The companies develop and differentiate their products and services by the use of design for touch points¹ throughout the airline customer journey. This researcher in this current study highlights how design touch points have been engineered and managed in various airline companies, which is an area of enquiry that has been little researched to date.

Historically, the industry has been heavily regulated and governments dictated where and

¹ A touch point is defined by Mckechnie *et al.* as ‘The touch points are distinctive steps in an air travel service encounter and generic to most airlines’ (2011, p.146) and this is adopted for use throughout this study.

how airlines could operate (Clemes, Gan, Kao, Choong, 2008; Piercy, 2001). This created an environment in which governmental policy took precedence over profitability and competition. In 1978, the Airline Deregulation Act in the USA changed the competitive structure of the airline industry (Clemes et al., 2008; Levin, 1987; Bailey et al., 1985), creating pressure for the USA airline industry to encourage innovation (Holloway, 2002). Furthermore, the Airline Deregulation Act meant that individual airline companies were able to set prices and decide when to enter and exit the industry, as long as health, safety and insurance requirements were met (Clemes et al., 2008). Since this period of economic deregulation, cost efficiency, operating profitability and competitive behaviour have become dominant issues facing airline management. Subsequently, the impacts of airline deregulation have spread all over the world (Belobaba, Odoni, and Barnhart, 2009) and the industry has expanded greatly due to global connectivity encouraging people to travel for various reasons, such as business, leisure and education.

The deregulation has helped the industry become one of the most rapidly growing industries. The airline industry is significant, not only in terms of its enormous impact on the world economy. The trade group for the world's biggest airlines, the International Air Transport Association (IATA), projected the total revenue of £414 billion for 2013, and £434 billion in 2014 (Zacks, 2013). Moreover, the industry's net profit has recently been on the rise in 2013, which is a significant improvement over £4.8 billion in 2012. The growing trend was expected to continue into 2014, when airlines were expected to return a net profit of £10.8 billion. This would make the year 2014 the second strongest year this century, after the record-breaking £12.6 billion profit in 2010 (IATA, 2013).

In the 21st century, the airline industry has grown to 1397 airlines, operating more than 25,000 aircraft, which provide services to 3864 airports (ATAG, 2014). IATA predicts that passenger growth will expand by 28.5% between 2012 and 2016 (IATA, 2012). This means around 331 million new passengers will be flying internationally and over 500 million new passengers will take domestic flights before 2016 (IATA, 2012). The average use of aircraft is considered to be 80% greater than the use of other forms of transport (ATAG, 2014). Furthermore, the position held by many airlines in the industry is one of close association in the minds of many people between the national airline carrier and national pride and achievement.

1.3.1 Middle East Region

The Middle East region is well positioned at the crossroads between Europe, Asia and Africa, to compete for international traffic connecting these regions together. According to the airline industry, the Middle East region outperformed the world in international traffic growth between the years 2001 and 2013 (Boeing, 2014) (see Figure 1.4).

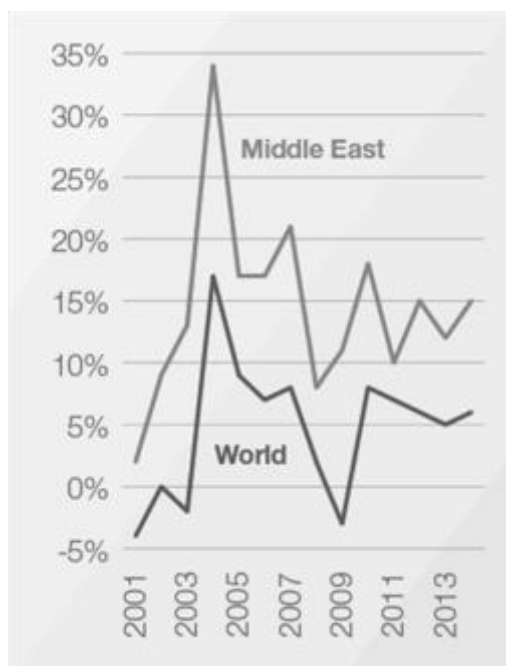


Figure 1.4 Middle East traffic growth. Source: Boeing (2014) Current Market Outlook 2014–2033.

For the Middle East figures of 15.2% RPK (revenue passenger kilometres) and 2.4 % ASK (available seat kilometres), were reported in 2012 (CAPA, 2013). These were the highest results among all the other regions (see Figure 1.5). IATA reported that the Middle East region's share of global traffic increased from 4% to 9% in just over a decade (IATA, 2014). This rapid growth may reflect the fact that Middle Eastern countries are strategically located within an eight-hour flight radius between eastern and western countries. These countries are considered well positioned to benefit from the mature economies of Europe and the emerging markets of South East Asia, India, China and Africa (Scourse, 2013).

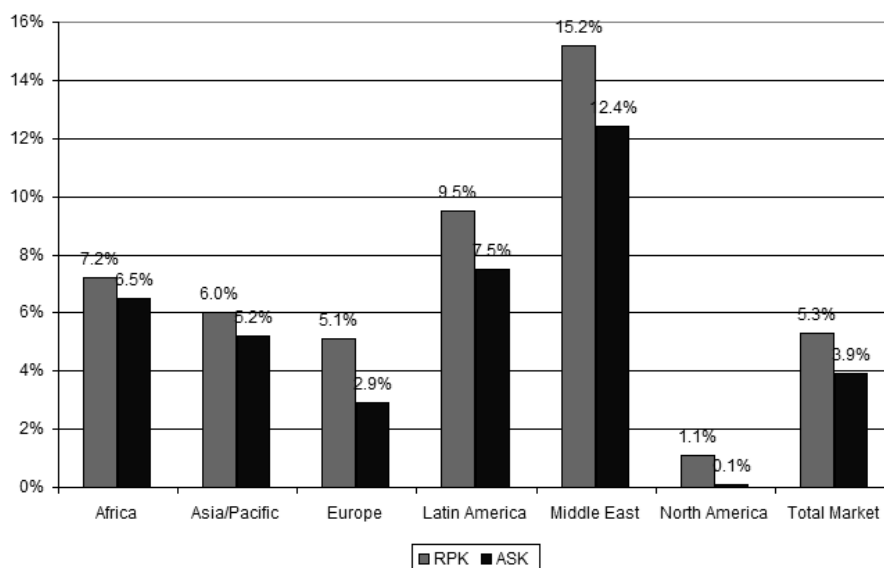


Figure 1.5 Passenger traffic and capacity 2012 (RPK = revenue passenger kilometres; ASK = available seat kilometres) Source: CAPA (2013)

1.3.2 Gulf Cooperation Council (GCC) Region

The airline companies of the Gulf Cooperation Council (GCC) countries are at the centre of the increasing economic success of the Middle East region (see Figure 1.6). According to IATA's Director-General and CEO, the GCC airlines are expected continue to play a major role in the second century of commercial premium airline business (IATA, 2014),



Figure 1.6 GCC Countries. Source: Managing intellectual property, Regional trademark law for the GCC states (2014).

Three main GCC airlines have been recognised as the ‘world’s best airlines’ by trade bodies in the industry such as Skytrax World Airline Awards, Air Transport News Awards and World Travel Awards, which examines all design touch points offered in the customer journey. The three main GCC airlines according to the Boston Consultant Group named as the best megacarriers are: Emirates Airlines, Etihad Airways and Qatar Airways (Von Oertzen, Stephen, and Schilling, 2011). The Skytrax World Airline Awards, a global survey providing professional benchmarking programmes for product and service quality for airline companies, has awarded these three megacarriers positions within its top ten leading airline companies for five consecutive years (Skytrax, 2011). Table 1.3 clearly gives an idea of the position of these GCC airlines hold (Etihad Airways, and the Emirates and Qatar Airways) in the global market.

Table 1.3 Top ten airlines for the last 5 years. Source: Skytrax (2011 to 2015)
www.worldairlineawards.com.

	2011	2012	2013	2014	2015
1	Qatar Airways	Qatar Airways	Emirates	Cathay Pacific Airways	Qatar Airways
2	Singapore Airlines	Asiana Airlines	Qatar Airways	Qatar Airways	Singapore Airlines
3	Asiana Airlines	Singapore Airlines	Singapore Airlines	Singapore Airlines	Cathay Pacific Airways
4	Cathay Pacific Airways	Cathay Pacific Airways	ANA All Nippon Airways	Emirates	Turkish Airlines
5	Thai Airways	ANA All Nippon Airways	Asiana Airlines	Turkish Airlines	Emirates
6	Etihad Airways	Etihad Airways	Cathay Pacific Airways	ANA All Nippon Airways	Etihad Airways
7	Air New Zealand	Turkish Airlines	Etihad Airways	Garuda Indonesia	ANA All Nippon Airways
8	Qantas Airways	Emirates	Garuda Indonesia	Asiana Airlines	Garuda Indonesia
9	Turkish Airlines	Thai Airways	Turkish Airlines	Etihad Airways	EVA Air
10	Emirates	Malaysia Airlines	Qantas Airways	Lufthansa	Qantas Airways

Some airlines, particularly these aforementioned megacarriers have set the standard of the airline industry in the Middle Eastern region and others. MacDonald (2011, p. 3) stated ‘The Gulf Carriers of Etihad, Qatar Airways and most notably Emirates have developed at a pace that has surpassed even the predictions of the most optimistic aviation observers.’

Moreover, their use of design is considered a benchmark with regards to deploying the most up to date design touch points in keeping up the standard of the customer journey that they offer (MacDonald, 2011). Airline Trends (2014a; 2014b; 2012) identified the three key carriers, Emirates Airlines, Etihad Airways and Qatar Airways, as key innovators in the market. Furthermore they are considered the fastest growing commercial premium airlines in the market and they are effectively reshaping the airline industry as a whole. Figure 1.7 presents the megacarriers growth from 2005 to 2020.

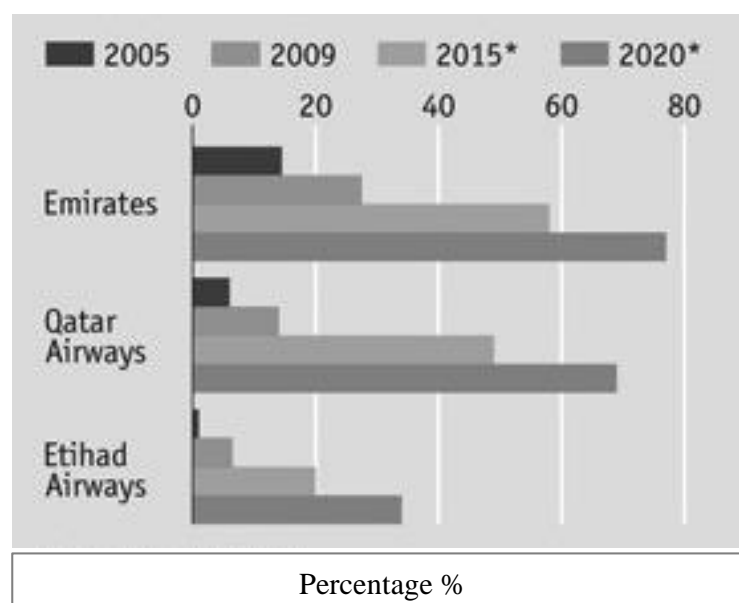


Figure 1.7 The megacarriers’ growth. Source: Airlines Forecasts cited in Economist (2010)

Moreover the Boston Consultant Group supports the argument that these megacarriers continue to expand, highlighting that passenger flow continues to increase which reflects on annual growth (Von Oertzen, Stephen, and Schilling, 2011). For example, the Emirates’ annual report (2014-2015) confirmed that passengers totalled 49.3 million, and the airline is considered the largest wide-body airline in the world (The Emirates Group, 2015b). The next section looks in detail at the contribution that design makes in these three airlines regarding the customer journey.

1.3.2.1 Emirates Airlines

The Emirates Airline’s website (2015a) reports that it is considered the largest airline in the world in terms of international revenue passenger kilometres (RPK), as the airline serves over 140 destinations worldwide. The company has paid attention to its ambition to become one of the leaders in the airline industry by developing all design touch points in the customer journey as one of its stated claims is that passengers should ‘enjoy the

journey as much as the destination’ (Strategic Direction, 2012). By always striving to differentiate themselves from their competitors, it achieved many ‘firsts’ regarding design touch points in customer journey and has provided private suites and dedicated exclusive lounges for First Class and Business Class passengers in terminals all over the world. Seats on board for these classes have built-in amenities including a personal minibar, privacy panel, separate footrest extension, and laptop stowage. In addition, on the A380 aircraft on-board showers are available for the First Class passengers (see Figure 1.8).



Figure 1.8 Emirates onboard shower facilities. Source: www.emirates.com (2015)

The Emirates is known to have been one of the first airlines to allow the use of mobile phones on-board allowing travellers to send SMSs and emails (ATW, 2011). Flottau (2014) reported that the CEO of the Emirates Airlines paid extra attention to the interiors of the new aircraft and quoted a supplier who said he had ‘hardly ever seen another airline CEO who would go into such great detail when it comes to interiors.’ This demonstrated that members of senior management supported and understood the salience of design touch points regarding the overall quality of the customer experience. In addition several trade bodies in the industry awarded the Emirates Airlines awards that focused on their innovative and outstanding performance in the customer journey. In 2012, Emirate Airlines was awarded several awards, for example Airline Transport News awarded the airline the ‘Gold airline of the year’ (The Emirate Group, 2015b). Furthermore, in 2013 Emirates was awarded APEX Passenger Choice Awards and several other awards for the good use of design in their airlines (The Emirate Group, 2015b).

1.3.2.2 Etihad Airways

Etihad Airways is a young airline established in 2003, being one of the national airlines of the United Arab Emirates based in Abu Dhabi. Currently the airline has 98 international destinations across the world (Etihad, 2014). It has been recognized as a strong brand

airline because of its excellent design touch points offered in the customer journey (GCC Aviation Sector, 2014). Recently, Etihad Airways differentiated itself from other airlines by launching a First Class ‘Apartment in the Sky’ (CNN, 2014), which had never been implemented before in any airline. Etihad Airways redesigned the upper deck cabin in its new airplanes to consist of a three-room VIP suite, with its own double bedroom, en-suite shower, and living room (see Figure 1.9).



Figure 1.9 First class apartment. Source: www.etihad.com (2015)

In addition several trade bodies in the industry awarded Etihad Airways awards that focused on their innovative and outstanding performance in the customer journey. By 2014 Etihad Airways was awarded World Travel Awards and was named the ‘World’s leading airline’ for five consecutive years (Etihad, 2015).

1.3.2.3 Qatar Airways

Established in 1994, Qatar Airways has been one of the fastest growing airlines in the world. Currently the airline has developed a global network of more than 130 destinations across the world (GCC Aviation Sector, 2014). Qatar Airways chief executive officer Akbar Al Baker stated ‘At Qatar Airways we pride ourselves on offering our customers the highest levels of service and comfort which they expect and fully deserve’ (cited in Asia Pulse, 2011). Qatar Airways offer their customers comfort and modern fleets that include the best products and services investing hundreds of millions of pounds. For example, Qatar Airways was the first to introduce the e-menu for passengers to order meals from their seats, and to view the meals on-screen (Airline Trends, 2011). The CEO stated that this innovative approach through design, reduced weight, reduced fuel and saved printing costs (Qatar Airways, 2010). Furthermore several trade bodies in the industry gave Qatar Airways awards that focused on their innovative and outstanding performance in the customer journey. For instance in 2011 the Asian Leadership Awards named Qatar Airways ‘Asia’s Most Preferred Airline Brand’ (Qatar Airways, 2015) and the airline was awarded ‘Airline of the Year’ by Air Transport News.

1.3.3 Saudia Airlines

In comparison to these megacarriers described above Saudia Airlines has not received the same positive recognition as the Emirates Airlines, Etihad Airways and Qatar Airways in the industry. This section will discuss three main reasons why this researcher is of the opinion that Saudia Airlines is worthy of investigation as the focus of this thesis: 1) the underutilised potential, 2) the need to innovate, and 3) the lack of study of Saudia Airlines.

1.3.3.1 Underutilised Potential

Established in 1945, historically Saudia Airlines is the oldest airline among those operating out of the GCC and this means it has the longest experience. Although this distinguishes it from other GCC airlines, its growth rate has been minimal compared to those of Emirates Airlines, Etihad Airways and Qatar Airways. In 2011 Saudia Airlines reported its strongest growth in passenger traffic and company growth as the national economy expanded. In Figure 1.10 the dark line demonstrates the increase in company growth and the bars show passenger traffic growth (CAPA, 2011) (see Figure 1.10). It was facing a decline and negative company growth in the past few years and as shown in Figure 1.10 the dark line illustrates this decline, especially in the years 2003, 2006 2008, and 2009.

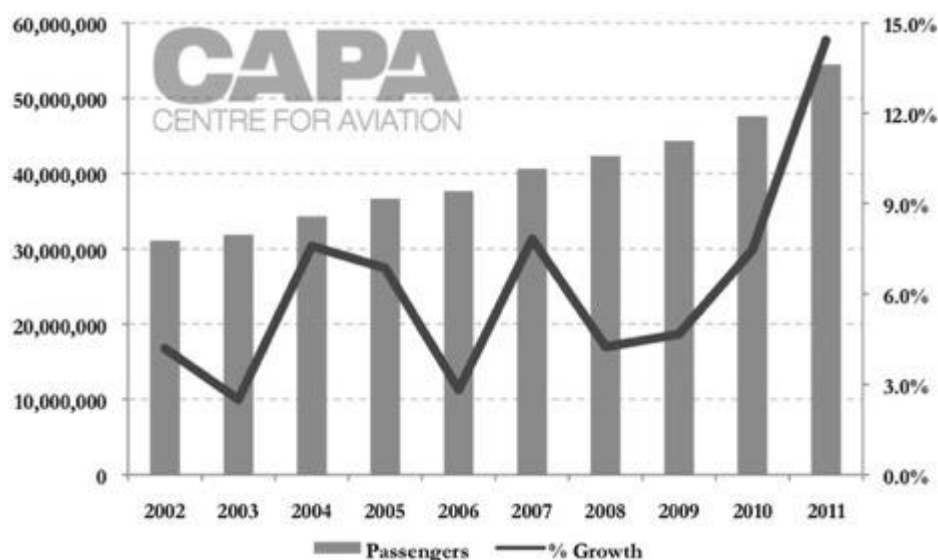


Figure 1.10 Saudia Airlines' passenger traffic growth and company growth from 2002 to 2011.
Source: www.centreforaviation.com (CAPA, 2012)

1.3.3.2 The Need to Innovate in Saudia Airlines

Table 1.4 illustrates the star ranking by Skytrax for the GCC airlines that have been mentioned in this chapter for the years from 2009 to 2014.

Table 1.4 Star Ranking from Skytrax from 2009 to 2014. Source: www.airlinequality.com

	Qatar Airways	Emirates Airline	Etihad Airways	Saudia Airlines
2014	5 star	4 star	4 star	4 star
2013	5 star	4 star	4 star	3 star
2012	5 star	4 star	4 star	3 star
2011	5 star	4 star	4 star	3 star
2010	5 star	4 star	4 star	3 star
2009	5 star	4 star	4 star	3 star

The table shows that Qatar Airlines was ranked at 5 star for five continuous years, Emirates Airlines and Etihad Airways were ranked at 4 star for five continuous years whereas Saudia Airlines was only ranked with 3 stars for four years but in 2014 improved to a 4 star standard which may indicate its ambition with regards to improving its overall status. It appears that Saudia Airlines has taken measures to improve performance, services and customer satisfaction. This might have been brought about by negative media reviews, where, for example a Saudi newspaper referred to it as a sick man whose suffering would be terminated soon, after it had enjoyed an eminent earlier past (AlSulaman, 2010). In addition, Lala (2014) reported Saudi Airlines is considered only after the above-mentioned big three GCC airlines.

Saudia Airlines' Director General, Saleh bin Nasser Al Jasser, has been cited as saying that he believed the advantage in competition comes from providing higher standards and better services for the airlines (Lala, 2014). In addition he said, 'we will give top priority to customers in order to maximise satisfaction' (Lala, 2014). The airline has embarked on a renewal programme that involves investing billions of pounds in the purchase of new aeroplanes, the redesigning of cabin interiors, and various projects for improving customer experience and attracting new customers. Moreover, it appears that The former Director General, Khalid A. Almolhem, was also seeking to promote the airline as a 'customer-oriented airline' by boosting organisational effectiveness, operational efficiency and profit (Rasooldeen, 2011) and he was reported to be optimistic about returning the airline to its previous position as a market leader in the GCC region and internationally, a position it held prior to the rapid rise of the other three GCC airlines (Rasooldeen, 2011). Alharthy

and Alslami (2008) investigated Saudia Airlines' relationship regarding customer satisfaction and service touch points of the customer journey for domestic flights. The study emphasised the need for the company to strengthen customer relationships and provide services that are needed. The researchers highlighted a lack of communication between Saudia Airlines and their customers and recommended that the company trained their employees to improve their customer service so as to maintain their current customers and attract other customers to travel with Saudia Airlines. Moreover, communication is considered one of the main factors underpinning the strategic value of design. Their study pointed to the fact that the airline needed to consider in greater depth the intangible design aspects of the customer journey.² Therefore for Saudia Airlines to be able to survive in this competitive industry the need to innovate is essential so as to meet customers' needs (Goffin and Mitchell, 2010).

1.3.3.3 The Lack of Study of Saudia Airlines

The few times that Saudia Airlines has been mentioned in the trade literature has usually been with respect to their struggle to keep up with the rapid growth of their competitors (Emirates Airlines, Etihad Airways and Qatar Airway). Alharthy and Alsalami's (2007) work is one of the few studies that have addressed Saudia Airlines and the difficulties it faces in terms of design issues. To the best of our knowledge, no other studies have investigated how Saudia Airlines uses and manages the strategic value of design within their organisation. To survive in this challenging industry and to provide a high level of customer satisfaction, a company such as Saudia Airlines would appear to need to re-evaluate its perception of the strategic value of design. As explained above, Alharthy and Alsalami (2007) found that Saudia Airlines lacked good communication with customers, which is considered one of the main factors contributing to the strategic value of design. This potentially could form one of the key factors for helping a company like Saudia Airlines to change their perception of the strategic value of design in such a way that they are equipped to face an increasingly competitive market that is always introducing innovations and product differentiation.

Few empirical studies have been conducted on understanding how airline industry companies elevate the perception of the strategic value of design from operational level to a strategic level. The following Table 1.5 illustrates a summary of the above-mentioned

² According to Oxford dictionary intangible design is 'unable to be touched; not having physical presence' and tangible design 'a thing that is perceptible by touch' (Oxforddictionaries.com, 2015a, b)

GCC airlines in 2013.

Table 1.5 Information on GCC Airlines in 2013. Source: Saudia Airlines staff, www.emirates.com and www.arabiansupplychain.com

Airlines	Saudia Airlines	Emirates Airline	Qatar Airways	Etihad Airways
Established	1945	1985	1993	2003
Revenue	18.75 billion SAR	82.636 million AED	5.2 billion USD	6.1 billion USD
Net Profit	750 million Loss	3,254 million AED	None	62 million USD
Destination	126	Over 140	146	102
Passenger Traffic Million	28 million	44.5 million	18 million (2012)	11.5 million
Fleet size	115	More than 230 aircraft	158	89
Star Ranking	4 star	4 star	5 star	4 star

1.4 Research Gap

According to comprehensive literature review of the literature pertaining to the airline industry in the above section it was observed that there are limited studies which:

- 1) Identify the perception of the strategic value of design in the airline industry.
- 2) Evaluate the use of design at the operational and the strategic levels of an airline company
- 3) Explore the role of design in creating a long-term competitive advantage in the context of the airline industry
- 4) Provide a theoretical framework to evaluate and elevate the existing perception of strategic value of design in the context of the airline industry.

In design and design management literatures, several academics and practitioners have discussed the strategic value of design in the business context and pointed out that it can significantly contribute to business success (Cooper et al, 2003; Lockwood and Walton, 2008; Best, 2010). These studies represent an initial step in applying the strategic importance of design, and illustrated through case studies how some of the leading

companies make good use of the strategic value of design. As mentioned earlier, the Design Council (2007b), which tracked the financial performance of the most design-driven companies in the UK and found that design-driven companies outperformed the FTSE100 and the FTSE All Share index by more than 200 per cent. This evidence points to the worth of undertaking research that is geared towards elevating the strategic value of design in organisations. Although in the airline industry the number of airline companies with well-developed tangible and intangible designs for all service touch points in the customer journey has been increasing (Rothkopf, 2009), relatively few studies have investigated this industry. There is a lack of research regarding companies that use design but do not recognise the strategic value of design in the customer journey. Gorb and Dumas (1987) recognised this approach as Silent Design which will be discussed in the next chapter (see Chapter 02 in Section 2.2). As a result of taking this approach some companies end up with designs that are only aesthetically pleasing because design has not been valued at a strategic level in the organisation.

Furthermore, one of the reasons for evaluating an airline company like Saudia Airlines is because in the past few years it has failed to achieve positive recognition in the trade literature and has performed poorly in comparison with GCC airline companies that make good use of the strategic value of design. One of the contributions of this thesis for an airline company like Saudia Airlines is that they may decide to re-evaluate their perception of the strategic value of design with regards to the tangible and intangible designs in all service touch points in the customer journey they offer. Finally, frameworks that demonstrate how to elevate the perception of the strategic value of design for companies that use design at an operational level are limited. Moreover, there is no research that has evaluated the reasons for there being barriers for companies which mean that they do not use design at a strategic level. There is a need for a conceptual framework as a means to demonstrate to firms in this case in the airline industry, how to enhance the perception of the strategic value of design for companies that tend to only use design at an operational level.

1.5 Aim and Objectives

The purpose of this research was to ‘create a design management conceptual framework for Saudia Airlines to assist the company in evaluating and elevating the perception of the strategic value of design.’ This proposed framework was developed with a view that it

could be adapted to suit design management needs of other airlines. Subsequently, this research contains six objectives as follows:

1. To investigate well-established and emerging **theories** regarding design management, strategic value of design and innovation in the business context, especially in the airline industry.
2. To analyse design management **practices** in companies that are well-known for making good use of strategic design, especially airline companies with well-developed tangible and intangible designs of all service touch points in customer journey.
3. To evaluate the existing **perception** of strategic value of design and design management **practices** of Saudia Airlines among all key stakeholders in the company.
4. To **compare** the design management practices and the perceptions of strategic value of design of airlines that make good use of strategic design with those of Saudia Airlines – the emphasis will be placed on tangible and intangible designs of all service touch points in the customer journey.
5. To **create** a design management conceptual framework (DMCF) for Saudia Airlines using iterative prototyping, based on the secondary and primary research results.
6. To **evaluate** the potential of the proposed framework and revise it according to the feedback from key stakeholders.

1.6. Research Contribution

This research aimed to provide two key contributions:

- An insight into the perception of the strategic value of design of Saudia Airlines and help them use strategic design to build long-term competitive advantages. It was assumed that one of the factors preventing Saudia Airlines to fulfil its potential could be a lack of strategic design management. The study later confirmed that Saudia Airlines adopted the Silent Design practice, which will be explained in detail in Chapter 02. The focus was placed on how strategic design could enhance tangible and intangible designs for all service touch points in the customer journey.
- A design management conceptual framework (DMCF) to elevate the perception of the strategic value of design for Saudia Airlines in order for the senior management to embed the elevated perception of the strategic use of design into the culture of

the organisation as a whole. This framework is developed with a view that it could be generalised and/or adapted to suit design management needs of other airline companies, which need to elevate the perception of the strategic value of design or are currently using the 'Silent Design' approach and help them to use design to build innovation capabilities in the long term.

1.6.1 Iteration

In terms of generating the DMCF, this study starts by outlining the initial prototype (Prototype A) based on analysis and synthesis of the relevant literature. This initial prototype was established to provide the criteria and structure to be used in investigating the perceptions and narratives of stakeholders who can provide insight into the customer journey offered by Saudia Airlines (see Chapter 03, Section 3.6). By adapting the process outlined by Pugh (1991), the 'framework' is treated as the 'product' for which a total design process has been planned and executed.

Pugh (1991) identified a core of iterative design activities, which he called total design, and integrated methods to create innovative products that satisfy the needs of customers (see Figure 1.11). This means that this thesis follows a process that has been previously introduced in the field of design and design management. Furthermore, Pugh's model is also adapted for organising the structure of this thesis in the following section because his model is one of the very few that offers the iterative prototype process in the field of design and design management (see Section 1.7).

Iteration is the main design flow of the development process of the product (in this case, the DMCF) that is applied throughout this research and is detailed in Chapter 03 (methodology) and chapter 07 (discussion). According to Pugh, the iterative process is based around a core of design activities that is constantly revisited. He explained that the design activities start with identifying the users' needs and the process is followed through to the final product. Therefore, in this research, the iterative process may revert at any stage to previous stages to allow this researcher to modify and develop the prototypes according to the emergent findings. Pugh (1991, p. 6) stated 'at all stages the design core activities are operated iteratively, yet upon later inspection the stages as depicted will appear to have been gone through sequentially'. The process of the iterative development taken by this researcher to reach the final DMCF is reviewed and evaluated in detail in Chapter 07.

1.7 Structure of the Thesis

The chapters in this thesis are geared towards producing a conceptual framework (DMCF) by applying an iterative process, as mentioned in the previous section, specifically addressing the situation found in the targeted airline company, Saudia Airlines, where the Silent Design approach is used. To this end, the diagram from Pugh's work (1991) is presented and adapted for the structure of the thesis for the study chapters are loosely related to the stages that Pugh identified. The structure of this thesis is divided into six key stages 1) research direction, 2) structure of prototypes, 3) methodology, 4) iterative prototype process, 5) DMCF formation and evaluation and, 6) presentation of final DMCF (see Figure 1.11).

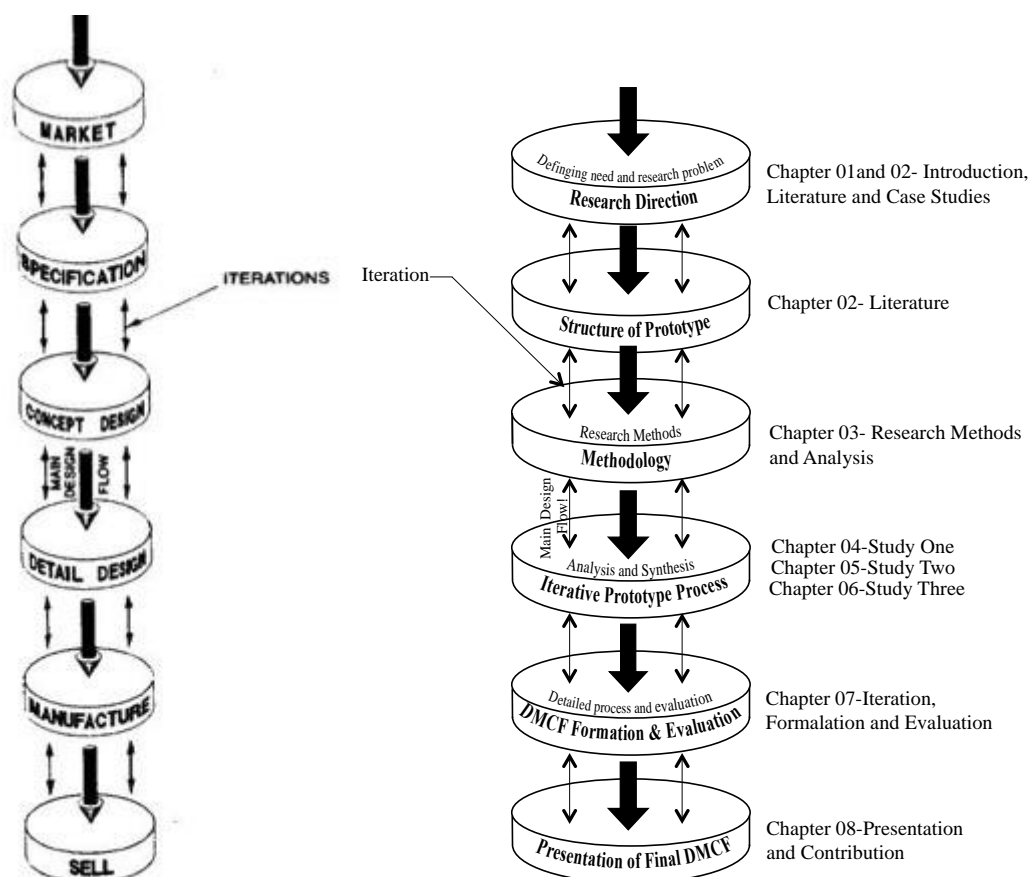


Figure 1.11 The Total Design Model. Source: Pugh (1991) on the right hand side.

The outline of the thesis following Pugh (1991) on the left hand side. Source: Researcher

Chapter 01 (Research direction): This is the first stage of this thesis and sets out the research direction to be addressed in the field of design and design management. It covers the introduction to the thesis (Chapter 01) and literature review (Chapter 02) which evaluates well-established and emerging theories regarding design management, and the strategic value of design and innovation in the business context. This research emphasises evaluating companies that make good use of the strategic value of design and the management of design. To sum up, in these two chapters the researcher creates the initial prototype (Prototype A) based on the relevant secondary sources.

Chapter 02 (Structure of Prototypes): In Chapter 02, the researcher focuses on the development of the initial prototype (Prototype A) to address the second contribution and initiate the generation of the DMCF.

Chapter 03 (Methodology): This is a very important part of this thesis and focuses on how the primary research is conducted. It justifies the criteria of the research tools and selected methods. Furthermore, it describes the methods employed to analyse the findings of the quantitative and qualitative research. It explains in greater detail the iterative methodological approach.

Chapter 04, Chapter 05 and Chapter 06 (Iterative Prototype Process): These stages cover objectives 2, 3 and 4 (see Section 1.5 above). They comprise the primary research probing the three stakeholder groups and involve presenting the primary findings regarding each of the identified stakeholder categories in Chapters 04, 05 and 06. As mentioned above, the aim in this thesis is to evaluate and elevate the perception of strategic value of design at Saudia Airlines. To this end, the details of each chapter are summarised:

Chapter 04 (Saudia Airlines' Customers): This presents the main findings of the primary research for customers who travelled with Saudia Airlines and other international airlines. The information is analysed according to the research objectives. Therefore, this chapter investigates customer satisfaction levels with the tangible and intangible designs for all touch points of Saudia Airlines' customer journey. In addition, this chapter evaluates the perception of the strategic value of design of Saudia Airlines from their customers' point of view.

Chapter 05 (Design Experts): This covers the main findings of the primary research carried out with design experts who have experience with airlines that make good use of the strategic value of design. The collected interview information is analysed to meet the research objectives. This chapter evaluates the perception of the strategic value of design in these other airline companies and investigates how design experts use and manage the tangible and intangible designs for all service touch points in the customer journey. Furthermore, it identifies key dimensions that elevate the perception of the strategic value of design and help use design to build innovation capabilities in the long term.

Chapter 06 (Saudia Airline Employees): This covers the main findings of the primary research for Saudia Airline employees where the Silent Design approach appears to be used. The information is analysed and discussed to meet the research objectives. This chapter evaluates the perception of the strategic value of design in Saudia Airlines from the perspectives of employees and hired consultants working for the airline on projects. In addition, it probes how Saudia Airlines' employees use and manage the tangible and intangible designs for all service touch points in the customer journey. Furthermore, key dimensions that are being used for the Silent Design approach, which can be barriers to the perception of the strategic value of design, are identified.

Chapter 07 (DMCM Formulation and Evaluation): This chapter explains in detail the iterative prototype process and discussion of the complete research, including the final validated framework of the DMCF. This covers objectives 5 and 6 (see Section 1.5).

Chapter 08 (Presentation of Final DMCF): This presents the research contributions, limitations and proposes avenues for studies that could be carried out in future.

2. Literature Review

The aim of this chapter is the literature research that addressed objective one, ‘To investigate well-established and emerging theories regarding design management, strategic value of design and innovation in the business context, especially in the airline industry (see Chapter 1- Section 1.5). This chapter describes in section 2 design, in 2.1 the levels of design that include both design at an operational level and design at a strategic level and in 2.2 Silent Design which is considered using design at a operational level. Next in section 2.3 design management is defined to understand how design is managed in organisations that make good use of design and in section 2.4 design management evolution to understand who manages design and how the strategic use of design evolved. Next in 2.5 innovation is addressed and in 2.5.1 the relationship between innovation and design is highlighted. Then in 2.5.2 the importance of innovation. In 2.5.3 types of innovation and innovators in the airline industry are covered. In 2.6 organisational culture is addressed and then, in 2.6.1 Martin and Terblanche’s model (2003) and in 2.6.2 the Golden Circle by Sinek (2009) and in 2.6.3 case studies are covered. Finally, in section 2.7 the structure of prototype is addressed and in 2.7.1 the initial prototype (Prototype A) of the thesis is presented.

2.1 Design

‘All men are designers. All that we do, almost all the time, is design, for design is basic to all human activity’ Papanek (n.d., cited in de Mozota, 2003,p.2).

To date several studies have reported the demand on creating competitive products and that services have driven companies to use design at a strategic level (Lockwood, 2009; Holland and Lam, 2014). In this part, the term ‘*design*’ will be defined and the levels of design (design at an operational and design at a strategic level) in companies will be discussed. Design is a commonly-used notion in language learning and yet it is a concept difficult to define precisely. De Mozota (2003) found that design is a misleading word with so many interpretations, which gives several definitions. She argues that the term ‘*design*’ and its multiple meanings can cause confusion. According to the Collins Dictionary (2015) design can be defined as a noun ‘a plan, sketch, or preliminary drawing’; it encompasses as a verb ‘to work out the structure or form of (something), as by making a sketch, outline,

pattern or plans'. In the broadest terms design is an activity that gives 'form and order to life arrangements' (Porter1980, cited in De Mozota, 2003, p. 2).

Throughout this thesis, the term design is used to refer to the use of design at a strategic level, which will be discussed in detail in the next section, which will support the mature understanding of design. For example according to a definition provided by the former Chairman of the Design Council, Sir George Cox (The Cox Review, 2005, p.2), 'design is what links creativity and innovation. It shapes ideas to become practical and attractive propositions for users or customers. Design may be described as creativity deployed to a specific end.' Furthermore the Chief Design Officer of the Design Council, Hunter (2014, p.1) claimed that 'Design is all around you everything man made has been designed, weather consciously or not' as mentioned earlier in Chapter 01. Hunter believes design is human centred, and great designers care tremendously about the humans who will be using the product, environment, service or building. He emphasised achieving solutions to meet users' needs whether the user is aware of them or not. Subsequently, design can potentially play many different roles within a business. In the next section the researcher discusses the two main levels of design, which emphasise the importance of the use of design at a strategic level in organisations and aligning it with the use of design at an operational level.

2.2 The Levels of Design

Cooper and Press (1995) stated that design can begin from an individual activity such as designing a table, through to a business process that drives innovation to meet customers' needs and desires. There are two main levels of design:

1) Design at an operational level, which is divided into: design as an outcome and design as a process. Design as an outcome is considered an individual activity as mentioned earlier, e.g. designing a table (Cooper and Press, 1995). Design as a process is not an individual or isolated activity, but a process that is linked to more than one design activity (Cooper and Press, 1995).

2) Design at a strategic level: design as a strategy was first influenced by business schools such as Harvard and Stanford. They were amongst the first universities to introduce strategic design practices. Design at a strategic level emphasises achieving goals, changing the culture of the organisation to think about the future, and for the organisation to innovate by using design for organisational success (Holland and Lam, 2014). The design levels will be discussed in more detail in the following section.

2.2.1 Design at an Operational Level

2.2.1.1 Design as an Outcome

Design as an outcome mainly uses design to lead to styling and aesthetically pleasing results, which is considered to be at an operational level. Design as an outcome in the airline industry for example is presented as tangible touch points such as (e.g. check-in counters, interior space of lounge area and furniture, cabin seats, logo of airline company, or cabin crew uniforms) and intangible touch points such as (e.g. airline website service, cabin crew service or customer experience) in customer journey. The design outcomes are addressed according to the tangible and intangible customer touch points in customer journey. In Chapter 03 the customer journey is divided into three stages (pre-flight, on board and post-flight), as adapted from the literature, which will be explained in detail. These three stages have been divided according to the literature of airlines and trade bodies in the airline industry (Green, 2012; Skytrax, 2015; IATA, 2015). Gorb (1986) divided design outcomes into three different outcomes: information, product, and environment design. In addition, service outcomes will be included because the airline industry is considered a service industry and for its richness of services that are offered by airline companies.

Information Outcomes

Information is integrated with typography and graphic symbols to represent the tangible and intangible touch points for the airline's corporate identity. It is incorporated with different areas of 2D design that include complete visual identity. For example, in the pre-flight stage the airline companies' websites, billboards for advertisements, logos of the airline company are considered information outcomes (see Figure 2.1). In addition other information outcomes are also used in the airline industry such as (e.g. brochures, packaging, and posters).



Figure 2.1 Information design. Source: Emirate Airlines, Etihad Airways, Virgin Atlantic Airway websites.

Product Outcomes

Products are for example the tangible customer touch points that are included in the pre-flight stage the check-in counters or furniture. In addition, in the onboard stage: cabin seats, or cabin storage (see Figure 2.2).



Figure 2.2 Product design. Source: Emirates Airlines, and Qatar Airways website.

Environment Outcomes

This includes the planning of the space and creating the interior of the space. Environmental outcomes include for example Virgin Atlantic Airway's lounge area, Emirates Airlines cabin area and airport area (see Figure 2.3).



Figure 2.3 Environment design. Source: Emirate Airlines, Etihad Airways, Virgin Atlantic Airway websites.

Service Outcomes

Service design is an emerging design field which aims to provide end users with a memorable experience using intangible touch points (Stickdorn and Schneider, 2012). The Service Design Network (2015) stated that service design is 'all about making the service you deliver useful, usable, efficient, effective and desirable'. For example, in the pre-flight stage Emirates Airways provides special family services for children. In addition in the onboard stage at Singapore Airlines the First Class service is well-know by their icon 'Singapore girl' and KLM Airways Wi-Fi. These are all considered service design outcomes (see Figure 2.4).



Figure 2.4 Service outcomes. Source: Emirate Airlines, Singapore Airlines, KLM Airways websites

2.2.1.2 Design as a Process

In design research several academics and practitioners have stated ‘design as a process’ is the most common term used in businesses. Powell (1998) argues the design discipline is considered the only discipline that created the development and evaluation of ideas into a thought process. He believes designers’ unique characteristics enables designers to discover, develop, and examine the ideas in a consistent way throughout the development of the final outcome for the business success. This design process is usually a contribution of design management, which will be discussed later in this Chapter (see Section 2.3). Stamm (2008) describes design as a decision-making process where people are fully aware of an idea to transform it into an outcome. Similarly, De Mozota (2003) stated design process starts with a brief that identifies a problem to be solved and ends with a outcome (product or service).

Double Diamond Model

The Design Council (2007a) reported a study that focused on design as a process in 11 design-driven companies from different industries such as Starbucks, Lego, Whirlpool, Microsoft, and Virgin Atlantic Airways. From the airline industry Virgin Atlantic Airways was the only airline company that was investigated. The principal findings of the study revealed the similarities in the design processes employed by these 11 companies, emphasising on the key stages, which led to the development of ‘double diamond model’ as a simple graphical way to explain the design process (Design Council, 2007a). The double diamond model is divided into four different phases (see Figure 2.5).

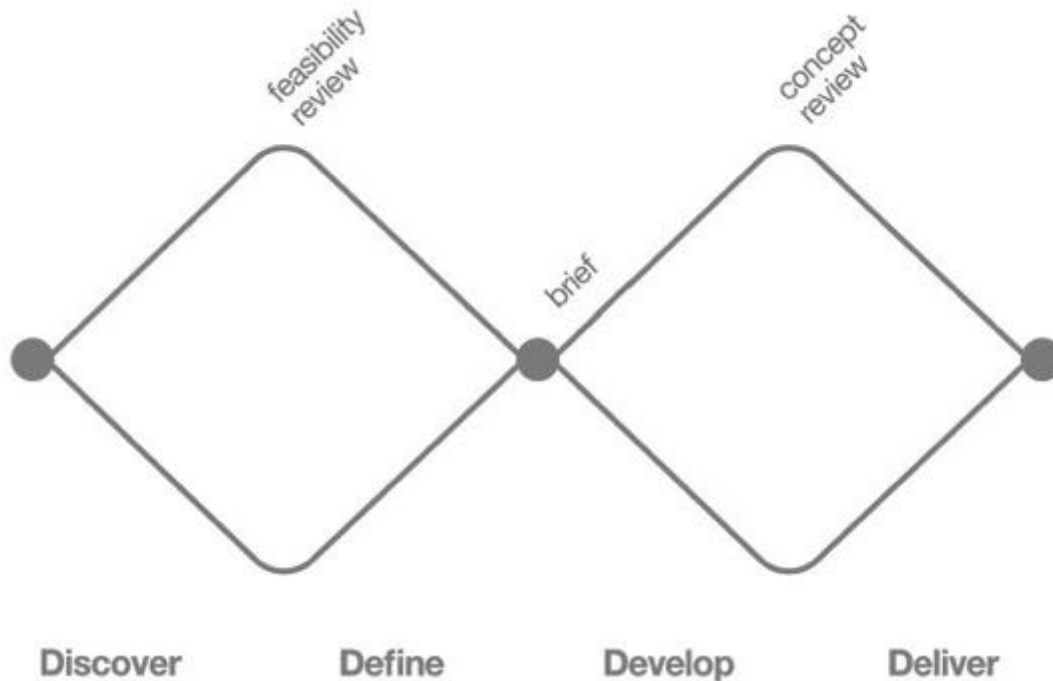


Figure 2.5 Double Diamond model. Source: Design Council (2007a)

Discover: This is the first stage of the double diamond model, and marks the start of the design process for the projects. This stage starts with an initial idea or inspiration, in which user needs are identified and discovered. In this initial stage of the design process, the company is asking questions and identifying problems by analysing market, user and design research, in addition to other information sources.

Define: This is the second stage of the model represents the definition stage. Interpretation and alignment of the discovered needs to business objectives is accomplished. Key activities during the define stage are project development, management and sign-off.

Develop: As the third stage it is a period of development where design-driven solutions are developed, prototyped and examined within the company before the last stage.

Deliver: The final results are delivered of a product or service and it is launched in the market. The main activities undertaken in this stage is final testing, approval and launch to relevant market. In addition evaluation and feedback loops are also included in this stage.

Design Thinking Process

Another good example for design as a process is the Design Thinking model developed by Dschool (Ratcliffe, 2009) in collaboration with IDEO, a well-known design innovation firm. This model is based on the design thinking concept, which is described by Brown (2009, p .49) as ‘the mission of design thinking is to translate observations into insights and insights into products and services that will improve lives.’ He believes the design

process adds value to customer and market opportunity. In Figure 2.6 illustrates the design thinking process that consists of six stages.

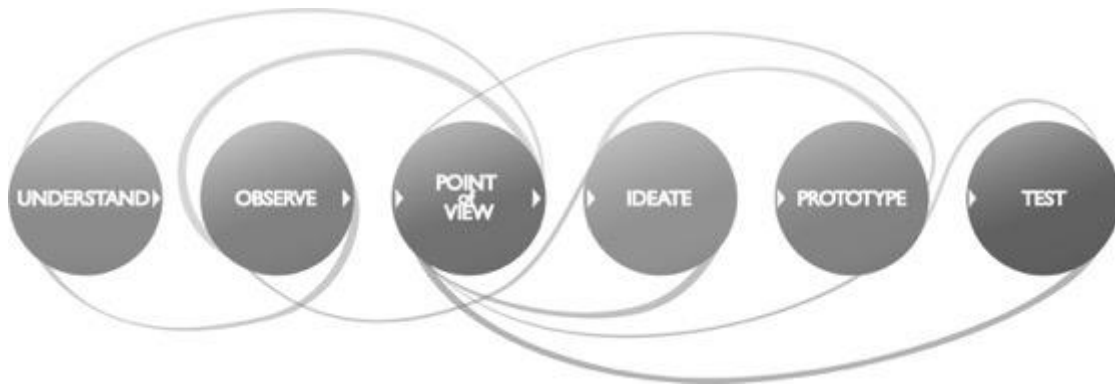


Figure 2.6 Design thinking process. Source: Stanford D-school (Ratcliffe, 2009)

- **Understand:** This stage involves developing a basic understanding of why, what, how, where? The basics of the problem
- **Observe:** This stage involves observing users, seeing them in their environment, viewing physical spaces and places
- **Point of view:** This stage involves making sense of empirical findings
- **Ideate:** This stage involves developing as many ideas as possible, perhaps through brainstorming
- **Prototype:** This experimental phase involves building prototypes and sharing them with other people to narrow down the solutions
- **Test:** This stage involves first testing and then refining the design, narrowing down the solution (this can also be referred to as the solution-driven phase)

Design thinking is important for a human-centred design process, which can influence the design strategy of the company (Lockwood, 2010). This design process clearly stimulates various feedback loops among stages, and may even have several stages taking place in the same time. This contrasts with that of the double diamond model, which does not have feedback loops among stages and the stages seem to take place in order. Therefore in sum, most companies recognised the importance of design as a process, which are applying it at the project and organisational level (Martin, 2009). In the next section the researcher emphasises the use of design at a strategic level (design as a stagey) and why is it important to businesses because it is the focus of this research.

2.2.2 Design at a Strategic Level: Design as a Strategy

Lockwood (2009, p.30) stated: 'Design strategy sets the direction and the roadmap; and design leadership lies in the areas of integrating design into business for continuous improvement.' The role of design at a strategic level in companies has unveiled profound interest (Stamm, 2008). Companies with strong design stand out from their competitors (Bruce and Cooper, 1997). In the twenty-first century the perception of the value of design is no longer presented at the last stage of the project to offer aesthetic and stylistic gestures. Song and Chung (2008, p.32) stated in the twentieth century the role of design was based on product styling, yet in the twenty-first century the role of design has significantly changed into a core business strategy. A considerable amount of literature has been published on the strategic importance of design in business (Kotler and Rath, 1984; Cooper and Press, 1995; Bruce and Cooper, 1997; Oslon et al., 1998; De Mozota, 2002). In this research the term '*the strategic value of design*' is used interchangeable with the term '*design at a strategic level*'. In the section, below the third definition '*design as a strategy*' will be covered, but first the term 'strategy' is defined.

In business studies, Chandler (1962) defined strategy as the determination of the basic long-term goals and objectives of a business and the change of courses of action and the allocation of resources required for handling these goals. In addition, Porter (2008) defined strategy from the perspective of creating competitive advantage. He argued strategy in business creates sustainable competitive advantage, over its competitors by deliberately choosing unique set of activities to deliver greater value. Furthermore he believed companies can outperform competitors only if they can create a difference they can sustain. They need to create superior value for customers or deliver comparable value at a lower cost, or do both. Similarly, Martin and Terblanche (2003) stated strategy is a combined set of choices that place the organisation's position in the market, which gains sustainable advantage and superior value relative to their rivals.

In empirical studies the concept of design as a strategy, first indicated the relationship between marketing and design. According to Kotler and Rath (1984) stated design as a strategy can be used in companies to gain sustainable competitive advantage. However this concept was neglected by most companies. Most businesses do not acknowledge that '*good design*' can improve the outcomes. Similarly Olson et al. (1998, p.55) stated the concept of design as a strategy is as follows: 'coordination of design resources and the

effective allocation and activities to accomplish a company's objectives of creating its appropriate internal and public identities, its product offerings and its environment'.

De Mozota (2002) argued the capability of design to support businesses in efforts to strategically and tactically differentiate, transform and integrate innovation opportunities, is well recognised. In addition, Topalian (2002, p.12) stated 'design is a strategic resource that is central to wealth creation because it has a critical influence on the conception and delivery of products and services that match closely with customers' needs and aspirations.' Moreover Lockwood and Walton (2008) stated that when appropriate design strategies and business objectives are aligned, the combined capabilities could be a powerful force. Brown (2009) stated design in companies moved out of the studio into board meetings. Recently Knoskova (2011) argued that in the strategic importance of design there are two trends: 1) the need to differentiation products and service by the use of design in the increasing growing market has seen significant in the past few years; 2) the contribution of design in companies has seen a profound increase in companies' acknowledgment, perception and value of design.

Value Levels of Design Approaches (2011)

In a recent study, Celaschi, Celi and García (2011) proposed a design value model to clarify and describe the different levels of the value of design in companies (see Figure 2.7).

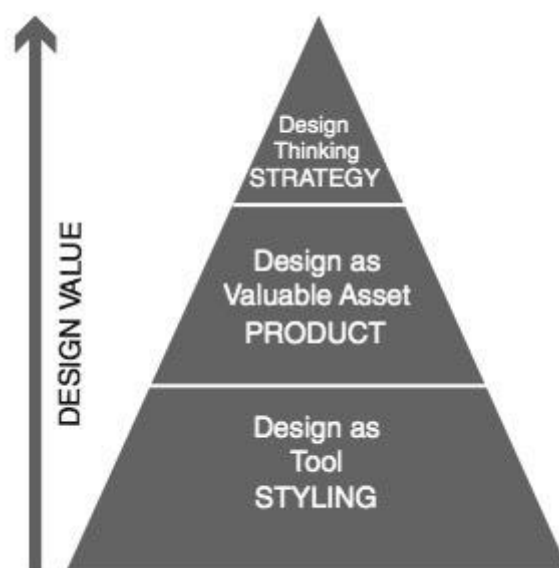


Figure 2.7 Value Levels of Design Approaches. Source: Celaschi, Celi and García (2011)

- Design as tool styling: mostly used to solve styling problems for new product development. Celaschi, Celi and García (2011) believe that design at this level is an outsourced activity.
- Design as a valuable asset product: is the next level of the pyramid. Design has more authority, capabilities, space, time and decision-making autonomy to deliver a specific project or service.
- Design thinking strategy: is the top level of the pyramid. Design is integrated into the decisions making of the senior management and is involved in building the future of the business.

Despite the considerable amount of literature published on design at a strategic level, the national survey carried out by the Design Council in 2004 and the Design Ladder study conducted by the Danish Design Center from 2003 to 2007, revealed that most companies did not understand the strategic value of design and, therefore, did not apply design at the strategic level.

Design Ladder – Danish Design Center (2011)

The study of Danish Design Center (Seeproject, 2011), in association with the Danish National Agency, led to the development of the Design Ladder, a tool that can be used to measure the use of design in Danish companies. This study examined the design investments of 1000 companies. The investments were divided into four stages: Stage 1 (no utilisation of design), Stage 1 (design is used for styling), Stage 3 (design is perceived as a process) and Stage 4 (design is used as a strategic tool). Figure 2.8 illustrates the results of the study conducted in the year 2003 to 2007.

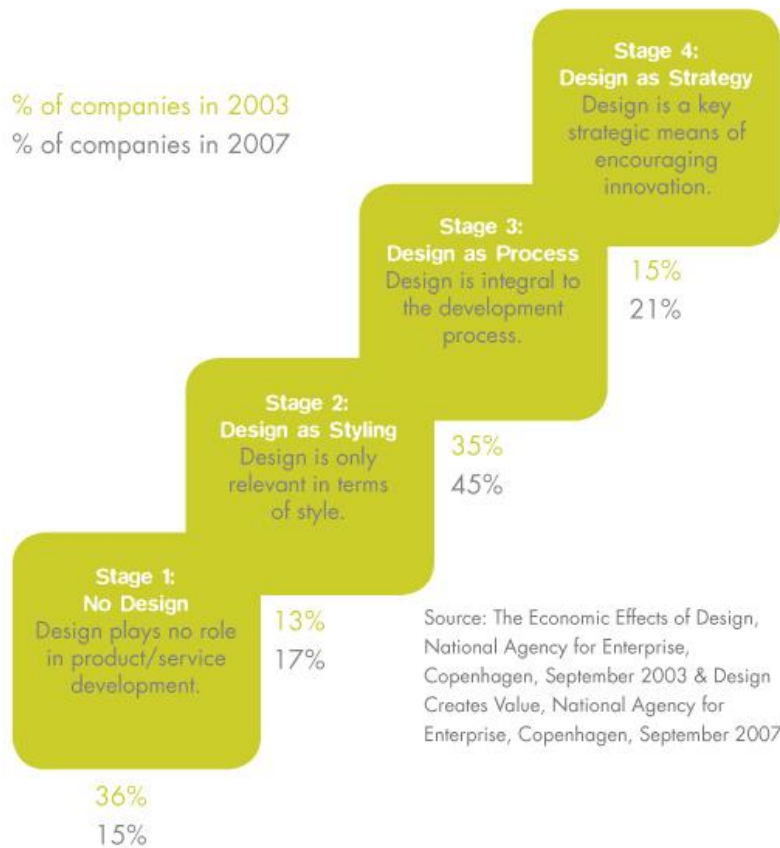


Figure 2.8 The economic effect of design and design creates value. Source: National Agency for Enterprise, Copenhagen, September 2003 and September 2007. Seeproject (2011)

Findings of the progress of using design in Danish companies, design strategy scored 15% in 2003, which revealed a clear increase scoring 21% in 2007. The Danish Design Center believed companies that use design as a strategy was likely much better to develop new products compared with companies that do not use design. In 2007 results demonstrate profound increase in their understanding of design from 2003. As a result, over the period of the study Danish companies that use design, recorded a total rise in their gross revenue of around 22% £6.372 million higher than companies that did not use design (Seeproject, 2011). However still ‘design as process’ scored the highest score for both years, which prove that most organisations, are still limited in using design at an operational level only. In addition companies that have ‘no design’ scored 36% in 2003. Yet, these companies showed major improvement scoring 15%, which is considered a positive result for companies in the Denmark.

From their study the findings emphasised that the perception of the strategic value of design can be changed. Companies that recognised the strategic importance of design do not limit their use of design only at an operational level meaning (design as an outcome

and design as a process). Yet they combined all the three definitions together. In addition appropriate education can help companies see strategic values of design and use them more effectively. In the next section the researcher will place emphasis on how organisations that use design at an operational use design in their organisations, but first the findings of the Design Council's National survey (2008a) will be illustrated to reinforce the findings of the Danish Ladder (Figure 2.8, p. 55), on the limited use of the strategic use of design in organisations.

Design Council's National Survey (2004)

The Design Council has performed a series of studies on design. In 2004 a survey of 1,500 companies was carried out for the Design Council by PACEC. The survey asked companies about their perception of design and the level to which they engaged in design activities. The findings of the survey revealed the lack of mature understanding of the meaning of the strategic use of design in companies. In the survey, participants were given seven different meanings for what is design, which highlighted that most companies perceived design as an outcome and/or a process (Tether, 2005). Only the minority perceived design as a strategic tool.

Figure 1.9 illustrates that the majority of participants (75%) perceived the role of design in their businesses as 'used to develop new products and services'. However, 34% of participants perceived design as a strategic business tool for differentiation (see Figure 2.9).

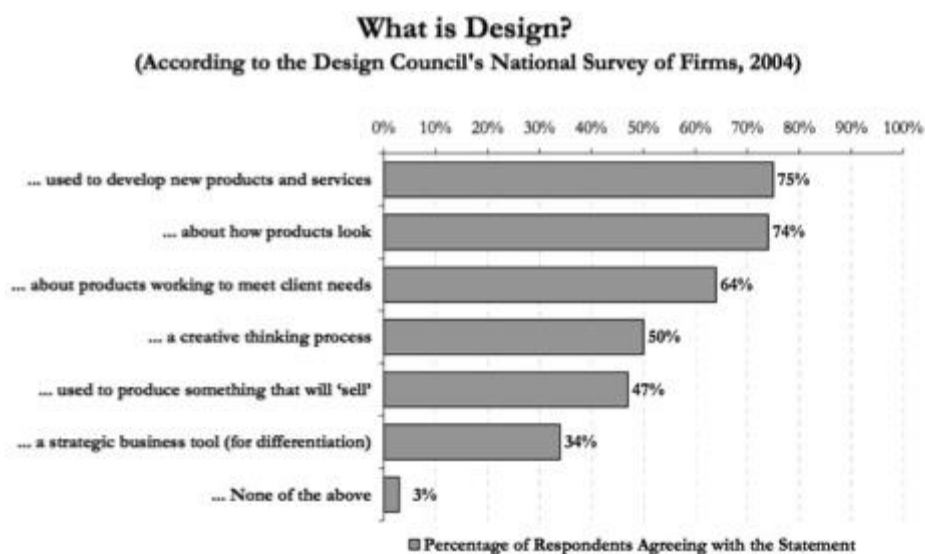


Figure 2.9 What is design? Source: Design Council's National Survey of firms 2004 in Tether (2005)

Their study emphasised on the limited use of design as a strategic business tool (for differentiation) by companies. Balmond (2004) stated that organisations are not doing enough to incorporate design fully into their strategies, which will be investigated in detail in this PhD thesis. Therefore in the next section the researcher identifies the ‘Silent Design approach,’ to find out how companies that do not use design at a strategic level perceive the use of design in organisations.

Silent Design

Gorb and Dumas (1987) is one of the main studies that addressed the ‘Silent Design approach.’ Gorb and Dumas (1987) referred to workers who are not designers, e.g. engineers, programmers and marketing managers, who use design or make decisions that affect design, as silent designers. In fact in most businesses that fail to understand the use and value of design tend to have other employees that are unsuitably skilled workers, taking on the role of a designers (Danish Design Center, 2011; Kootstra, 2009; Celaschi, Celi and García (2011). Design Council deputy chief executive Rich stated that ‘business are advised to use design or fail’ (Balmond, 2004, p.1). He argued companies from the early phases of design should be working with designers (Balmond, 2004). DTI (2005) reports that all products and services are designed, even if professional designers do not do them. The report stresses that most design indirectly takes place not in a formal design function and are not done by designers, which supported Gorb and Dumas’s view about Silent Design (DTI, 2005).

Furthermore DTI (2005) study identified the importance of the connection between design and organisational performance. High performing companies can spend more on design but not essentially show that design activities lead to success because it can easily be that higher performing organisations can afford to spend more on design.

For example Figure 2.10 presents two firms which use and implement design equally. In Firm 1 may assign certain design activities to their marketing or research and development (R&D) departments. Firm No. 1 reflects companies that have a high performance of the use of design. However, in Firm 2 design is somewhat hidden within the other activities of the company; whilst in Firm 1, design is considered equal in value to the outputs of other departments which emphasise the high performance of design. Firm 2 is an example of a company which only uses design at an operational level, described as the Silent Design approach.

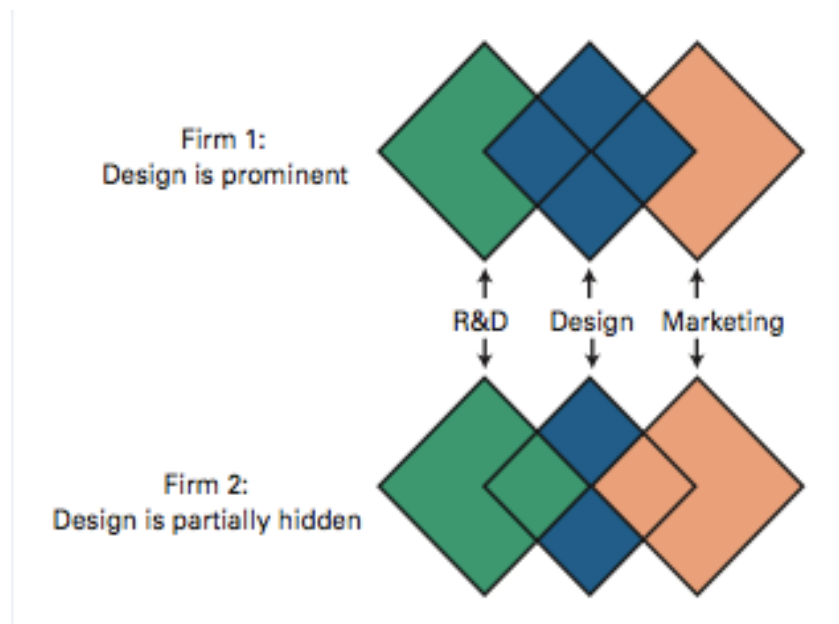


Figure 2.10 The importance of design, a matter of perspective. Source: DTI (2005)

Why design projects fail is important to understand. Bruce et al. (1995; cited in DTI, 2005) discovered that one fifth of design projects they assessed were failures resulting in financial loss. He argued one of the key reasons was the lack of design management skills (ill-defined objectives and poor planning). Researchers have not studied the Silent Design approach in much detail. Previous studies of organisations that use Silent Design have not dealt with their perceived use of design at a strategic level, which is the main aim of the current research.

After identifying the Silent Design approach within organisations, which includes issues such as lack of design capabilities and employees who lack the design background and knowledge to manage design, the researcher realised the importance of addressing how design should be managed within organisations. In the next section design management will be discussed in detail.

2.3 Design Management

Design management is an area of study that combines design with management to understand how design can be managed and implemented at an operational and/or strategic level. A considerable amount of literature has been published on the effective use of design management and the benefits of the connection between design and management (Cooper and Press, 1995; De Mozota, 2003; Cooper et al., 2011). Despite there being a vast rise in the quantity of research, particularly in the 21st century (Kim and Chung, 2007), as yet, there is no concise definition, which may be attributed to its complex nature and broad coverage. Design management as a clear concept emerged in the 1960s (De Mozota, 2003; Cooper et al., 2011).

Michael Farr (1965; cited in Cooper et al., 2011) gave the first formal definition of design management. He asserted that it involves those activities undertaken in order to identify a problem, allocate appropriate designers and then ensure that they work to assigned time limits and designated budgets to solve the defined problem. From this perspective, this practice can be applied to all appointed locations where there are designers working in an organisation (De Mozota, 2003; Cooper et al., 2011). Moreover, Farr contended that designers should focus on design and associated core skills rather than take on tasks related to management and management activities (Cooper et al., 2011) for, as he explained, design managers are need to manage designers and, moreover, it is the design managers who need to establish a strong relationship with the members of the board of a company (Cooper et al., 2011). At this time, Farr and other authors highlighted the ‘competitive value of design’ and the importance of managing design in businesses more effectively (Cooper et al., 2011, p.36). Design management subsequently flourished under the joint efforts of the London Royal College of Art and the Department of Design Management at the London Business School where Peter Gorb pioneered the approach. Gorb (1990), known as the ‘godfather’ and later as one of the ‘grandfathers’ of design management, claimed the concept has a number of definitions that offer richness to the field all of which bring fresh ideas and behaviours to a rather new and emergent domain. Gorb (1990, p.1) defined design management as ‘the effective deployment by line managers of the design resources available to an organisation in the pursuance of its corporate objective’, which suggests that its effective application by managers is directly linked to where design is located in the company to achieve the company’s objectives.

The general understanding for design management is to link between design issues and business issues. McBride described design management as ‘the bridge between design and business that enables the designer’s voice to be heard’ (Best, 2006, p. 200). Similarly, Vossoughi (cited in Design Management Institute 1998, p.19) described design management as being ‘like conducting an orchestra in which each individual plays different notes. When guided and shaped by a conductor, these different notes become beautiful music.’ This indicates that design management is based on significant levels of collaboration of different services across different departments in an organisation all of which share the goal of delivering effective outcomes. Wally Olins (1990; cited in Hands, 2009, p.18) believed that design plays a major role, just like any other function in the company.

Cooper and Press (1995) made a contribution to our understanding by looking at the field from both the operational and strategic level. They pointed out that design management can offer major advantages suggesting that senior management in a company need to have a positive perception and appreciation of it so that they include it within their organisational agenda. Further to this, Topalian (2002) explained that managing design within a company involves the management of all design disciplines, in the two levels of design mentioned earlier design at an operational level and design at a strategic level. Topalian explains the two levels in detail (see Figure 2.11 and 2.12).

Figure 2.11 illustrates the design activities at an operational level, which focuses mainly on the design project. This includes selection of design specialists, planning and administration of design projects, design research and sourcing for design projects, implementation and evaluation of design projects (Topalian, 2002). In Figure 2.11 the arrow in the middle shows that there is a starting point and ending point to the design activities, which might create some sort of limitations to the design process.

Figure 2.12 illustrates design management at a strategic level pertaining to all the design management activities undertaken in the company at a strategic level. It covers the following design activities such as: integration of design within an organisation, the positioning and 'visibility' of design, introducing an appropriate design management system and infrastructure, corporate design capabilities, and evaluation of the contribution and impact of design on corporate performance (Topalian, 2002). Furthermore in regards to the design activities in Figure 2.12 there seems to be more flexibility without an arrow in the middle like in the case of Figure 2.11. However in both diagrams nothing in relation to people's perception of the strategic value of design is mentioned. In addition Topalian's study does not address any recommendations on how organisations that use design at an operational level can elevate to design at a strategic level (see Figure 2.11 and 2.12).

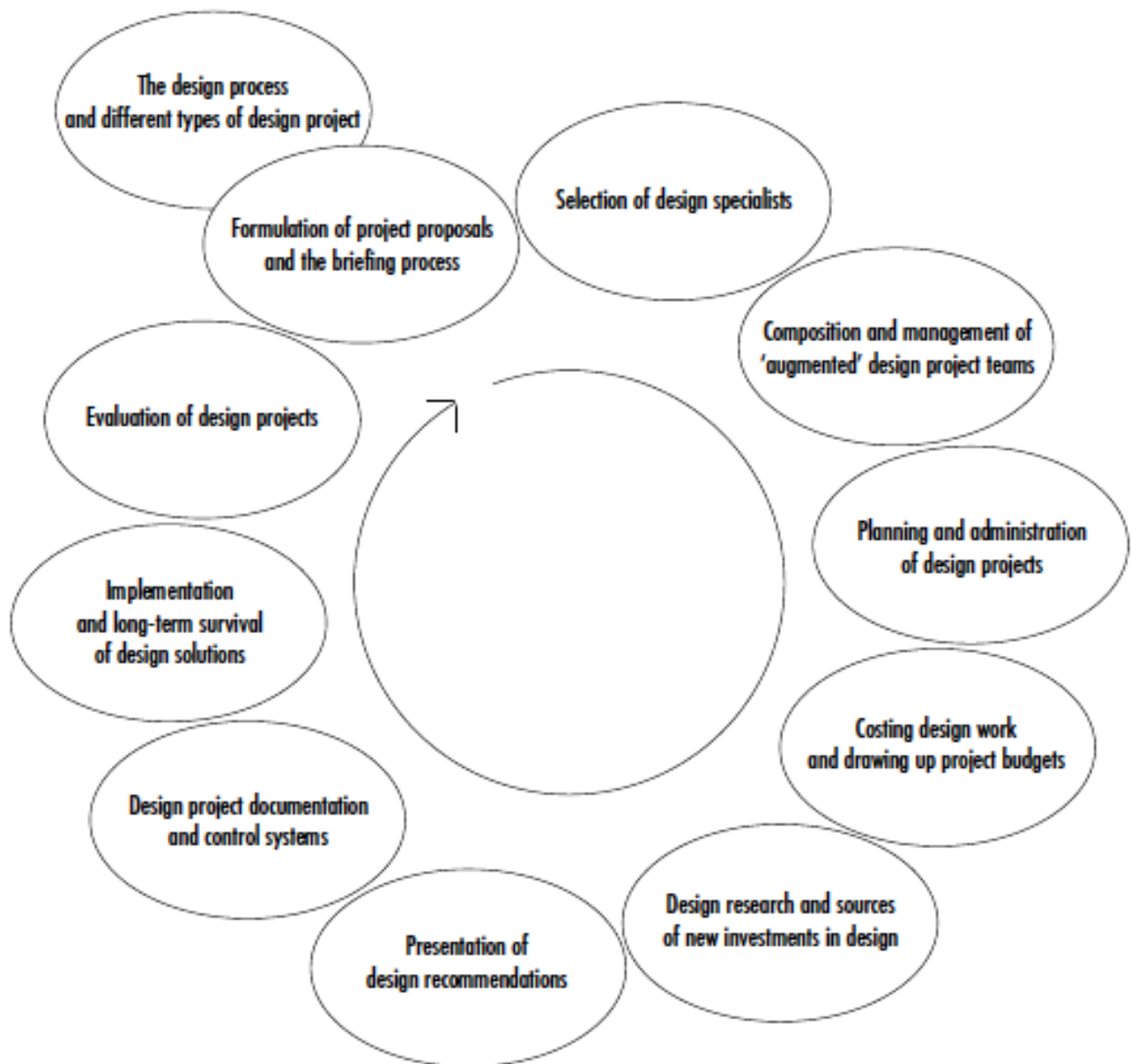


Figure 2.11 Design management at an operational level. Source: Topalian (2002)

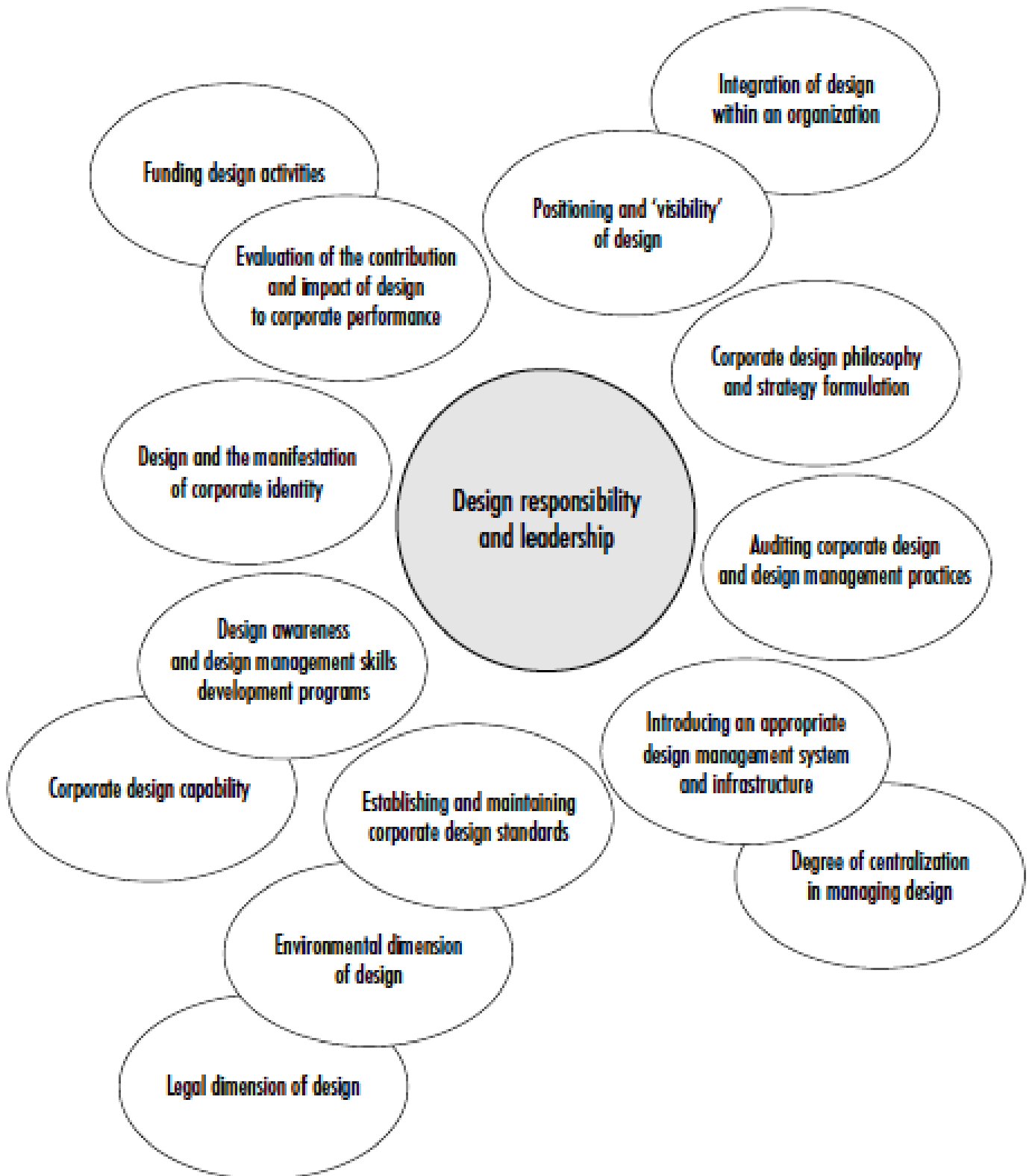


Figure 2.12 Design management at a strategic level. Source: Topalian (2002)

In 2007 Walton in his article ‘Design Management Comes of Age’ states top management of leading companies have been the ones that have exploited design as a strategic tool (Walton, 2007). Design strategy is the vision for design at all levels within the organisation and design management involves looking beyond the day-to-day specifics of product design to a wider spectrum of issues (Best, 2006).

2.4 Design Management Evolution

A review of the evolution of design management reveals the history of how the field developed through the years to encompass the strategic value of design in companies. These changes that occurred during the evolution saw design shift from being only a matter of producing aesthetically pleasing outcomes to a process of strategic relevance (Kim and Chung, 2007; Erichsen and Christensen, 2013). The interrelation between the two concepts design and management may be traced all the way back in history to achievements such as the construction of the pyramids (cf. Iser, 2001, cited in Cooper et al., 2011). The term ‘design management’ was first introduced in the United Kingdom, in the 1960s by the Royal Society of Art (Erichsen and Christensen, 2013). According to Cooper et al. (2011) their investigations regarding the history of design management resulted in them making the conclusion that no generic history for the field can be ascertained. Nonetheless, by outlining the evolution it is possible to trace the theoretical concepts which have emerged in the domain (Erichsen and Christensen, 2013). The field of design management has not been able to gain recognition from other fields outside the design research community (Cooper et al., 2011).

2.4.1 The Early Contributions - Before the 1960s

In this subsection on the evolution of design management, the time line, dating from pre-1960, is divided into six periods: early contributions – before the 1960s, 1960s–1970s, 1970s–1980s, 1980s–1990s, 1990s–2000s, and 2000s to date. The rows that are highlighted in grey indicate when authors discussed the strategic use of design within the organisation. Table 2.1 below lists early developments in Europe leading up to 1960s.

Table 2.1 The early contributions - before the 1960s

Year	Proponents	Movement/Industry	Contribution	Reference
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1795	Josiah Wedgwood	Wedgewood Company, United Kingdom.	This period used design as an outcome, mastered the beauty of designing ceramic pottery for tableware. Delivering the first case study that connected designers with the management in the business.	Best (2006)
1865	William Morris	Art and Craft Movement, United Kingdom	Morris was a craftsman and designer who looked for problems and solutions for design objects within everyday life. He was one of the first that related design to people's needs. He differentiated the work of craftsmen from the results of products made by machine.	Cooper et al. (2011)
1907	Peter Behrens	AEG electricity company, Germany.	Behren created the complete approach for visual consistency within a company. He was responsible for the design of electric products, stationary, packaging, the interior of stores and exhibits. AEG was one of the first contributors to the design management field, which was not yet fully recognised.	De Mozota (2003); Best (2006); Cooper et al. (2011)
1915	Harry Peach	Design and Industries	DIA focused on grouping	De Mozota

		Association (DIA), United Kingdom.	various stakeholders (designers, manufacturers, critics, economists, and distributors) to work together in a team. DIA put the emphasis on providing customers with good design products but the term 'customers' was not coined.	(2003); Best (2006); Cooper et al. (2011)
1919	Walter Gropius	Bauhaus, Germany moved to the United States in 1933.	After the First World War, The Bauhaus was a movement and school for modern architecture. They included design and management issues with the aim to create a 'total' work of art combining painting, architecture, and sculpture into a single creative expression. They also accepted the machine focus on offering simple and beautiful outcomes by the use of mass production.	De Mozota (2003); Best (2006); Cooper et al. (2011)
1930	Styling period	American styling period.	After the economic crisis in the United States, manufacturing companies realised the important role of product design in business success. They encouraged teamwork and promoted design of products that were suitable and met customers' needs.	De Mozota (2003); Best (2006); Cooper et al. (2011)

1933	The British Broadcasting Company Ltd (BBC)	Television Broadcast, United Kingdom.	Anthony Betram talked about design and how design is in ‘everyday things.’	Best (2006)
1944	The Council of Industrial Design (CID)	CID is today known as the Design Council, United Kingdom.	The CID was established at the end of the Second World War as this period focused on the development of product design in British industries after the war. There was a strong focus on relating CID to economic issues in order to promote ‘good design.’	Best (2006)
1951	Walter Paepcke	The International Design Conference (IDCA), United States.	The conference was on ‘design as a function of management’ (Cooper et al., 2011, p.3). There was engagement between designers, business engineers and industry leaders from all around the world for the first time regarding design practice and theory. Topics looked at the relationship between designers and managers. In addition, leaders and businesses were covered. This conference was considered one of the first explicit attempts in addressing design management as this field	Cooper et al. (2011)

			did not exist during these days.	
1955	Walter Teague	Industrial designer, United States.	Teague's design consultancy collaborated with the Boeing company from the airline industry. The firm designed a full-scale prototype of the interior of the Boeing 707. The prototype was included as part of their design process.	Best (2006)
1956	Eliot Noyes	IBM, United States.	Appointed by Thomas Watson president of IBM as chief of design.	De Mozota (2003)

The researcher recognises that in the above table this period considered design at an operational level (De Mozota, 2003; Best, 2006; Cooper *et al.*, 2011). That is, design mainly focused on styling and product quality.

2.4.2 1960s-1970s

According to Cooper *et al.* (2011) the relevant literature from the 1960s up to the 1970s is quite limited and not easily accessible because during the 1960s, the design and design management field did not have dedicated scholarly journals. The only journal of note was the 'Design Magazine' which covered design and industry topics.

Table 2.2 Design management 1960s to 1970s

Year	Proponents	Profession/ Industry	Contribution	Reference
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1965	Michael Farr	Editor of design magazine	Farr pointed out the role of design management was to achieve a competitive advantage. He emphasised the need to manage design more effectively from a business perspective. This role ensured the smooth execution of projects and maintaining good communication.	De Mozota (2003)
1966	Thomas Watson	Design director for International Business machines (IBM)	The president of IBM. Watson stated 'good design is good business' (Best, 2006, p.23). He hired Eliot Noyes as the design director of IBM to shape the company to becoming a leader in design. The increasing recognition of the value of design in companies and positioning design as a top priority was a main focus.	De Mozota (2003); Best (2006)
1967	Bruce Archer	Professor of design research- the Royal College of Art, United Kingdom	Contributed to education regarding the need for management programmes to include design issues in their curriculum. He gave attention to the relationship between design and management.	(De Mozota (2003); Best (2006); Cooper et al. (2011)
1975	Bill Hannon	Design Management Institute (DMI), United States	The role of the institute is for leaders, designers, educators and researches to raise the profile of design and design managers as an important part of business strategy.	Best (2006)

1976	Peter Gorb	Former Director of London Business School's, United Kingdom.	Design leadership was introduced at this point and the need for design management to be on the company board and a trusted figure was noted.	De Mozota (2003); Best (2006); Cooper et al. (2011)
1976	Alan Topalian	Principal of Alto Design Management, United Kingdom.	Topalian discussed design leadership, highlighting board-level responsibility for design. Businesses anticipated design solutions rather than reacted to problems. Companies identified different types of design and design projects, which meant there would be different approaches in managing design. Topalian provided a framework of tasks for the management of design.	Cooper et al. (2011)
1976	James Pilditch	Design consultant played a significant role in design in business	Pilditch states that design is a comprehensive activity that is related with the managing and organising of activities for the survival of the business. He discusses the role of designers and their capability to change using new methods. For example, the idea of design thinking was applied for innovation, however the term was still not widely coined. He rarely discussed the concept of design management, but he	Cooper et al. (2011)

			linked the value of design with the need for appropriate management and the need for designers to understand their contribution.	
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This period is also considered to use design at an operational level and design still focused on design styling and product quality (De Mozota, 2003; Best, 2006; Cooper et al., 2011). In this period design was recognised more by senior management, and the term ‘design management’ was used for the first time. Gorb says that (Cooper et al., 2011) design leadership was introduced at this point and the need for design management to be on the company board and a trusted figure was noted. However the discussion of ‘design at a strategic level’ was still lacking at this stage.

2.4.3 1980s - 1990s

It was not until the late 1970s when the first scholarly journals for design management were published. The Design Management Journal and the Design Management Review targeted design managers, professionals and academics. Such publications were devoted to addressing the problems and practices in the field and a number of scholars contributed to the discourse. This included: Blaich, Oakley, Dumas, Kolter, Rath and others. In 1986, Gorb was one of the first who published on design management as an identified subject area.

Table 2.3 Design management 1980s to 1990s

Year	Proponents	Authors/industry	Contribution	Reference
1980	Robert Blaich	Senior managing director of design at Philips	Senior management supported grouping design marketing and production under one unit that created a design management system for the first time at Philips. However at this period design was mainly used at an operational level	Best (2006)

			did not focus on the strategic level.	
1984	Philip Kolter	Northwest University, United States.	The authors discussed the role of design as a strategic tool that will gain companies a sustainable competitive advantage. They are considered some of the first to address the use of design at a strategic level. They argued that the concepts of strategy and design have changed.	Kolter and Rath (1984)
	Alexander Rath	Principal of Tah and Association, United States.		
1984	Mark Oakley	Aston Business School, United Kingdom.	Oakley discusses change and the scale of change. Design management skills can help in maintaining a good work environment between designers and the rest of the company. He raises the issue that design management can deal with a wide range of responsibilities in the company. One of the first who contributed to design management.	Cooper et al. (2011)
1986	Peter Gorb	London Business School, United Kingdom.	The authors are some of the first to explain how design has been managed by different disciplines, other than designers, who take design decisions for products in the company. In their study they called this concept 'silent design.' In their study they did not focus on companies' perceptions of the value of design or meeting customer needs.	Gorb and Dumas (1986)
	Angela Dumas	London business school, United Kingdom.		
1989	Tom Peters	Management Consultant	Peters argued that design consists of two parts: secondary as an object	Cooper et al. (2011)

			and primarily as the whole approach of the company, serving customers and adding value.	
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This period witnessed the use of design at a strategic level for authors such as Kolter and Rath (1984) discussed its strategic importance (highlighted in grey). Furthermore, Gorb and Dumas (1986) addressed the concept of what they called ‘Silent Design’, as mentioned in the above table and defined in this chapter (see Section 2.2).

2.4.4 1990s - 2000s

Publications relating to the design management field increased substantial during these years and discussions about the strategic value of design have been further investigated.

Table 2.4 Design management 1990s to 2000s

Year	Proponents	Authors/industry	Contribution	Reference
1991	Stefano Marzano	CEO and Chief Creative Director at Philips	Continuing the work of Blaich at Philips in 1991, the design process was aligned with business processes. In addition, supporting the approach of design as a strategy became an essential asset of the overall business strategy for Philips.	Best (2006)
1995	Mike Press and Rachel Cooper	Academic field, United Kingdom	The authors explained the different disciplines of design and the importance of incorporating design in all the levels of the business. They argued design management is the process that can achieve companies’ objectives and also	Press and Cooper (2003)

			<p>help define these. Their main focus was on companies that have design managers in their businesses and are familiar with the use of design at a strategic level. They did not probe companies that do not use design at a strategic level and do not have design managers. In addition, customs and customer experience was lacking in their approach.</p>	
1998	Executive Perspective	Professionals	<p>18 working professionals from different fields defined design management. They all stressed that design is a corporate resource. Most of them viewed design at strategic level. One of the views mentioned that design management can foster a culture of innovation, which only a few have mentioned during this period.</p>	Design Management Institute (1998)
1998	Powell	Former president of DMI, Academic and professional	<p>Powell explains six factors that make for good management of design: purpose (strategy), people, presence (culture) these are considered intangible. The other three are tangible and include process, project and practice. He believes that this framework supports managing design but fails to explain how to adapt this framework.</p>	Powell (1998)

This period also witnessed the use of design at a strategic level from authors such as Press and Cooper (2003), which discussed its strategic importance (highlighted in grey).

2.4.5 2000s – current

Table 2.5 illustrates the authors who have discussed that design management has obtained a more strategic role in business since the start of the 21st century.

Table 2.5 Design management 2000s – current

Year	Proponents	Background	Contribution	Reference
2000	Ahire and Dreyfus	Academics, United States.	These authors argued that design management has a positive effect on the improvement of product design and quality process management. However, the result of good design and design investments will not ensure companies are successful. They stressed the need for the right skills and a well-managed process for design to achieve a positive result in business performance. Their study did not focus heavily on the strategic importance of design and was mostly targeted at understanding design management at an operational level.	Ahire and Dreyfus (2000)
2003	Borja De Mozota	Author and contributor to international research networks,	Borja De Mozota created a three level design management model: design as differentiator, design as coordinator and design as transformer. The author investigated only	De Mozota (2003)

		journals and academia, France.	companies that were considered well known for their excellent design products. Those which did not have well-developed design products were not investigated.	
2003	Press and Cooper	Academic, United Kingdom.	The authors discussed the changing role of design and designers in the 21 st century. These changes include customer need to be understood by applying strategies that allow competitiveness and innovation. They explained how designers are creating products and services for customer to meet the changes happening in culture and society. They also discussed how the design experience could influence customer behaviour within their surroundings.	Press and Cooper (2003)
2004	Von Stamm	Founder and Catalyst for Innovation Leadership Forum	Von Stamm addressed the importance of design in business. She believed design is closely related to innovation. However, in businesses there is a lack of understanding about the use of design. She argued for the need to change people's mind-sets for strengthening the relationship between businesses and design communities. The in-house design departments is essential to achieving innovative solutions. However, she failed to discuss	Stamm (2004)

			how to change people’s mind-sets or how to elevate the perception of design.	
2005	DTI Economics Paper on Creativity, Design and Business Performance	Department of Trade and Industry (DTI) Economics	This study illustrated that one of the reasons for project failure is lack of professional management when it comes to design. The report identified the difference between companies that use design as an important function in the company from the ones that use ‘silent design.’ However their study neglected to explain how ‘silent design’ companies can elevate their perception of the strategic value of design in the business.	DTI (2005)
2006	De Mozota	Academic in France. Author and participates in international research networks and journals	De Mozota created a common language between designers and managers in the design value model by using the Balance Score Card (BSC) toolkit. BSC identifies the four powers of design by including design as good business to the previous design management levels: as differentiator, coordinator and transformer. She discussed that the model offers a framework for the development of design leadership and design thinking. The model facilitates gathering together designers and management. However she did not examine	De Mozota (2006)

			companies that do not have a design department	
2007a	Design Council	Design Council, United Kingdom.	Design Council research on eleven leading companies. The results of the studies created the double diamond model, to describe the design process in these companies. Their study focused on design at an operational level and neglected the importance of design at a strategic level.	Design Council, (2007a)
2007	Danish Design Centre (DDC) developed a Design Ladder from 2003 to 2007		This study created a design ladder model to identify the different stages of design in business. However their study did not show how companies can use design at a strategic level in order to improve their outcomes.	DDC in association with the Danish National Agency for Enterprise conducted a survey to measure the economic benefits of design in companies.
2008	Tim Brown	CEO of IDEO design consultant firm	The acceptance of IDEO is a powerful way for 'design thinking' to be applied in businesses. Design thinking started in the 2000s. The author acknowledged the relationship between design and	Cooper et al. (2011)

			strategic management. Design thinking in companies needs to have a culture that encourages design and innovation. Senior management support is vital for implementing such design process.	
2009	Design Management Europe	Study of the design management practices in Europe	This study created the design management staircase model that identified the levels of design management in business in addition to key factors that can help in design outcomes. However, the model does not show how companies can use design at a strategic level in order to improve their outcomes, as with the design ladder model.	Kootstra, (2009)
2009	Thomas Lockwood	President and Founding Partner of Lockwood Resource. Former President of DMI, from 2006 to 2011	Lockwood discussed using design at a strategic level in businesses.	Lockwood (2009)

2009	Verganti	Academic in Italy	Verganti defined design driven innovation outcomes that create meaning for the customer. He created a design driven model that illustrates four design driven innovation outcomes. In addition he involved interpreters in the development of design investment, which goes beyond the involvement of customer and end users. The model does not identify how companies are able to deliver design driven innovative outcomes from an operational and strategic level.	Verganti (2009)
2011	Chang	Chief Design Officer / Deputy Mayor of Seoul Metropolitan Government	They pointed out that companies identified the strategic importance of design and that design has been recognised as a top priority for the business agenda. They discussed the role of designers in many different ways. For instance, in-house designers are having greater opportunities undertaking executive positions and engaging in the decision-making of the corporation that drives to innovative solutions.	Cooper et al. (2011)
	Kim	Academic in Korea		
2012	David Kelley	Founder of the global design firm IDEO.	Kelly argued design thinking is an innovative approach that incorporates human behaviour into creating design. In IDEO the	Rose (2013)

			willingness of people to change and embrace innovation in the culture of the organisation was clearly recognised.	
2013	Lafley and Martin	Former chairman and CEO for P&G And Academic in Canada	The authors discuss how strategy works in the company addressing P&G as a case study. They define strategy and cascade the different choices available when creating a new strategy for the company. However they neglected to discuss the culture of the company that supports the strategy.	Play to win Lafley and Martin (2013)
2013	Lockwood	President and Founding Partner of Lockwood Resource. Former President of DMI, from 2006 to 2011	Lockwood discussed the power of design and innovation for the growth of companies. He is one of the few who discussed design management and innovative culture for businesses. For example he examined British Airways as a company committed to using design at all levels of the organisation (Cooper et al., .2011)	Lockwood (2013)

The main issues of design management during this decade include the strategic importance of design, design thinking, design driven innovation, and design management models for use by businesses. Both academics and practitioners discussed the use of design at a strategic level. However, the majority of design management studies are built on information obtained from practice. More specifically, Kim and Chung (2007) in their meta-review of published articles from the Design Management Journal and the Design Management Review have reported that the majority were from practitioners and less than half were contributed by academics. The studies usually took information obtained from case studies regarding companies, which used design at a strategic level.

To sum up, this brief review of the evolution of design management reveals the history of how the field developed through the years to encompass the strategic value of design in companies. Firstly, design management was discussed in detail (see Section 2.3). Then the design shift from being only a matter of producing aesthetically pleasing outcomes to a process of strategic relevance was introduced (Kim and Chung, 2007; Erichsen and Christensen, 2013). As a result the researcher realised that it is a necessity for organisation to have effective management of design within the organisation (Best, Kootstra, and Murphy, 2010). It facilitates an organisation to innovate and move ahead of their competitors, and satisfy customer needs (Best, Kootstra, and Murphy, 2010). Therefore, when design becomes an important part of the management process within the organisation, it can achieve a great impact on business performance and sustain a market position for the long term (Best, Kootstra, and Murphy, 2010). Moreover empirical studies added a body of knowledge for companies to rethink their business strategy, highlighting issues related to design and innovation. Therefore, the relationship between design, design management and the strategic use of design is strongly related to innovation, which will result in differentiating organisations. Therefore, Saudia Airlines, in order to sustain a market position among their competitors, must understand the relationship between design and innovation. Empirical studies to date have not addressed the perception of the strategic use of design and what their results are in organisations that have used the Silent Design approach. In the following sections the researcher explains the relevance of innovation in this study, but first the term is defined.

2.5 Innovation

Berger (2011) claimed that innovation is an immensely popular buzzword in companies but in reality, people talk about it more than they achieve it. Many business people think that by simply adding a new button to a gadget or changing the production process, they achieve innovation (Rothkopf, 2009). In fact, the BSI (2008, p. 9) stated innovation is a 'successful exploitation of new ideas' while the Dictionary of Economics (Black Hashimzade, and Myles, 2012), where a new or modified product is introduced and it serves as a new or modified method of business. Further, Anthony (2012, p.16) defined it as 'something different that has impact'. This scholar confirmed that if a business does not innovate 'you are sowing the seeds of your own destruction' (Anthony, 2012, p.28). Moreover, it is widely recognised to be key for the good economic performance of

organisations (Best et al., 2010). Companies offering products and services supported with a high level of innovation have noticed greater sales and better financial performance (Gatignon and Xuereb, 1997; Zhou, 2006; Augusto and Coelho, 2009).

2.5.1 The Relationship Between Innovation and Design

Innovation and design are common words used in business today and are clearly connected with business success (Witiger, 2010). In order to achieve innovation, companies apply design and design management for successful innovations and strategic renewal (Martin, 2009). In addition, the literature design and design management studies increasingly acknowledge the wider role design and innovation have on business and economic activity. Evidence from literature such as case studies of companies including P&G, Lego, and Virgin Atlantic Airways, show they achieved innovative outcomes through design (Design Council, 2007a).

Hobday et al. (2011a) argue in innovation studies, design is treated superficially or completely ignored. According to Berger (2011, p.103) 'innovation is not synonymous with design, but is closely aligned with it, at least with regards to the way the two terms are used in today's business world.' Business executives feel more comfortable talking about innovation than design because, as Nussbaum (2007) cited in the *Journal in BusinessWeek*, explains, it appears to be more like a science or an engineering term and is perceived to be more masculine while design is associated with the arts and femininity. Verganti (2009) tried to link design and innovation by using the term 'design-driven innovation'. Furthermore, Verganti (2009) argued that companies that do not innovate through design lose a fundamental opportunity and give competitors the opportunity to progress whilst they are left behind. However, he did not discuss how design management and the strategic value of design within the organisation could be involved in design-driven innovation. On the other hand, in the United States, the former president of the Design Management Institute, Earl Powell, stated, 'As businesses of all kinds deepen their understanding of the role of design in innovation, they will look to design management as a powerful resource for innovation that will effectively differentiate their business and build sustainable competitive advantage' (De Mozota, 2003, p.68). He linked design management as a positive resource with the role of design in innovation, which drives companies to differentiation and builds sustainable competitive advantage.

2.5.2 Importance of Innovation

The importance of innovation continues to increase and is amongst the top strategic priorities in many companies. The latest survey of the Boston Consulting Group (Taylor et al., 2013), see Figure 2.13 below, found that innovation is rapidly moving up the CEO agenda across industries and regions. Twenty-four percent of respondents said innovation was their top priority while fifty-three percent of participants ranked it as a ‘top-three’ strategic priority, this being the highest point it has reached in the history of the BCG survey.

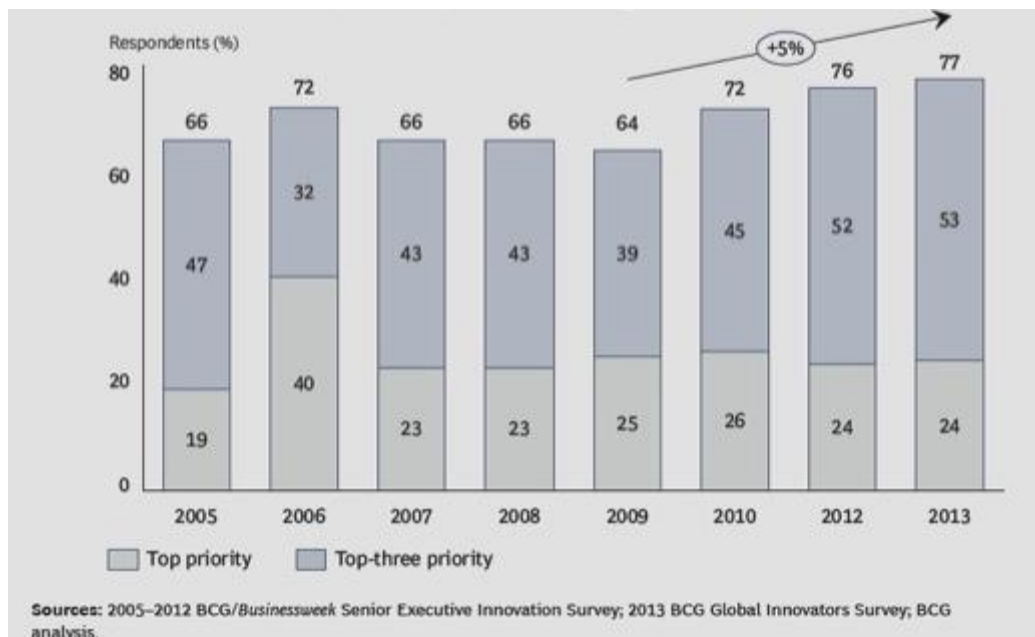


Figure 2.13 The importance of innovation continues to increase. Source: The most innovative companies 2013; 2005-2012 BCG/Businessweek Senior executive Innovation Survey; 2013 BCG Global Innovators Survey; BCG Analysis (BCG, 2013)

The main results for companies who innovate are improvements in revenue, cost efficiency and improvement of quality in their products/services (Franke, 2007). Primarily, innovations that enhance quality are expected to have a positive effect on customer demand.

2.5.3 Need for Innovation

Figure 2.14 illustrates that in businesses there are four main drivers for the need to innovate: changing customers, technology advances, changing business environment and intensified completion (Goffin and Mitchell, 2010).

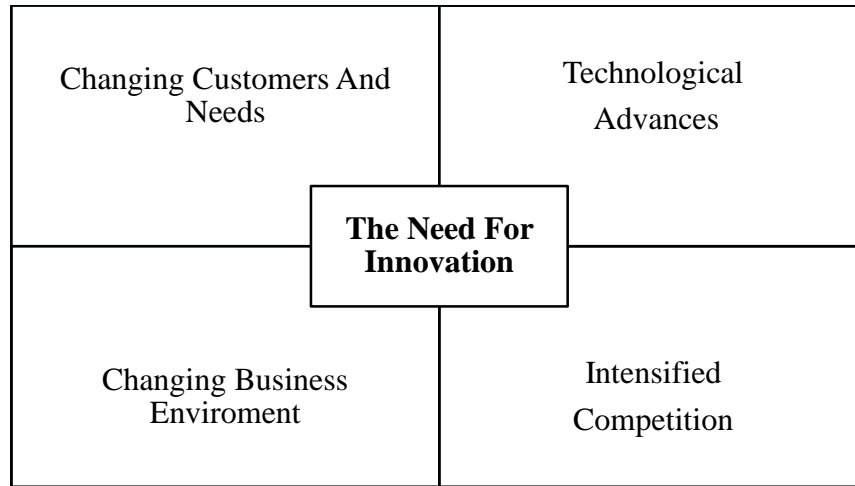


Figure 2.14 Drivers of the need for innovation. Source: Goffin and Mitchell (2010); Sheth and Ram (1987)

- Changing Customers and Needs

The first driver for the need to innovate is related to the changing characteristics and requirements of customers and their needs. Demographics show many markets are changing (Tidd and Bessant, 2011). For example, the significant growth in the average age of the population. The increase in the proportion of older people is likely to change the nature of many Western and South East Asian consumer markets (Vettori, 2010). The Japanese electronics firm Fujitsu have developed a new smartphone designed for elderly users that features a larger keyboard, larger text and a simple interface with a few apps. In general, changing customer typographies mean that traditional market segments are disappearing and new ones are emerging and in order to be successful, companies are prompted to innovate and adjust their products and services accordingly. The presence of the elderly amongst travellers is emerging as a force to be reckoned with. Marowits (2010) reported the demographic shift affecting airlines researchers, which have observed that this class of travellers is influencing airlines' decisions about on board communication and leisure facilities. In addition, the ageing population with their desire for leisure travel is one of the changing drivers for the industry (Marowits, 2010). For instance, these aged passengers demand improved on board communications and signage, better lighting and better-positioned bathrooms (Marowits, 2010).

- Technology Advances

The second driver that makes companies innovate is the availability of technology advances technology. Rothwell (1994) stated 'Being a 'fast innovator' is seen increasingly as an important factor determining a company's competitiveness.' An example of this is the Tata Nano car, made and sold in India. The Nano is the cheapest car in the world today; made possible by advanced technology. In regards to the need for innovation through technological advances in the airline industry, for example, Easy Jet applied an ultra-thin coating on their aeroplanes to reduce cost of fuel. Sumberg (2011) reported that experts said the nano coating technology could cut fuel costs by 2 per cent, which would save the airline around £14 million each year.

- Intensified Competition

The third driver is intensified competition. Companies are not only subject to more new entrants to their own fields, they also face increased competition from sources outside their industry. In order to be successful, innovative companies are creating new products and often, they are moving away from their original markets. For instance, Apple, generally focuses on personal computer market, opened up a new arena for the company by creating the iPod/iTunes product line. This strengthened Apple's position against their competitors' strategies. The new line allowed Apple to make headway in the personal computer sector with considerable success (Esslinger, 2009) this will be further discussed in detail in this chapter (see Section 2.6.3).

In the airline industry, benefiting from its geographical location, the Emirates is among the fastest growing airlines in the world. This allowed Dubai International Airport to attract passengers and they have pursued an aggressive expansion plan for future growth by building a strong network across each of the other GCC countries. The Dubai airport management also provides service innovation programmes to help passengers navigate their way through the airport. This is helpful as it is the second busiest airport for international passenger traffic in the world (IATA, 2013).

- Changing Business Environment

Globalisation is an example of one change to the business environment. Markets have become more open as governments around the world have embraced a market economy.

For example, the North American Free Trade Association and the Europe Union Airline companies have emerged, and regulations affecting specific markets, the airline industry, have been changed during the twentieth century. The deregulation of airlines meant that individual airline companies were able to set prices and decide when to enter and exit the industry, providing they met the criteria regarding health, safety and insurance (Clemes, Gan, Kao, and Choong, 2008).

2.5.4 Types of Innovation

A large body of literature has investigated the types of innovation with different interpretations, which causes confusion (Anthony, 2012) but in an attempt to clarify the situation, some scholars have identified it terms of degree or category of innovation. The two forms of innovation defined in this research are radical and incremental innovation.

- Radical Innovation

With regards to the former, the BSI (2008, p.12) defined radical innovation as a ‘result in large and/or fundamental change in one or two factors; or from smaller changes in several factors that, together, lead to a surprising outcome that breaks the mould or sets a new benchmark.’ Newness is associated with such a change (Baregheh et al., 2009). According to Verganti (2009), radical innovation is considered a ‘long-term competitive advantage’ in comparison to incremental innovation which only refers to meeting a short term profit. In brief, this form applies to products or services that are entirely new to both the marketplace and businesses. Examples are the innovation of the Dyson vacuum cleaner (Ettlie, 2013) and the Wii Nintendo (Verganti, 2009).



Figure 2.15 Dyson Vacuum Cleaner on the left hand side and Wii (Nintendo) on the right hand side.
Source: www.dyson.co.uk and www.ebay.co.uk

Regarding the airline industry, British Airways was the first company that came up with the idea of flat beds seats in both first and business class. They had design managers within the company that collaborated with different departments in the organisation and other external agents to create a 'lounge in the sky' (Rich, 2004, page 32).



Figure 2.16 British Airways flatbed seats. Source: www.iairgroup.com

As mentioned earlier in Section 2.5.3 Easyjet, one of the low cost commercial airlines and possibly one of Europe's largest, was the first to use 'revolutionary nano technology coating' for the exterior paint on their airplanes, which is considered a radical innovation for airline companies. This technology reduces the amount of fuel used by the aircraft the outcomes of which may benefit passengers by the company being able to offer lower fares as well as creating a smaller carbon footprint, which helps the environment (Sumberg, 2011).

- Incremental Innovation

With regards to this form, the BSI (2008, p.9) defines incremental innovation as 'change that involves one or more relatively minor innovations that are predictable extrapolations from the present state.' Verganti (2009) states this does not reflect bringing change to dominant meanings embodied in products for it only refines or reinforces extant models. The fashion industry is a clear example of incremental innovation, as companies change the design of their: patterns, styles and colours frequently without challenging the basic concept of a pair of trousers or a dress (Verganti, 2009). However, incremental innovation is not limited to fashion design. For example, in the automobile since the 1970s cars have remained box shaped, while some other features and colours have changed (Ettlie, 2013) (Figure 2.17).



Figure 2.17 Toyota cars (Lexus, Prius and Scion). Source: www.Toyota.co.uk

This can be described as incremental innovation as it achieves short-term success for the company. Regarding airline companies, the flat bed seats have been modified and improved in first and business class for many years since their initial introduction (see Figure 2.18) based on the original seat design of British Airways, which was the original radical breakthrough in seat design. To conclude, there are degrees of novelty that can be perceived in both radical changes and incremental improvements, which may transform the way consumers perceive and use products and/or services.



Figure 2.18 Emirates, Cathay Pacific and Singapore Airlines respectively. Source: <http://www.smarttravelasia.com/BusinessSeats.htm>

2.5.5 Innovators in the Airline Industry

IATA's Director General and CEO Tony Tyler stated that 'innovation and an aligned value chain will be crucial components toward serving a growing aviation industry' (Boynton, 2012 p.1). It is recognised that the airline industry has a long history of innovation and has produced fundamental changes (Rothkopf, 2009). This author illustrated some of the most important innovations in the past fifty years in the airline industry, in particular, those made by Qantas Airways, Singapore Airlines and Virgin Atlantic Airways, (See Figure 2.20).

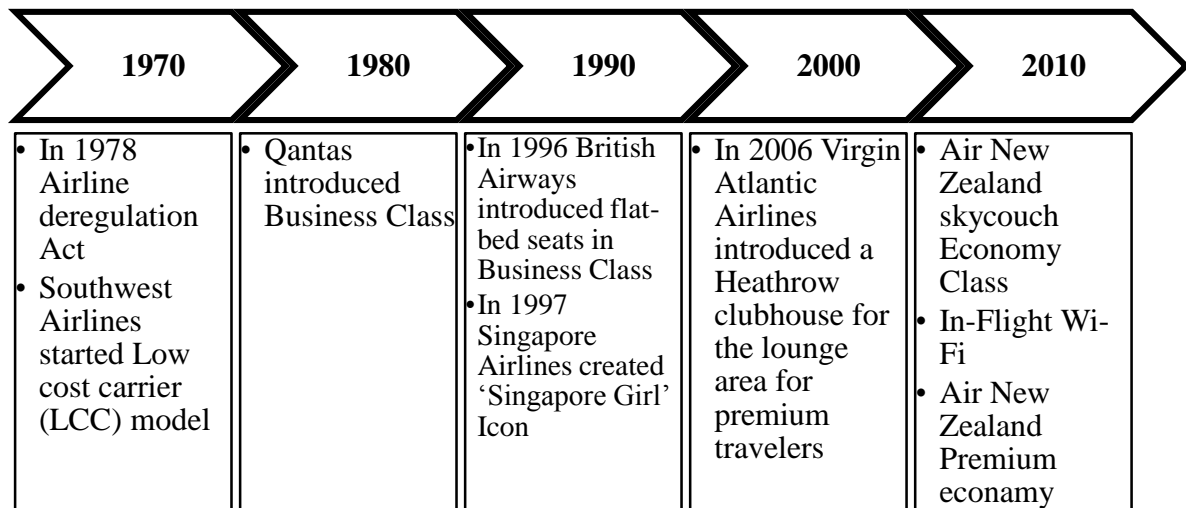


Figure 2.19 Innovators in the airline industry. Source: Rothkopf (2009)

The airlines that make good use of strategic design are considered innovators because they have introduced something novel to the global market (Rothkopf, 2009). For example Figure 2.19 illustrates in 1979, Qantas Airways strong culture of innovation prompted them to add a third class, which was the 'Business Class', to the interior cabin (Rothkopf, 2009). Since then, many other airlines have added a Business Class section. In 1997 Singapore Airlines introduced 'Singapore Girl', an international service icon (Chan, 2000). The airline's strategy was to design a service that differentiated their cabin crew from those of other carriers, offering a gracious service which reflects friendliness and warmth whilst supporting an image of authority and confidence (Wirtz and Heracleous, 2010). For instance, a passenger may wish for a vegetarian meal without having reserved one. Even when the menu has no vegetarian selections, Singapore cabin crew know how to arrange a vegetarian meal from the available food (Wirtz and Heracleous, 2010).

2.6 Organisational Culture

In this section of Chapter 02 the topics that will be covered are; organisational culture, case studies, the structure of prototypes and the initial prototype (Prototype A).

Based on the extensive literature review, the researcher acknowledges that companies identified as successful innovative companies emphasise the strong link between their strategic use of design and an organisational culture that encourages innovation. An organisational culture that encourages innovation within the organisation can allow design to flourish; encourage creativity among staff; promote the appreciation for design and design thinking; encourage design to be valued and used in a broader domain. According to the limited studies on the Silent Design approach, the companies that use this do not

recognise an organisational culture that encourages innovation. Therefore, there is a need to focus on how to elevate the use of design at a strategic level and building an organisational culture that encourages innovation for companies that use the Silent Design approach.

Organisational culture is discussed in detail to identify key dimensions that encourage innovation and the strategic use of design within the organisation. However this is considered a rather young field of research (Dauber, Fink and Yolles, 2012) and in the field of design and design management very few studies have addressed it. Organisational culture has been acknowledged as an important factor in understanding companies in various contexts and it has been discussed with respect to competitive advantage (e.g. Barney, 1986; Cameron and Quinn, 2005; Dauber, Fink and Yolles, 2012) and its influence on the performance of the organisation (e.g. Wilkins and Ouchi, 1983; Gordon and DiTomaso, 1992; Marcoulides and Heck, 1993; Dauber, Fink and Yolles, 2012). Organisational culture is defined in many different ways as theories, models and frameworks. For example, Barney (1986) described organisational culture as a complicated set of beliefs, values, symbols and assumptions that define the way in which a company is managed. Lundy and Cowing (1996) defined it as the way people do things in the company. More specifically, Martin and Terblanche (2003, p.65) defined organisational culture as the ‘deeply seated values and beliefs shared by personnel in an organisation.’ This researcher reviewed theories and empirical studies on organisational culture which identified it as an important factor for sustaining innovation (Dombrowski et al., 2007). It is recognised by authors such as Rao and Weintruab (2013) that senior management in companies often want their companies to become more innovative.

Lockwood (2013) pointed out that there are few managers who can make the connection between design, innovation and organisational culture in an effective manner. This may be put down to the fact that building cultures of innovation is complex. Tellis et al. (2009) studied innovation in 759 companies across 17 major markets and reported that the character of the organisational culture in each was much more important than labour, capital or government influences, with regards to promoting radical innovation.

The literature shows that models can offer a holistic approach in describing organisational culture. For example, Schein’s (1985) is considered the most cited model about

organisational culture. His model distinguishes between the domains of organisational culture in terms of visible (tangible) and invisible (intangible) elements of culture but fails to address innovation. Martin and Terblanche's (2003) model highlights the relationship between organisational culture and innovation. In this study the researcher aims to create a design management conceptual framework (DMCF) to help guide airlines that use the Silent Design approach. Firstly, it is important to highlight the difference between 'framework' and 'model' to avoid confusion.

- Framework: 'a supporting structure around which something can be built' (Cambridge Online Dictionary, 2015).
- Model: 'something that a copy can be based on because it is an extremely good example of its type' (Cambridge Online Dictionary, 2015).

The DMCF guides Silent Design airlines through steps that should elevate their perceived use of design to a strategic level. In addition, the purpose of the DMCF is to identify the perception of the strategic use of design for airlines. This should help to bridge the gap between them and the airlines that do make good use of strategic design. The framework could help to facilitate a culture that encourages innovation through design to build a sustainable competitive advantage for airlines. The researcher formulated the conceptual framework from several iterative prototypes that were based on Martin and Terblanche's (2003) model and Sinek's (2009) model. Next, these two models will be explained and then the initial prototype based on the literature will be presented.

2.6.1 Martin and Terblanche's (2003) Model

Martin and Terblanche's (2003) model addresses the key determinants that encourage innovation in organisational culture. The key determinants are: strategy, structure, support mechanism, innovative behaviour and communication. These are explained in detail below (see Figure 2.20).

DETERMINANTS OF ORGANISATIONAL CULTURE THAT INFLUENCE CREATIVITY AND INNOVATION				
STRATEGY	STRUCTURE	SUPPORT MECHANISMS	BEHAVIOUR THAT ENCOURAGES INNOVATION	COMMUNICATION
<ul style="list-style-type: none"> - Vision and mission - Purposefulness 	<ul style="list-style-type: none"> - Flexibility - Freedom: <ul style="list-style-type: none"> ~ Autonomy ~ Empowerment ~ Decision making - Cooperative teams and group interaction 	<ul style="list-style-type: none"> - Reward and recognition - Availability of resources: <ul style="list-style-type: none"> ~ Time ~ Information technology ~ Creative people 	<ul style="list-style-type: none"> - Mistake handling - Idea generating - Continuous learning culture - Risk taking - Competitiveness - Support for change - Conflict handling 	<ul style="list-style-type: none"> - Open communication

Figure 2.20 Martin and Terblanche's (2003) model. Source: Martin and Terblanche's (2003)

After an extensive research the researcher considered these key determinants the most salient in the literature, which build an organisational culture that encourages innovation within the organisation.

Strategy

There is no one clear definition of the term 'strategy' as it is considered a relatively new field. Porter (1980) describes strategy by carefully selecting different sets of activities that can achieve unique value that gives the organisation competitive advantage over their competitors. Similarly Lafley and Martin (2013, p. 3) define strategy as 'an integrated set of choices that uniquely positions the firm in its industry so as to create sustainable advantage and superior value relative to competition.' Furthermore, strategy differentiates companies from their competitors and prevents anyone else from copying them (Denison et al., 2012). Therefore companies that are considered innovative have a clear sense of direction and purpose that enables them to define their strategies and vision for the future (Denison et al., 2012).

Structure

De Mozota (2003) state that design management changes a hierarchical structure into a flexible and flat structure for successful organisations. These organisations are self-organising multidisciplinary teams, which are responsible for executing projects. She argues they are unlike unsuccessful organisations that have a tight and inflexible structure

directed by the organisation's managing director (De Mozota, 2003). Organisational structure should allow individuals to be able to communicate by contributing their own ideas, participating in decision-making and problem resolution, which allows them to have a positive influence on encouraging innovation (Dombrowski et al., 2007). Therefore a structure that is decentralised, flat and flexible is considered to encourage a culture that supports innovation (Hedberg, 1981; Meyer, 1982; Nonaka, 1994; Zdunczyk and Blenkinsopp, 2007). Within a flat structure information flows more flexibly and freely, facilitating cross-functional teamwork between the different departments (Garvin, 1993; Zdunczyk and Blenkinsopp, 2007).

Support Mechanism

This involves all the support mechanisms in a company that should be present to help operate in an effective way (Zdunczyk and Blenkinsopp, 2007). They argue it could include 'procedures and policies, technology, training schemes and other resources' (Zdunczyk and Blenkinsopp, 2007) In addition Martin and Terblanche (2003) defined the support mechanism as the availability of resources such as time, information technology and people with expertise. Therefore, support mechanisms are all the resources within the organisation that help an organisational culture to promote innovation. For example, recruiting the right people in an organisation is an important part of facilitating a culture that encourages innovation (Martin and Terblanche, 2003) addressed. In addition, the values and beliefs of senior management reflect the type of people that work in the organisation, which also includes people of diverse backgrounds that could lead to generating creative ideas to promote innovation (Bresnahan, 1997; Gardenswartz and Rowe, 1998; Martin and Terblanche, 2003). Martin and Terblanche (2003) state that support mechanisms involves employee reward and recognition. Management should be able to offer methods of reward and recognition that will inspire employees to be more innovative within the organisational culture (Tuchman and O'Reilly, 1997).

Innovative Behaviour

Leading companies have embraced behaviour that encourages innovation. Innovative behaviour is defined as 'behaviour directed towards the initiation and application (within a work role, group or organisation) of new and useful ideas, processes, products or procedures' (Farr and Ford, 1990 cited in de Jong and Den Hartog, 2007, p. 43). Martin

and Terblanche (2003) defined innovative behaviour as values and standards that promote innovation and manifest themselves in certain behavioural processes that can encourage innovation. For example, organisations that accept mistakes and consider it as part of the development of the organisation and reward or celebrate success. In addition several authors mentioned that innovation can be promoted by continuous learning (Arad et al., 1997; Lock and Kirkpatrick, 1995; Samaha, 1996; Martin and Terblanche, 2003). Therefore a learning culture encourages people to interact with one another keeping knowledge and skills up to date to be able to innovate (Martin and Terblanche, 2003). Furthermore, competitiveness is also considered an important matter regarding an organisational culture that promotes innovation. Moreover support change is a value that encourages innovation (Martin and Terblanche, 2003). To conclude innovation behaviour is all the behaviours of employees that can contribute in the innovative process (de Jong and Den Hartog, 2007).

Communication

Communication is the last key determinant reported by Martin and Terblanche (2003) with respect to companies that build innovation in their organisational culture. These companies encourage communication supports trust and transparency while helping to make individuals feel emotionally safe and trust each other. Design managers have an important role within the discourse of the organisation. As mentioned previously design managers act as a bridge between business and design (Best, 2006). Verganti (2009) highlighted that strongly connecting people, ideas, processes within the organisation is key to an innovative culture. Companies that encourage innovative in their organisational culture have the ability to understand how people could give meaning to things (Verganti, 2009). Lockwood (2009) clearly explains how in a design process stakeholders communicate. Concurrent communication takes place between different stakeholders at every and any stage of the design process (see Figure 2.21).

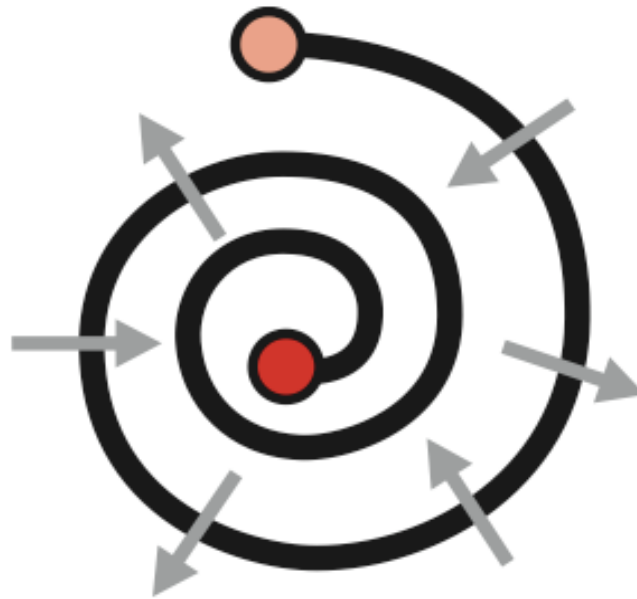


Figure 2.21 Integrated design management process. Source: Lockwood (2009)

The stakeholders continuously interact when needed throughout the design project, allowing more flexibility, continuous improvement, on-going design and collaboration cross-discipline and cross-function. Lockwood (2009, p.32) believes ‘innovation does not really start and stop, but rather needs on going interaction and collaboration.’ Holloway (2002) explained the airlines that encourage innovation and risk-taking in their organisational culture, maintain good relations with the external environment and strive to understand their customers. In the model presented by Martin and Terblanche, (2003) they mention the key determinants of an organisational culture that encourages innovation, the results after it might promote or inhibit innovation. However they did not discuss the strategic use of design within an organisational culture that encourages innovation. Therefore, in the section below the researcher will evaluate the companies that have been highlighted in the literature. These companies addressed the use of design at a strategic level, which encourage differentiating themselves from their competitors. The researcher will evaluate and illustrate these companies as case studies to help in creating the first iteration of the initial prototype of this research.

2.6.2 ‘The Golden Circle’ by Sinek (2009)

The Golden Circle posited by Sinek (2009), consists of three circles: 1) inner circle ‘why’, 2) middle circle ‘how’ and 3) outer circle ‘what’.

Sinek located ‘why’ at the heart of his model to emphasise the importance of this issue (covered later in this study), rather than just focusing on ‘how’ an organisation does things and ‘what’ they have to offer. Sinek’s model is one of the few that addresses senior management’s perceptions and beliefs of why the organisation is doing what it is doing. Moreover, Sinek’s model emphasises senior management’s influence on everyone else in the organisation (Sinek, 2009).

In the previous Section 2.6.1, the researcher pointed out key dimensions in the organisational culture that can help to elevate the perception of the strategic value of design, as adapted from Martin and Terblanche (2003). To reduce the complexity of the five key dimensions explained by Martin and Terblanche’s (2003) model, the researcher merges these dimensions into Sinek’s ‘The Golden Circle’ model to be tailored to service senior management within the airline industry. Furthermore, both models emphasise the purpose of why they do what they do. The following section discusses the three circles in detail (see Figure 2. 22):

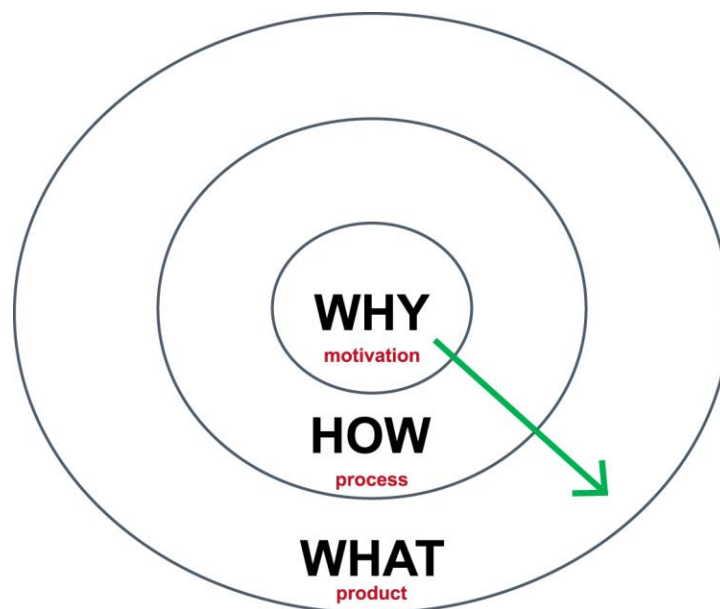


Figure 2.22 The Golden Circle. Source: Sinek (2009)

1) Why is in the heart of the model, which links to the strategic approach of the organisation. It explains the importance of the organisation’s beliefs, visions and values. In addition, it emphasises the organisation’s purpose and reason for ‘why they do what they

do' (Sinek, 2009, p.39). This is related to Martin and Terblanche's (2003) first key dimension 'strategy', which discusses mission, vision and purpose. Martin and Terblanche (2003) located 'strategy' in the first column of their model, which links to the importance of this key dimension.

2) How explains 'how they do what they do'. According to Martin and Terblanche's (2003) model, this addresses the structure, support mechanism, and the behaviour that encourages innovation and communication.

3) What presents the results of products and services offered by the business. For example, the 'what' for Apple is their products and services such as laptops, iPods, iPhones and online services. In Martin and Terblanche's (2003) model the 'what' did not mention the final results of the products and services after facilitating an organisational culture that encourages innovation. They stated that encouraging innovation in an organisational culture might promote or inhibit innovation.

Therefore, the conceptual framework that will be developed in this research addresses senior management's perception of the strategic use of design adopted by the airline industry. In the following section the companies that use design at a strategic level will be illustrated as case studies. The structure of these case studies is divided based on the relationship between Martin and Terblanche's (2003) key determinants and Sinek's three circles. By merging these two models together the case studies for the secondary research are outlined, as these case studies are selected from the airline industry and other industries.

2.6.3 Case Studies

Organisational culture that encourage innovation can be identified as underpinning the success stories of companies such as Virgin Atlantic Airways, Apple, P&G, and Google that will be presented in this section. They achieved market breakthroughs for their products and services. It emerges that they have done something different from other companies. In more detail, they make good use of strategic design and have embedded an organisational culture that encourages innovation. The research explained the case studies according to the two models discussed earlier, therefore, the case studies will merge the two models as follows: 1) why: strategy, 2) how: structure, support mechanism, innovative behaviour and communication, and 3) what. Most of the case studies are from industries

other than the airline industry because only a few airlines appear in relation to this issue in the literature.

2.6.3.1 Why (strategy, mission and vision, and purposefulness)

Example: Virgin Atlantic Airways

It has been recognised that Virgin Atlantic Airways is one of the few airlines in the literature that addressed the strategic value of design and how their organisational culture encourages innovation. According to the Design Council in the United Kingdom, Virgin Atlantic Airways' understanding of design sustained the airline to survive in the highly competitive industry. Virgin Atlantic Airways for instance uses design as a competitive differentiator. The Design Council (2007a), highlighted their strategic value of design led to long-term purpose and direction. Former head of the design department, Ferry (Design Council, 2007a) described senior management of the company as very supportive of design and acknowledging the importance and the strategic value of design that can contribute to their business. He pointed out that both the Chief Operating Officer (COO) and the Chief Executive Officer (CEO) supported the drive to enhancing design investments to be ahead of their competitors (Design Council, 2007a). Air Transport World (ATW) (2005) stated Virgin Atlantic Airway's strategic value of design is known as having an adventurous style and sense of fun, providing a superior product, delivered by enthusiastic staff. Therefore the organisation always tries to achieve their products and services to meet their strategy.

Example: Apple

Design at Apple is king (Edson, 2012). Design is aligned with Apple's business strategy in a way that is highly innovative (Bruce and Bessant, 2002). Therefore, design is integrated within the culture of the company (Edson, 2012). As a result, Apple products have shown a dramatic increase in sales and customer satisfaction. Furthermore, Apple is one of the companies that focuses on their beliefs and purpose, which gives them the ability not to limit themselves as a computer company. Apple has entered and dominated so many industries, which challenges what is the true meaning of being a computer company. They believed in their existence and it is so clear, which made them different from their competitors.

Example: P&G

P&G the senior management clearly address their ‘why,’ which is their purpose in their industry (Lafley and Martin (2013). Lafley and Martin (2013. p.3) stated ‘strategy is an integrated set of choices that uniquely positions the firm in its industry so as to create sustainable advantage and superior value relative to the competition.’ Therefore P&G defined strategy as a clear set of choices that involves managers making effective choices for the company to be able to compete. Between 2000 and 2009 the company noticed major improvements. Figure 2.23 shows key performance measures such as gross margin, free cash flow and capital expenditures.

Other key performance measures	2000	2009
Gross margin	46%	52%
Free cash flow	\$3.5 billion	\$15 billion
Capital expenditures (percentage of sales)	7.6	4.3
Global business services (percentage of sales)	6.5	3.1
R&D (percentage of sales)	4.8	2.5
Marketing (percentage of sales)	14	15

Figure 2.23 Key performance measures for P&G. Source: Lafley and Martin (2013)

2.6.3.2 How (structure, support mechanism, innovative behaviour and communication)

Example: Virgin Atlantic Airways

In this section the researcher addresses ‘how’ the selected organisation strategically use design. In regards to the structure, Ferry (Design Council, 2007a) described Virgin Atlantic Airways as a ‘very flat structure.’ He describes the term ‘flat structure’ in the sense of having a flexible relationship within the company between senior managers and employees. The company has done an exceptional job of creating an environment where employees feel that design is acceptable and it is crucial to innovate. Furthermore, in regards to support mechanisms, Virgin Atlantic Airways provides an in-house design team, which offers a wide variety of mixed design disciplines to develop design touch points, such as the interior design for lounges and cabin interiors, graphic design for signage and logos, product design for cabin seats and fashion design for uniforms. Virgin Atlantic Airways also invested heavily in their design touch points in the customer journey. The airline’s

support of design and designers promoted them to use methods that can improve their design process such as the double diamond model mentioned previously in this chapter (see Section 2.1.1.2).

Virgin Atlantic Airways used the double diamond to improve their customer experience. Virgin Atlantic design team re-defined the services offered in the premium class long-haul travel experience (Green, 2012). The airline identified the customers' need to reduce stress and difficulty when getting to and leaving airports (Green, 2012). This was according to the first stage (discover) of the double diamond model the airline focused on researching customers' needs by doing customer research. The investigation of the detailed process of the customer journey addressing the design touch points starting from the pre-flight to the on board until post-flight, broke down the entire customer experience without omitting any point (see Figure 2.24).



Figure 2.24 Premium class development of the customer experience journey at Virgin Atlantic. Source: <http://www.mycustomer.com>

The results of asking customers about their personal experiences, in terms of describing their emotions are listed in the top section. Below, in the second part, the responses to the probes about what else they may desire during their journey are given as solutions (Green, 2012). This design thinking process shows how Virgin Atlantic used design as a strategic tool to solve problems facing the customer to create new ways that differentiate them from their competitors.

Example: Apple

Apple is one of the few companies in the literature that shows how they have supported an innovative behaviour that encourages risk taking, competitiveness, idea generating and

support for change, which allowed them to enter new markets of different industries (Esslinger, 2009; Sinek, 2009). For example, while the company was focused upon defending their success in the personal computer market, Apple's former CEO Steve Jobs opened up a new arena for the business creating the iPod/iTune product line, followed by the iPhone. This strengthened Apple's position against their competitors' strategies. As the new products were driven by variants of the same operating system, competitors were unable to compete on Apple's new playing field they did not own the right software or were unable to adapt their product line to the new uses. The new product lines allowed Apple to make headway in the personal computer sector with dynamic success (Esslinger, 2009). Furthermore, people with expertise is something important that Apple focuses on and they have a reputation for hiring the best, most talented people in their disciplines. For example, Apple embraced the term 'Think different' and put it on ads, banners and T-shirts employees wore inside the headquarters of Apple. It was their own vision of a pirate flag to remind employees of Apple's mission 'to zig while others zag' (Berger, 2011, p 166).

In addition, employees at Apple were expected to embrace a number of tactics, for example, learning to work within constraints of time, budgets and materials, taking risks, questioning everything and valuing ideas. This supports the mechanisms of organisations like Apple that encourage innovation. Furthermore, Apple's senior management value and reward creative thinking and experimentation, and this priority has led the company to be an industry leader (Esslinger, 2009).

Example: Google

Google does not have traditional offices; their offices were designed to encourage communication within the organisation. The company has created work surroundings designed to facilitate the production of innovative insights. For example, offices and cafeterias are designed to encourage interactions between employees both within and across teams. Additionally, Google employees have access to recreational facilities including workout rooms, football, video games, musical instruments and similar. Google also offers massage, onsite dental care and a physician two days a week. Employees also enjoy free meals from breakfast to dinner. The working environment of Google has been described as similar to that of a university where there is less division between the working environment and home life, and where students play, live and work together to encourage innovation and creativity within the organisation (Jones, McCormick, and Dewing, 2012).



Figure 2.25 Google's headquarters. Source: Google

Google depends on recruiting leading-edge talents (Sullivan, 2007). Like Apple, they recruit the brightest and best employees in order to create a culture for innovation (Moccia, 2013). They create an organisation in which employees share common goals and visions for the company. They also ensure the diversity of employees reflects the global audience they serve (Sullivan, 2007). Google has over 70 offices in more than 40 countries worldwide (Gillett, 2015).

Furthermore, in relation to support mechanisms 'time' is considered a key dimension in the encouragement of innovation at Google. Google's method for creating an innovative culture has been shaped by the '70/20/10' formula model (Skarzynski and Gibson, 2008). This model was developed from ideas originally put forward by Lombardo and Eichinger (1996), and suggests that best results in a number of fields come from splitting time in a ratio of 70 to 20 to 10 per cent. Therefore employees allocate 70% of their time to the company's main business work; 20% of their time is on new strategic projects (e.g. google book search, google earth, google apps and google checkout) and the last 10% is for their 'pet projects' related to employees' own area of interest.

Martin and Terblanche (2003) addressed behaviour that encourages innovation as including risk taking. For example, Google's former CEO Eric Schmidt (Berger, 2011, p.177) stated 'in a recession if you tighten up too much, you eliminate future innovation and then you set yourself up for a really bad outcome five or ten years from now.' Google in late 2008, while the financial markets were in trouble, continued to experiment and invest (Berger, 2011). Therefore risk taking was considered one of Google's strengths within the organisation. In addition to behaviour that encourages innovation there is support for change and continuous learning (Martin and Terblanche, 2003). In the case of Google, it creates products and service worldwide and evolves and grow as people engage with them. Google is considered highly adaptable to changing conditions around them. Moreover Google is designed so that it never stops learning. It is always learning from the

people that interact with it and continually branching out into new areas of expertise by devouring additional knowledge bases.

2.6.3.3 What (customer experience, outcomes and tangible and intangible touch points)

Martin and Terblanche's (2003) model did not focus on what were the results of these companies that encouraged a culture of innovative in regards to products and services offered to customers. In Sinek's (2009) model he mentioned 'what,' which addresses what companies offer. This was the outer circle of his model.

Example: Virgin Atlantic Airways

In 2006 the executive lounge was considered one of the first designed with the concept of improving the customer experience. The lounge offered an atmosphere for enjoyment, whether the customers wanted to relax, work, play or dine, and provides all the different amenities they might need for a pleasant journey (Virgin Atlantic, 2015).



Figure 2.26 Virgin Atlantic Airways' Executive Lounge. Source: www.virginatlantic.com

Example: Apple

Apple's products are an example of good design. Apple has shown a dramatic increase in sales as design is aligned with 'Apple's corporate strategy in a highly innovative way' (Bruce and Bessant, 2002, p.1). Edson (2012, p.13) states that at 'Apple design is king' because Apple uses the full-court design approach (design outcome, design process and design strategy) to create successful products and services.



Figure 2.27 Apple's products (Laptop, iPad, and iPhone) and services (Apple store). Source: www.Apple.com

In summary this section is the final section of the literature review before the structure of prototypes is explained and the initial prototype of this study is presented (see Section 2.4). This researcher recognised the relationship between companies that use design at a strategic level and the need to have an organisation culture that encourages innovation within the organisation. This was highlighted by the case studies that were based on Sinek's and Martin and Terblanche (2003) models.

2.7 Structure of Prototypes

As mentioned earlier, the researcher based the structure of the prototypes on the models of Martin and Terblanche (2003) and Sinek (2009) that were merged and divided as follows: 1) why: strategy, 2) how: structure, support mechanism, innovative behaviour and communication, and 3) what. In this section Prototype A will be formulated based on the secondary research. The researcher's extensive literature review covered a variety of topics that included: design, Silent Design, design management, innovation and organisational culture research. The researcher based the structure of the initial prototype on Martin and Terblanche's (2003) and Sinek's (2009) models because the combination of both models depicts the strategic direction and outcomes at the operational level. The combined model encompasses all key dimensions (why: strategy, how: structure, support mechanism and what: outcomes). In the case of Martin and Terblanche's (2003) model key dimensions were adapted for the initial prototype (see Section 2.6.1). Moreover, Sinek's model was suitable in two ways: 1) firstly, the structure of the model was appropriate for Prototype A, which will then help in formulating the DMCF (see Chapter 07). The researcher chose Sinek's model because it is clear and simply designed, which allows the researcher to adapt the key determinants in Martin and Terblanche's (2003) model in the initial prototype; 2) secondly, Sinek's model consists of three circles that relate to the key dimensions of Martin and Terblanche's model and the case studies were divided accordingly (see Section 2.6.1, 2.6.2 and 2.6.3).

According to the findings of this research the final iteration for Prototype A was divided into two halves. The top half illustrates the companies that make good use of design and which use design at a strategic level. The bottom half shows those companies that use the Silent Design approach and which use design at an operational level (See Figure 2.28).

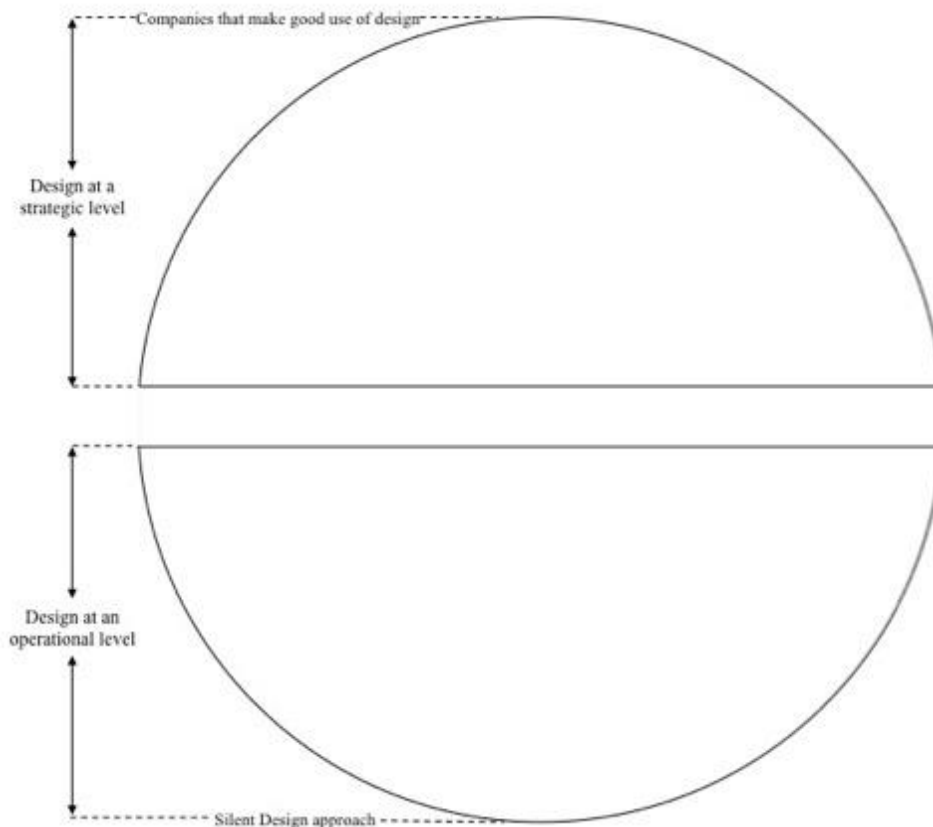


Figure 2.28 Design of Prototypes A. Source: Researcher

2.7.1 Prototype A

Figure 2.30 illustrates Prototype A, which is the final iteration of several iterative prototype developments for this initial prototype throughout this research. The main aim for Prototype A is to help in the formulation of the DMCF, which will be explained in Chapter 07.

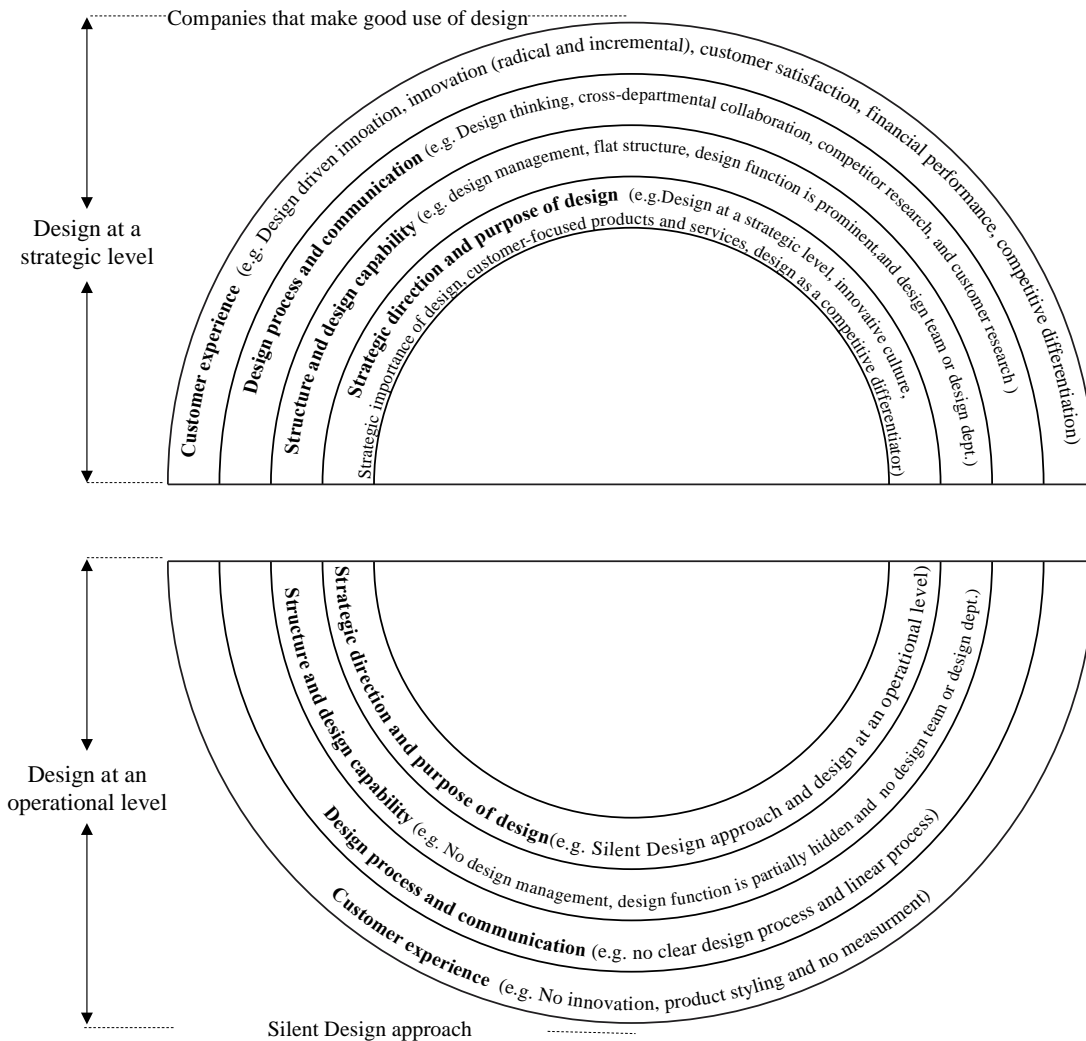


Figure 2.29 The initial prototype (Prototype A) from the literature review. Source: Researcher

Why: the inner circle looks at the strategic direction and purpose of design. At the top half of the inner circle, the topics covered are the strategic use of design, innovative culture, the importance of the strategic use of design, customer-focused products and services, and design as a competitive advantage. At the bottom half of the inner circle, the topics covered are design at an operational level and the Silent Design approach.

How: the next circle addresses the ‘structure and design capabilities’, and ‘design process and collaboration’. Therefore, at the top half of the next circle the strategic level addresses topics such as design management, flat structure, design function is prominent, and design team or design department within the organisation. In regards to ‘design process and collaboration’ the topics that were addressed include: design thinking, cross-departmental collaboration, competitor research and customer research. ‘Structure and design capabilities’, at the bottom half of the next circle, where most organisations at an operational level in the literature are included: no design management, design function is partially hidden, and no design team or design department within the organisation. In

regards to 'design process and collaboration' the topics that were addressed included no clear design process and linear process.

What: Customer experience addresses the outer circle of Prototype A. At the top half of the circle is design at a strategic level, and the topics covered are design-driven innovation, innovation, customer satisfaction, increase in financial performance and competitive advantage. At the bottom half of the circle are design at an operational level and customer experience topics such as no innovation, product styling and aesthetically pleasing outcomes.

Summary

To sum up, in this chapter the researcher covered several topics from the literature. Prototype A is a result of analysing and synthesising the literature review to achieve objective one for this research: 'To investigate well-established and emerging theories regarding design management, strategic value of design and innovation in the business context, especially in the airline industry.' All the main issues of Prototype A will be addressed and linked with the other prototypes of this study. Prototype A will help in the process of building the DMCF, which is the main aim of this research. The initial prototype will be presented in further detail in chapter 07.

3. Research Methods

In this chapter all the primary research methods used to collect, evaluate, and analyse the data in this research are explained and justified. The methods employed to formulate and validate the conceptual framework are described and analysed in detail in Chapters 04, 05, and 06. The primary research aim is to address objectives from 2 to 6 (see Figure 3.1). The process employed to select the appropriate primary research methods comprised four steps. Firstly, objectives 2 to 6 were analysed and secondly, their key issues were defined. Thirdly, a primary research method was selected for every key issue according to the stakeholders involved. Finally, all the research was planned and executed.

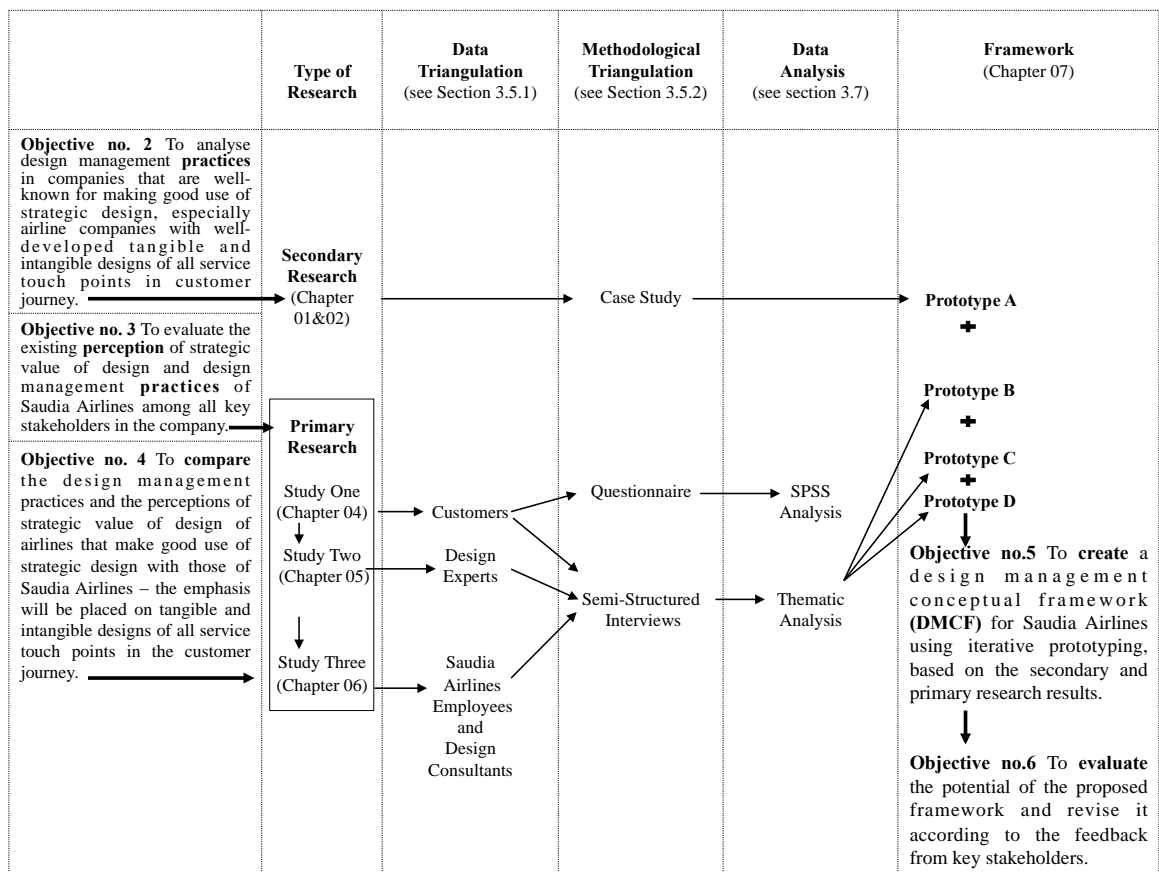


Figure 3.1 The key issues addressed in objectives 2 to 6. Source: Researcher

3.1. Summary of Research Problems

The ultimate goal of this research is to help airline companies 1) understand the strategic value of design and 2) manage design at the strategic level more effectively in order to improve customer experiences and create competitive advantages on a long term basis. According to a comprehensive literature review (see Chapter 01 and 02), the key problems can be summarised as:

- There is a lack of research investigating the perception of the strategic value of design among airline companies. This research focuses on the strategic value of design in two of the most important aspects of the airline business, which is to continually enhance passengers' travelling experiences and differentiating themselves.
- It was observed that some airlines may not fully understand the strategic value of design. Hence, there is a need to find out how this perception can be improved in order to encourage airline companies to use design at the strategic level more effectively.
- There is a lack of study exploring of how design could enhance the innovation capabilities of airline companies on a long term basis. In order to convince airline companies to adopt strategic design management, there is a need to demonstrate how design could contribute towards innovation capability building.
- There is a lack of an academic framework that could help 1) enhance the perception of the strategic value of design among commercial airlines and 2) demonstrate how design could be used as a means to build innovation capabilities in the long term.

To address these problems, it is necessary to investigate three main subject areas (design, design management and innovation) and their interrelationships in the context of the airline industry. In Chapter 02, the literatures in these three areas and relevant subjects were thoroughly reviewed in order to formulate an initial framework, which would guide the primary research design (see Section 2.7). In this study, Design mainly covers definitions of design, design strategy, design in business and the strategic value of design. Silent Design – the approach, which is employed by companies that do not have design experts to implement and manage design – is also investigated. In the companies using the Silent Design approach, employees from other disciplines (e.g. marketing) plan, manage, and implement both tangible and intangible designs. In this study, Design Management mainly focuses on definitions of design management and strategy and the evolution of design management. In this current research Innovation mainly covers different types of

innovation, and the relationship between design and innovation. It also focuses on design-driven innovation and innovative culture. The airline industry is perceived as an integral core that connects all three of the above topics (see Figure 3.2).

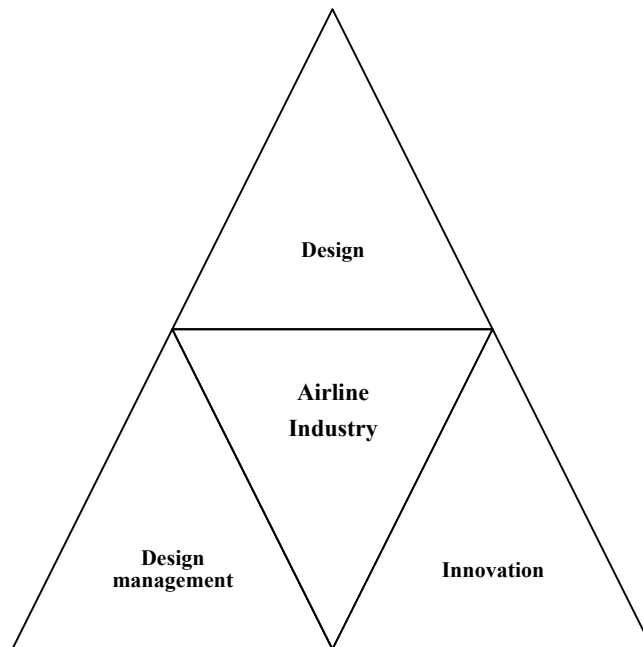


Figure 3.2: The key subject areas in the research. Source: Researcher

3.2. Research Objectives and Questions

3.2.1. Research Objectives

This study has three research objectives, as shown below:

- **RO1 – To investigate the current perception of the strategic value of design among key stakeholders in airline companies.** This study focused on international airline companies mainly in the gulf region and concentrated on how design can be used to enhance passenger experiences throughout the whole customer journey, as mentioned in Chapter 01.
- **RO2 – To compare the design management practices and the perceptions of the strategic value of design** between airlines that make good use of strategic design and those adopting the Silent Design approach in order to identify major differences and suitable means of closing the gap in terms of practice and perception. In this case, an airline, Saudia Airlines, was chosen as an example of a Silent Designer approach.
- **RO3 – To refine a design management conceptual framework** based on the initial framework derived from the literature review. This framework aims to enhance the perception of the strategic value of design of airlines currently using the Silent Design

and help them use design to build innovation capabilities in a long term.

3.2.2 Research Questions (RQs)

In order to fulfil the three objectives, three research questions were created as follows:

RQ1 – What is the perceived strategic value of design in relation to customer experiences from all key stakeholders' points of view?

RQ1.1. Perceived value from the customers' perspectives: How do tangible and intangible designs for all customer touch points affect the level of user satisfaction and overall customer experience?

RQ1.2. Perceived value from the companies' perspectives: How could tangible and intangible designs contribute towards a company's strategic goals/objectives?

RQ2 – What are the main differences in terms of design management practices and perceptions of the strategic value of design between airlines that make good use of strategic design and those adopting the Silent Design approach?

RQ2.1. What do airlines that make good use of strategic design perceive design to be and how do they perceive its strategic value?

RQ2.2 What do airlines that employ the Silent Design approach perceive design to be and what is its strategic value?

RQ2.3. How do airlines that make good use of strategic design actually manage design?

RQ2.4. How do airlines that employ Silent Design actually manage design?

RQ3 – How could the perception of design be improved in order to help an airline company make a better use of strategic design management as well as use design to build innovation capabilities in a long term?

RQ3.1 What are the enabling factors (e.g. people's mindset and organisational cultures) that help those airline people who make good use of strategic design recognise its strategic values and allow design disciplines to flourish?

RQ3.2 How might airlines employing the Silent Design approach be able to embrace these enabling factors and/or overcome their current barriers preventing design from flourishing at the strategic level?

3.3 Research Design and Conceptual Framework

This research study is divided into three studies, which correspond to the three groups of key stakeholders:

Study One: Customers/passengers that have travelled with Saudia Airlines and other commercial airlines.

Study Two: Design experts for the airline companies that make good use of strategic design.

Study Three: Design experts that adopt the Silent Design approach, such as Saudia Airlines' employees and design consultants. The term design experts refers to employees in the airline companies who manage design and take design decisions for all design touch points of the customer journey.

- Study One aims to find out how design affects customers' experiences and their level of satisfaction (RQ1.1.- see Chapter 04).
- Study Two aims to address key questions from the perspectives of design experts for the airline companies that make good use of strategic design (RQ1.2, RQ2.1, RQ2.3, and RQ3.1- see Chapter 05 and 07)
- Study Three is designed to address the key questions regarding the Silent Design using companies' perspectives (RQ1.2, RQ2.2, RQ2.4, and RQ3.2 - see Chapters 06 and 07).

3.4 Research Methodology

Methodology is a term referring to the overall approach of the research process including data collection, data analysis and synthesis of the principal findings (Collis and Hussey, 2009). Research can be conducted via multiple approaches, and several methods can be employed. However, the selection of the most suitable approach and methods is a critical matter, as it affects the reliability of results. Therefore, three main research approaches are examined in order to identify the most appropriate for carrying out the primary research and creating a design management conceptual framework aimed at helping Silent Design users in the airline industry adopt strategic design management practice. Castellan (2010 cited in Krathwohl, 1998) describes quantitative and qualitative research approaches as the two sides of the inquiry continuum. In the following subsections (3.4.1 – 3.4.3) the nature of each approach is discussed order to ascertain their relevance to this research.

3.4.1 Quantitative Approach

A quantitative research method seeks to confirm universal cause-and-effect relationships between variables. These approaches typically use deductive reasoning, which moves from a general theory to a more specific hypothesis, with the initial premise/s guiding the development of the final hypothesis. Such approaches concentrate mostly on the statistical significance of the results, which are generated from empirical tests (Creswell, 2014). Rubin and Rubin (1995) argue that a common disadvantage of quantitative approaches is that they normally reduce complex information to summary measures, often disregarding the detail and richness of individual behaviour, avoiding subjectivity and producing results, which may be too generalised. Such approaches are associated with the survey/questionnaire method of research (David and Sutton, 2011).

3.4.2 Qualitative Approach

Qualitative research approaches aim to reveal patterns and meanings by looking carefully at people's words, actions and recollections, and regarding them as important human artefacts. The techniques involved typically use inductive reasoning, where the explanation is extrapolated from the data. This is usually performed through close observation and analysis of the research topic, moving to broader generalisations and theories (Alhojailan, 2012). Qualitative approaches are commonly used for examining complicated phenomena. Therefore, most phenomena or concepts that have been not investigated before and require in-depth exploration are investigated through use of this approach (Johnson and Onwuegbuzie, 2007). According to Creswell (2014), a qualitative approach is often used for exploratory research, where researchers employ this when they do not know the important variables to investigate. In contrast to quantitative research, the qualitative approach provides rich insights into human behaviour and functions, as its purpose is primarily to derive meanings from, and to develop cognition of, a phenomenon rather than quantifying or measuring. It is associated with several research methods, in particular, interviews, respondent observation and documentary analysis (David and Sutton, 2011).

3.4.3 Mixed Methods Approach

The mixed methods approach involves the collection or analysis of both qualitative and/or quantitative data in a single study in which the data are collected sequentially or concurrently, and are assigned a priority. Such an approach involves the integration of the

data at one or more stages in the process of the research (Creswell and Clark, 2008). The mixed methods approach is one in which a researcher usually makes claims related to pragmatic goals, for instance, in relation to problem-centred, pluralistic and/or consequence-oriented research (Creswell and Clark, 2011). Mixed methods involve combining the research tools for both quantitative and qualitative approaches to address a research question (Collins, 2010). Quantitative data are usually closed-ended, for example, in survey questionnaires, where respondents are restricted to answering questions that allow a narrow range of responses for example, from ‘completely satisfied’ to ‘completely dissatisfied’, while qualitative data elicits more open-ended responses, such as those likely to be generated in semi-structured interviews. It is recognised that quantitative and qualitative approaches have limitations in some respects, such as problems of generalisation and difficulties of replication. The mixed method approach has been selected as the most appropriate strategy for this study because of its emphasis on capturing multiple perspectives, standpoints and positions regarding a research problem. The mixed method approach employed for this research was specifically tailored to meet the requirements of investigation.

3.4.3.1 Types of Mixed Methods Designs

A mixed methods approach depends on four criteria, as follows (Creswell and Clark, 2008):

1. Implementation of data collection: this refers to the sequence the researcher uses to collect the data. The choices for implementation of data collection consist of conducting both qualitative and quantitative data in different phases (sequentially) or conducting it together at the same time (concurrently). In addition, the order of either qualitative or quantitative methods calls for a clear justification regarding the reasons for gathering both forms of data in the first place and understand the significance of the interrelationship between the qualitative and quantitative stages in data collection according to the research’s primary purpose.
2. Priority: this refers to the emphasis, which is given to either qualitative or quantitative research as it occurs during the data collection process. Furthermore, this criteria would give the two methods equal emphasis or one method outweighing the other depending on the research. In most cases this decision might depend on the researcher’s comfort level as one approach opposes the other. The researcher needs to give the appropriate weight

or/and attention to qualitative or quantitative method throughout all the stages of their research.

3. Stage of integration: this refers to the researcher mixing the qualitative and quantitative data. That is, the data from both methods are integrated at various phases in the research, such as during the data collection, data analysis, and/or interpretation.

4. Theoretical perspective: this refers to the researcher's personal stances according to the topic she/he is studying. This stance reflects personal history, gender culture and experience. The theoretical perspective criteria guides the researcher towards shaping the complete design of a research endeavor.

After discussing the four criteria (implementation, priority, integration and theoretical perspective) it is helpful to outline the six major designs that a researcher could use, which are adopted from Creswell (2009). These authors divide these into three sequential designs, which are considered basic mixed methods (see Figure 3.3) and three concurrent designs, which are considered advanced mixed methods (see Figure 3.4). The three sequential designs are as follows: (1) sequential explanatory design, (2) sequential exploratory design, and (3) sequential transformative design.

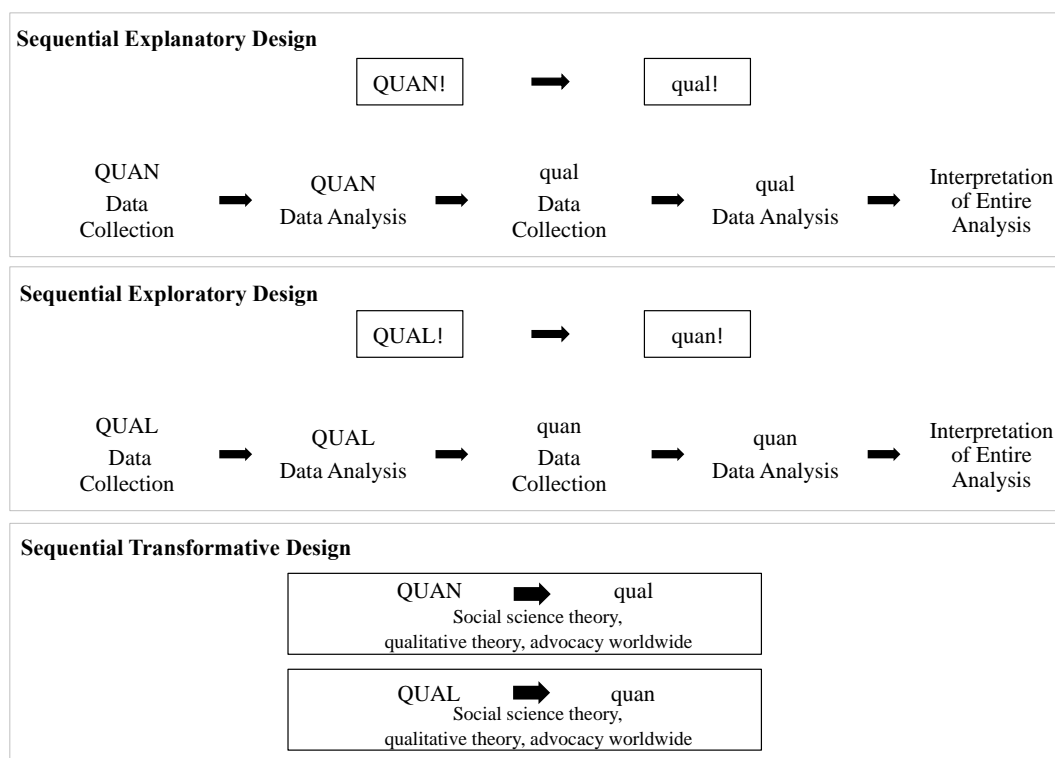


Figure 3.3: Sequential designs. Source: Creswell (2009, p.209)

The three concurrent designs are: (4) concurrent triangulation strategy, (5) concurrent embedded design, (6) concurrent transformative design.

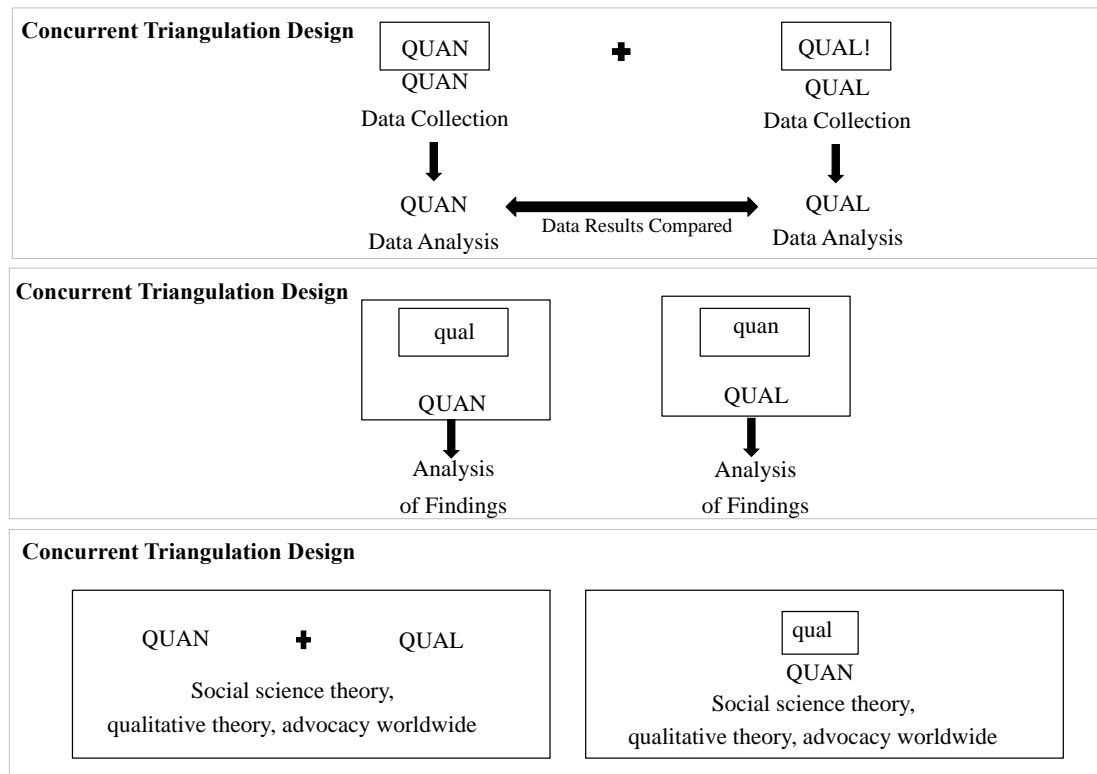


Figure 3.4 Concurrent designs. Source: Creswell (2009, p.210)

The extant literature confirms that combining a variety of data provides a better and more complete understanding of a research problem than using a quantitative or qualitative approach alone (Creswell, 2014). Therefore, the research methods need to be chosen carefully in order to fulfil research questions and objectives. With this in mind, the primary research for this study was a multiphase mixed methods design that included three phases of primary research.

The primary research can be described as having a concurrent triangulation design mixed method approach; this approach was the most relevant method to adapt for this research. The quantitative and qualitative data collection and analysis were treated as having equal importance. For this, the researcher collected quantitative data, analysed the results and used these outcomes to form the basis of the second phase (Creswell, 2014). The second

phase involved qualitative data collection informed by the results of the preceding phase. The results were compared afterwards. More specifically, the group of participants was purposefully chosen and the type of questions that were asked were shaped by these results. The aim of carrying out this design was to have the qualitative section outcomes support the results of the quantitative data by providing more detail (Creswell, 2014). The following discusses the selected methods for all three studies.

3.5 Selection of an Appropriate Research Methodology

In this study a concurrent triangulation design multiphase mixed methods approach was employed, in which the researcher combined both quantitative and qualitative data to gain an in-depth understanding of the key research problem, as adapted from Creswell and Clark (2008) (see Figure 3.4). An appropriate combination of research methods was designed in order to achieve all the study objectives and address the research questions.

The mixed methods approach in this study also contributes towards the triangulation of the research. The use of both qualitative and quantitative methods is considered to be complementary as it helps enhance the comprehensiveness of the research outcomes (Jick, 1979). Qualitative and quantitative methods address the same problems and research questions; methodological strengths of both methods can be enhanced while their inherent weaknesses are cancelled out. Thus, triangulation helps to produce more robust findings. In the 1970s Denzin distinguished four different types of triangulation: 1) data triangulation, 2) theory triangulation, 3) investigator triangulation and 4) methodological triangulation (Flick, 2014). In this study the researcher employs two types of triangulation, namely, data and methodological triangulation.

3.5.1 Data Triangulation

The data triangulation requires data to be collected from various groups of stakeholders to minimise bias (Flick, 2014). In this research, the researcher selected three main groups of stakeholders that were involved in the customer journey. These are, first, customers that have experienced the customer journey with Saudia Airlines and other airlines. Second, the design experts that were involved in the development of customer journey, for international airlines that are considered to make good use of design. The third are Saudia Airlines employees and design consultants. These are the internal stakeholders who are involved in the design developments of the customer journey for the focal airline in this

study. Figure 3.5 demonstrates data triangulation that consists of the three main groups of stakeholders and their interrelationship.

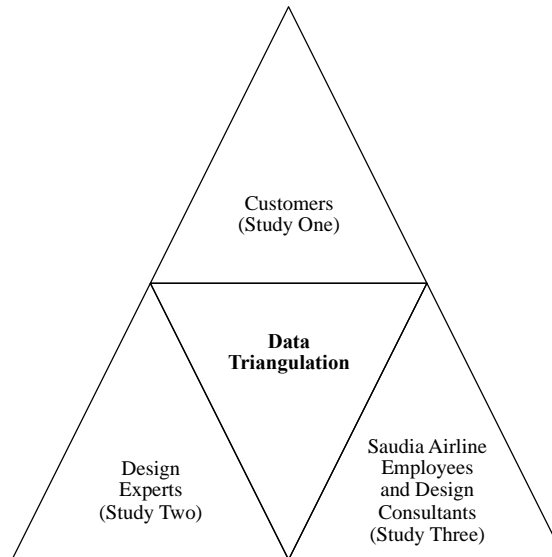


Figure 3.5 Data triangulation comprising three main groups of stakeholders. Source: Researcher

3.5.1.1 Study One - Customers

At the initial phase of this research an online survey of passenger who travelled with the company using the Silent Design approach (Saudia Airlines) was conducted. It was mandatory for the participant to have had a customer experience with Saudia Airlines so as to provide an early indication of Saudia Airline's market position from the perspective of the customers. In order to measure their level of satisfaction and perceived experience with Saudia Airlines, analysis and findings of the online survey identified the appropriateness of proceeding further with the investigation of Saudia Airlines. Next passengers who frequently flew with Saudia Airlines and other airlines were interviewed to evaluate their level of satisfaction regarding their experiences. The interviews included evaluation of the design touch points of the customer journey of airline companies that have been recognised in the literature for having good use of strategic design and Saudia Airlines, a company using the Silent Design approach (see Chapter 04).

3.5.1.2 Study Two - Design Experts

This involved interviews with the design experts of airline companies which were mentioned by the literature and by frequent flyers in the customer interviews in study one. These design experts (e.g. designers, design managers of leading airlines, design strategists working with airline companies) worked in airlines which were competitors of Saudia Airlines (see Chapter 05).

3.5.1.3 Study Three - Saudia Airlines Employees and Design Consultants

This focussed on the Saudia Airlines employees and design consultants. In detail, these participants were involved in the development of tangible and intangible design touch points in the customer journey (see Chapter 06).

3.5.2 Methodological Triangulation

Flick (2014) explains that methodological triangulation refers to the combination of different methods in order to reduce potential biases. For example, case studies, surveys, and semi-structured interviews may be employed. The methodological triangulation for this research is illustrated in Figure 3.6 below.

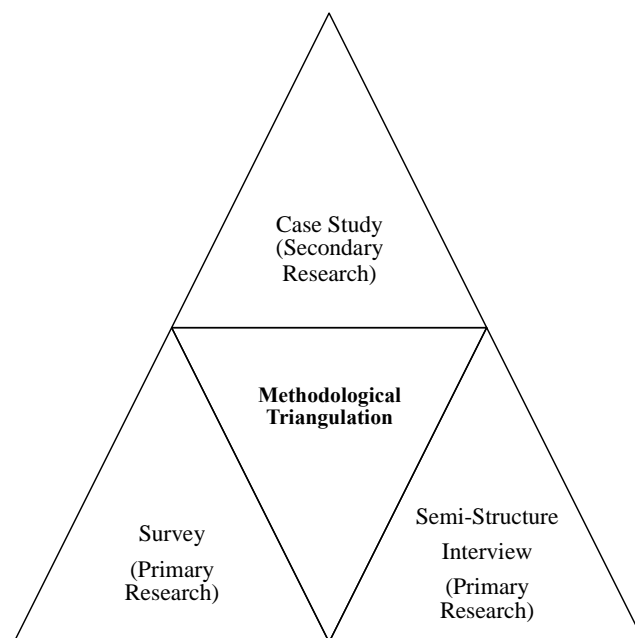


Figure 3.6 Methodological triangulation drawing on the research methods used in this research.
Source: Researcher

The objective of employing this form of triangulation is to achieve rigorous results regarding design experts' and Saudia Airlines employees' narratives, as well as the outcomes of the customer surveys. Rigorous findings could not be assured through

utilising just one of these methods alone. Using the methodological triangulation approach can enhance the possibility of obtaining fully illustrative results for it leads to an increase in the scope, consistency and depth in the methodological process, and allows for the production of findings with solid foundations (Flick, 2014). However, the potential downside of using triangulation is that data generated through different methods can be difficult to merge. Therefore, it is important to plan carefully what outcome is expected from using the triangulation, and then use it at those phases where the researcher could potentially discover solid findings (ibid). The outcomes of all the studies are merged together to corroborate the research findings by following the pathway outlined below in Figure 3.7.

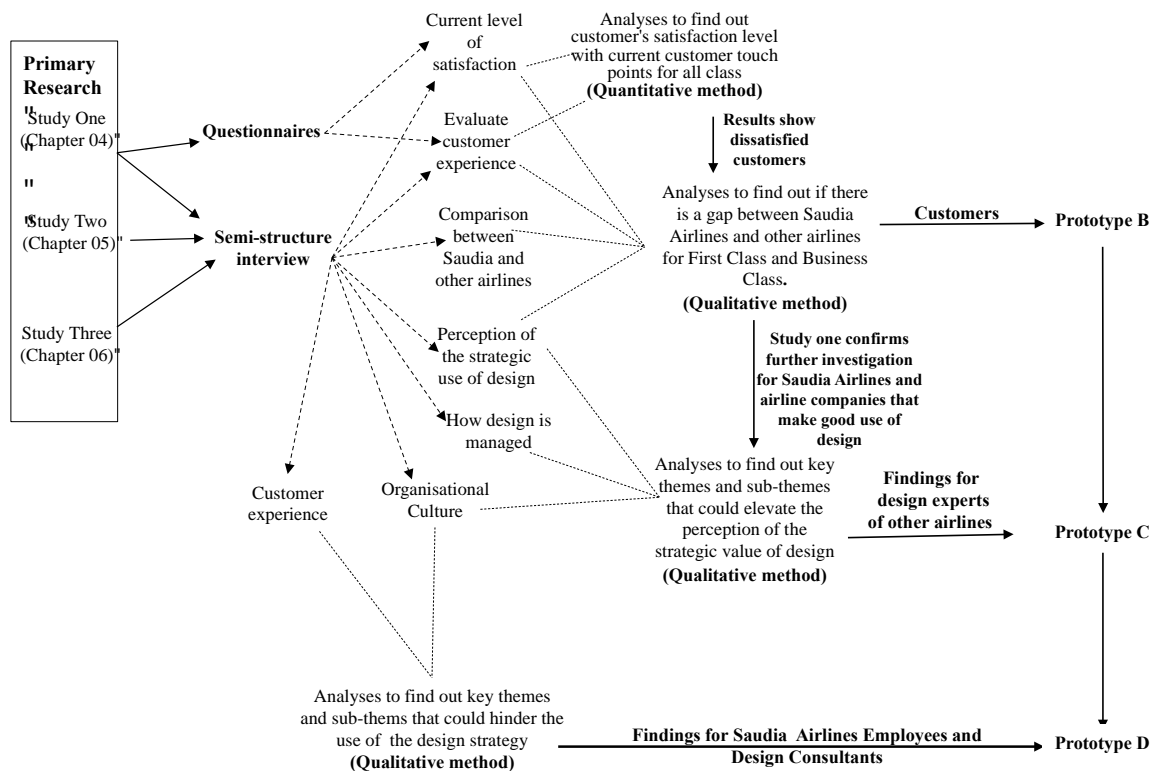


Figure 3.7 Diagram demonstrating structure of the primary research. Source: Researcher

The aim of RQ3 is to refine a DMCF. The refinement of the framework requires this researcher to evaluate and analyse the secondary research and each phase of the primary research to create prototypes at each stage, which builds an iterative prototype phenomenon (see Figure 3.7). Furthermore, the initial prototype outlined in the literature

analysis and synthesis is revised and evaluated by drawing together the three complementary studies, i.e. the online-survey and interviews with customers, the interviews with the design experts and finally, the interviews with Saudia Airlines employees and design consultants. The initial prototype (Prototype A) in Chapter 02 was developed based on the secondary research (see Section 2.7.1). The other prototypes (Prototype B, C, and D) were created based on the primary research studies that are presented in Chapters 04, 05 and 06 (see Figures 5.1 and 6.1).

3.6 Research Methods

The primary research employs one quantitative and two qualitative methodological techniques (see Figure 3.7). The one used for the quantitative approach was the online survey to measure the level of satisfaction and experiences of passengers that travelled with Saudia Airlines. The advantage of this was the speed and ability to collect a reasonable number of participants' responses that could reflect on their experiences in a short period of time. The reason for carrying out the survey was to examine the level of satisfaction and confirm the appropriateness of the selected airline as the focus of the research. The results of the online survey justified the need for the further investigation of the chosen airline company, Saudia Airlines.

Subsequently, the qualitative stage was then applied after the statistical analysis of the quantitative data. The qualitative technique that was used for the primary research was the semi-structured interviews collected from the three stakeholders (customers, design experts and Saudia Airline employees and design consultants) mentioned earlier (see Figure 3.5) and which will be explained in detail in this chapter.

3.6.1 Study One - Customers

Study one investigated the customers which were the first stakeholders identified in the data triangulation approach (see Figure 3.5). For this, two types of research methods, as presented in methodological triangulation approach (see Figure 3.6), were deployed; first, an online survey to measure the level of customers' satisfaction and overall experiences. Second, for the qualitative investigation, semi-structured interviews were carried out with customers who had frequently flown with Saudia Airlines and other airlines. This was carried out to evaluate the current perception of Saudia Airlines' strategic value of design from the customers' perspective and to understand how this airline company perceived design. That is, whether or not they focussed on the Silent Design approach in the development of their design projects regarding the customer journey. Currently, there is a lack of research about Saudia Airlines' perceived perception of the strategic value of

design. Moreover, a very limited amount of research was discovered regarding Saudia Airline concerning the level of customer satisfaction for tangible and intangible designs in the service touch points in the customer journey they offer. In sum, the online survey was geared toward gaining an understanding and evaluating the current level of satisfaction and overall experience of customers that travelled with Saudia Airlines. As mentioned earlier, the results of the online survey served to confirm the appropriateness of the research and whether or not it was worthwhile carrying on with the investigation of the chosen airline company, Saudia Airlines.

This investigation in study one for the survey and interview covers the customer journey, which is divided into three stages: 1) pre-flight, 2) onboard, and 3) post-flight as mentioned earlier in Chapter 02 (see Section 2.2.1.1). These three stages have been divided according to the literature surveys of airlines and airline industry trade bodies (Green, 2012; Skytrax, 2015; IATA, 2015). Figure 3.8 highlights the three stages of customer journey with the different tangible and intangible customer touch points that will be focused on in this research.

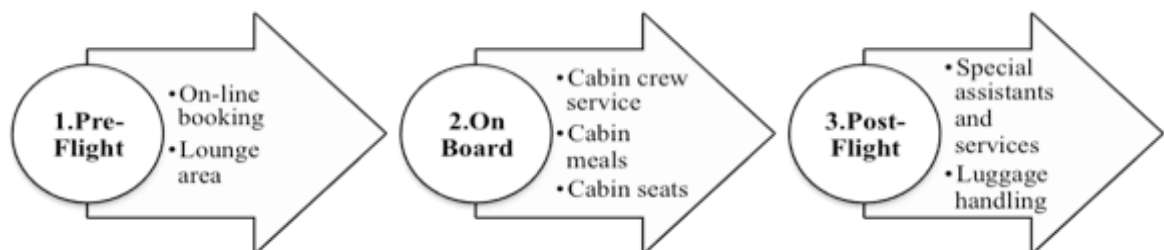


Figure 3.8 Customer touch points in the journey that are considered in this research. Source: Researcher

3.6.1.1 The Customer Online Survey

The questionnaire for the survey was adapted from the trade bodies of the airline industry such as IATA and Skytrax, which had previously investigated customers' experience and level of satisfaction. Three stages and all design touch points pertaining to the customer journey were adapted from literature (e.g. IATA and Skytrax), and adapted for investigation in this research. An online survey was selected as the most appropriate form because it is inexpensive and relatively quick to design and distribute. This survey was accessed by participants through a link sent to them in an email and created using the survey software 'Smart Survey' (Smartsurvey, 2015). The online survey offers a number of advantages and disadvantages as shown in Table 3.1.

Table 3.1 Advantages and disadvantages of an online survey Source: Sue and Ritter (2012)

Advantages	Disadvantages
<i>Speed:</i> Survey can be deployed to a large number of people at one time.	<i>Availability of sample frame:</i> If the researcher does not have an email list for the population he/she aim to survey. It can be hard to access the sample frame.
<i>Economy:</i> this type of survey was economical because the online survey software and email service was free.	<i>Unsolicited emails (e.g. spam or junk mail):</i> The online survey can be dumped as spam or junk mail, which can prevent participants seeing the survey.
<i>Convenience:</i> online survey was convenient and flexible gave the researcher the opportunity to create the questionnaire and distribute the survey as required by a survey link.	<i>Too many emails</i> requesting help with surveys may result in respondents not answering the survey.
<i>Simplicity:</i> the online survey software was user-friendly, which included step-by-step instructions and tutorials to help create the survey. In addition the survey provided a wide range of templates for the researcher to choose from for the design of the survey.	

For this investigation, the online survey was employed to address research question RQ.1.1 regarding the perceived value from customers' perspectives: 'How do tangible and intangible designs in all customer touch points affect the level of customer satisfaction and overall customer experience?' This was specifically regarding a company (Saudia Airlines) applying the Silent Design approach see Chapter 02 (see Section 2.2). The questionnaire-based survey was a cross-sectional study of passengers who had travelled with the company. Customer journey surveys from airline industry trade bodies were used to construct the questions for the questionnaire (Green, 2012; Skytrax, 2015; IATA, 2015). For example, 'IATA' and 'Skytrax' surveys were thoroughly reviewed because all the

questions were related to tangible and intangible design in all customer touch points. Skytrax International worldwide survey guided the researcher in 1) focussing on the areas/topics covered in the questionnaire, 2) shaping the question/probes regarding touch points in the customer journey and customer satisfaction measurements, and 3) selecting appropriate and well-established statistical tests to run on collected survey data, which was the SPSS software in this research.

After the first draft of the survey was completed, survey piloting was carried out to ensure the accuracy of the questions before distributing them to a large number of respondents (Appendix A1). The criteria for the selection of the participants was firstly, their traveling experience with Saudia Airlines and secondly, they had to speak and read English, because the survey was designed in this language. According to these criteria, fifteen participants were selected and the pilot questionnaire emailed to them. After participants completed the pilot survey, the researcher then divided the fifteen participants into two groups for the purpose of holding focus group sessions that were scheduled to last one hour. The two groups discussed the pros and cons of the survey in order to develop it. The feedback was collected and subsequently used for the development of the survey questionnaire. The focus groups took place in London, United Kingdom because this location afforded accessibility and was convenient for the researcher and selected participants.

The outcomes of the piloting regarding the structure and the design of the questionnaire survey were recorded as follows:

- Demographic questions needed to be re-located at the end of the survey. The feedback suggested that respondents are usually very receptive at the beginning of the survey but begin to lose interest toward the end. Thus, placing questions that require thoughtful consideration at the beginning and those that are relatively easy in the last section could increase the rate of completion.
- Originally, the survey was written in English. However, respondents advised that the Arabic version should be added since the targeted audiences (travellers frequently flying with airlines from the gulf region) mostly spoke Arabic as their first language.
- The structure of the questions was considered comprehensible and straightforward. However, it was observed that the format of the survey needed to be clearer (e.g. font type, size and text spacing).
- The length of survey was considered reasonable by all respondents.

The final version of the survey took all the recommendations from the pilot into consideration. It was designed with an estimated completion time of around twenty minutes. As mentioned above, the ‘Smart-Survey’ (Smartsurvey, 2013) was selected as a suitable web-based survey platform because it offered the most flexibility in terms selecting the type of question, structure, colours and font styles. In addition, it was considered to be one of the most user-friendly platforms as it was easy to alter the questions and design of survey where needed. In this questionnaire almost all of the questions were in multiple-choice form, measured by a Likert scale (rated from 1 to 5) to enhance ease of completion (see Appendix A2).

The online questionnaire was organised into two parts:

Part one was designed to gauge the current state of passengers’ experiences and satisfaction levels with Saudia Airlines by focusing on the three stages of the passenger journey:

- **Pre-flight:** Design touch points that passengers encounter during the pre-flight stage (e.g. on-line booking and lounge area) for all three classes of travellers.
- **In-flight:** Design touch points that passengers encounter whilst on board the aircraft: (e.g. cabin crew services, cabin meals, and cabin seats) for all three classes of travellers.
- **Post-flight:** All touch points that passengers encounter upon their arrival at their destination (e.g. special assistance services and handling luggage) for all three classes of travellers.

Part two was designed to evaluate how tangible and intangible design affects respondents’ overall satisfaction levels. In addition, part two includes demographic data and personal information (e.g. class of travel, star ranking and nationality).

Sampling Strategy used for distributing the Customer Survey

One type of sampling was used to distribute the online survey: snowballing. O’Leary (2010, p.170) describes snowball sampling as gaining a ‘sample through referrals’. It involves respondents cooperating by recommending the survey to others, allowing them to participate and thus building up the sample. However, the disadvantage of the snowball sampling is that there is a chance that participants’ referrals are among people who shared the same characteristics which might end with all of them being from one network and sharing similar experiences (Seale, 2012). Therefore, the researcher, to gain richness in the findings, tried to find multiple starting points to make sure respondents reflected different networks. For example, some of the networks the researcher distributed the survey to were

employees in the Royal Embassy of Saudi Arabia, Saudi Culture Bureau, Saudi travel agency and Saudi students living in the United Kingdom. Most participants were self-selected therefore a large number of participants took part in the full survey in a very short time. Access to the survey was available online for approximately two months and availability was ended as soon as the researcher was aware that the responses had reached over 900. As a result, the researcher received a total of 938 responses.

3.6.1.2 Saudia Airline Customer Interviews

An interview is a conversation held with someone so as to obtain certain information. This might be information regarding beliefs, facts, opinions, ideas or a combination of these (Thomas, 2013). The format of interviews can be divided into three main types. For structured interviews, the researcher asks a set of questions that are relatively straightforward and beyond answering the set of questions, there is hardly any scope for further discussion. By contrast, unstructured interviews are like a discussion, for there is no predetermined format and the interviewee is usually allowed to set the outline of the conversation around the topic of interest. The third type is the semi-structured interview, which can be considered to be a combination of the above forms and one of the commonly preferred types, because it is considered the most straightforward choice (Thomas, 2013). The questions were open-ended in order to gain as much information as possible from the interviewees. For this style of interview, the researcher provides a structured list of topics to be covered but also allows flexibility, in this the interviewee can discuss the focal topics. Hence, the semi-structured form was deemed appropriate for interviewing all the three stakeholder groups (customers, design experts and Saudia Airlines employees) in this research because of the freedom and flexibility it gives the respondents and the researcher. As the questions are not required to follow a set order they can be asked so that they address what the interviewer wants intends to cover, as appropriate (Thomas, 2013).

In study one after completing the online survey, the researcher analysed the data to use the results as an early indication of Saudia Airline's market position from the perspective of the customers. Next the qualitative phase took place with the researcher carrying out the semi-structured interviews with customers. The customer interviews helped to gain an in-depth understanding about customers' views as they form one of the key stakeholder groups identified from the previous section (see Figure 3.5). The semi-structured interviews were carried out with frequent flyers in order to 1) gain a better understanding of how tangible and intangible designs affect customers' experiences, and, 2) find out

customers satisfaction level regarding the tangible and intangible customer touch points between other airline companies that make good use of design and Saudia Airlines.

The researcher selected Business Class and First Class frequent flyers for customer interviews because they were found to be more critical and more demanding than passengers in Economy Class. These travellers are considered keen on experiencing and exploring the airline and its design touch points in the journey. Those travelling in Economy Class might just buy the tickets because of the low prices regardless of the experience they might encounter.

The Nature of the Interview Questions

The interview questions were employed with all participants in order to ensure consistency within the findings. The interview questions can be divided into two parts:

- **Warm-up questions:** Respondents were asked to give a brief introduction about themselves including their frequency of flying and a list of all the airlines they had travelled with.
- **Comparison between Saudia Airlines and other Airlines:**

The interview questions were based on the survey questions that covered all three stages in a customer journey: 1) pre-flight, 2) onboard, and 3) post-flight as mentioned earlier in Section 3.6.1 in this Chapter and in Chapter 02 (see Section 2.1.1.1). The set of questions for the semi-structured interviews asked respondents to 1) explain their journeys starting from the pre-flight stage up until the post-flight stage and 2) compare the design touch points that they experienced when flying with other airlines and those encountered with Saudia Airlines (see Appendix A3). That is, they were asked to make a comparison between those airlines that make good use of design, which created a meaningful and memorable experience in the customer journey and those that did not. In addition, the outcomes of the online survey that measured customers' satisfaction levels and experiences were analysed.

Sampling Strategy for the Customer Interviewing

The data collection procedure involved purposefully selected individuals. As explained by Creswell (2009), qualitative research can be based on purposefully choosing respondents that will best help the researcher understand the research problem and questions. Therefore 'purposeful' sampling was used for the semi-structured interviews with all the stakeholders (customers, design experts and Saudia Airlines employees and its design consultants). In other words, this refers to the selection of respondents according to certain

purposes/criteria established for the study (O’Leary, 2010). In study one for the customer interviewing these were as follows: 1) respondents had to travel frequently on several different airlines per year, which allowed participants to have a good understanding and experience of more than one airline, 2) passengers had to be First Class or Business Class travellers and 3) it was mandatory that they had travelled several times with Saudia Airlines and had a clear insight of flying with the company so they could compare their experience of Saudia Airlines with the other airline companies’ offer.

Most of the respondents were contacts in the Saudi community living or frequently visiting London. As a consequence, the nationalities of the respondents were mostly Saudi and the researcher encountered difficulties in finding non-Saudi participants who had experienced travelling with Saudia Airlines. As this particular carrier is not a common international commercial airline, most non-Saudis who were approached by the researcher had never heard of the airline or had decided not to travel with it because of the highly competitive market, with there being a wide selection of carriers to choose from.

Profiles of the Customer Interviewees

Table 3.2 shows the profiles of the interviewed customers, including: 1) frequent flyers’ occupation, 2) Reason to travel with Saudia Airlines, 3) frequency of flights (per year) and 4) Airlines that the interviewees had experiences with.

Table 3.2 Profiles of the customer interviewees

	Frequent Flyers occupation	Reason to travel with Saudia Airlines	Frequency of flights (per year)	Airlines that the interviewees had experiences with
P1.	Aramco Employee	Leisure	7 to 8 times	Saudia Airlines, British Airways, Emirate Airlines, Qatar Airways and Etihad Airways
P2.	Businessman	Leisure and business	4 to 5 times	Saudia Airlines, Gulf Air, British Airways, Emirate Airlines, Turkish Airlines and Kuwait Airways
P3.	Business woman- Retail store owner	Leisure and treatment	6 to 7 times	Saudia Airlines, Lufthansa, Singapore Airlines, British Airways, Emirates, KLM Airlines and Virgin Atlantic Airlines
P4.	Business	Business	6 to 7 times	Saudia Airlines, British Airways,

	woman- Pharmaceutica l company			Emirate Airlines, Qatar Airways, Etihad Airways, KLM Airlines and Singapore Airlines
P5.	Housewife	Leisure and business	4 to 5 times	Saudia Airlines, Singapore Airlines, Malaysia Airlines, British Airways, Emirate Airlines, Delta, EgyptAir
P6.	Former STC consultant	Business	Over ten times	Saudia Airlines, British Airways, Emirate Airlines, Qatar Airways, Etihad Airways, Air France, KLM Airlines, Gulf Air, Kuwaiti Airways
P7.	TV presenter & writer	Business	4 to 5 times	Saudia Airlines, British Airways, Lufthansa, EasyJet Emirate Airlines, Etihad Airways,

Interview Process

The frequent flyers were easily contacted directly by their emails, which the researcher had previously obtained because they were either her friends or family members and also fulfilled the sampling criteria mentioned earlier. The researcher began the recruitment for these interviews by sending emails to the respondents' personal email addresses explaining the aims and objectives of the in-depth semi-structured interview and confirmed that the information disclosed would be used for academic purposes only. All respondents who were approached agreed to participate. All respondents who expressed a willingness to participate were located in different countries, such as Saudi Arabia, the Emirates and the United Kingdom. This geographical spread necessitated carrying out the interviews by two different means: 1) a face-to-face interview and 2) an online interview conducted via Skype. All the interviews lasted around thirty minutes. The respondents were informed that the conversations would be recorded, transcribed and prepared for thematic analysis. The findings from these were revised, evaluated and detailed in order to create the next prototype (Prototype B) and iteratively improve the initial prototype that was presented at the end of Chapter 02 from the literature review (see Figure 2.30). The explanation of how the researcher did the revising/ improving of the iterative prototype process will be explained in this chapter (see Section 3.8). Then in Chapter 07 the complete iterative prototype process will be presented in detail (see Section 7.1).

3.6.2 Study Two - Design Experts

In addition, to answer the research questions the researcher required access to experts knowledgeable in the field of design within the airline industry to answer the questions. Study two investigated the views of design experts, which was the second stakeholder group to be examined. The design experts of airline companies were selected based on the recommendations of the passengers from study one. These customers emphasised their positive, meaningful and memorable customer experiences with several airlines which listed in the literature as some of the top airlines: for example, British Airways, Emirates Airline, Singapore Airlines, Qatar Airways and Etihad Airways (Airline Trends, 2011; Airline Trends 2012). Therefore, the researcher conducted interviews with design experts of these airline companies. These design experts i.e. designers, design managers of leading airlines, and design strategists worked in airlines which were highly competitive in the airline industry, including GCC carriers such as the Emirate Airlines, Qatar Airways and Etihad Airways that were mentioned in the passengers interviews, in terms that were more favourable than those used to describe Saudia Airlines. The main reason for interviewing these design experts was because they were involved in the design developments of tangible and intangible design touch points in the customer journey for these airlines. The qualitative research element of study two was semi-structure interviewing which allowed the researcher to gain an in-depth understanding about the current perceptions of design experts regarding the strategic value of design in these airline companies. The semi-structured interviews were deemed an appropriate tool because they give freedom for participants to elaborate within a structure that helps cover all the main issues of this research (see Section 3.6.1.2).

Structure of Interview Question Schedule

The set of semi-structured interview questions used for the design experts was chosen in order to help cover the research problem and questions (RQ 1.2, RQ 2.1 and RQ2.3) (see Appendix A4). The questions can be divided into four groups:

- **Warm-up questions:** All the interviewees were asked to describe their backgrounds and expertise in the context of the airline industry.
- **The role and position of design in a company:** All the interviewees were questioned about the roles and position of design in their companies.
- **The perception of the strategic use of design and current design management practices:** All the interviewees were questioned about their perception of the strategic use of design, and how design was perceived, planned, managed and implemented in

their companies.

- **Enabling factors that allow design to flourish in a company:** All interviewees were asked about the factors enabling design to flourish in their companies.

Sampling Strategy of the Design Experts

Purposive sampling was used for the design experts because the participants were chosen on the basis of having an important relation to the research matter (Seale, 2012). This means the selection of respondents is according to certain purposes/criteria (O’Leary, 2010) as mentioned earlier. The criterion in this case was that all respondents represented the second key stakeholder group, i.e. the design experts, which were involved in the development of design touch points of the customer journey of airlines most were chosen from study one (customer research).

As a result, for the design experts, the criteria were as follows: 1) the design experts of the chosen airlines investigated in study two were based on passengers’ recommendations from study one (see Chapter 04, Section 4.1); 2) design experts were selected according to the airlines that offered the most memorable and meaningful customer experiences for participants in study one (see Chapter 04, Section 4.2). To sum up, design experts were chosen according to these two criteria mentioned in the above section that were based on participants in the customer interviews, which highlighted their favourable airlines, based on their satisfaction and positive memorable experiences with airline companies such as British Airways, Emirates Airlines, Etihad Airways and Qatar Airways. In addition, in Chapter 02 in the literature review those airlines that make good use of design such as KLM Royal Dutch Airlines and Virgin Atlantic Airways were also selected.

All the participating design experts were registered on the social network LinkedIn website. This website helped the researcher find design experts who were registered under the airline companies that were selected to be investigated as mentioned in the above section. Most design experts described their design practice and experience in the design development of products and services in the customer journey of the airline company within the LinkedIn website. The design experts were selected because of their experience in design and design background, which helped them understand design developments that involve the customer journey. There was diversity in the nationalities of the design experts who came from different countries such as (United Kingdom, Qatar, and the Netherlands). Their nationalities matched the airline companies in which they worked. In addition, some were of different nationality in the case Etihad Airways the interviewee was a Lebanese

designer and Virgin Atlantic Airways the interviewee was an American. Initially there were supposed to be eight participants, however two participants from the Emirates Airlines and Singapore Airlines refused to participate because they were not allowed to disclose information regarding their company.

Profiles of the Design Experts

Table 3.3 lists the profile of the six recruited design experts from airlines such as British Airways, Etihad Airways, KLM and Virgin Atlantic Airlines, which make good use of design at a strategic level. Most of these design experts held a management position and reported directly to senior management. Table 3.3 includes: 1) airlines, 2) job title, 3) role of design experts, and 4) years of experience.

Table 3.3 Profiles of design expert interviewees

	Airlines	Job title	Role of design experts	Years of experience
DE1.	British Airways	Former design manager	Managed design, used design as a tool to solve problems for different design projects with the design team, and collaborated with senior management and different departments within the organisation.	12 years
DE2.	Etihad Airways	Present manager of guest experience	Managed design and worked on design projects with the collaboration of design consultancies and different departments within the organisation.	2 years at Etihad, worked several years in the airline industry.
DE3.	KLM Airline	Present senior designer	Managed design and worked mainly on onboard design projects.	4 years
DE4.	Qatar Airways	Present senior officer customer	Worked with customers and customer research to develop	5 years at Qatar,

		care	design projects.	worked several years in the airline industry.
DE5.	Virgin Atlantic Airways	Former design manager and former head of design department	Worked on several innovative projects, managed and assigned design managers to manage design projects. Collaborated with senior management and different departments.	14 years
DE6.	Engine /Virgin Atlantic Airways	Present Senior Designer	Managed a design project with Virgin airways, customer research and collaborated with design department.	The information was not disclosed

Interview Process

Prior to the interviews, the respondents received emails explaining the aims and objectives of the semi-structured interviews and which confirmed that the information disclosed would be used for academic purposes only. All participants were contacted through the social network website LinkedIn and then they provided their emails, so they could receive the full details of the interview process (e.g. mode of communication and interview questions). One of the issues that had to be clarified with design experts by email was the mode of communication, because respondents were located in different countries: Netherlands, United Arab Emirates and United Kingdom. Thus, it was necessary to carry out both face-to-face or telephone interviews. The interviews lasted around thirty minutes. The respondents were informed that the conversations would be recorded, transcribed and were assured that all information disclosed would be used for academic purposes only. Subsequently, the results of design experts' interviews were used to analyse the raw data, which was revised, evaluated and detailed so as to create Prototype C that went through several iterative prototypes presented at the end of Chapter 5 (see Figure 5.1). This

prototype will help in the process of formulating the DMCF that will be explained in detail in Chapter 07.

3.6.3 Study Three - Saudia Airlines Employees

Study three was the final part of the primary research of this study and assists in unearthing the current position of Saudia Airlines. This airline company has adopted the Silent Design approach that was explained in Chapter 02 (see Section 2.2). Study three investigated how the organisation's members perceive design, its strategic value and examined how they managed the development of design touch points in the customer journey. Saudia Airlines has the Silent Design approach, which is being evaluated and is the focus of the research questions.

Structure of Interview Question Schedule

A similar set of interview questions that were used with design experts were used with Saudia Airline employees and design consultants in order to ensure consistency of the findings (see Appendix A5). The questions can be divided into four groups:

- **Warm-up questions:** All the interviewees were asked to describe their backgrounds and expertise in the context of the airline industry.
- **Roles and responsibilities:** All the interviewees were questioned about their roles and responsibilities in relation to design touch point developments.
- **The perception of the strategic use of design and current design management practices:** All the interviewees were questioned about the current perception of the strategic use of design, and how design was perceived, planned, managed and implemented in Saudia Airlines.
- **Enabling factors that allow design to flourish in a company:** All interviewees were asked about the factors that could enhance the perception of design value.

Sampling Strategy for the Saudia Airlines Employees

Saudia Airlines employees and design consultants were also selected by adopting a purposive sampling strategy because under this, the participants are chosen on the basis of having an important relation to the research matter (Seale, 2012). This means the selection of respondents is according to certain purposes/criteria (O'Leary, 2010) as mentioned earlier. The criterion in this case was that all respondents represented the third key stakeholder group, the Saudia Airlines employees and design consultants who were involved in the design development of the design touch points of the customer journey. As the Saudia Airline employed the Silent Design approach, most respondents who played an

important role in the development of the design touch points came from various non-design disciplines, such as business administration, information technology and marketing.

Profiles of Saudia Airline Employees and Design Consultants

Table 3.4 lists the profile of the seven executives recruited from Saudia Airlines and two design consultants from the airline industry. Most of these Saudia Airlines employees held a management position and reported directly to senior management. Table 3.4 includes: 1) job title, 2) role of Saudia Airlines employees and design consultants, 3) background and 4) location.

Table 3.4 Profiles of Saudia Airline employees and design consultants

	Job Title	Role of Saudia Airlines employees and design consultants	Background	Located
SA 1	General Manager of Product Development	Managed most design touch points in customer journey	Computer Science	Saudia Arabia
SA 2	Section Manager of Cabin Interiors	Responsible for cabin interior and cabin seats	Business administration	Saudia Arabia
SA 3	Station Manager Heathrow	Manages London, UK Saudia Airlines terminal	Geography	United Kingdom
SA 4	Manager Facilities Engineer	Manager	Engineer	Saudia Arabia
SA 5	Frequent Flyer program manager	Developed the Frequent Flyer programme	Marketing and e-Commerce	United Kingdom
SA 6	Section manager	Developed and redesigned the waiting areas.	Business administration	Saudia Arabia
SA 7	Executive Vice President Strategic	Manages customer journey products and	Management	Saudia Arabia

	Projects strategic projects	services.		
External Design Consultants				
DC1	Design Manager	Managed design projects for Saudia Airlines.	Landscape and Architecture	United Kingdom
DC2	Senior Designer	Managed design projects for Saudia Airlines (check-in counters)	Design	Italy

Interview Process

The researcher was not an employee of the Saudia Airlines, she was considered an outsider, which made it harder for the researcher to find and contact employees that directly involved in the development of customer journey. Moreover, Saudia Airlines did not have a designated department such as a design department just for the development of design projects of customer journey. Design projects/tasks were divided into different departments such as marketing department and engineering department. The focus of the research was explained to Saudia Airline employees and design consultants. The researcher followed the same procedures that were applied for design experts. Firstly the researcher found the Saudia Airlines employees and design consultants by consulting LinkedIn and then sending a briefing by email to all the respondents explaining the aims and objectives of the research. In this she highlighted ethical issues, such as the recording and transcribing of data, and assuring them that all information disclosed would be used for academic purposes only. The researcher also assured them that their answers would remain anonymous and confidential.

It was also mentioned that this study could benefit Saudia Airlines in the future by presenting the DMCF and evaluating whether or not it could help Saudia Airlines in elevating the perception of the strategic use of design. Most of the semi-structured interviews were conducted face-to-face or by telephone and lasted around thirty minutes. All respondents were given the same set of interview questions. Subsequently, the results of Saudia employees and design consultants' interviews were used to analyse the raw data, which was revised, evaluated and detailed so as to create Prototype D that went through several iterative prototypes presented at the end of Chapter 6 (see Figure 6.1). This

prototype will help in the process of formulating the DMCF that will be explained in detail in Chapter 07.

3.7 Data Analysis

This section discusses the processes for both quantitative and qualitative data analysis selected for this research. The main aim of this section is to build a common view on how the data that was collected is analysed and, to illustrate a justification for the data analysis approach chosen. Cohen et al. (2011) explained seven ways in which collected data can be prepared and presented and suggests that the researcher opt for the one most appropriate to the nature of the research study. Hence, for this research, this researcher has chosen to analyse and present the data according to the research questions. This section includes description of statistical techniques applied to the quantitative data as well as the coding scheme and thematic analysis for the qualitative data.

3.8 Quantitative Data Analysis

3.8.1 Online Survey of Data Analysis

The initial stage of this research was the quantitative online survey for study one. The analysis of the quantitative data was carried out through applying the Statistical Package for the Social Sciences (SPSS) Window Version 18.0 to produce descriptive analysis. Descriptive statistics present the basic features of quantitative data analysis (Sue and Ritter, 2012) and for this, first the data is carefully inputted into the SPSS software program to make sure that the data entry is correct. After all the data has been inputted and confirmed tabulation is prepared where the raw data are summarised in compact forms. Descriptive statistic uses the means, mode and median measures that help indicate the central point of a particular distribution. Seale (2012, p.331) stated ‘the mean is the average of the distribution of variable.’ The research used the mean, which is a common measurement among survey researchers. In order to create frequency distributions, which is the default mode for presenting the results of the satisfaction level for the online survey questions. Figure 3.9 illustrates a frequency distribution of participants to one question of this studies survey.

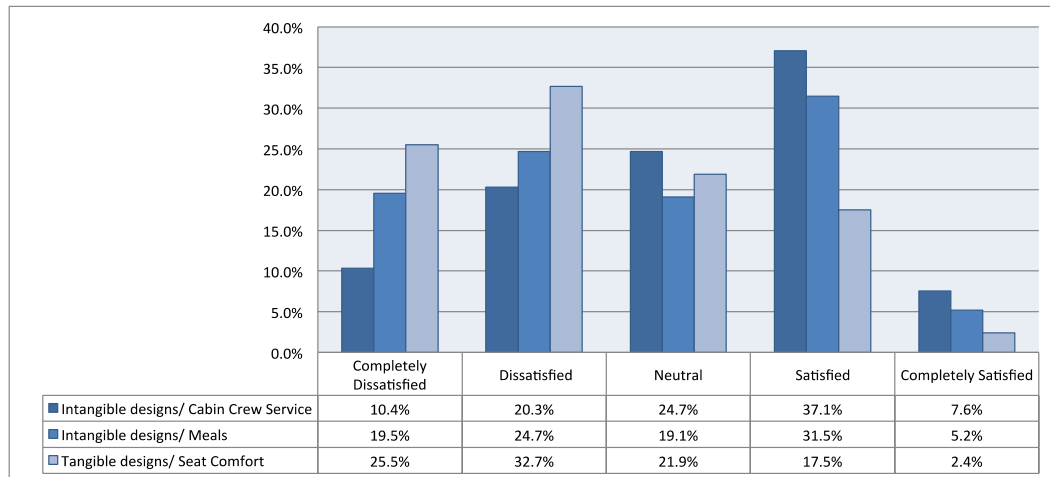


Figure 3.9 The frequency of the satisfaction level of the online survey of this research. Source: Researcher.

The bar chart format was used to clearly illustrate the results of the research. The details of the quantitative data analysis for this research are further explained in Chapter 04 (see Section 4.1).

3.8.2 Qualitative Data Analysis

Thematic analysis is a commonly used method for the processing of qualitative data generated from fieldwork research. Thematic analysis is able to demonstrate data in detail and deal with diverse topics through interpretation (Boyatzis, 1998). It can be applied to many forms of qualitative data collected through a variety of methods. As for this research, it was used as the data analysis technique for the semi-structure interviewing carried out in studies one, two and three. The rationale for its selection is because it allows the data to be systematically interpreted and links the separate analyses of the segments' theme to the whole meaning of the research. In addition, in thematic analysis there exists the possibility to connect several concepts and opinions that emanate from respondents and compare these with data previously collected from other participants in different situations at different phases during the research (Miles and Huberman 1994; Gibbs 2002; Yin 2010; Alhojailan, 2012). These features mean that thematic analysis is appropriate for this research because one of the objectives is to compare the design management practices and the perceptions of the strategic value of design between airlines that make good use of strategic design and those adopting the Silent Design approach. That is, thematic analysis facilitates the comparison a large body of diverse data which sometimes overlaps and is conflicting. Furthermore, thematic analysis allows the researcher to code and categorise the collected data into themes. Later the data can be displayed and classified according to contrasts and comparisons (Miles and Huberman, 1994).

Outline of the Data analysis Procedure

After the data collection was completed for each study, sequentially, the researcher analysed the data collected to build upon the findings of each previous study to develop an evolutionary prototype of the conceptual framework. As already explained the qualitative data analysis covered in study one the customer semi-structured interviews (see Section 3.6.1.2). In study two and three the interviews with design experts and Saudia Airlines employees (see Sections 3.6.2 and 3.6.3) produced qualitative information. For each of these stages of the study, the researcher adapted Creswell's (2014) proposed thematic process:

1. Arranging and preparing the data for analysis
2. Reading through the raw data
3. Coding to breakdown, simplify and organise the data into relevant categories
4. Using the coding process to create a description of the categories or theme for analysis
5. Representing sub-themes and themes with different techniques, as follows: quotations, narrative texts, a process model, figures and tabulating the differences and similarities to clarify their relationships
6. Interpreting the findings of the research

The Thematic Process Applied to the Qualitative Data

Firstly, the process of organising and preparing the data for analysis was carried out after the researcher had transcribed the recorded interview data. Secondly, she read through the raw data. It was important to read the data repeatedly and re-visit it many times to grasp clearly the narratives of the interviewees before starting the coding. Thirdly, she used coding to breakdown, simplify and organise the data into relevant categories. This stage involved the initial unearthing of common words, which were identified as codes. The small unit of data, which is known as a 'code' is 'most often a word or short phrase that symbolically assigns a summative, salient, essence-capturing, and/or evocative attribute for language based or visual data' (Saldana, 2013). The coding process can be done with a software program or manually and in this study, the software, MaxQDA, was used to systematically select and simplify the codes that were similar (see Figure 3.10).

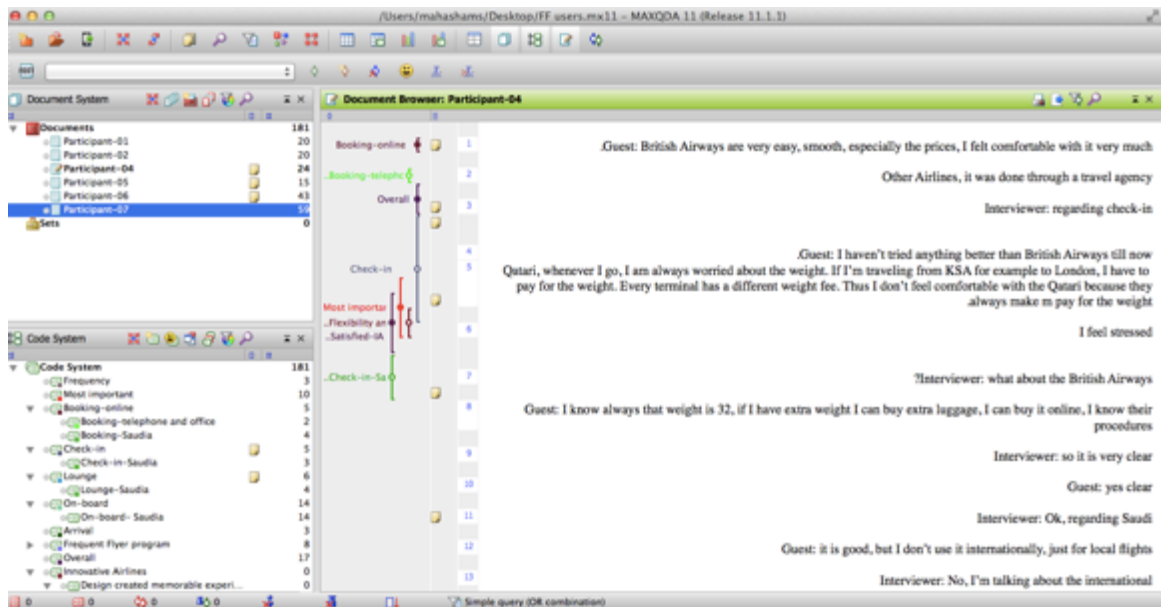


Figure 3.10 MaxQDA software use to organise the initial codes. Source: Researcher.

Next the coding process was employed to create a description of the categories or themes for analysis. A coding and grouping of data were complete, a long list of different codes was produced. In this stage the researcher used affinity maps as a visual tool to focus on the broader level of themes by sorting the different codes into potential themes (see Figure 3.11, Appendix C1 and D1)

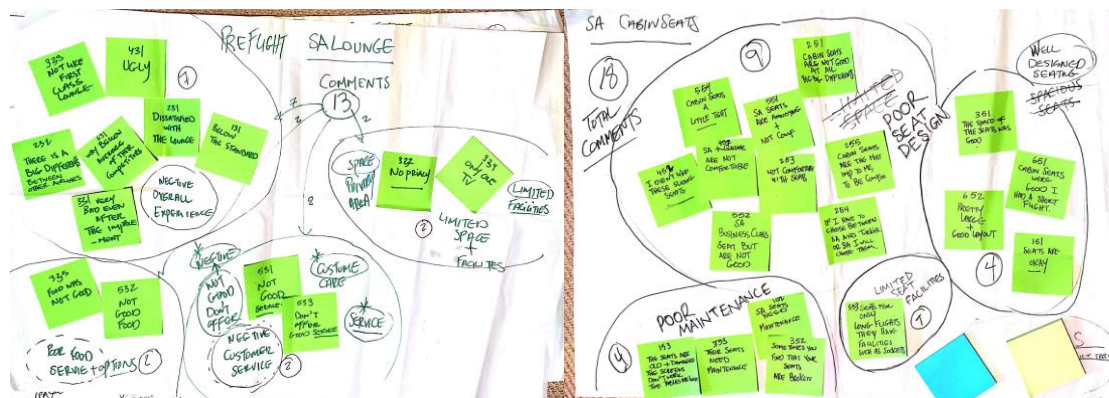


Figure 3.11 Affinity maps done by the researcher. Source: Researcher.

The affinity maps of the data were reviewed to ensure they were satisfactorily in depth and had full coverage. The themes prepared for the analysis were modified and some were further refined to ensure that they captured the essence of what each was about and the features of the data each theme covered for the data for each study. As a result, a collection of themes and sub-themes were produced. Creswell (2014) recommends the demonstration of the sub-themes and themes with different techniques, as follows: quotations, narrative texts, figures and tabulating the differences and similarities to clarify

their relationships and associated complexities (Miles and Huberman 1994; Gibbs 2002; Yin 2010; Alhojailan, 2012) The advantage of employing various data display techniques is that it can make descriptions of comparisons and similarities more well defined. In this research the researcher used the technique of tabulating the data. Table 3.5 illustrates one example of tabulating the data in this study, for study two for design experts, the table includes the key theme organisational mind-set and lists the nine sub-themes.

Table 3.5 Study Two for design experts, the key theme for organisational mind-set and the nine sub-themes.

Key themes		Sub-themes
1.Organisational mind-set	1.1	Appreciation of both strategic and operational contributions of design.
	1.2	Support and investment for overall design agendas from senior management
	1.3	Strong ambition for Design
	1.4	Positive attitude toward change
	1.5	Importance of innovation in airlines
	1.6	Respect for Design
	1.7	Monitoring competitors
	1.8	Importance of customer experience and design contributions
	1.9	Design as an essential part of business

Furthermore, the researcher then evaluated the themes to make sure that the themes represented the overall text (Miles and Huberman, 1994; Alhojailan, 2012). All the themes were evaluated and quotations that offer evidence, support and validate interpretations (Miles and Huberman, 1994; Gibbs, 2002) were noted. Ensuring the reliability and validity of the analysis will be explained in detail in the next section. By applying the data display technique of tabulating the data the researcher organised (see Appendix B, C and D) and framed the information so that she was able to make links, compare the data and

move towards the final stage of analysis (Miles and Huberman, 1994; Gibbs, 2002; Alhojailan, 2012). Finally, the last stage of the data analysis process for each of the three studies involved interpreting the findings. The findings were linked by displaying and organising the ideas and thoughts into the evolutionary prototype framework that was presented at the end of each chapter (see Chapters 04, 05 and 06) for each study. This was developed by creating coherent results and drawing structure from the data.

Ensuring the Reliability and Validity of the Analysis

The researcher involved an outside reviewer in the early stage to evaluate the themes that had been identified (see Figure 3.12). The purpose of the outside reviewer was to examine whether or not the themes were compatible with the whole text. An independent reviewer also helps to give more feedback regarding the identified themes from an outside perspective to compare the feedback of the reviewers to build reliability. The outside reviewer was Dr Busayawan Lam and the independent reviewer was Dr Ray Holland, who are experts in the area of design and design management field, which is the area of this study. The key reason for this according to Hosmer (2008, p.52) is to ‘build reliability in theme analysis coding.’ Afterwards the researcher can identify any conflicts regarding the themes or codes that had been added or removed by both the outside and independent reviewers (Miles and Huberman, 1994; Hosmer, 2008; Alhojailan, 2012) (see Appendix B2, B4, C2 and D2).

Findings and Discussion for First Class and Business Class Customers

Pre-Flight

	Pre-Flight/SA Booking		
	Raw Data		Coded Data
P1	P1.1.1 SA online booking is good	✓	Positive overall experience
	P1.1.2 Booking is not practical	✓	Poor service process
	P1.1.3 Very rigid and not flexible		Poor service process
	P1.1.4 Hanged from time to time,		Poor service process
	P1.1.5 Sometimes you can book the seat and sometimes you cannot. Some times you can pay online sometimes you cannot.	✓	Poor service process
	P1.1.6 felt the service was poor for the online service of SA.	✓	Poor service process
P2	P2.1.1 Saudi is a little bit complicated.		Negative overall experience
	P2.1.2 I think Saudi started to give options as well	✓	Starting to improve
	P2.1.3 SA as for the reservation, it is very easy.	✓	Positive overall experience
	P2.1.4 Booking a ticket electronically, is easy.	✓	Positive overall experience
	P2.1.5 The problem is that let's assume I bought the ticket and for some reason I decided not to go, and I want to refund my money back. To get the money from them it is a hassle, while in other airlines they just put it back to your account credit card.		Poor service process
	P2.1.6 If I want to change the ticket I bought from a travel agent. If the travel agent is closed, SA can not change my flight there is no flexibility this is a disadvantage in Saudi Airlines.		Negative overall experience
P3	P3.1.1 found the online service of SA terrible.	✓	Negative overall experience
P4	P4.1.1 Travel agent all the time		
P5	P5.1.1 Booking online with SA was generally good	✓	Positive overall experience
	P5.1.2 The SA website, you enter the date and it displays the flights available only on that date, not a day before or after it.	✓	Limited service information and options
P6	P6.1.1 To issue the ticket it was 'complex' now I know they have probably moved to E tickets but when I was using it a lot there was no E tickets it was a paper ticket. So I had to get my driver to go and get the ticket and bring it to me you know these kind of things on logistics basis it was very complex.		Negative overall experience

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Figure 3.12 An example of the corrections of one of the reviewers for the qualitative analysis. Source: Researcher.

3.8 Outlining the Initial Framework

The main aim of this research was to evaluate and elevate the existing perception of the strategic value of design and design management practices of Saudia Airlines by considering the perspectives of all key stakeholders involved in the customer journey. In this section **Objective 5** is addressed: ‘To create a design management conceptual framework (DMCF) for Saudia Airlines using iterative prototyping, based on the secondary and primary research results.’

Due to the limited literature and existing knowledge on airline companies like Saudia Airlines who use the Silent Design approach, it was difficult to find any measurable criteria or structure to start the study. Therefore the researcher started with analysis and synthesis of the existing literature in the fields of design, design management, and innovation, aimed at identification of such a structure. Accordingly, in an integrative approach and by thorough analysis and synthesis of relevant literature, the researcher found a model that could help in the development process of forming a DMCF. A systematic process is adopted for the design and development of the iterative prototype approach for developing the framework. That is, by mimicking the design process, the 'framework' is approached as the 'product' for which a design process needs to be planned. The model adapted for a systematic approach to generate the DMCF of this research is that of Pugh (1991), who identified the Total Design Framework. Pugh's model was chosen for the development of the DMCF because it is considered one of the most well-known models in the field of design and design management. His model is one of the few that addresses an iterative process (see Chapter 01, Section 1.7). Pugh's model is the most suitable because it captures the iterative characteristics of the design process and gives detailed descriptions. In this study an iterative prototype process similar to Pugh's model has been applied to formulate the DMCF.

This approach is based around a core of design activities that apply integrated methods in an iterative manner for the purpose of creating innovative products that satisfy the needs of customers (see Figure 3.13). The total design model is a systematic activity that starts with identifying the market/users' needs and continues until the last stage of selling the successful product is achieved. In Pugh's (1991) model of the iterative prototype process, a number of key stages are considered. Below in Table 3.6 the core activities of his model are used to form the DMCF, which incorporates six key stages of the design process.

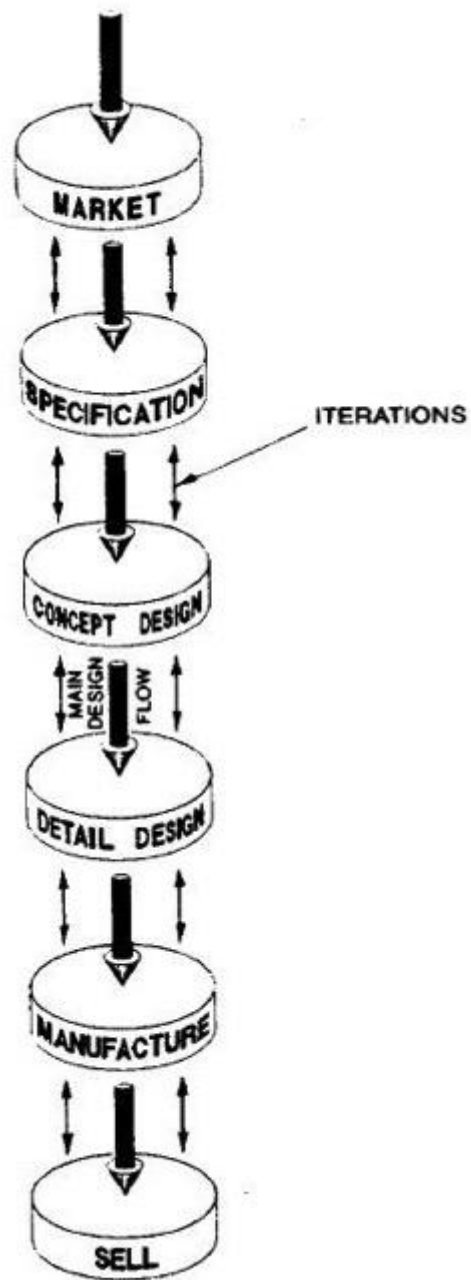


Figure 3.13 Total Design model. Source: Pugh (1991).

Table 3.6 DMCF development process derived from the Total Design Framework. Source: Pugh (1991)

Pugh's (1991) Total Design Framework	DMCF development process in this thesis
<p>1. Marketing needs and demands: is the first stage of the core of design activities that include literature searching, market research, and competitor analysis.</p>	<p>1. Research Direction: defining research aim and objectives. In addition to identifying research gap.</p>
<p>2. The product design specification (PDS): a brief that is written to document the specifications of the product to be designed. In order to understand the complete design activities of the product design specifications, which evolved to match the characteristics of the final product or project. This is the basic reference of the design activities that acts as the control of all the stages.</p>	<p>2. Structure of prototypes: adopting and adapting models from the literature to define structure of prototypes. This was explained in detail in chapter 02 (see Section 2.7).</p>
<p>3. Conceptual design: involves the process of ideas and generating solutions to meet the final product or project. This stage is applied throughout the core design activities until the final stage. It can and should be applied to any stage.</p>	<p>3. Iterative prototype process development: Applying the iterative prototype process to develop prototypes iteratively based on analysis and synthesis of secondary and primary research (see Appendix E1)</p>
<p>4. Detail design: the main criterion is maximising the performance and detailing the design. The details of the design become greater and more considered with dimension and breaks down into 'sub-dimensions'.</p>	<p>4. DMCF formulation and evaluation: Synthesising prototypes to create and iteratively refine DMCF based on expert review and validation (see Chapter 07).</p>

<p>5. Manufacture: This stage is usually presented in a drawing form. After the design has been defined. In the Total Design process this stage is encouraged to be part of the early stages of the designing process to prevent any difficulties that may occur during the manufacturing stage.</p>	<p>5. Presentation of final DMCF: Explaining DMCF and research contribution (see Chapter 08).</p>
<p>6. Sell (Marketing): is the last stage that completes the Total Design framework, which is the selling of the product this stage also includes the feedback of customers' satisfaction.</p>	

Pugh stated in the total design model that all six stages are of equal importance. In the DMCF iterative prototype process five stages are included and are of equal importance, yet the researcher joined the manufacturing and marketing stages together to reduce complexity. For the purpose of this research, the above shown Table 3.6 right hand side column explains the five stages: 1) research direction, 2) structure of prototypes, 3) iterative prototype process, 4) DMCF formation and evaluation and 5) presentation of a final DMCF. As in Pugh's design process, the design flow is an iterative process, which is indicated in double-headed arrows (see Figure 3.14). Therefore, the whole five stages of the design cycle are repeated in an iterative cycle in order to constantly improve the prototypes that have developed for the secondary and primary research throughout this study, which will be explained in detail in chapter 07. Figure 3.14 illustrates this iterative prototype process, which highlights that this process consists of four prototypes; each prototype is an iterative process that helped in forming the DMCF.

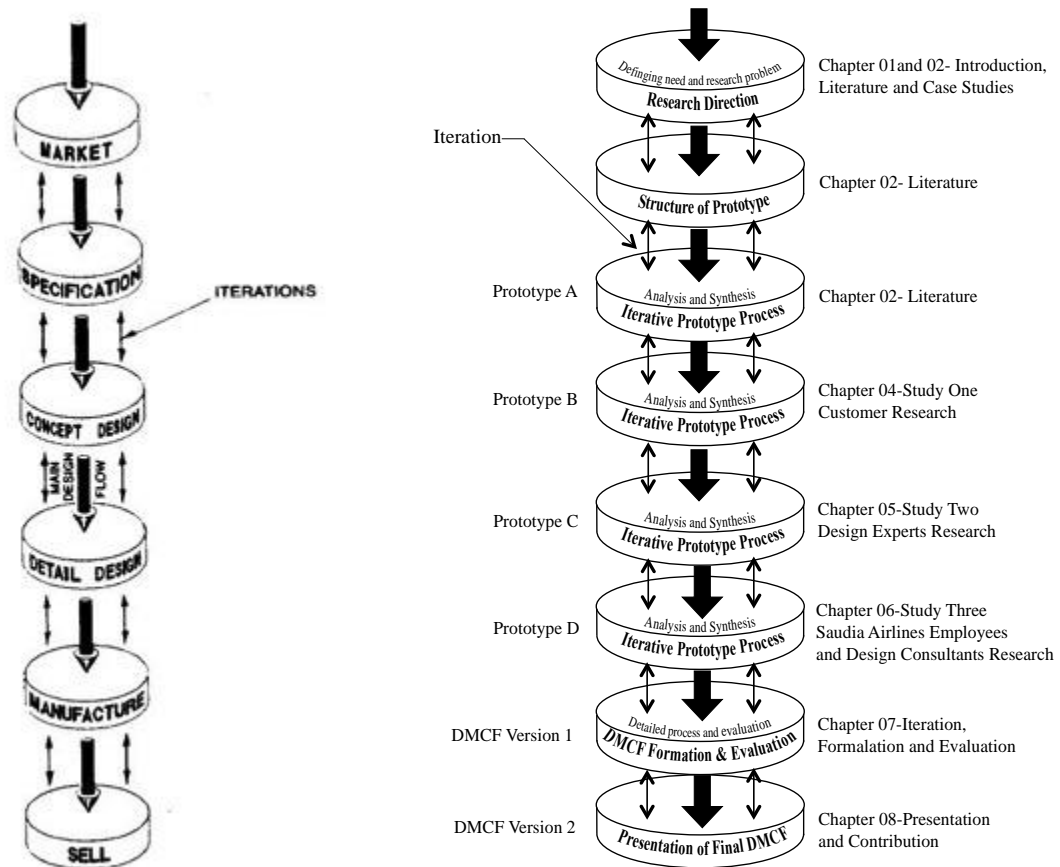


Figure 3. 14 The Total Design model. Source: Pugh (1991) on the left hand side and the outline of the DMCF development following the format given by Pugh on the right hand side. Source: Researcher.

Previously Chapter 02 demonstrated the initial prototype, which was obtained from the secondary research. In the following chapters the researcher will show the prototypes extracted from the primary research, which will be explained in detail: Chapter 04 (Prototype B), Chapter 05 (Prototype C), and Chapter 06 (Prototype D and CD). Furthermore, the iterative prototype process will be explained in detail for all four prototypes and the DMCF in Chapter 07.

Based on the nature of each study, various methods of data collection and analysis are used. As mentioned previously, in this study research triangulation (Creswell and Clark, 2008) is adopted in order to enable cross-examination of the results and three different yet complementary methods are applied and combined to study the same phenomenon. Therefore, a mixed methods research (Creswell, 2009) is adopted and where possible supportive or supplementary methods as a second data collection method are used to validate or corroborate the results. The three combined methods are both qualitative and quantitative in their nature and include a questionnaire of customers of an airline that uses silent design, semi-structured interviews with customers, semi-structured interviews with

design experts from the airline industry and Saudia Airlines employees who are involved in the development of the customer journey.

In the case of the primary research iterative prototype process is used to study the perception of the strategic use of design in each study (see Chapter 04, 05 and 06) and is then revised, evaluated and detailed after each study this iterative cycle is repeated several times, for each of the studies planned (see Chapter 07). This way, each study provides a prototype according to the finding extracted of each study, until it reached the final prototype structure given in Chapter 02 (see Section 2.7). After all four prototypes were completed the researcher formed the DMCF.

3.9 Validation of the DMCF

3.9.1 Method Used to Validate the DMCF

The two key stakeholders in study two and study three (design experts and Saudia Airlines employees) participated in validating the DMCF. The design experts represented the airline companies that make good use of design and Saudia Airlines employees presented the Silent Design approach, as addressed in the conceptual framework that will be presented in chapter 07 (see Section 7.2).

The researcher considered different methods for validating the DMCF such as:

- Semi-structured interviews
- Focus groups
- Field study
- Online survey

The researcher selected the most appropriate method for validating the conceptual framework within this study, which was through an online survey. The other methods for validating the DMCF had some disadvantages, which prevented the researcher to choose them. These are as follows:

Semi-structured Interviews

- 1) The researcher discarded interviews to validate the conceptual framework and the main reason was because of the difficulty in arranging time with the senior managers in Saudia Airlines due to their busy schedules.
- 2) Interviews carry a risk of unintentionally leading (influencing) the respondent. Therefore for the validation to be truthful the researcher wanted honest answers from participants without any external influence.

Focus Group

- 1) The researcher discarded carrying out a focus group to validate the conceptual framework. The main reason was because the most vocal participant usually influences the rest of the participants, which makes it difficult to get an objective view from all participants (Flick, 2014).
- 2) In addition arranging a time to do the focus group with senior management is even more difficult than arranging an interview.
- 3) Furthermore conflict, arguments and diversity of views may occur (Flick, 2014).

Field Study

- 1) In regards to a field study, time and cost were major limitations within the scope of this PhD thesis. The researcher had limited time to test the conceptual framework. A field study could take from two to five years to see improvement, which is considered unsuitable for the limited timeframe of a doctoral study.

Online Survey

- 1) Online survey was the most appropriate method to do the validation for the DMCF. It was the most independent and objective method because the researcher has the least influence on participants.
- 3) Respondents can complete it within 15 minutes in their own time at their convenience.
- 2). Time and budget are most appropriate for this PhD research.
4. Furthermore it includes both qualitative and quantitative methods while as all the other methods are limited to qualitative research.

3.9.2 Expert Validation

This section addresses Objective No. 6 ‘to evaluate the potential of the proposed framework and revise it according to the feedback from key stakeholders.’ This researcher used design experts’ opinions from the airline industry who make good use of design at a strategic level to validate the proposed conceptual framework. The rationale is to confirm

the conceptual framework and to improve the DMCF from the perspectives of design experts that are working/worked in airline companies and design consultancies that experienced working in the airline industry. The validation covered the experts' opinion on the content that formulated the DMCF that will be explained in Chapter 07 (see Section 7.2).

3.9.2.1 The Profile of Participants

The researcher contacted experts who had worked/working in an airline company and design consultancies involved in the airline industry via the LinkedIn website. The participants comprised nine experts including heads of design, senior designers and design managers in airline companies and design consultancies that used design at a strategic level in the airline industry. Two experts had experience of working in airline companies (e.g. Virgin Atlantic Airways and British Airways) and two currently worked in airline companies (e.g. KLM Airways and Etihad Airways). Five experts were currently working in design consultancies that do design projects for airline companies such as Virgin Atlantic Airways, Etihad Airways, British Airways, Emirate Airlines and Lufthansa. Table 3.7 includes: 1) Classification, 2) name of airline/design consultancy, 3) job title and 4) number of participants.

Table 3.7 The profile of design experts who validate the DMCF

	Classification	Name of Company	Job Title	Number of participants
DE-DMCF 1	Worked/working at an airline companies	Virgin Atlantic Airways	Head of design	4
DE-DMCF 2		British Airways,	Head of design	
DE-DMCF 3		KLM Airways	Senior Designer	
DE-DMCF 4		Etihad Airways	Senior Designer	
DE-DMCF 5	Design consultancies that have experience of working in the airline industry	Design Q	Design manager	5
DE-DMCF 6		Factorydesign Ltd.	Creative Director	
DE-DMCF 7		PriestmanGoode	Senior Manager	
DE-DMCF 8		Russell James	Senior Manager	
DE-DMCF 9		PriestmanGoode	Senior Manager	
	Total (N)			9

3.9.2.2 Structure of Online Survey

To determine the opinions of the experts, items for a questionnaire were composed similar to the customer survey conducted in study one (see Chapter 03- Section 3.6.1.1). The questions were both close-ended and open-ended probes. This included providing multiple choice (Brace, 2004) questions with an open-ended section for comments. The aim of this survey design was to get comments and suggestions on any challenges that might arise in practice as well as the practicality of implementing the framework within the airline industry. The online survey addressed four stages to validate the conceptual framework.

Firstly at the beginning of the questionnaire, the introduction, aim and conceptual framework of this research were presented. The second stage contained questions about the key dimensions, Silent Design Culture and Strategic Design Culture. Then in the third stage the researcher highlighted recommendations of how the DMCF could bridge the gap between Silent Design Culture and Strategic Design Culture. These recommendations were based on methods across the four key dimensions: organizational mind-set, structure and design capabilities, design process methods and collaboration and customer experience. In the last stage, opinions were sought concerning overall feedback on the conceptual framework.

The questionnaire for the survey was sent by e-mail. Participants accessed this survey through a link sent to them in the e-mail and was created using the survey software '*Smart Survey*' (Smartsurvey, 2015) (see Chapter 03- Section 3.6.1.1). This questionnaire is presented in Appendix A6.

3.9.3 Final Validation

This section highlights Objective No. 6 'to evaluate the potential of the proposed framework and revise it according to the feedback from key stakeholders.' After validating and making minor improvements to the conceptual framework according to experts' comments, the researcher carried out another survey to do a final validation for the conceptual framework (DMCF Version No. 2) directly with the Silent Design Culture airline company, in this research this was Saudia Airlines. The participants of this final validation are senior management within Saudia Airlines, who are involved in the development of the tangible and intangible design touch points in the customer journey. The senior managers who participated in this final validation have over 85 years of combined experience working within Saudia Airlines. Thus, these respondents could be reasonably expected to have a clear understanding of Saudia Airline's key dimensions that were identified in the DMCF (i.e. the organisational mind-set, structure and design

capabilities, design methods and collaboration and customer experience). Hence they were in a good position to validate this framework and its application within Saudia Airlines (see Table 3.8).

Table 3. 8 The profile of Saudia Airlines employees who validated the DMCF

	Job Title	Job description	Years of experience	Major
SA-DMCF 1	Manager Ground Product	Looking after products and services directly interacts with customers on ground	20 years	Marketing
SA-DMCF 2	Senior Marketing Specialist	Sky Priority Product Manager. Lounges, Consumer Experience	5 years	Airline industry
SA-DMCF 3	EVP commercial	Responsible for all commercials	40 years	Business administration
SA-DMCF 4	Manager Onboard Product	Responsible for Marketing Onboard Product in Cabin Interior and Inflight Entertainment	23 years	Media and Customer Relation

The researcher first emailed the senior managers to get approval to carry out the online survey. After the senior management agreed to participate in validating the conceptual framework, the researcher sent the online survey link to potential ten participants, however only four respondents completed the survey. This reinforces the researcher's understanding that the senior management are extremely limited in the time that they can dedicate to this validation. In addition at Saudia Airlines no one added any comments to this survey responses. Even though only four had responded their feedback was strongly consistent across respondents.

3.9.3.1 Structure of Online Survey

To determine the opinions of the senior management of Saudia Airlines, question items for a questionnaire were composed similar to the customer survey conducted in study one (see Chapter 03- Section 3.6.1.1). The questions comprised both closed-ended and open-ended probes; providing multiple choice (Brace, 2004) questions with an open-ended sections for comments, similar to that for the design experts' survey. The aim of this survey design was to get comments and suggestions on any challenges that might arise in practice as

well as the practicality of implementing the framework within the airline industry. The online survey was composed of two stages targeted at validating the conceptual framework.

Firstly at the beginning of the questionnaire, the introduction and aim of this research were presented. The second stage contained questions about the key dimensions and highlighted a number of recommendations that could enhance these four key dimensions within the airline company.

The questionnaire for the survey was sent by e-mail. Participants in Saudia Airlines accessed this survey through a link sent to them in the e-mail and created using the survey software 'Smart Survey' (Smartsurvey, 2015) (see Chapter 03- Section 3.6.1.1). This questionnaire is presented in Appendix A7.

Summary

Table 3.9 presents a breakdown of the three studies and relevant methods used in the primary research. Each data collection and analysis method implemented in each of the studies is discussed in detail in the relevant chapters where issues regarding validity and reliability of methods are listed.

Table 3.9 Breakdown of studies and relevant methods used in the primary research

	Study One- Chapter 04		Study Two- Chapter 05	Study Three Chapter 06	Chapter 07
Data triangulation	Customers		Design Experts (Design managers and designers)	Saudia Airlines employees and Design Consultants	Validation of the conceptual framework
Methodological triangulation	Online questionnaire (multiple-answer questions) and Semi-structured interview		Semi-structured interview	Semi-structured interview	
Type of research	Qualitative + Quantitative		Qualitative	Qualitative	
Data analysis methods	Statistical analysis (SPSS)	Qualitative analysis (Thematic analysis)	Qualitative analysis (Thematic analysis)	Qualitative analysis (Thematic analysis)	
Number of participants	938	7	6	9	
Evolutionary prototype	Prototype B		Prototype C	Prototype D	

This chapter studied a number of relevant research strategies and methodologies from the design and social sciences fields. It described how a research strategy was adapted and how the appropriate methodology was designed. The chapter explained each study of the design methodology and provided a breakdown of various methods used for data collection and analysis. Table 3.7 summarises the three studies according to the research methodology and methods used in each stage and the results from each.

4. Study One - Key Findings and Discussion for Customer Research

The literature review suggested that the strategic use of design could lead to a high level of customer satisfaction. The customer research (study one) investigated whether the design touch points provided by companies employing strategic design (airlines that make good use of design) and those offered by airlines using Silent Design (Saudia Airlines) were perceived differently by customers and affected the level of their satisfaction.

This chapter presents the principal findings of study one from the primary research. The results were also used for data triangulation purposes as explained in Chapter 03 (see Figure 3.5). The findings discussed in this chapter were collected from participants who travelled on Saudia Airlines and other airlines that make good use of design. This chapter addresses the following questions:

RQ.1.1 Regarding the perceived value from the customers' perspectives: How do tangible and intangible designs in all design touch points affect the level of user satisfaction and overall customer experience?

To address the above research question, as explained in Chapter 3 (see Section 3.2.2), the primary research includes both quantitative and qualitative methods. The rationale behind the use of the quantitative method (online questionnaire survey) was to explore the key areas and identify potential problems/areas for future improvement, which would form the basis for further investigation. It was also employed to confirm the assumptions made at the beginning of the study that Saudia Airlines could benefit from using design management at the strategic level. The analysis of customer findings begins with the presentation of pre-flight data, followed by onboard considerations and finally the post-flight findings (see Figure 3.5.1). The quantitative analysis is discussed in the next section and this is followed by the qualitative analysis (Section 4.2). In the quantitative research, all three classes are included (First Class, Business Class and Economy Class), whereas the qualitative research includes First Class and Business Class passengers only because they were found to be more critical and more demanding than those in Economy Class. Upper class passengers were found to be more interested in gaining a travelling experience and exploring design touch points of the airlines, than paying a low price for the ticket. Moreover, given that Economy Class customers were less critical of the design of the customer touch points and owing to time constraints they were not included in the qualitative research.

4.1 Quantitative Research: Online Customer Survey

A customer survey was conducted before the in-depth interviews to provide an early indication of Saudia Airline's market position from the perspective of the customers. This was also geared towards examining Saudia Airline's level of satisfaction and overall experience for tangible and intangible design touch points for all services during the customer journey. The quantitative research was conducted through an online survey, as mentioned earlier in Chapter 03 (see Appendix A). The criteria of the respondents was that travelling on Saudia Airlines was mandatory for completing the survey as all questions were based on design touch points of Saudia Airlines' customer journey. Figure 4.1 illustrates the 938 respondents of the online survey that were divided according to the three classes (First Class, Business Class and Economy Class). First Class participants represented 26.7% and those from Business Class represented 28.4%, comprising more than half of the participants (55.1%); Economy Class participants constituted 44.9%.

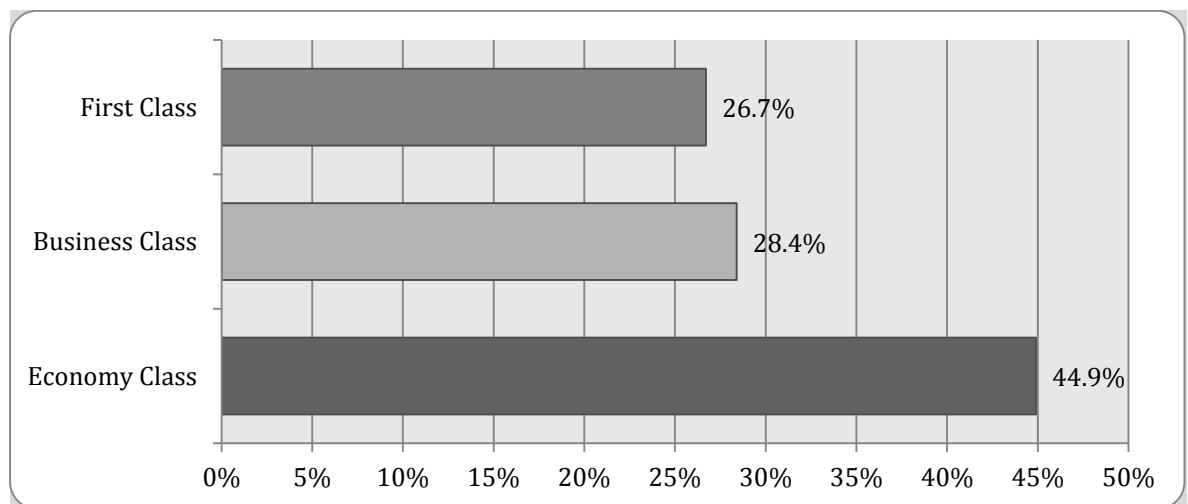


Figure 4.1 First Class, Business Class and Economy Class participants

4.1.1 Pre-Flight

In this section, the pre-flight customer touch points that include the online booking page and passenger lounge at the airport are presented and evaluated beginning with First Class, followed by Business Class and finally Economy Class customers.

First Class Customers

The First Class participants' opinions regarding tangible and intangible designs of the customer touch points are illustrated in Figure 4.2. The aim was to evaluate their level of satisfaction with the online booking page and the lounge area for Saudia Airlines at airports.

In general, the respondents in First Class were ‘satisfied’ with the online booking arrangement. Results show that 31.5% were ‘satisfied’ and 9.2% were ‘completely satisfied’. In addition, a significant number were ‘completely dissatisfied’ (13.9%) or ‘dissatisfied’ (17.1%) with the online booking page, yet results show that they were fewer than the customers who were satisfied. Furthermore, 28.3% of First Class respondents were ‘neutral’ about this service.

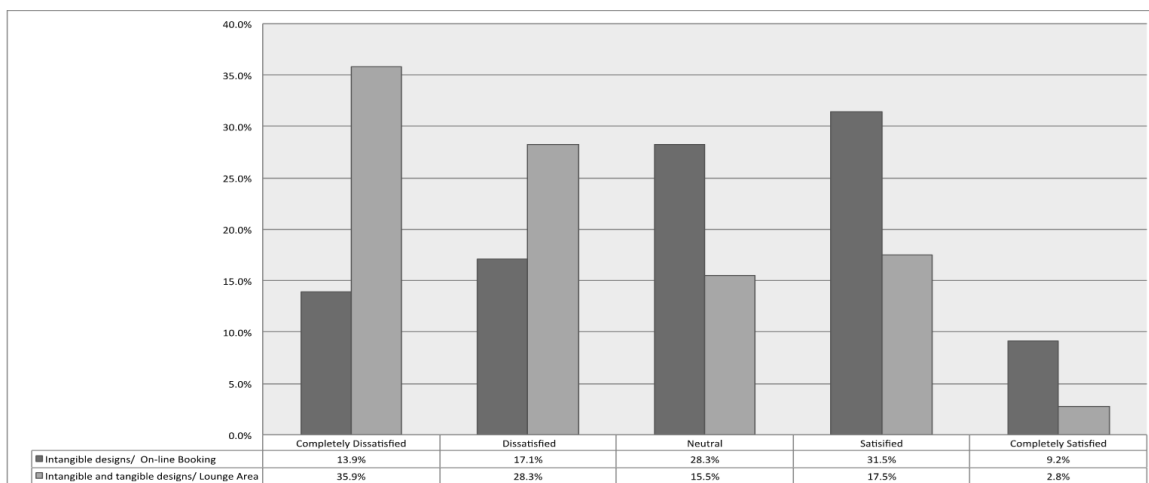


Figure 4.2 First Class satisfaction levels regarding the pre-flight designs of customer touch points

Figure 4.2 also provides the First Class respondents’ level of satisfaction with Saudia Airlines’ lounge area. Respondents were dissatisfied, with 35.9% reporting that they were ‘completely dissatisfied’ and 28.3% that they were ‘dissatisfied’. However, 17.5% reported that they were ‘satisfied’ and 2.8% were ‘completely satisfied’. To conclude, First Class respondents who were dissatisfied were much more prevalent than those who were satisfied with this design touch point in the customer journey.

Business Class Customers

The Business Class participants’ opinions regarding the tangible and intangible designs of customer touch points are illustrated in Figure 4.3, in relation to the level of pre-flight satisfaction with the online booking page and the lounge area for Saudia Airlines at the airports.

In general, the respondents of this class of travel were satisfied with the online booking page, with 34.8% reporting that they were ‘satisfied’ with this intangible design customer touch point and 10.1% that they were ‘completely satisfied’ with this service. In addition, a significant number were ‘completely dissatisfied’ (11.6%) or ‘dissatisfied’ (18.0%) with

the online booking page. As a result, customers who were dissatisfied were fewer than the customers who were satisfied with this design touch point. Furthermore, 25.5% of Business Class respondents were ‘neutral’ about this service.

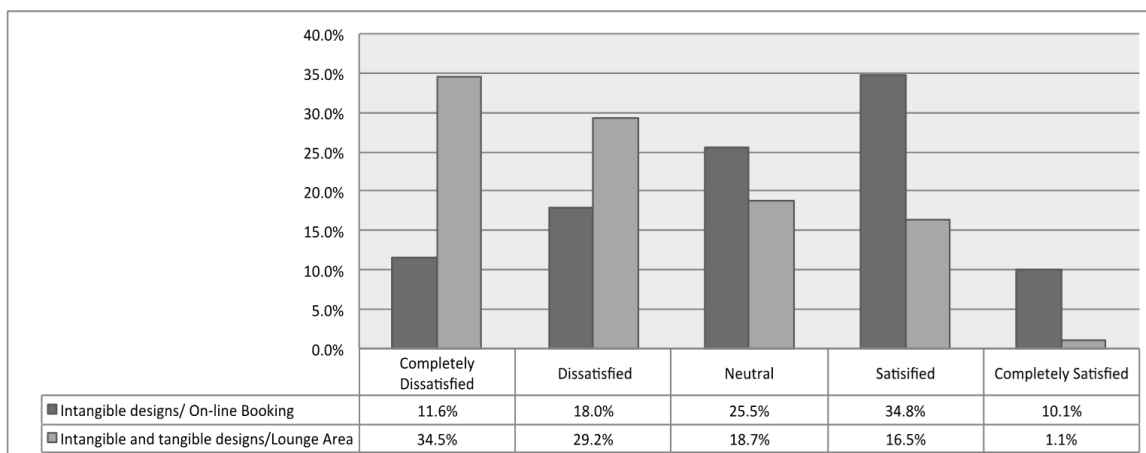


Figure 4.3 Business Class satisfaction levels regarding the pre-flight designs of customer touch points

Figure 4.3 also illustrates the Business Class respondents’ level of satisfaction with Saudia Airlines’ lounge area at the airports. Many respondents indicated that they were ‘dissatisfied’. Specifically, 34.5% were ‘completely dissatisfied’ and 29.2% were ‘dissatisfied’, whilst only a small number of respondents were ‘completely satisfied’ (1.1%) or ‘satisfied’ (16.5%) with the lounge areas. To conclude, there were more dissatisfied Business Class respondents’ than satisfied ones regarding this design touch point in the customer journey.

Economy Class Customers

The Economy Class respondents’ opinions regarding the tangible and intangible designs of customer touch points are illustrated in Figure 4.4. The aim was to evaluate their level of satisfaction with the online booking page and the lounge area for Saudia Airlines at the airports.

In general, the respondents in Economy Class had a ‘neutral’ (31.3%), ‘satisfied’ (30.8%) or ‘completely satisfied’ (11.7%) stance regarding the online booking page. Moreover, a significant number were ‘dissatisfied’ (14.3%) or ‘completely dissatisfied’ (11.9%) with the online booking page. As a result, customers who were dissatisfied were fewer than the customers who were satisfied or neutral about this design touch point.

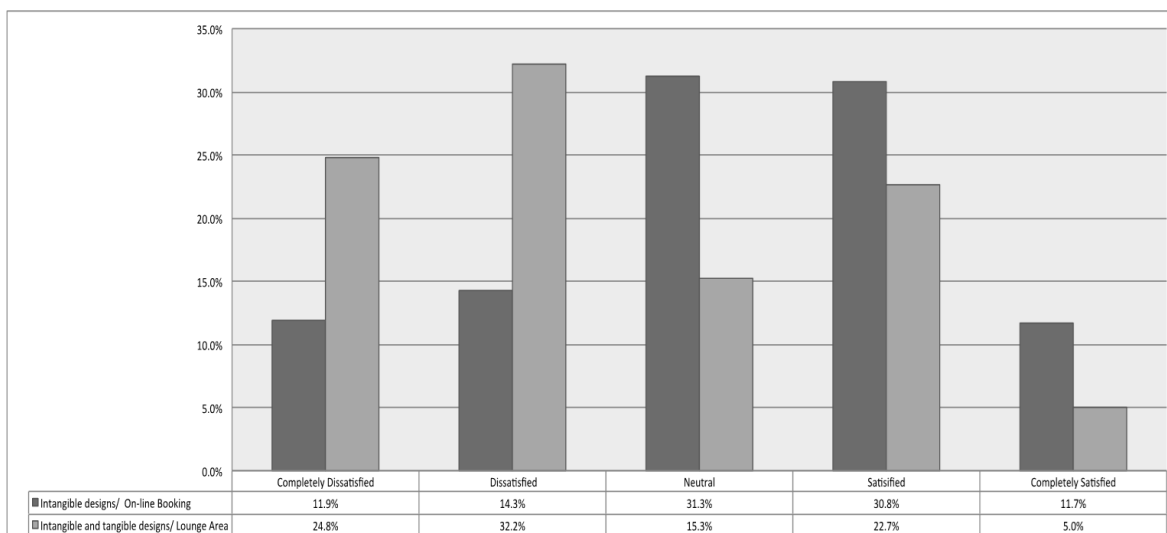


Figure 4.4 Economy Class satisfaction levels regarding the pre-flight designs of customer touch points

In addition, Figure 4.4 illustrates the Economy Class respondents’ level of satisfaction with Saudia Airlines’ lounge area, showing that 24.8% were ‘completely dissatisfied’ and 32.2% were ‘dissatisfied’. In addition, some customers were satisfied, with 22.7% reporting that they were ‘satisfied’ and 5.0% reporting ‘completely satisfied’. To conclude, there were more dissatisfied Economy Class respondents’ than satisfied passengers regarding this design touch point in the customer journey. Furthermore, 15.3% of Economy Class respondents were ‘neutral’ about this service.

Overall, the results for First, Business and Economy Class regarding the online booking page arrangements were similar, as most respondents were satisfied with this design touch point. This is possibly because the service offered for online booking is the same for all passengers regardless of the class they travel. Regarding the perception of Saudia Airlines’ lounge area at the airports, results were similar for all classes, as most respondents were dissatisfied with this design touch point. The relationships between the level of customer satisfaction and pre-flight design touch points will be discussed further in sections 4.2.1 and 4.2.3, for First Class and Business Class.

4.1.2 Onboard

The onboard tangible and intangible designs of customer touch points were evaluated and are illustrated in this subsection. These are as follows: cabin crew service, cabin meals and cabin seats, which are presented and evaluated beginning with First Class, followed by Business Class and finally Economy Class customers.

First Class Customers

The First Class participants’ opinions regarding tangible and intangible designs of the customer touch points are illustrated in Figure 4.5. The aim was to evaluate their level of satisfaction with the cabin crew service, cabin meals and cabin seats. In general, the respondents of this class of travel were satisfied with the cabin crew service, with 37.1% reporting that they were ‘satisfied’ with this intangible design customer touch point and 7.6% that they were ‘completely satisfied’ with this service. However, a significant number were ‘completely dissatisfied’ (10.4%) or ‘dissatisfied’ (20.3%) with the cabin crew service. As a result, there were more customers who were satisfied than dissatisfied with this design touch point. Furthermore, 24.7% of First Class respondents were ‘neutral’ about this service.

Figure 4.5 also illustrates the First Class respondents’ level of satisfaction with Saudia Airlines’ cabin meals, with 31.5% reporting that they were ‘satisfied’ with this design touch point and 5.2% stating that they were ‘completely satisfied’ with this service. On the other hand, First Class respondents were ‘dissatisfied’ (24.7%) and ‘completely dissatisfied’ (19.5%) with the cabin meals. Thus, the sum of dissatisfied and completely dissatisfied passengers is 44.2%, which is higher than those of satisfied First Class respondents regarding cabin meals.

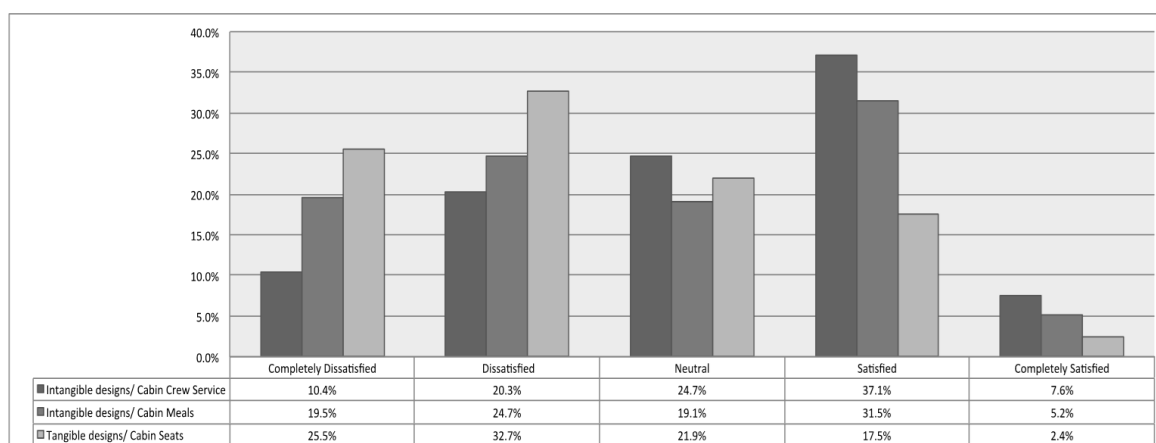


Figure 4.5 First Class satisfaction levels regarding the onboard designs of customer touch points

Figure 4.5 also shows the First Class participants’ level of satisfaction with Saudia Airlines’ cabin seats. In general, the respondents were ‘dissatisfied’, with 32.7% reporting that they were ‘dissatisfied’ and 25.5% were ‘completely dissatisfied’ with this tangible design customer touch point. Only a small number were ‘satisfied’ (17.5%) and

‘completely satisfied’ (2.4%) with the cabin seats. There were more dissatisfied First Class respondents’ than satisfied passengers with this design touch point in the customer journey. Furthermore, 21.9% of First Class respondents were ‘neutral’ about this design touch point.

Business Class Customers

The Business Class participants’ opinions regarding tangible and intangible designs of the customer touch points are illustrated in Figure 4.6. The aim was to evaluate their level of satisfaction with the cabin crew service, cabin meals and cabin seats.

Firstly, most of the respondents in Business Class were satisfied with the cabin crew service, with 36.3% reporting that they were ‘satisfied’ with this intangible design customer touch point and 5.2% saying that they were ‘completely satisfied’. By contrast, 18.4% of Business Class respondents were ‘dissatisfied’ with this service and only a small number of were ‘completely dissatisfied’ (8.2%). Furthermore, 31.8% of Business Class respondents were ‘neutral’ about this design touch point. Figure 4.6 also illustrates the Business Class respondents’ level of satisfaction with Saudia Airlines’ cabin meals with 33.7% of the respondents stating they were ‘satisfied’, and only a small number stating they were ‘completely satisfied’ (3.7%).

On the other hand, 18.4% indicated that they were ‘dissatisfied’ with the meals and 23.2% reported that they were ‘completely dissatisfied’. Hence, those dissatisfied or completely dissatisfied (41.6%) outweighed those who were at least satisfied with the cabin meals (37.4%).

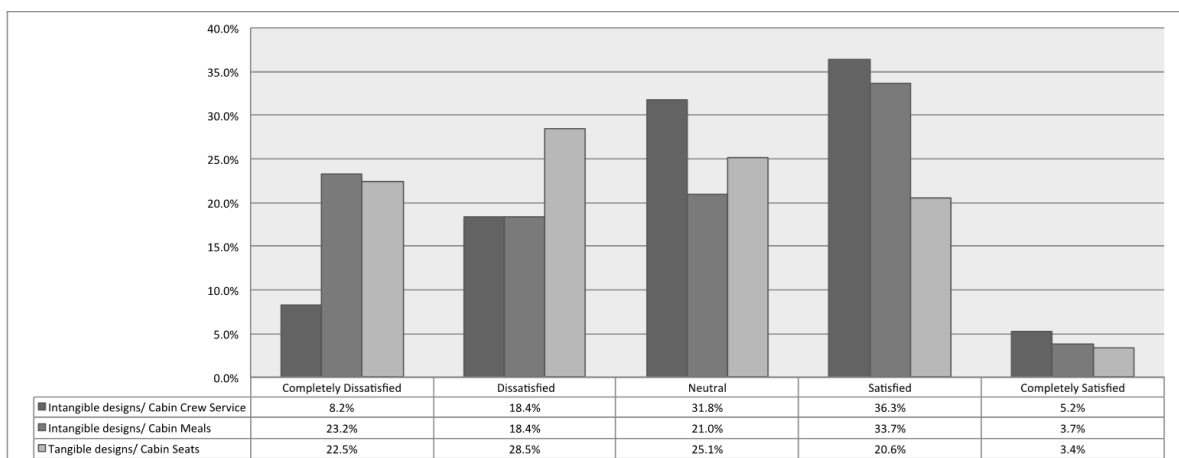


Figure 4.6 Business Class satisfaction levels regarding the onboard designs of customer touch points

Figure 4.6 also presents Business Class participants' level of satisfaction with Saudia Airlines' cabin seats. In general, the respondents in Business Class were 'dissatisfied' with them (28.5%) and 22.5% saying they were 'completely dissatisfied'; over half were dissatisfied with this tangible design customer touch point. Only 20.6% of Business Class respondents were 'satisfied' and only a small number of participants were 'completely satisfied' (3.4%) with this tangible design customer touch point. Furthermore, 25.1% of Business Class respondents were 'neutral' about this design touch point.

To sum up, the results for onboard design touch points for Business Class respondents were similar to those who travelled in First Class. In regards to cabin crew service, passengers indicated that they were satisfied with this design touch point although some Business Class respondents were dissatisfied with both the cabin meals and cabin seats.

Economy Class Customers

The Economy Class participants' opinions regarding the tangible and intangible customer touch points are illustrated in Figure 4.7. Firstly, the majority of respondents were 'satisfied' (44.6%) or 'completely satisfied' (9.3%) with the cabin crew service. Many, 31.8%, Economy Class respondents were 'neutral' towards it. Notably, only a small number of Economy Class respondents were 'dissatisfied' (14.8%) or 'completely dissatisfied' (8.2%) with the cabin crew service, i.e. less than a quarter.

Figure 4.7 also shows the Economy Class respondents' level of satisfaction with Saudia Airlines' cabin meals. Over a third, 33.9%, of these passengers were 'satisfied' but only a small number of respondents were 'completely satisfied' (3.7%). On the other hand, 20.3% and 16.5% reported that they were 'dissatisfied' or 'completely dissatisfied' with the cabin meals, respectively. Given that those at least satisfied (37.6%) with this onboard provision were approximately the same as those at least dissatisfied (36.8%), this would suggest that, on the whole, Economy Class passengers are not as demanding as First Class and Business Class passengers.

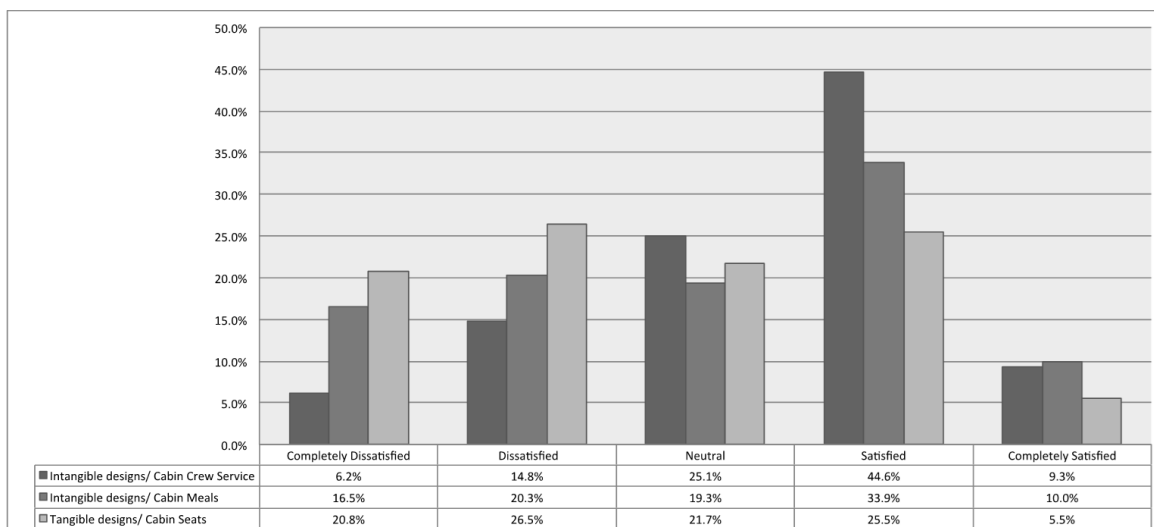


Figure 4.7 Economy Class satisfaction levels regarding the onboard designs of customer touch points

In addition, Figure 4.7 demonstrates Economy Class participants’ level of satisfaction with Saudia Airlines’ cabin seats. In general, the respondents in Economy Class were ‘dissatisfied’ with the cabin seats (26.5%) and 20.8% were ‘completely dissatisfied’ with this tangible touch point. By contrast, 25.5% reported that they were ‘satisfied’ and those who were ‘completely satisfied’ with the cabin seats only amounted to 5.5%. Hence, those Economy Class respondents who were at least dissatisfied with the cabin seats (47.3%) far outnumbered those who were at least satisfied (31.0%).

To conclude, the Economy Class result for the onboard design touch point of cabin crew service was they were satisfied with this design touch point. Passengers satisfied and dissatisfied with cabin meals were relatively the same score but respondents were largely dissatisfied with the cabin seats in Economy Class.

The relationships between the level of customer satisfaction and onboard design touch points will be discussed further in sections 4.2.2 and 4.2.4 for First Class and Business Class.

4.1.3 Post-flight

In this section, the post-flight customer touch points that include the special assistance service and luggage handling are presented and evaluated beginning with First Class, followed by Business and finally Economy Class customers.

First Class Customers

The First Class participants’ opinions regarding the above customer touch points are illustrated in Figure 4.8. The aim was to evaluate their level of satisfaction with Saudia Airlines’ special assistance service and luggage handling. Firstly, the majority of the

respondents in First Class were ‘neutral’ (52.6%) towards the special services aspect of the flight experience. Regarding dissatisfied respondents, 17.9% said they were ‘dissatisfied’ and 14.7% reported that they were ‘completely dissatisfied’ with the special assistance service. On the other hand, some First Class passengers were ‘satisfied’ (12.0%) or ‘completely satisfied’ (2.8%) with this intangible provision.

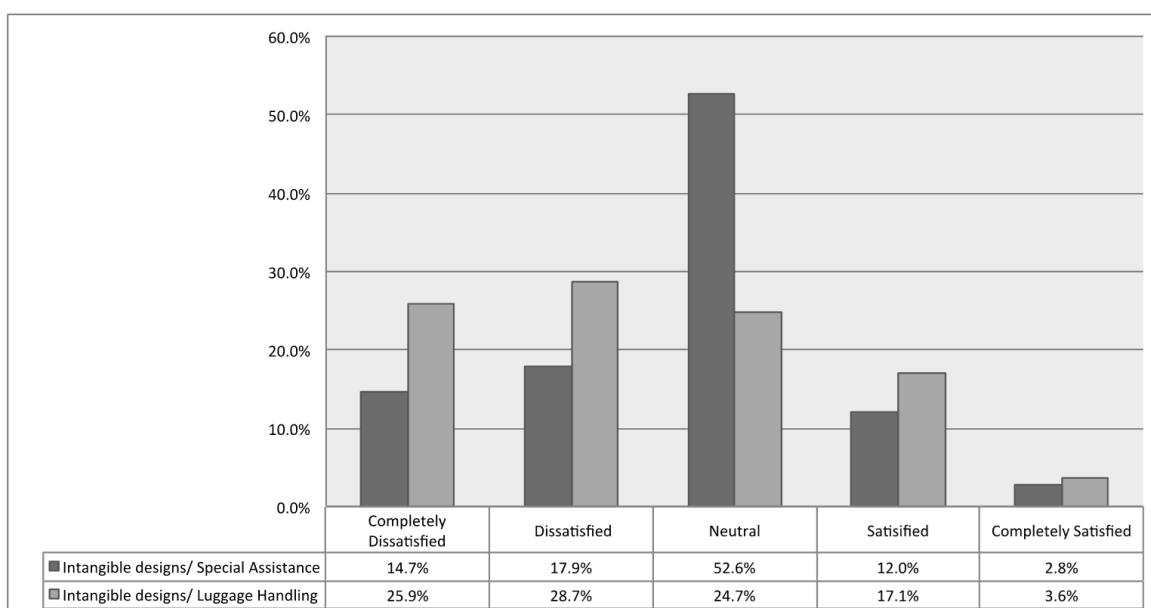


Figure 4.8 First Class satisfaction levels regarding the post-flight designs of customer touch points

Figure 4.8 also presents First Class participants’ level of satisfaction with Saudia Airlines’ luggage handling. The majority of respondents in First Class were dissatisfied with this, with 28.7% reporting that they were ‘dissatisfied’ and 25.9% that they were ‘completely dissatisfied’ with this intangible design customer touch point. By contrast, 17.1% reported that they were ‘satisfied’ or ‘completely satisfied’ (3.6%) with the luggage handling, i.e. only about one fifth of customers.

Business Class Customers

The Business Class participants’ opinions regarding post-flight designs for customer touch points are illustrated in Figure 4.9. Firstly, the majority of respondents (50.9%) reported that they were ‘neutral’ towards the special assistance service. Of these passengers, 18% said they were ‘dissatisfied’ and 12% reported that they were ‘completely dissatisfied’ with this service, whilst 15.7% were ‘satisfied’ and 3.4% were ‘completely satisfied’. Hence, those at least dissatisfied with the special assistance service (30%) outweighed those who were at least satisfied (19.1%).

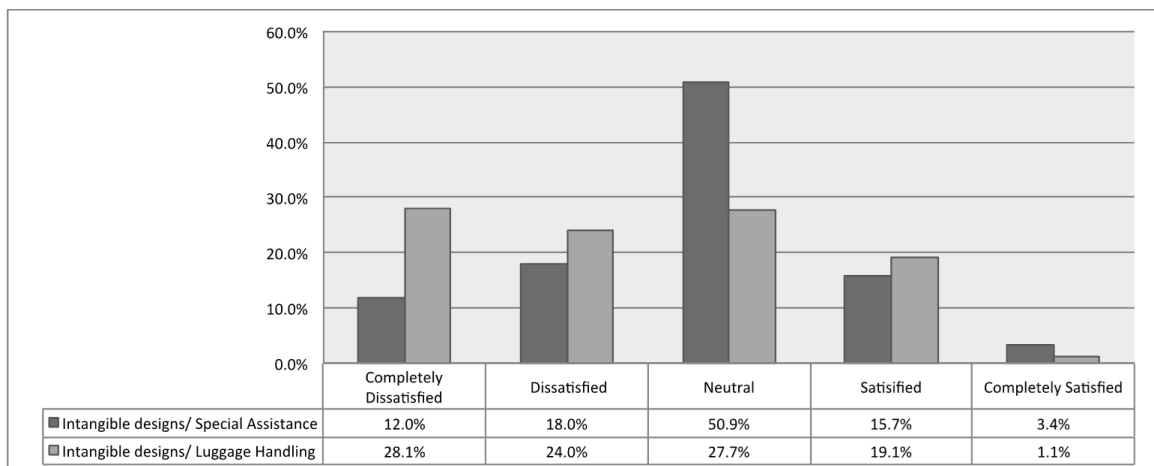


Figure 4.9 Business Class satisfaction levels regarding the post-flight designs of customer touch points

Figure 4.9 also shows Business Class participants’ level of satisfaction with Saudia Airlines’ luggage handling. Here, 28.1% reported that they were ‘completely dissatisfied’ with this design touch point and 24.0% were ‘dissatisfied’, i.e. 52.1% were at least dissatisfied. By contrast, 19.1% reported that they were ‘satisfied’ and 1.1% were ‘completely satisfied’ with the luggage handling, that is, just over a fifth.

Economy Class Customers

The Economy Class participants’ opinions regarding customer touch points are illustrated in Figure 4.10. Firstly, almost half these respondents (47.5%) were ‘neutral’ towards the special assistance service. Next, 31.3% were ‘dissatisfied’ or ‘completely dissatisfied’ with this post-flight service, whereas 21.3% were ‘satisfied’ or ‘completely satisfied’.

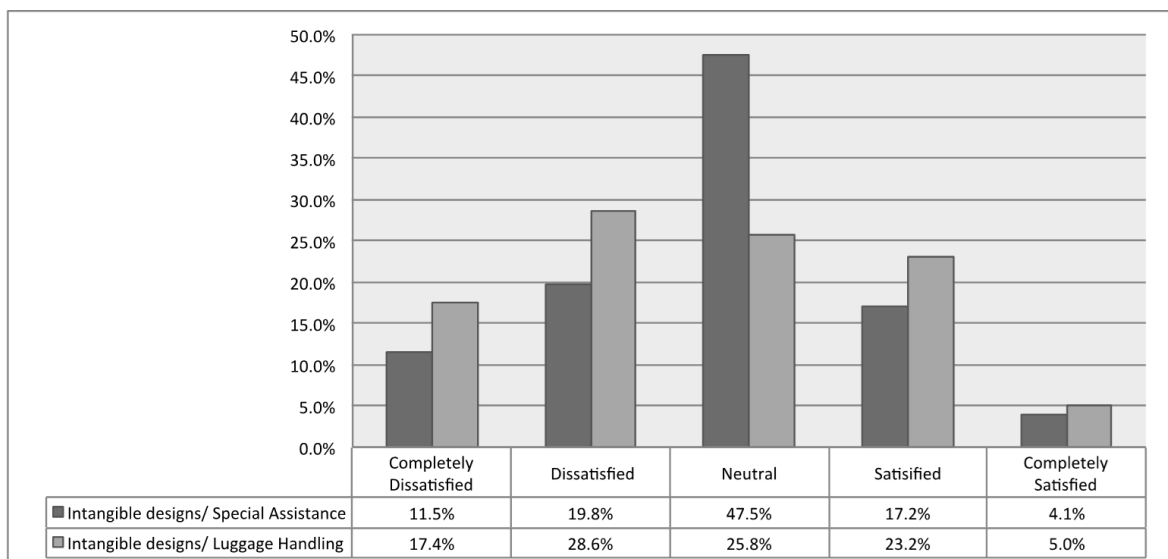


Figure 4.10 Economy Class satisfaction levels regarding the post-flight designs of customer touch points

In addition, Figure 4.10 shows Economy Class participants’ level of satisfaction with Saudia Airlines’ luggage handling and almost half the respondents were dissatisfied with it. Specifically, 28.6% of this class of participants reported that they were ‘dissatisfied’ with this customer touch point and 17.3% were ‘completely dissatisfied’, making a total of 45.9% giving negative feedback. By contrast, 23.2% said they were ‘satisfied’ and 5.0% were ‘completely satisfied’ with the luggage handling. In the post-flight stage participants reported that they were dissatisfied with Saudia Airlines’ special assistance service and luggage handling for all classes.

4.1.4 Overall Customer Satisfaction

Figure 4.11 illustrates the overall customer satisfaction for First Class, Business Class and Economy Class participants. The majority of customers of all classes were ‘dissatisfied’ with the customer journey provided by Saudia Airlines. One third (33.1%) of First Class participants reported that they were ‘dissatisfied’ with customer journey as a whole, and 30.7% were ‘completely dissatisfied’, i.e. a substantial proportion (63.8%) reported a negative customer experience. A few First Class respondents expressed the view that they were ‘satisfied’ (13.1%) or ‘completely satisfied’ (2.0%) with their overall customer experience.

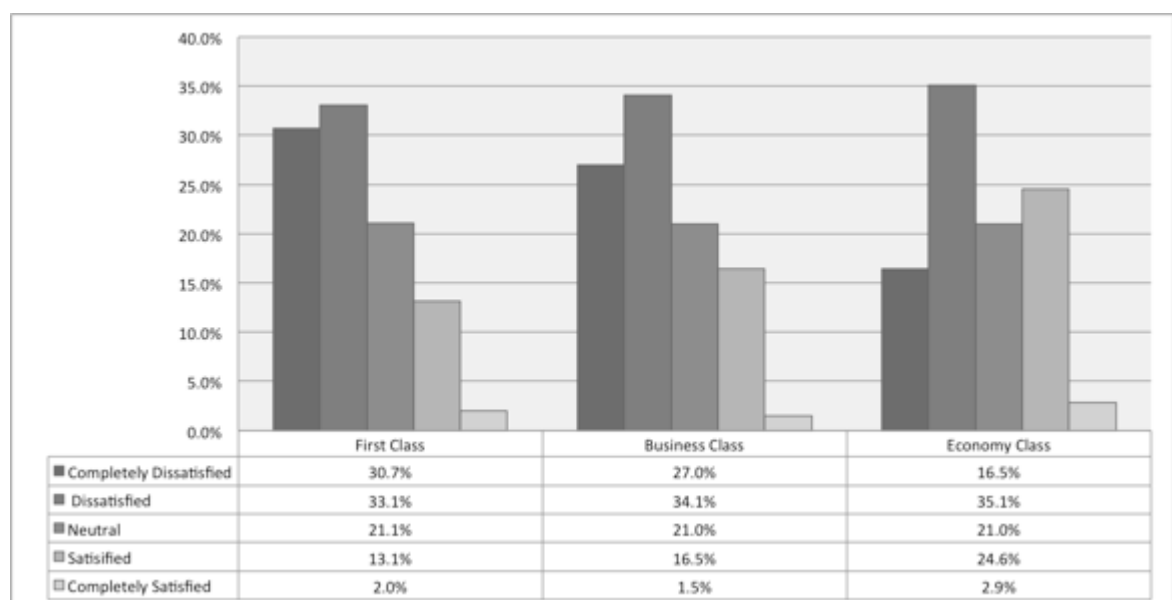


Figure 4.11 Overall customer satisfaction

Figure 4.11 indicates that 34.1% of the Business Class participants were ‘dissatisfied’ with their journey as a whole and 27.0% were ‘completely dissatisfied’, i.e. a substantial proportion of 61.1% reported a negative customer experience. By contrast, 16.5% said they were ‘satisfied’ and 1.5% were ‘completely satisfied’ with the overall customer

experience. Furthermore, Figure 4.11 indicates that 35.1% of Economy Class participants were ‘dissatisfied’ with their journey as a whole and 16.5% were ‘completely dissatisfied’, i.e. a substantial proportion of 51.6% reported a negative customer experience. By contrast, 24.6% said they were ‘satisfied’ and 2.9% were ‘completely satisfied’ with the overall customer journey. Regarding the overall customer satisfaction, the majority of passengers in all classes were dissatisfied with Saudia Airlines according to the findings of the survey.

4.1.5 Star Ranking for Saudia Airlines

Figure 4.12 shows the findings regarding the First Class, Business Class and Economy Class respondents’ star ranking of Saudia Airlines. Only a small number of respondents for all classes ranked Saudia Airlines with five stars (0.8% First Class, 0.4% Business Class and 2.6% Economy Class). The majority of participants for all classes ranked Saudia Airlines with three stars (31.9% First Class, 33.3% Business Class and 42.5% Economy Class), which was the same ranking given to Saudia Airlines in the Skytrax worldwide surveys from 2009 to 2013 (see Chapter 01, Table 1.4).

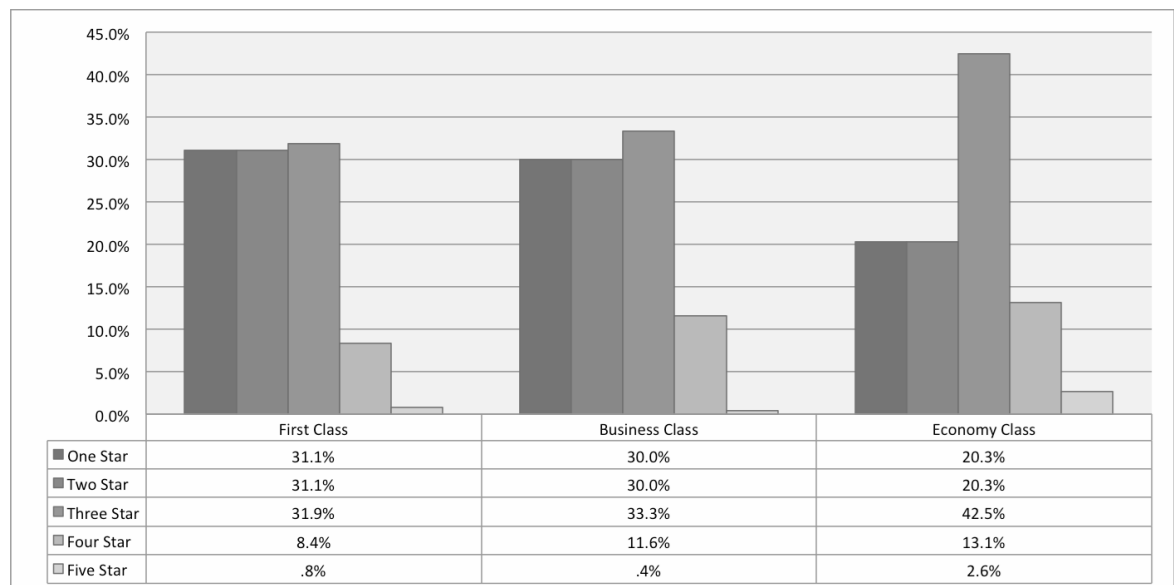


Figure 4.12 Star ranking for Saudia Airlines

Furthermore, the proportion of First Class respondents who gave Saudia Airlines a one or two star ranking was equal at 31.1%. Similarly, Business Class respondents’ one or two star rankings were the same at 30.0%. Economy Class respondent results for one or two star rankings were also the same at 20.3%.

To sum up, only a small number of participants ranked Saudia Airlines with five stars, whilst the majority of participants in all classes ranked Saudia Airlines at three stars.

4.1.6 Passenger Nationality

The first question in the survey ensured that the participants met the criteria for participating in the study. The main criterion was restricted that the participants had flown with Saudia Airlines because the survey addressed the tangible and intangible design touch points of Saudia Airlines only. The results of the survey showed that most of the passengers were of Saudi nationality and only a small number of participants had other nationalities such as Arab and Middle Eastern, European, North American and South African (see Table 4.1).

Table 4.1 Results of the survey for passengers’ nationalities who travelled with Saudia Airlines

Nationality	Frequency	Percentage
Saudi	807	86%
Arab\Middle Eastern	92	9.8%
European\American	17	1.8%
Asian\Australian	13	1.4%
African	9	1%
Total	938	100%

4.2 Qualitative Research: Customer Interviews

This section gives the overview of the findings extracted from the passengers’ interviews (Appendix B1 and B3). Through seven interviews with frequent flyers, 271 distinct comments were captured. In order to uncover key issues and patterns within these comments, they were assigned to nine different groups according to the touch points that the comments referred to. Within each group, comments were abstracted further – see several key themes in Appendix B5 and B6. The detailed information and discussions of each group will be discussed in sections 4.2.1–4.2.4). For a more detailed breakdown of customers’ comments for each touch point, please refer to Appendix B5 and B6.

4.2.1 Pre-flight: Lounge Area at the Airport

This section will discuss the pre-flight stage of the design of the lounge because it was the touch point that participants most frequently commented on. In fact, 57 comments out of the total number of 271 were related to the design of the lounge for both Saudia Airlines and other airlines (see Appendix B2-2). Furthermore, four key themes were derived from the transcripts of the interviews with frequent flyers who travelled with both Saudia Airlines and other airlines. The key themes contain several distinct sub-themes. The sub-

themes that participants emphasised the most were considered very important and therefore will be discussed in great detail (see Table 4.2).

Table 4.2 Pre-flight: Lounge area at the airport

Key themes		Most frequently arising sub-themes		Comments related to Saudia Airlines' touch points	Comments related to other airlines' touch points
1	Experience	1.1	Positive overall experience	0	13
		1.2	Negative overall experience	6	0
2	Tangible design touch points	2.1	Provide comfort and privacy	0	6
		2.2	Limited space	1	1
3	Intangible design touch points	3.1	Food service caters for all	0	5
		3.2	Poor food service and options	2	0
4	Communication	4.1	Positive customer service	0	6
		4.2	Negative customer service	2	1

*Note: Only the sub-themes that participants frequently emphasised are presented in this table.

4.2.1.1 Key Theme 1: Experience of the Lounge Area

One of the key themes titled '*experience*' was derived from the transcripts of the interviews with frequent flyers who travelled on both Saudia Airlines and other airlines. This key theme contains several sub-themes (see Appendix B2-2). The two main sub-themes were '*positive overall experience*' and '*negative overall experience*'. These sub-themes will be discussed in detail (see Table 4.2).

Sub-theme 1.1: Positive Overall Experience

It is important to point out that all positive comments were given with respect to the lounges provided by other airlines. None of the participants gave positive comments about the design of Saudia Airlines' lounges. Thirteen comments about the designs of the lounges provided by other airlines could be labelled as 'positive overall experience'. For example, one interviewee commented, '*British Airways lounge, the service, calling for the flight and food. All the facilities offered were really good*' (P1.3.1)³. He reported further, '*Etihad, their lounge is excellent*' (P1.3.2). Moreover, another respondent stated that '*The Emirate Airlines was the best one between all Airlines*' (P3.3.1). Similarly, another customer explained that '*Qatar Airways lounge was marvellous*' (P4.3.2). He described

³ The breakdown for participants' numbers (e.g. P1.3.1) is as follows: (P) participant, 1 is participant's number in this research, 3 is the order of design touch point in the customer journey, and 1 is the number of the comment for this participant.

further that *‘Qatar Airways I feel good in their lounge’* (P4.3.4). Finally, another passenger commented that *‘Emirate Airlines in Dubai, the First Class lounge, it is part of heaven’* (P7.3.1).

It was observed that participants used terms such as ‘excellent’, ‘best’, ‘marvellous’ and ‘part of heaven’ to describe their overall experience regarding this touch point. The tone of voice suggested that they received very positive experiences from the designs of the lounges provided by leading airlines, such as British Airways, Emirates Airlines and Qatar Airways. It could be seen that the lounges that participants referred to had spacious areas, which provided facilities and privacy.

Sub-theme 1.2: Negative Overall Experience

It is important to point out that all negative comments were given to the designs of Saudia Airlines’ lounges. None of the participants gave negative comments about the lounges provided by other airlines. Six comments about the designs of Saudia Airlines’ lounges could be labelled as ‘negative overall experience’. For example, one participant commented, *‘I am dissatisfied with the design, the setting, food, newspaper, all services in general. There is a big difference, excellent service when it comes to British Airways or Emirates Airline’* (P2.3.2). Moreover, another participant asserted, *‘Saudia Airlines lounge is bad of course even for what they call First Class lounge, Saudia Arabia is very bad even after the development’* (P3.3.1). Similarly, one respondent stated, *‘truthfully Saudia Airlines is way below the average on the lounge specifically I didn't go to Jeddah but I went to Riyadh in the lounge and you know it was way below the average of their competitors’* (P6.3.1). In addition, one customer indicated, *‘the lounges in the Saudi Airlines are so bad’* (P7.3.1).

It was observed that participants used the terms such as ‘bad’, ‘below average’ and ‘dissatisfied’ to describe their overall experience of Saudia Airlines’ lounges. The tone of voice suggested that they had very negative experiences from the designs of the lounges. It could be seen that the lounges provided by Saudia Airlines were significantly different from those offered by the other airlines mentioned in the previous section.

4.2.1.2 Key Theme 2: Tangible Design Touch Points of the Lounge Area

This section will discuss one of the key themes titled *‘tangible design touch points (of the lounge area)’* derived from the transcripts of the interviews with frequent flyers who travelled on both Saudia Airlines and other airlines. This key theme contains several distinctive sub-themes (see Appendix B2-2). The two sub-themes that participants

emphasised the most were *'provide comfort and privacy'* and *'limited space'*. These sub-themes will be discussed in detail (see Table 4.2).

Sub-Theme 2.1: Provide Comfort and Privacy

All participants gave positive comments regarding the tangible design touch points of the lounges provided by other airlines while none of them reported positive comments about the tangible design touch points of the lounges offered by Saudia Airlines. The positive comments given about the lounges of other airlines shared common aspects, which could be labelled as *'provide comfort and privacy'*. For example, one participant commented, *'British Airways when I go to the first class lounge, it is quiet, comfortable and nice'* (P4.3.1). In addition, another passenger asserted that *'British Airways, their lounge is comfortable'* (P5.3.6). Similarly, one respondent stated that *'British Airways, their space is very large'* (P6.3.4). He further commented, *'Emirate Airlines have terminal three, which is a specific lounge a whole floor actually that was a terrific lounge'* (P6.3.2).

The detailed discussion of tangible aspects of the lounges suggested that comfort and privacy were the keys to positive customer experiences. To develop their customer experience, Saudia Airlines should design the lounge area to focus on improving passenger comfort and privacy when planning tangible design touch points.

Sub-Theme 2.2: Limited Space

Furthermore, two negative comments for the tangible design touch points were given regarding the designs of the lounges provided by both Saudia Airlines and other airlines. For example, one participant commented on the limited space offered by the other airlines: *'Etihad Airways they have one problem only their lounge was small, but they are working on expanding it. In the high seasons, they are stressed, so if you arrived one hour early you won't be able to book for the spa'* (P7.3.9). This participant indicated that Etihad Airways are planning to expand their lounge, which should give passengers more room and privacy within the lounge area. Furthermore, limited space was also highlighted with respect to Saudia Airlines. For instance, another respondent stated that *'seats were next to each other, no privacy'* (P3.3.3). It could be seen that the lounges provided by other airlines were significantly more comfortable and private than the lounges offered by Saudia Airlines. Therefore, it can be concluded that Saudia Airlines should provide comfort and privacy within their lounges to enhance their customer experience.

4.2.1.3 Key Theme 3: Intangible Design Touch Points of the Lounge Area

This section will discuss one of the key themes titled '*intangible design touch points (of the lounge area)*' derived from the transcripts of the interviews with frequent flyers who travelled on both Saudia Airlines and other airlines. This key theme contains several distinctive sub-themes (see Appendix B2-2). The two sub-themes that participants emphasised the most were '*food service caters for all*' and '*poor food service and options*'. These sub-themes will be discussed in detail (see Table 4.2).

Sub-Theme 3.1 Food Service Caters for All

All participants gave positive comments regarding the intangible design touch points of the food service in the lounge provided by other airlines, but none of them reported positive comments regarding the offer from Saudia Airlines.

The positive comments given about the lounges of other airlines shared common aspects, which could be labelled as '*food service caters for all*'. For example, one customer commented that '*the kind of food; there are food for different kinds of people like vegetarian, high protein, and diabetes, all kinds of people whatever the diet you follow, you find the food that suits you*' (P3.3.3). In addition, another passenger indicated that '*the food in the Emirates Airlines lounge is excellent*' (P5.3.4). Moreover, one participant commented that '*the Qatar Airways foods is of all cuisines and beverages were excellent*' (P7.3.7). He added that '*Etihad Airways the food options are a wide variety and excellent*' (P7.3.10).

It was observed that participants used terms such as '*food that suits you*', '*foods of all cuisines*' and '*a wide variety*' to describe the catering service provided by other airlines. The tone of voice suggested that they received very positive experiences from the catering service designed for the lounges provided by leading airlines, such as Emirates Airlines Qatar Airways and Etihad Airways. It could be seen that these other airlines understood their passengers' needs and designed a catering service that they believed would be suitable with a wide variety of choices.

Sub-Theme 3.2: Poor Food Service and Options

In contrast, passengers gave negative comments about the intangible design touch points of the food service in the lounges provided by Saudia Airlines; none reported negative comments about the food offered by other airlines. For example, one passenger stated that '*food was not good*' (P3.3.5). Furthermore, another respondent noted that '*Saudia Airlines in comparison between other airlines, especially in food they're not that good*' (P5.3.2).

To sum up, customers highlighted that other airlines tend to have *'food service that caters for all'* their passengers, whereas respondents stressed the *'poor food service and options'* provided by Saudia Airlines. Therefore, Saudia Airlines should understand their passengers' needs to be able to improve the catering service they provide.

4.2.1.4 Key Theme 4: Communication in the Lounge Area

This section will discuss one of the key themes titled *'communication (in the lounge area)'* that emerged from the transcripts of the interviews with frequent flyers who travelled on both Saudia Airlines and other airlines. This key theme contains two distinctive sub-themes, which will be discussed in detail (see Table 4.2).

Sub-Theme 4.1: Positive Customer Service

It is important to point out that all positive comments were given about the lounges provided by other airlines. None of the participants gave positive comments about the design of Saudia Airlines' lounges.

Six comments about the designs of the lounges provided by other airlines could be labelled as *'positive customer service'*. For example, one interviewee commented that *'Etihad Airways their services are superior. You feel the hostess serves only you, though they serve others, but you feel you are number one'* (P1.3.3). Moreover, another participant stated that *'Emirates Airlines have marvellous services in the lounge'* (P7.3.4). He explained that *'the Qatar Airways has a whole building for the lounge, 7 stars service, excellent services and spa'* (P7.3.6). It was observed that participants used the terms such as *'superior'*, *'number one'* and *'7 stars'* to describe their customer service experience regarding this touch point. It could be seen that the lounges that participants referred to offered services that were superior and made passengers feel special. Their tone of voice suggested that they received very positive service from the leading airlines, such as Etihad Airways, Emirates Airlines and Qatar Airways.

Sub-Theme 4.2: Negative Customer Service

By contrast, as part of the key theme *'communication'* Saudia Airlines' customers gave negative comments that were evidence of *'negative customer service'* about airport lounge areas. For example, one passenger commented that *'in comparison between other airlines their service is not that good'* (P5.3.1). He described further that *'honestly they don't offer good service'* (P5.3.3). Therefore, it can be concluded that Saudia Airlines' passengers reported *'negative customer service'* in contrast to airlines other than Saudia Airlines, such

as Etihad Airways, Emirates Airlines and Qatar Airways, for which the comments highlighted ‘positive customer service’.

Saudia Airlines should design positive customer service for passengers by improving their services in the lounge, which could increase levels of satisfaction and overall experience. According to Cooper and Press (2003) customers need to be understood by applying strategies that allow competitiveness and innovation. This is related to the use of design at a strategic level. Furthermore, they argue that understanding customers is essential because by understanding how people live, an organisation can create a meaningful customer experience.

4.2.2 Onboard: Cabin Crew Service

This section will discuss the onboard stage of the cabin crew services because it was the second most important touch point that most participants commented about. That is, 50 comments out of the total number of 271 were related to the cabin crew services for both Saudia Airlines and other airlines (see Appendix B4-1). Moreover, the key theme that emerged from the transcripts of the interviews with frequent flyers who travelled on both Saudia Airlines and other airlines was communication. This key theme contained several distinctive sub-themes. The sub-themes that participants emphasised the most will be discussed in detail (see Table 4.3).

Table 4.3 Onboard: Cabin crew service

	Key themes		Most frequently arising sub-themes	Comments related to Saudia Airlines’ touch points	Comments related to other airlines’ touch points
1	Communication	1.1	Positive customer service	1	7
		1.2	Negative customer service	10	0
		1.3	Extra attention and care	0	9
		1.4	Limited attention and care	2	0
		1.5	Good staff communication and behaviour	0	4
		1.6	Poor staff communication and behaviour	4	0

*Note: Only the sub-themes that participants frequently emphasised are presented in this table.

4.2.2.1 Key Theme 1: Communication of the Cabin Crew Service

This section will discuss the key theme titled ‘*communication*’ emerged from the transcripts of the interviews with frequent flyers who travelled on both Saudia Airlines and other airlines. This key theme contains several distinctive sub-themes (see Appendix B4-1). The six sub-themes that participants emphasised the most will be discussed in detail (see Table 4.3).

Sub-Theme 1.1: Positive Customer Service

As part of the key theme of communication, only one customer gave a positive comment about the cabin service offered by Saudia Airlines. In contrast, seven positive comments were given about the cabin service offered by other airlines. For example, one interviewee said they were ‘*completely satisfied with services of other airlines*’ (P1.4.1). In addition, another respondent stated, ‘*the Business Class service for British Airways and Etihad Airways is great*’ (P6.4.1). One passenger commented, ‘*I know the manager has an administration that will support him, my job description is ABC, and he could have told me it is not part of my job description. I liked the touch he offered me. I know he went beyond his power to please me*’ (P7.4.5). Subsequently, a score of 1 was assigned to Saudia Airlines’ positive customer service, for example one customer explained that ‘*when I was travelling international from the United Kingdom to Saudi Arabia I was impressed with their service. I was in a very bad mood, but they were very friendly, the food and the service was good*’ (P4.4.3). A score of 7 was therefore allocated to other airlines’ positive customer service. It could be seen that there was a pressing need to improve the quality of cabin service at Saudia Airlines.

Sub-Theme 1.2: Negative Customer Service

As part of the key theme of communication, Saudia Airlines’ customers gave 10 negative comments about their cabin service. In contrast, no negative comments were given about that provided by other airlines. For example, one interviewee explained, ‘*the cabin crew service is below standard*’ (P1.4.4). Another customer stated, ‘*I am dissatisfied with the service of the cabin crew*’ (P2.4.1). Furthermore, one respondent expressed the view that ‘*I’m completely not satisfied with Saudia Airline’s service in general*’ (P3.4.3). He described further that ‘*sometimes in Saudia Airlines you booked Business Class and suddenly you figured out they have downgraded even without notifying you that you have been downgraded for a certain reason! You only find out once you are in the plane*’

(P3.4.1). Moreover, one participant pointed out that *'service was very poor'* (P7.4.2). As a result, a score of 10 was assigned to Saudia Airlines' negative customer service, whilst a score of 0 was allocated to other airlines' negative customer service. It seemed that interviewees were very critical of services delivered by Saudia Airlines. This might be because most participants were Saudi Arabian citizens and often flew with this company.

Sub-Theme 1.3: Extra Attention and Care

As part of the key theme of communication not one customer gave positive comments about the extra attention and care offered by Saudia Airlines. In contrast, nine positive comments were given to that offered by other airlines. For instance, one passenger pointed out that *'the cabin crew staff constantly checked on me, if I needed anything because I told them I had had a surgery, they really offered amazing care'* (P3.4.2). In addition, another interviewee stated, *'in Malaysian Airlines, their planes are very clean because the cabin crew gave extra care and regularly removed the litter and cleaned the cabin during the flight, even before the plane landed at the airport'* (P5.4.1). One passenger explained that *'Qatar Airways cabin crew come to you every hour to ask you if you want something else or if things are fine'* (P6.4.3).

It was observed that participants used terms such as *'amazing care'*, *'extra care'* and *'crew come to you every hour'* to describe their overall experience regarding this touch point. The tone of voice suggested that they received very positive experiences from the cabin crew service provided by other airlines, such as Malaysian Airlines and Qatar Airways. It could be seen that the cabin crew service that participants referred to was a positive service, which involved extra attention and care.

Sub-Theme 1.4: Limited Attention and Care

As part of the key theme of communication, Saudia Airlines' customers gave two negative comments about their limited attention and care. In contrast, no negative comments were given about the limited attention and care provided by other airlines. For example, one interviewee stated *'they are not dedicating seats for the families, like other airlines'* (P1.4.3). One passenger explained, *'they don't care about how old is the passenger, old people, kids and women this is totally not considered'* (P3.4.2).

It was observed that participants used terms such as *'not dedicating seats'* and *'don't care'* to describe their overall experience regarding this touch point. Their tone of voice suggested that they received very negative experiences from the cabin crew service provided by Saudia Airlines. It could be seen that the cabin crew service that participants

referred to was negative, and provided limited attention and care even for those people who needed extra care (e.g. elderly, children and females). Therefore, it can be concluded that Saudia Airlines should provide extra attention and care for their customers to create the memorable experience and satisfaction passengers mentioned with the other airlines.

Sub-Theme 1.5: Good Staff Communication and Behaviour

As part of the key theme of communication, not one customer gave positive comments about good staff communication and behaviour offered by Saudia Airlines; four positive comments were given about other airlines. For example, one interviewee explained that *'the British Airways, for instance, from the moment you get on the plane, they smile and always speak to you nicely'* (P5.4.6). In addition, another interviewee stated that *'Emirates Airlines gives their staff the target to satisfy people. Do whatever you can to let the people enjoy and be satisfied'* (P7.4.4). It could be seen that the cabin crew service that participants referred to had good staff communication and behaviour in common. The passengers received very positive experiences from the cabin crew service provided by leading airlines, such as British Airways and Emirates Airlines.

Sub-Theme 1.6: Poor Staff Communication and Behaviour

As part of the key theme of communication Saudia Airlines' customers gave four negative comments about their poor staff communication and behaviour. In contrast, no negative comments were given about the poor staff communication and behaviour provided by other airlines. For example, one interviewee noted that *'sometimes if you asked them a question they show you it is not their job or responsibility. If you asked for your bag, they act like help yourself'* (P2.4.2). He explained further that *'their attitude is a little bit not nice, compared to other airlines they have to work on that'* (P2.4.3). Another frequent flyer commented that *'honestly, they should recruit staff having better communication skills. The staff still talk to you in a rude way...Look at the other airlines, for instance, from the moment you get on the plane, they always speak to you nicely'* (P05.4.4).

To sum up, customers seemed to be dissatisfied with the cabin crew service offered by Saudia Airlines, and gave negative comments about the limited attention and care and poor staff communication and behaviour. It could be observed that the cabin crew services provided by other airlines were significantly better with many positive comments about extra attention and care and good staff communication and behaviour. It could be seen that these other airlines understood their passengers' needs and had designed a cabin crew service that they believed would create a memorable experience and satisfy their

passengers. Similarly, in empirical studies Singapore Airlines pointed out the importance of the service it offered passengers and at the heart of its service was the ‘Singapore Girl’ that was one of the industry’s strategic benchmarks (Chan, 2000).

4.2.3 Pre-Flight: Online Booking

This section will discuss the pre-flight stage for online booking because it was the third most frequently commented on design touch point. As many as 44 comments out of the total number of 271 were related to the design of the online booking of both Saudia Airlines and other airlines (see Appendix B2-1). Furthermore, two main key themes emerged from the transcripts of the interviews held with frequent flyers who travelled with both Saudia Airlines and other airlines. These key themes contain several distinctive sub-themes. The sub-themes that participants emphasised the most will be discussed in detail (see Table 4.4).

Table 4.4 Pre-Flight: Online booking

	Key themes	Most frequently arising sub-themes		Comments related to Saudia Airlines’ touch points	Comments related to other airlines’ touch points
1	Experience	1.1	Positive overall experience	2	8
		1.2	Negative overall experience	3	1
2	Intangible design touch points	2.1	Plenty of options and information	0	7
		2.2	Limited service information and options	1	0
		2.3	User friendly process	1	6
		2.4	Inflexible and complicated	6	2

*Note: Only the sub-themes that participants frequently emphasised are presented in this table.

4.2.3.1 Key Theme 1: Experience of Online Booking

One of the key themes entitled ‘*experience*’ derived from the transcripts of the interviews with frequent flyers who travelled on both Saudia Airlines and other airlines. This key theme contains several distinctive sub-themes (see Appendix B2-1). The two main sub-themes were positive overall experience and negative overall experience. These sub-themes will be discussed in detail (see Table 4.4).

Sub-Theme 1.1: Positive Overall Experience

As part of the key theme *experience*, only two customers gave positive comments about the online booking offered by Saudia Airlines while eight positive comments were given to online booking offered by other airlines and could be labelled as a positive overall experience. In the case of Saudia Airlines' positive comments, one respondent pointed out that '*Saudia Airlines' online booking is good*' (P1.1.1). In addition, another passenger indicated that '*Saudia Airlines was generally good*' (P5.1.1). On the other hand, amongst the positive comments about other airlines one interviewee commented, '*online booking for British Airways is excellent*' (P1.1.1). He stated further that '*Qatari Airlines was also excellent*' (P1.1.3). Moreover, another participant stated, '*Emirates Airlines is excellent and Etihad Airways is excellent*' (P7.1.1).

It was observed that participants used the term '*good*' to describe their overall experience regarding this touch point with Saudia Airlines. The tone of voice suggested that they received a moderate experience from the online booking provided by Saudia Airlines. Passengers used the term '*excellent*' to describe their overall experience regarding this touch point with other airlines. The tone of voice suggested that they received a very positive experience from the online booking provided by leading airlines, such as British Airways, Qatar Airways, Emirates Airlines and Etihad Airways. It could be seen that the online booking that participants referred to for Saudia Airlines was a good service but it was not as good as the other airlines that provided excellent service for their customers.

Sub-Theme 1.2: Negative Overall Experience

It is important to point out that all negative comments were given to the design of Saudia Airlines' online booking. Only one customer gave a negative comment about the online booking provided by other airlines, whilst three comments that could be labelled as negative overall experience were given about the design of Saudia Airlines' online booking. For example, one interviewee noted, '*the online service of Saudia Airlines was terrible*' (P3.1.1). Furthermore, another customer stated that '*the website was bad*' (P7.1.2). He added, '*I stopped it*' (P7.1.3).

To summarise, it could be observed that the online booking service provided by Saudia Airlines was markedly lower than the online booking services provided by leading airlines, such as British Airways, Qatar Airways, Emirates Airlines and Etihad Airways. Customers' comments on the online booking used the terms '*terrible*' and '*bad*' to describe their overall experience regarding this touch point with Saudia Airlines. Saudia

Airlines should investigate the reasons their passengers are dissatisfied and what caused them to stop using this service to improve their online booking.

4.2.3.2 Key Theme 2: Intangible Design Touch Points of Online Booking

This section will discuss one of the key themes titled *intangible design touch points (of the online booking)* derived from the transcripts of the interviews with frequent flyers who travelled on both Saudia Airlines and other airlines. This key theme contains several distinctive sub-themes (see Appendix B2-1). The four sub-themes that participants emphasised the most will be discussed in detail (see Table 4.4).

Sub-Theme 2.1: Plenty of Options and Information

As part of the key theme, *intangible design touch points*, no customer gave positive comments about the options and information and the online booking system offered by Saudia Airlines; seven positive comments were given to the options and information features of the online booking offered by other airlines. For example, one participant explained that *'the booking in British Airways, they give you information about the different prices, like two or three different prices'* (P2.1.1). In addition, another customer pointed out that *'British Airways and Emirate Airlines gives you extra information, this information may help you if you need to know more dates or routes'* (P5.1.5). Similarly, another interviewee described, *'Qatar Airway's website, when you choose your dates of travel and your destination, then you have a table and the table gives you some flexibility to say "okay, if I delay my flight by one day I save £50"'* (P6.1.2).

A score of 7 was allocated to other airlines that provided plenty of options and information on the online booking system. It could be seen that there is a pressing need to offer more options and information to improve the quality of the online booking service at Saudia Airlines.

Sub-Theme 2.2: Limited Service Information and Options

As part of the key theme *intangible design touch points* one customer gave a negative comment about the service offered by Saudia Airlines online booking service. He explained that *'Saudia Airlines online booking you enter the date and it displays the flights availability only on that date, not a day before or after it'* (P5.1.2). In contrast, no negative comments were given about the limited service information and options provided by other airlines.

To sum up, customers' comments emphasised positive comments about the number of options and information provided mostly by other airlines. Only one passenger gave a negative comment about the limited service information and options offered by Saudia Airlines. It could be observed that given customers' ability to select from a wide variety of airlines that offer good services, Saudia Airlines should differentiate their services from the rest of the market because of the strong competition facing the airline industry. Saudia Airlines should develop the customer experience that provides for passengers' needs and expectations to be met to be able to survive.

Sub-Theme 2.3: User-Friendly Process

As part of the key theme *intangible design touch points*, only one customer gave a positive comment about user-friendly processes when describing the online booking system offered by Saudia Airlines. The passenger stated that *'Saudia's online reservation is very easy'* (P2.1.3). By contrast, six positive comments were given to the user-friendly processes of the online booking offered by other airlines. For example, one interviewee commented that *'British Airways' website is quite flexible, easy to use and fully supported by the airline'* (P1.1.2). In addition, another customer explained that *'British Airways online booking is very easy, smooth, especially the prices, I felt comfortable with it'* (P4.1.1). Moreover, another respondent pointed out that *'you have a table you can choose your dates and choose the price'* (P6.1.4). He described further, *'I think all of them are pretty fast by five clicks you can get your reservation'* (P6.1.5). As only one comment was allocated to Saudia Airlines about the user-friendly process of the online booking system, it could be seen that there is a pressing need to offer more flexibility and speed to improve the quality of the online booking service of Saudia Airlines.

Sub-Theme 2.4: Inflexible and Complicated

As part of the key theme *intangible design touch points*, Saudia Airlines' customers gave six negative comments about their inflexible and complicated online booking system. For example, one interviewee stated that *'it's very rigid and not flexible'* (P1.1.3). He explained further, *'sometimes you can book the seat and sometimes you cannot. Sometimes you can pay online sometimes you cannot'* (P1.1.5). In addition, another passenger noted that *'the problem is that let's assume I bought the ticket and for some reason I decided not to go, and I want to refund my money back. To get the money from them it is a hassle, while in other airlines they just put it back on your credit card'* (P2.1.5).

In contrast, two negative comments were given describing the inflexible and complicated system provided by other airlines. For instance, one respondent commented that *‘Lufthansa I have a problem with the language in their website because the English language is complex not like in British Airways, Germans sometimes use unclear English terms’* (P3.1.3). The detailed discussion of intangible aspects of the online booking system suggested that plenty of options and information and a user-friendly process was the key to positive customer experience, whereas having limited service information and options and inflexible and complicated procedures were the keys to negative customer experience. The literature mentioned the term ‘empathy’ as a way to view the world around us with other peoples’ interpretations and experiences to design experiences that could create opportunities (Brown, 2009). Saudia Airlines should involve passengers to design the experience to meet their needs and expectations in their journey. Accordingly, by engaging customers in the design experience, it might increase customers’ levels of satisfaction and create a positive customer experience for Saudia Airlines.

4.2.4 Onboard: Cabin Seat

This section will discuss the onboard stage pertaining to the design of cabin seats because it was the touch point that participants most frequently commented about. For this, 41 comments out of the total number of 271 were related to the design of the cabin seats for both Saudia Airlines and other airlines (see Appendix B4-3).

Furthermore, two key themes were derived from the transcripts of the interviews with frequent flyers who travelled with both Saudia Airlines and other airlines. The key themes contain several distinctive sub-themes. The sub-themes that participants emphasised the most were considered very important and therefore will be discussed in great detail (see Table 4.5).

Table 4.5 Onboard: Cabin seat

	Key themes		Most frequently arising sub-themes	Comments related to Saudia Airlines' touch points	Comments related to other airlines' touch points
1	Experience	1.1	Positive overall experience	0	7
		1.2	Negative overall experience	2	1
2	Tangible design touch points	2.1	Provide comfort and privacy	0	9
		2.2	Lack of comfort and privacy	4	1
		2.3	Well-designed seats	1	7
		2.4	Poor seat design	2	0

*Note: Only the sub-themes that participants frequently emphasised are presented in this table.

4.2.4.1 Key Theme 1: Experience of Cabin Seats

One of the key themes titled *experience* emerged from the transcripts of the interviews with frequent flyers who travelled on both Saudia Airlines and other airlines. This key theme contains several distinctive sub-themes (see Appendix B4-3). The two main sub-themes under this theme were positive overall experience and negative overall experience. These sub-themes will be discussed in detail (see Table 4.5).

Sub-Theme 1.1: Positive Overall Experience

It is important to point out that all positive comments were given to the cabin seating provided by other airlines. None of the participants gave positive comments about the design of Saudia Airlines' cabin seats.

Seven comments given to the design of the cabin seat provided by other airlines could be labelled as a positive overall experience. For example, one customer stated that '*First Class is First Class, but British Airways and Etihad Airways are the best*' (P1.5.1). In addition, another interviewee pointed out that '*Turkish Airlines and British Airways have fantastic seats*' (P2.5.1). Moreover, another participant noted, '*I love the British Airways cabin seats*' (P4.5.2). It was observed that participants used terms such as '*best*', '*fantastic*' and '*love*' to describe their overall experience regarding this touch point. The

tone of voice suggested that they received very positive experiences from the design of the cabin seats provided by leading airlines, such as British Airways, Etihad Airways and Turkish Airlines. It could be seen that the cabin seat that participants referred to had a good design that provided comfort and spaciousness.

Sub-Theme 1.2: Negative Overall Experience

As part of the key theme *experience*, Saudia Airlines' customers gave two comments about their negative overall experience regarding the cabin seat. For example, one participant said, '*Saudia Airlines cabin seats are not good at all comparing to British Airways*' (P2.5.1). He explained further that '*there is a big, big difference comparing to other airlines, which are much better*' (P2.5.2). Only one negative comment was given about a negative overall experience provided by other airlines. One customer stated that '*British Airways cabin seats compared to others airlines is not good*' (P3.5.2).

It was observed that participants described the negative experience regarding this touch point offered by Saudia Airlines. The tone of voice suggested that they received a negative experience from the design of the cabin seat provided by Saudia Airlines. It could be seen that the cabin seat that participants referred to had a bad design, in comparison with the positive experience provided by leading airlines regarding their cabin seats.

4.2.4.1 Key Theme 4: Tangible Design Touch points

This section will discuss one of the key themes titled *tangible design touch points (of the cabin seat)* that emerged from the transcripts of the interviews with frequent flyers who travelled on both Saudia Airlines and other airlines. This key theme contains several distinctive sub-themes (see Appendix B4-3). The four sub-themes that participants emphasised the most will be discussed in detail (see Table 4.5).

Sub-Theme 2.1: Provide Comfort and Privacy

All participants gave positive comments regarding the tangible design touch points of the cabin seats provided by other airlines, whilst none of them reported positive comments regarding those offered by Saudia Airlines. The positive comments given to the cabin seats of the other airlines shared common aspects, which could be labelled as '*provide comfort and privacy*'. For example, one passenger explained that '*I prefer privacy while travelling, this is what I like. Etihad Airways and British Airways provide you with*

privacy and comfort' (P1.5.4). In addition, another interviewee noted that *'So if you want to sleep, you will find it comfortable and you have your own personal space'* (P3.5.3). Moreover, another participant described *'the thing that I liked about British Airways is that their seats are comfortable and have a good space. The seats aren't too close to each other, there is space'* (P5.5.1). Furthermore, another participant pointed out that *'Etihad and British Airways are at the same level regarding the seats because they have seats, which lies 180°. So if you have a long flight you can sleep very comfortably and there is enough space between the chairs'* (P6.5.1). A score of 9 was allocated to other airlines that provided comfort and privacy. It could be seen that there is a pressing need to provide comfort and privacy to improve the quality of cabin seats at Saudia Airlines.

Sub-Theme 2.2: Lack of Comfort and Privacy

As part of the key theme *tangible design touch points*, Saudia Airlines' customers gave four negative comments about their lack of comfort and privacy. In contrast, only one negative comment was applied to that provided by other airlines. For example, one interviewee noted, *'I am not satisfied with the seats honestly of Saudia Airlines, because I am not comfortable with it'* (P2.5.3). He compared Saudia Airlines with other airlines, commenting, *'if I have to choose between Saudia Airlines and Turkish Airlines and Saudia Airlines and British Airways, I will choose the other airlines. I can deal with ok service, but the seats are the most important thing to me, is to sit comfortably and have privacy'* (P2.5.4). Furthermore, another customer described that *'Saudia Airlines seats are annoying and not comfortable. I was supposed to be flying in Business Class but still the seats were annoying'* (P5.5.1).

It was observed that participants used terms such as *'not satisfied'*, *'not comfortable'* and *'annoying'* to describe their overall experience regarding Saudia Airlines' cabin seats. The tone of voice suggested that they received very negative experiences from the designs of the cabin seat. It could be seen that the cabin seats provided by Saudia Airlines were significantly different from those offered by the other airlines mentioned in the previous section.

Sub-Theme 2.3: Well-designed Seats

It is important to point out that all positive comments were given to the cabin seats provided by other airlines and only one of the participants gave a positive comment about the design of Saudia Airlines' cabin seats. Seven comments given about the design of the cabin seat provided by other airlines could be labelled as well-designed seats. For

example, one customer stated that *'the cabin seats are large in Etihad Airways'* (P1.5.2). In addition, another interviewee commented that *'Turkish Airlines and British Airways have fantastic seats, it is very comfortable, it is like a bed'* (P2.5.3). Moreover, another participant described that *'the design of the cabin seats itself, I found that Etihad Airways has a good design and the selection of colours are beautiful'* (P6.5.3).

It was observed that participants described a positive experience regarding this touch point offered by other airlines such as Etihad Airways, British Airways and Turkish Airlines. It could be seen that the cabin seats that participants referred to were well-designed seats that provided comfort and space for passengers.

Sub-Theme 2.4: Poorly Designed Seats

As part of the key theme *tangible design touch points*, Saudia Airlines' customers offered two comments that were evidence of poorly designed seats. For example, one passenger pointed out that *'I don't like these sliding cabin seats at all while sleeping'* (P4.5.2) and another asserted that *'Saudia Airlines cabin seats were a little tighter than in the other airlines'* (P5.5.3).

All of the participants emphasised that Saudia Airlines' cabin seats were uncomfortable and had no privacy. Furthermore, passengers described that the cabin seats were poorly designed and needed maintenance. Regarding the other airlines, a respondent explained that they were spacious, large and provided the privacy passengers needed. Therefore, Saudia Airlines could improve their cabin seats by providing more comfort and privacy. The carrier should improve their seat design to meet customer expectations because passengers increasingly have a lot of options regarding the company with which they elect to travel.

It can be seen that the customer journey of Saudia Airlines was not considered to demonstrate the same level of satisfaction as those of other leading airlines and the designs of all touch points in the customer journey received more negative comments than positive ones. The survey and interview results highlighted the need for Saudia Airlines to improve their customer journey.

The design touch points discussed above were the ones that received the most comments. Post-flight touch points were of markedly less significance to customers than pre-flight and onboard touch points. The sub-themes elicited from customers regarding Saudia

Airlines' design touch points demonstrated their dissatisfaction and negative overall experiences. The quality of Saudia Airlines' lounges, cabin crew service, booking and cabin seats, which were the main touch points that customers were concerned about, were significantly weaker than those offered by other airlines. It was important to point out that customers commenting on tangible touch points seems to be markedly low compared to intangible aspects of the customer journey such as cabin crew service and online booking. Intangible touch points appeared to be more crucial to the satisfaction of customers. It can be assumed that passengers' levels of satisfaction were affected by intangible design touch points (e.g. service) much more than tangible design touch points (e.g. cabin seats). These results highlighted the need for service and system design rather than product design (e.g. furniture) only. In contrast, sub-themes arising from customers' comments on design touch points of airlines other than Saudia Airlines reflected satisfaction and positive overall experience.

In sum, the findings from study one of customers confirmed that the strategic use of design could lead to a high level of customer satisfaction. Furthermore, customer research confirmed that the design touch points provided by airlines employing strategic design (airlines that make good use of design) and those offered by airlines using Silent Design (Saudia Airlines) were perceived differently by customers and affected the level of their satisfaction. Saudia Airlines' use of the Silent Design approach was unable to give passengers the same memorable positive experience as those airlines that make good use of the strategic value of design, and which deliver a positive memorable and delightful experience. This also confirms the findings found in the literature.

4.3 Final Prototype B

At the end of study one, the customer research revisited the initial prototype (Prototype A). Key themes captured through the customer research were integrated into the initial prototype. The focus was on two key themes depicted in Prototype A (communication and customer experience) because the comments came from customers. Thus, they were unable to comment on the other key themes. By incorporating practical issues extracted from user research into Prototype B, the user research could ensure that Prototype B was based on a strong theoretical foundation and reflected the characteristics of the airline industry. The structure of Prototype B remains the same (based on Sinek's Golden Circle

model); however the detailed descriptions were revised and refined based on the primary customer research findings.

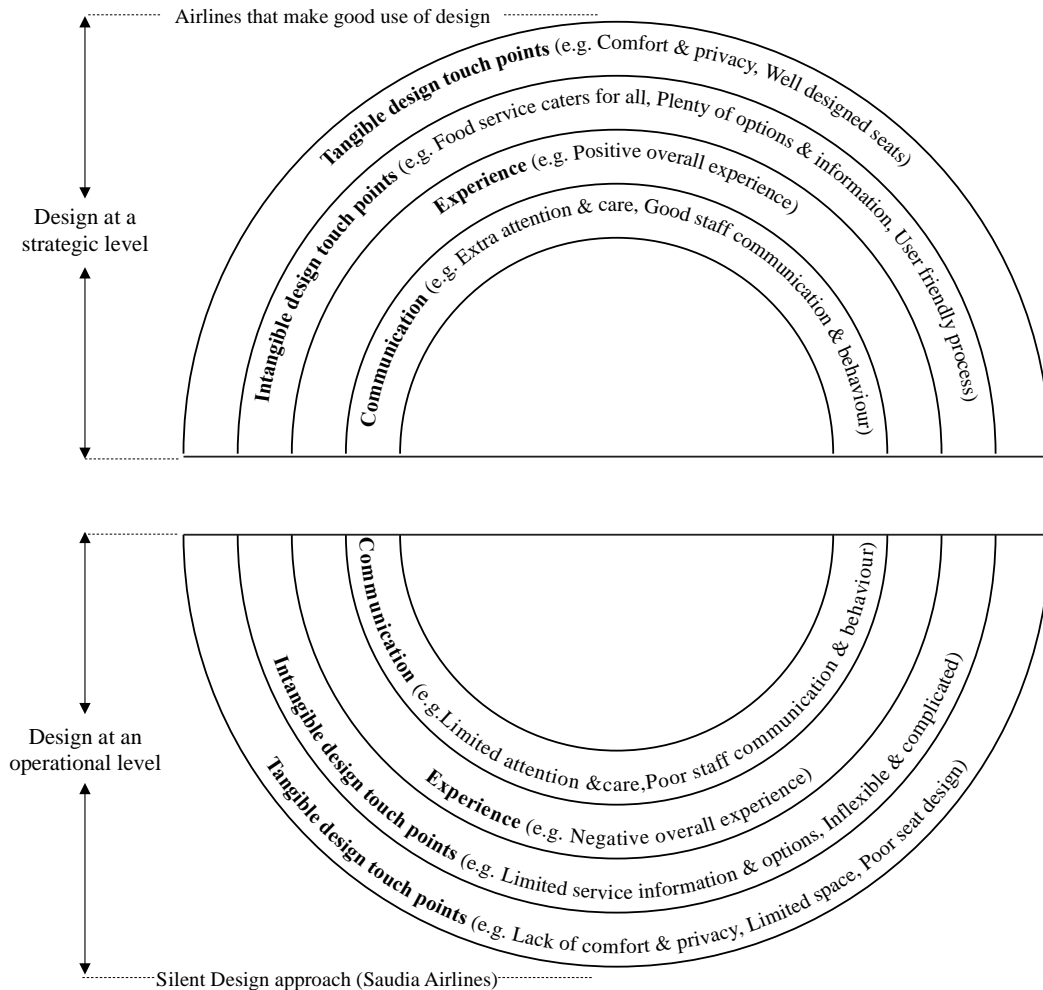


Figure 4.13 Prototype B (study one) for customer research

The structure of Prototype B demonstrates the customers’ perspectives, highlighting the first type of airline, which are those that make good use of design (located at the top half of the circle). The findings of the second type of airline, the current Silent Design approach for Saudia Airlines, is at the bottom half of the circle.

Prototype B highlights two key themes: 1) communication and 2) customer experience. The customer research is represented by three key themes. In addition, several sub-themes were addressed according to the findings of each type of airline. These two main key themes were the same for Saudia Airlines and the other airlines that make good use of design, yet the sub-themes differed from the Silent Design approach used by Saudia Airlines and the airlines that took a strategic approach to design.

The key themes in Prototype B are organised from the inner circle to the outer circle as follows:

1) Communication is at the inner circle, reflecting the order of the initial prototype (see Figure 2.30 in Chapter 02). Customers emphasised sub-themes for Saudia Airlines such as negative customer service and limited attention and care, but commented on the other airlines in a more positive manner, for example, positive customer service and good staff communication and behaviour.

2) Customer experience, which is represented by three detailed key themes a) experience, b) intangible design touch points and c) tangible design touch points:

a) Experience, in the second inner circle. The sub-themes changed according to the findings of Saudia Airlines, such as the negative overall experience, whilst the findings for the other airlines that make good use of design highlighted positive overall experiences.

b) Intangible design touch points of the customer journey. For Saudia Airlines the sub-themes stressed ‘limited service information and options’ and ‘poor food service and options’. For the airlines that make good use of design, the sub-themes emphasised ‘facilities that entertain all customers’ and ‘a food service that caters for all’.

c) Tangible design touch points highlighted sub-themes for Saudia Airlines that were negative such as the ‘limited space’ and ‘lack of comfort and privacy’. In contrast, the airlines that make good use of design stressed sub-themes that were more positive such as ‘provide comfort and privacy’ and ‘well-designed seats’.

This chapter has presented the interview narratives about Saudia Airlines’ customer journeys in which many participants expressed their dissatisfaction and related their unpleasant experiences, in comparison to their customer experiences with airlines that make good use of design such as British Airways, Etihad Airways, Qatar Airways, Emirates Airlines and Turkish Airways. Table 4.6 shows a clear gap between the two types of airline.

Table 4.6 Gap between Saudia Airlines and other airlines that make good use of design

Main key theme	Key themes	Sub-theme for other airlines	Sub-theme for Saudia Airlines	
Communication		Good staff communication and behaviour	Poor staff communication and behaviour	How: concept of Sinenk’s model (2009)
		Extra attention	Limited	

		and care	attention and care	‘The Golden Circle’ and Martin and Terblenche’s model (2003)
		Positive customer service	Negative customer service	
			Lack of brand communication	
Customer experience	Experience	Positive overall experience	Negative overall experience	What: concept of Sinenk’s model (2009) ‘The Golden Circle.’ Martin and Terblenche’s model (2003) encourages innovation or might prohibit innovation by following the key dimensions that they addressed.
		Fails to meet expectations	Fails to meet expectations	
	Intangible design touch points	Food service caters for all	Poor food service and options	
		Facilities entertain all customers	Poor facilities	
		Additional service	Limited service information and options	
		User-friendly process	Starting to improve	
			Additional service	
			Technical errors	
			Poor service process	
			Poor maintenance	
			Lost items	
			Inflexible and complicated	
	Tangible design touch points	Well-designed seats	Poor seat design	
		Good aesthetic design	Poor aesthetic design	
Provide comfort and privacy		Lack of comfort and privacy		
		Limited space		

Summary

The use and management of design at Saudia Airlines were not considered as successful as the airlines that make good use of design. The designs of all touch points in the customer journey received more negative comments than positive ones. The survey and interview results highlighted the need for better design and design management practice within

Saudia Airlines. The use of design and design management at other airlines and Saudia Airlines will be discussed in the next chapters, which present the findings of the interviews with design experts (see Chapter 05) and interviews with Saudia Airlines employees and design consultants (see Chapter 06). It is also important to point out that Saudia Airlines should place the customers at the centre of their business strategy and operation in order to provide a more satisfactory and positive overall customer experience.

5. Study Two - Key Findings and Discussion for Design Experts

This chapter addresses study two, which discussed the principal findings from the interviews with design experts who managed tangible and intangible designs of all touch points in customer journeys. The results were also used for data triangulation purposes, as explained in Chapter 03 (see Figure 3.5). The main aims of the analysis and discussion in this chapter were to 1) explore the perceptions of design experts with regard to the strategic value of design, and 2) to find out about the design management practices in their organisations. The findings from the interviews with design experts led to the development of Prototype C that helped in the formulation of the final DMCF (see Chapter 07). This chapter addresses the following research questions:

RQ1.2. How could tangible and intangible designs contribute towards a company's strategic goals and/or objectives?

RQ2.1. What do airlines that make good use of strategic design perceive design to be and how do they perceive its strategic value?

RQ2.3. How do airlines that make good use of strategic design actually manage design?

All design experts had extensive experience of managing tangible and intangible designs of all touch points in customer journeys. These experts were carefully selected based on the secondary research and the recommendations of customers in study one. According to the customer research, most interviewees (frequent flyers) identified British Airways, Emirates Airlines, Etihad Airways and Qatar Airways as examples of airlines that made good use of tangible and intangible designs and delivered a high-quality experience. Therefore, experts who managed and/or were directly involved in the design of the customer journeys for these airlines were chosen (see section 3.5.2). According to the literature review, Virgin Atlantic Airlines and KLM were highly regarded by many authors so design experts who worked in these organisations were also selected. There were six interviewees in total, two of whom were from Virgin Atlantic Airlines. Two potential participants from Emirates Airlines and Singapore Airlines declined the requests for interviews due to their concerns about the sensitive nature of information regarding these companies. At the time of the interviews, design experts from Qatar Airways, Etihad Airways and KLM Airlines were working for the airlines. The design expert from British

Airways was a former senior design manager of the design team at the company. In addition, the two design experts from Virgin Atlantic Airlines were the former head of the design department and the senior designer in a design consultancy firm that had worked with that organisation.

It was important to identify how airlines that make good use of design with well-developed tangible and intangible designs at all service touch points in the customer journey have achieved their design goals/targets. These findings could help Saudia Airlines and other airlines to understand the strategic value of design and manage design at the strategic level more effectively to improve customer experiences and create long-term competitive advantages. Seven key themes and sub-themes emerged from the analysis of interview results: 1) organisational mind-set, 2) design as a tool in the organisation, 3) structure and design capability, 4) design process, 5) communication, 6) design research capability, and 7) customer experience (see Appendices C1 and C2). Detailed descriptions of all seven themes are presented with their sub-themes and discussed in detail in the following section. These key themes and their sub-themes will help formulate Prototype C, which will be presented in the last section of this chapter.

5.1 Key Theme 1: Organisational Mind-set

This section will discuss the key theme of organisational mind-set that was analysed from the transcripts of the expert interviews. This key theme contains nine distinctive sub-themes (see Table 5.1), which are discussed in detail below.

Table 5.1 Key theme 1: Organisational mind-set

1.Organisational mind-set	1.1	Appreciation of both strategic and operational contributions of design
	1.2	Support and investment for overall design agendas from senior management
	1.3	Strong ambition for design
	1.4	Positive attitude towards change
	1.5	Importance of innovation in airlines
	1.6	Respect for design
	1.7	Monitoring competitors
	1.8	Importance of customer experience and design contributions
	1.9	Design as an essential part of business

5.1.1 Sub-theme 1.1: Appreciation of Both Strategic and Operational Contributions of Design

All respondents emphasised that their organisations showed strong appreciation of both the strategic and operational contributions of design. Their answers implied that design was an integral part of their organisational cultures and that most people in their organisations recognised that design significantly contributed to their success. The respondents also used examples from other industries to highlight the importance of the mind-set. For example, one interviewee pointed out that *‘Apple’s success was because they have design at the heart of their business’* (DE1.1.1.2).⁴ He explained that *‘Apple is successful because design brings in the people’s voices into the business at least if it is done right’* (DE1.1.1.3). This comment confirmed the results from the literature review that Apple’s success was due to its extensive investments in design and strong appreciation that effective design management could lead to an increase in profits and give a competitive advantage. In addition, another respondent asserted that *‘design is a distinguishing factor’* (DE3.1.1.1). One interviewee stated, *‘design is pretty paramount in order to achieve a competitive edge’* (DE5.1.1.5). The fact that most people in their

⁴ The breakdown for participants’ number (e.g. DE1.1.1.2) from left to right in this chapter is as followed: (DE) design expert, 1 is participant’s number in this research, 1 is the first key theme in this chapter, 1 is the first sub-theme in this chapter and 2 is the number of the comment from this participant.

organisations appreciated design had made a significant difference, since *'people's mind-set affects greatly what is performed and what is done in terms of design and innovation'* (DE2.1.1.2). Therefore, it can be concluded that the appreciation of both strategic and operational contributions of design profoundly affected the way design was used and managed. When most people believe that design could play a major role in the performance and outcomes of the organisation, they will use it at both strategic and operational levels. The appreciation of design contributions could reinforce the perception of strategic value of design in the organisation.

5.1.2 Sub-theme 1.2: Support and Investment for the Overall Design Agenda from Senior Management

All design experts agreed that if senior management truly believed in design, they would provide sufficient support and investment for overall design agendas. For example, one interviewee described, *'in order to embrace design, it needs to come from the top then cascade down'* (DE5.1.2.1). He explained that *'we were fortunate to have a leader who understood the value of design, innovation and what it can do to the brand'* (DE5:1.2.6). In addition, another respondent stated that effective use of design was due to the fact that *'senior management support design'* (DE6.1.2.2). It was implied that if senior management did not support design, it would be difficult for the design team to initiate and execute design projects. For instance, one expert asserted that *'if senior management does not support a design project, it will be difficult to get it across'* (DE2.1.2.3). Furthermore, senior management had the power and capability to establish design departments or a design team in the organisation. For example, one participant expressed the view that *'the existence of a design department depends on the senior management'* (DE6.1.2.3). To sum up, all design experts emphasised the importance of senior management's support and investment for overall design agendas. This was because the support and investment showed that the organisation took design seriously. Moreover, senior management's support greatly affected the opportunities for design at a strategic level because they could reinforce the concept of design in the culture of the organisation.

5.1.3 Sub-theme 1.3: Strong Ambition for Design

Some design experts suggested that organisations which had the right mind-set for design to flourish must have a strong ambition for design. For instance, one expert explained that his organisation had wanted *'to be the best airline in the world'* (DE2.1.3.1). He further

described that *'our innovations are ahead of their time'* (DE2.1.3.2). It was observed that all interviewees who worked in organisations that made good use of design displayed strong ambitions for design and perceived design as a driver of innovative outcomes. The strong ambition for design was also appreciated by customers (see Chapter 04). The interview data demonstrated a clear link between the ambition regarding design and the outcomes. For example, one interviewee noted that *'our ambition is to build a reputation that operates the best fleets in the sky'* (DE4.1.3.1). Subsequently, his organisation *'always focused on providing premium products'* (DE4.1.3.3). In summary, the airlines that have the right mind-set for design to flourish tend to have a strong ambition for design. Their ambitions were evident throughout the organisation and not limited to design projects. The strong ambition for design appears to promote innovative behaviours within the organisation, which is important when aiming to achieve innovative outcomes.

5.1.4 Sub-theme 1.4: Positive Attitude Towards Change

Many design experts emphasised the need for a positive attitude towards change. One design expert from KLM Airlines, one of the oldest airlines in the industry, stated, *'we have to grow or we will miss the boat... our airline is not afraid to change or improve... we learn from our mistakes and learn from others... design made a lot of improvement in the airline'* (DE3.1.4.2). This positive attitude towards change appears to help organisations see the long-term benefits from design rather than focusing on short-term gains/losses. For example, one interviewee explained, *'the airline was able to sacrifice short-term financial expenses (because you are paying to make changes) in exchange for long-term value, for the customer journey'* (DE5.1.4.3). This positive attitude to change also helps to create an organisational culture that facilitates design and innovation. These findings confirmed the model proposed by Martin and Terblanche (2003) which includes *'support to change'* as a key factor of *'behaviour that encourages innovation'* within the organisation. Furthermore, Dijk (2006; cited in Best 2006, p.201) noted that design management is one of the main strategic tools that management should use to define and realise change.

5.1.5 Sub-theme 1.5: Importance of Innovation in Airlines

Most respondents agreed that innovation was important to the airline industry. They recognised that innovation required a lot of effort and investment. To be innovative, airlines must place innovation at the top of their business agendas. For example, one

interviewee explained, *'our recent release of products, which is an effort for several years, was to drive innovation because at that time we wanted to create innovations that are ahead of their time'* (DE2.1.5.1). Moreover, another expert stressed that *'the airline is really aware of innovation. Innovation drives people at our airline. Innovation is really important part of our job'* (DE3.1.5.1). There was a strong link between innovation and business success. For instance, one respondent stated, *'we were one of the first companies to have screens in every seat, followed by most of the airlines'* (DE5.1.5.1). To summarise, all design experts highlighted the need for the right mind-set for supporting innovation at the senior management level. All experts confidently reported that the importance of innovation was understood by most people in their organisation. The mind-set for supporting innovation should be embedded in the organisation's culture.

5.1.6 Sub-theme 1.6: Respect for Design

Design experts reported that their organisations showed strong respect for design. For example, one interviewee stated, *'design was respected at British Airways'* (DE1.1.6.1). In addition, most interviewees stressed that most people in their organisations recognised that design should not be underestimated and was considered one of their values. For instance, one expert pointed out that *'design should not be underestimated; design is held pretty highly as one of our values'* (DE2.1.6.1). Furthermore, another expert explained that *'design is part of our DNA'* (DE3.1.6.2). All design experts reported that respect for design was evident throughout their organisations. People who understand and respect design should not be limited to the design staff who apply/manage design at an operational level in the design projects. In addition, the organisations that have respect for design appeared to use design at a strategic level instead of simply using it at an operational level.

5.1.7 Sub-theme 1.7: Monitoring Competitors

All respondents emphasised that their organisations recognised the importance of monitoring competitors on an on-going basis. Their answers indicated that monitoring competitors was necessary for them to find out what other airlines are doing and whether or not their organisations are continuously carrying out the latest and best design touch points in their customer journeys. For instance, one expert said, *'we have a lot of competitors that we monitor. I think Virgin Airlines are always providing the new technologies such as hand-held devices. I think that is a really good addition to have on an airline and I think that is something that people really like. So that is something that we need to always think about'* (DE2.1.7.1). It is important to point out that monitoring competitors did not mean that they would copy or follow their competitors' ideas.

Monitoring the key competitors on an on-going basis encouraged them to constantly come up with new innovations based on their own strengths. For example, one interviewee explained that *'most of the time we look around to see what competitors are doing. We look around us but we are not focused on others, we try to focus on our own strength'* (DE3.1.7.2). Furthermore, in the airline industry, the need to innovate is important for the airlines to survive. Another expert explained that *'we have to offer the best and latest designs to survive because the airline industry is a competitive industry'* (DE5.1.7.1).

To sum up, all design experts confirmed that they are monitoring competitors to find out what are the latest and best design touch points in the airline industry. In addition, they emphasised the need to innovate and differentiate themselves from their competitors to maintain their position in the airline industry. Design experts stressed this was because they wanted to always be ahead of their competitors and prevent themselves from falling behind in this highly competitive industry. The literature hardly touched upon the strong relationship between the act of monitoring competitors and its role as a driver for achieving innovative outcomes. However, the interview analysis illustrated a clear link between these two. New ideas from competitors should be perceived as one of the positive factors that drive changes and innovative outcomes. This attitude should be promoted as part of the organisational culture.

5.1.8 Sub-theme 1.8: Importance of Customer Experience and Design Contributions

All design experts agreed that the organisations with the right mind-set tended to understand the importance of customer experience and design contributions. As previously mentioned, the airline industry can be described as a service industry and the importance of customer experience is significant. For example, one interviewee explained that *'we like to create the experiences'* (DE2.1.8.1). Another expert explained that *'design is part of customer experience'* (DE3.1.8.5). Most experts recognised that business objectives could be achieved by focusing on the customer experience. For instance, one expert pointed out that *'Virgin Atlantic Airlines is famous for its great customer experience'* (DE6.1.8.1). He added that *'if you are designing the service to improve it, the emphasis in the way we work would be on the customer experience. For example, working closely with people and with all the key design tools, this can achieve a good customer experience'* (DE6.1.8.3). The interview results demonstrated the necessity for working closely with people and improving customer experience through the use of design. The design experts tend to acknowledge that design made direct impacts upon the customer experience.

In Chapter 04, quotes captured from frequent flyers were cited as evidence of the impacts of these successful airlines focusing their design efforts on the customer experience. For example, one of the participants commented on the *'well-designed seats'* that added value to the customer experience. In another, a respondent reported that *'British Airways have fantastic seats, it is very comfortable, it is like a bed'*. All frequent flyers appreciated being given additional services that were beyond the passengers' expectations, and which served to create a memorable experience. It would appear that the airlines that make good use of design are able to create a customer experience that might potentially go beyond customer expectations, which leads to a positive experience that encourages customers to travel again on the airline. This notion is further explored in the next sub-theme.

5.1.9 Sub-theme 1.9: Design as an Essential Part of Business

All respondents emphasised that their organisations understood design as an essential part of business. Their answers implied that design was not only essential but an integral part of their business. For example, one interviewee described that *'the organisation understood the value design added to business'* (DE1.1.9.1). The interview results stressed that most people in the respondents' organisations recognised that design could help improve their business. Moreover, another expert explained that *'in design, there are tricks and ways of increasing the comfort level and there are some products in the market that do that'* (DE5.1.9.2). The design experts emphasised the relationship between design and business as the whole company appeared to understand the value design brings to business, and that was the reason design should be practised well. For instance, one expert said, *'designing something is really important because if that is not done correctly, it remains in the airplane until it's pulled off'* (DE2.1.9.4). Therefore it is important that products are designed to be easily managed and maintained. For example, one participant stressed that *'design can improve everyday life'* (DE3.1.9.1); however, if the product is not designed to be easily maintained, it will remain on the aircraft in an unusable state, which would affect customers' satisfaction. Therefore, design is essential to keep passengers satisfied, and help the company continue operating successfully. The comments suggested that effective design management can help strengthen this relationship between design and business. This idea was aligned with McBride's (2006; cited in Best 2006, p. 200) perspective which noted that design management is *'The bridge between design and business that enables the designer's voice to be heard.'*

In sum, key theme 1: organisational mind-set, demonstrates that airlines need the right outlook for them to be successful in making good use of design at a strategic level. However, existing theories around organisational culture hardly discuss organisational mind-set for design to flourish. Hence, this key theme derived from this primary research could help to advance the studies in this field by highlighting the importance of appreciating ambition and supporting and investing in design for effecting positive organisational change.

5.2 Key Theme 2: Design as a Tool in the Organisation

This section explores another of the key themes, design as a tool in the organisation, which emerged from the transcripts of the expert interviews. This key theme contains two distinct sub-themes (see Table 5.2), which are discussed in detail.

Table 5.2 Key theme 2: Design as a tool in the organisation

2. Design as a tool in the organisation	2.1	Design as a tool to deliver products and services
	2.2	Design as a tool for problem-solving

5.2.1 Sub-theme 2.1: Design as a Tool to Deliver Products and Services

All respondents emphasised that their organisations managed to use design as a tool to deliver products and services. The interviewees stressed that most people in their organisations recognised that design could be used as a strategic tool to introduce products and services to achieve a strong brand position and differentiate their airlines from competitors. For example, one interviewee stated, *‘design is used as a tool to introduce products and services, which they market in line with their five star brand’* (DE4.2.1.1). He explained that *‘design differentiates our products and services from other airlines in the region’* (DE4.2.1.2). In addition, one interviewee pointed out that seeing and employing design as a strategic tool could expand the use of design into delivering not only products but also services; he stated, *‘design helped Virgin Atlantic Airlines to develop service design because they were mainly product oriented’* (DE6.2.1.1).

5.2.2 Sub-theme 2.2: Design as a Tool for Problem Solving

Most design experts agreed that design could be used as a tool to solve problems within the organisation. Some suggested that design could be used proactively or reactively to

solve problems that the organisations faced in the airline industry. On the one hand, designers could play a proactive role by identifying problems in the organisation and finding creative ways to solve them. On the other, they could have a reactive role in solving problems identified/assigned by the organisation. For example, one interviewee noted that *‘proactively, as British Airways is a large organisation there is a place to use design more...in this case the design team goes to the organisation to say there is a problem here and to give ways on how we can solve it’* (DE1.2.2.1). He explained that in *‘British Airways, this is the perception of the design team: reactively the organisation comes to the design team and says we have a problem here, how can we solve it?’* (DE1.2.2.2). As a result, it has been recognised that these airlines used design at a broader level, and not simply limited it to design projects. Moreover, some experts asserted that their senior management admitted that they did not understand how to use design as a strategic tool. However, they recognised that design managers were capable of using design to solve problems outside the design domain. Hence, design managers were encouraged to be involved in tackling other problems that the airlines encountered. Another respondent explained, *‘I help them understand how design can help’* (DE2.2.2.1). To sum up, these experts suggested that design managers help organisations to solve problems because they excel at generating creative solutions for challenges that the organisation might encounter.

5.3 Key Theme 3: Structure and Design Capability

This section focuses on another of the key themes, *‘structure and design capability’*, which emerged from the interview transcripts. This key theme contains two sub-themes (see Table 5.3), which are discussed in detail.

Table 5.3: Key theme: Structure and design capability

3. Structure and design capability	3.1	Clear position for design in organisational structure
	3.2	Design and design management capability

5.3.1 Sub-theme 3.1: Clear Position for Design in Organisational Structure

All respondents stressed that their organisations showed a clear position for design in the organisational structure. These answers implied that design held a clear and relatively high position in their organisational structures. The interviewees emphasised that most people in their organisations were aware of the design teams and their design visions. For example, one respondent described that *‘within the organisation there was a knowledge*

that this design team existed and that they had a vision' (DE1.3.1.1). Furthermore, one interviewee stated, *'we have a pretty flat structure (we all get involved)'* (DE6.3.1.2). It was observed that all these interviewees who worked in organisations that made good use of design had access to and received good support from their senior management. For instance, one interviewee asserted, *'design from our end up depends on the idea proposed and then the person in charge to make it happen from the top'* (DE2.3.1.2). Another respondent stated that effective use of design was due to the fact that *'we have senior people in a design role and close collaboration with the CEO and COO'* (DE5.3.1.1). To sum up, all the design experts emphasised the clear position of design in the organisational structure. In addition, the design experts stressed senior management's support of the use of design because they had senior management in a design role, and acknowledged the importance of design within the organisation.

5.3.2 Sub-theme 3.2: Design and Design Management Capability

All design experts suggested that organisations should have sufficient design and design management capability. For instance, one expert stated that his organisation had *'design in-house, we do small projects such as seats'* (DE2.3.2.2). He explained that *'we have well-established processes and large budgets for design, so we can get people from all over the world and we have hired design consultancies for large projects'* (DE2.3.2.3). All respondents emphasised the need to hire design consultancies occasionally, especially for a large project. However, one participant confirmed that they preferred to do most of the design projects in-house: *'we have design agencies that work for us but we try to do the most projects ourselves'* (DE3.3.2.2).

In addition, they also commented that employing design managers and establishing an in-house design team could have significant results for improving customer experience. For example, one interviewee asserted, *'the way we involved different people at different times is the skill of the design manager'* (DE1.3.2.1). He explained, *'design is a conduit that allows business to align what they are offering to customers'* (DE1.3.2.2). It can be concluded that having design and design management capability showed significant results in improving customer experience.

5.4 Key Theme 4: Design Process

This section addresses another key theme, ‘*design process*’, which was analysed from the interview transcripts. This key theme contains one sub-theme (see Table 5.4), which is discussed next.

Table 5.4: Key theme 4: Design process

4. Design process	4.1	Systematic design process
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5.4.1 Sub-theme 4.1: Systematic Design Process

All design experts reported that they employed a systematic design process for designing tangible and intangible design touch points in the customer journey. Their answers implied that the design process consists of a number of steps that are flexible and can be adapted according to the design project. For example, one interviewee described that ‘*the core process never changes... design process doesn't change but you can add other steps sometimes because design can be done in different ways*’ (DE1.4.1.2). Another expert stressed, ‘*the objective was how to get passengers from point A to point B in customer journey in a few minutes a lot of things needed to be considered... sometimes during the actual process the idea comes up and sometimes we need to have a structured process*’ (DE6.4.1.4). Furthermore, some design experts highlighted some of the design process models mentioned in the literature, such as the double diamond and the golden circle that facilitate a systematic design process. One of the design experts commented, ‘*our foundation was the double diamond but I think we ended up with about six diamonds... it was a derivative of the double diamond, a lot more complex; the double diamond is a very sophisticated version of how you manage design and it is a linear process*’ (DE5.4.1.2). The design experts emphasised that the design process could be systematically structured, yet flexible so that it could be adapted or modified to suit different design projects.

5.5 Key Theme 5: Design Research Capability

This section covers another of the key themes, *design research capability*, analysed from the interview transcripts. This key theme contains two sub-themes (see Table 5.5) that are discussed in detail.

Table 5.5: Key Theme: Design research capability

5. Design research capability	5.1	Critical analysis of competitors
	5.2	Customer research

5.5.1 Sub-theme 5.1: Critical Analysis of Competitors

All respondents reported that critical analysis of competitors was an integral part of their systematic design process since it helped them to find out what was happening in the industry, particularly regarding innovation and new developments being made by competitors. For instance, one participant commented, *'we do competitor analysis and make sure that our products are still better than their products'* (DE6.5.1.1). Another participant said, *'for our research we will look at innovation or new developments (product or services) of competitors in order to stay ahead'* (DE2.5.1.1). He explained that *'we do market research to determine if our products are satisfying the customers'* (DE2.5.1.2). Moreover, another respondent stated, *'most of the time we look around to see what competitors are doing'* (DE3.5.1.1).

5.5.2 Sub-theme 5.2: Customer Research

All respondents stated that customer research was an important part of their design processes. Their answers implied that customers were an integral part of the idea generation for the customer journey. For example, one expert stated, *'the airline industry never really generated the new ideas. It's always the airline talking to their customers that created a new idea'* (DE1.5.2.3). All interviewees noted that it was important that they listen to customers and take their suggestions seriously, since this enables them to make significant improvements for their customer experience. For instance, one respondent explained, *'as far as customer satisfaction we try to hear what our guests are saying, we try to incorporate those features on the aircraft and into the experience'* (DE2.5.2.1). Moreover, another participant stated, *'we will follow closely what passengers say of our products, our designs, and everything, we try to learn from it and make it better to improve it'* (DE3.5.2.2). In addition, another expert stated that effective use of customer research was due to the fact that *'there is a lot of customer engagement at the beginning but we try to keep them engaged all throughout the design project'* (DE6.5.2.9).

To sum up, all design experts reported the importance of customer research for capturing feedback and ideas for new developments and improvements in the customer journey.

Research is normally placed at the initial stage of the design process (see Section 1.2.2) but one of the design experts reported that customers’ engagement should be enlisted throughout the design process as companies could improve customer experience by listening closely to passengers’ expressed needs. The existing literature barely considers whether user research or competitor analysis is more crucial to the improvement of the customer journey. However, the primary research results of this thesis appear to suggest that user research was more important. Therefore, design experts might focus more on customer research to provide significant improvement for their customer experience.

5.6 Key Theme 6: Communication

This section discusses another of the key themes, communication, which emerged from the transcripts of the interviews. This key theme contains one sub-theme (see Table 5.6).

Table 5.6: Key theme: Communication

6. Communication	6.1	Cross-departmental collaboration
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5.6.1 Cross-Departmental Collaboration

All respondents emphasised the importance of cross-departmental collaboration in the organisation. They explained that within the organisation this could help to achieve sufficient design projects because one department alone could not do everything. For example, one interviewee explained, *‘we really work closely with all of our departments to make sure that we can get all the features that we need because one person cannot’* (DE2.6.1.9). Design experts acknowledged that they were involved in many design projects throughout the organisation, which gained them more exposure than other departments. For instance, one participant expressed the view that *‘a lot of departments have projects, we work for all departments this is the factor that gives us exposure’* (DE3.6.1.2). Moreover, another respondent described that *‘the biggest advantage is that you are internal, so that means you can get under the skin of things in the organisation’* (DE1.6.1.1). Most design experts suggested that cross-departmental collaboration can achieve innovative outcomes and protect the brand. For example, one expert commented that *‘we work together with innovation department to achieve innovative outcomes’* (DE3.6.1.6). In addition, another interviewee described that *‘design team, chief financial officer and communication director work together to protect the brand’* (DE5.6.1.1).

Furthermore, the nature of design management is to collaborate with different departments in the organisation. This could afford design managers the opportunity to find out what is needed to improve the design management within the organisation. One expert pointed out that conflicts might occur in the process of collaboration with different departments, stating, *‘departments will always ask for specific features and other features that may not be related to the design project. So we help the departments’* (DE2.6.1.1). Therefore design managers could reinforce a positive cross-departmental collaboration to develop sufficient design projects that can lead to innovative outcomes and reduce conflict during cross-departmental collaboration.

5.7 Customer Experience

This section discusses the last key theme, entitled customer experience, as analysed from the transcripts of the interviews. This key theme consists of one sub-theme (see Table 5.7).

Table 5.7: Key theme: Customer experience

7. Customer experience	7.1	Innovative and differentiated tangible and intangible touch points
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5.7.1 Innovative and Differentiated Tangible and Intangible Touch Points

All design experts reported on the innovative and differentiated tangible and intangible touch points of the customer journey. One design expert stated, *‘British Airways’ end project is still out, there looks great. People like it. I think we got the design process about right’* (DE1.7.1.1). Therefore, British Airways undertook design to achieve a significant customer experience that was unique and which differentiated it from other airlines. Most design experts described their customer experience as innovative and as having differentiated tangible and intangible touch points. For instance, one interviewee asserted that *‘passengers had their own private security corridor as they got out of the car, their luggage was taken away and were given their ticket, so that differentiated them from others’* (DE5.7.1.5). He explained, *‘we had lounges where we had spas and cinemas and playrooms and fine dining as a place to wait for a flight, instead of just giving them a hard chair and some sandwiches’* (DE5.7.1.10).

In sum, these airlines designed unique and innovative results after implementing design, which has been effectively accomplished and recognised in the literature and the primary research of this study. The airlines that make good use of design understood the importance of the strategic use of design within the organisation.

The following research questions have been addressed by the researcher and were presented at the beginning of this chapter. The interviews covered seven key themes and several sub-themes, which were apparent in the airlines that make good use of design.

RQ 1.1 How could tangible and intangible designs contribute towards a company's strategic goals and/or objectives?

Tangible and intangible design touch points contribute towards a company's strategic goals and objectives by delivering innovative products and services, and by differentiating their offerings and position in the industry. One passenger commented, *'Etihad Airways' services are superior. You feel the hostess serves only you, though they serve others, but you feel you are number one'* (P1.3.3) (see Chapter 04). Some experts emphasised the importance of companies designing tangible and intangible touch points that are innovative and unique, in order to differentiate themselves from other airlines. For example, the interviewee who worked at British Airways stated, *'British Airways' end project is still out there, looks great. People like it. I think we got the design process about right'* (DE1.7.1.1). Furthermore, some experts pointed out that tangible and intangible designs add value to offer the best services for their customers' experience. One expert explained, *'passengers had their own private security corridor as they got out of the car, their luggage was taken away and were given their ticket, so that differentiated them from others'* (DE5.7.1.5). Some design experts highlighted that there was an organisational mind-set that believed in the importance of customer experience and design contributions. The organisational mind-set was highlighted as the most important key theme and it included several sub-themes, as mentioned above (see Table 5.1). Therefore to achieve unique and innovative tangible and intangible designs that are differentiated from the rest of the market, companies need to understand the importance of organisational mind-sets, particularly those which foster the strategic use of design.

RQ1.2 What do airlines that make good use of strategic design perceive design to be and how do they perceive its strategic value?

The design experts of airlines that make good use of strategic design perceived design to be an essential part of their business. Thus, their senior management support and believe in design. As well as their understanding of the strategic value of design within the

organisation, their broad view of design was not limited to an operational level. Moreover, some design experts perceived design to have a strategic value through the use of design as a tool within the organisation. They stressed design being used as a tool to deliver products and services as well as for problem-solving. One interviewee noted that *'proactively, as British Airways is a large organisation, there is a place to use design more... in this case the design team goes to the organisation to say there is a problem here and to give ways on how we can solve it'* (DE1.2.2.1). Some design experts managed to perceive design as a tool because of their mind-set and the capabilities design and design management could offer the organisation, which is an essential part of the strategic use of design in business.

RQ1.3 How do airlines that make good use of strategic design actually manage design?

The airlines that make good use of strategic design managed design, for example, by the structure of the organisation which gives a clear position for design in the organisational structure, design and design management capability, the idea of a systematic design process, and cross-departmental collaboration.

In regards to the clear position for design in the organisational structure, one respondent described, *'within the organisation there was a knowledge that this design team existed and that they had a vision'* (DE1.3.1.10). In addition, respondents talked about design and design management capability, highlighting the skills needed to manage an in-house design department, give out large budgets for design and hire design consultancies to help with large projects. For example, one interviewee explained, *'we have well-established processes and large budgets for design, so we can get people all over the world and we have hired design consultancies for large projects'* (DE2.3.2.3). Furthermore, the idea of a systematic design process was aligned with the idea proposed by Vossoughi (1998, p.19) who described design management *'like conducting an orchestra in which each individual plays different notes. When guided and shaped by a conductor, these different notes become beautiful music.'* Some experts mentioned design process models that could be useful for achieving a systematic design process. For example, one expert explained that *'the golden circle (why, what and how) is really important in the design process especially when it comes to concept and brainstorming'* (DE3.4.1.4).

Moreover, design research capability was necessary within the systematic design process, which included critical analysis of competitors and customer research. Cross-departmental collaboration was addressed and the conflicts that may occur in the development of design projects during a design process. However, with design and design management capabilities the organisation could maintain a healthy environment for cross-departmental collaboration as a whole. For example, one interviewee asserted, *‘the way we involved different people at different times is the skill of the design manager’* (DE1.2.3.2). Design experts emphasised their ability to provide their customers with an experience that is unique and innovative as it appeared that these airlines managed design at a strategic level not just at an operational one.

5.8 Final Prototype C

At the end of study two, the design experts’ research revisited Prototype B from customer research and Prototype A from the literature review. Seven key themes captured through the design experts’ research were integrated into Prototype C. Table 5.8 illustrates the key themes integrated into Prototype C. As a result, five key themes were depicted in Prototype A and Prototype B into Prototype C as follows: 1) organisational mind-set, 2) structure and design capability, 3) design process, 4) communication, and 5) customer experience. Two key themes were new: design as a tool in the organisation, and design research capability.

Table 5.8: Key themes integrated in Prototype C

Structure of prototypes adapted from Sinek (2009) and Martin and Terblenche (2003)	Key themes of Prototype A	Key themes of Prototype B	Key themes merged into Prototype C	
Why: strategy	Strategic direction and purpose of design		Integrated from Prototype A	Organisational mind-set
			Not included in Prototype A or B	Design as a tool in the organisation
How: structure support, mechanism,	Structure and design capability		Integrated from Prototype A	Structure and design

behaviour that encourages innovation and communication				capability
	Design process		Integrated from Prototype A	Design process
				Not included in Prototype A or B
Communication	Communication		Integrated from Prototypes A and B	Communication
What	Customer experience	Customer experience	Integrated from Prototypes A and B	Customer experience

Incorporating practical issues extracted from design experts’ research into Prototype C could ensure that it was grounded on a strong theoretical foundation of customer research and expert opinions of the airline industry. The structure of Prototype C remains the same (based on Sinek’s Golden Circle model); however the detailed descriptions were revised and refined based on the primary design experts’ research findings.

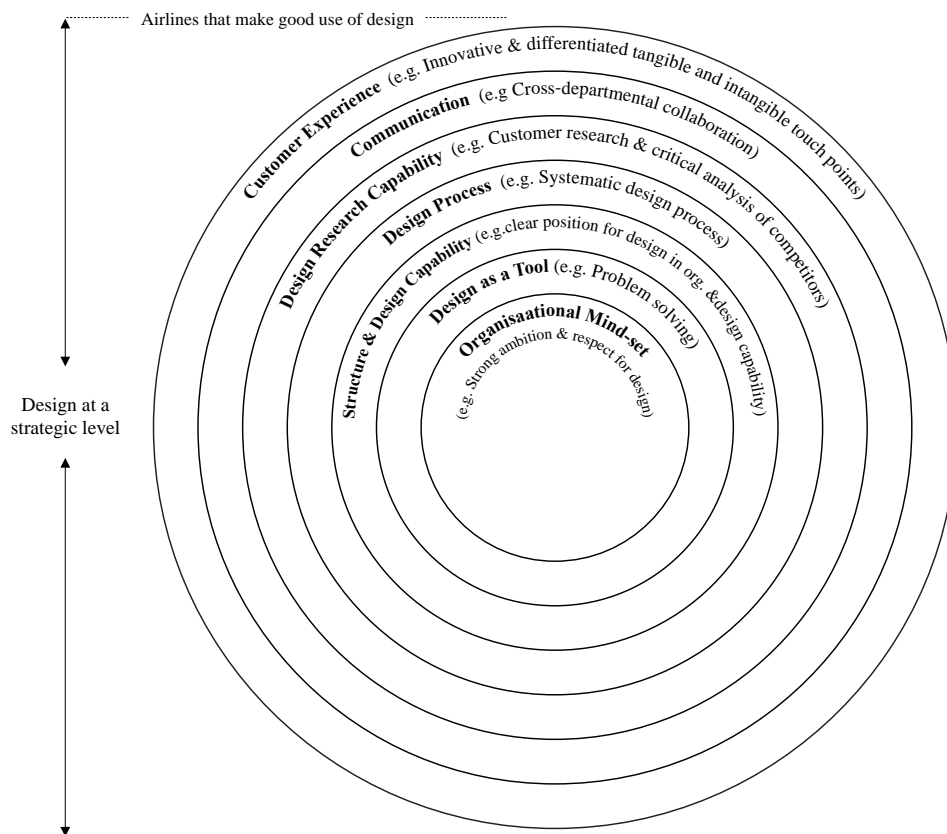


Figure 5.1 Prototype C (study two) for design experts’ research

This prototype demonstrates the findings of the design experts, which illustrate the seven key themes including several sub-themes that were extracted from the interviews.

- 1) ‘Organisational mind-set’ is the inner circle which illustrates the first key theme, which had nine sub-themes, such as strong ambition for design, positive attitude towards change and respect for design that design experts stressed. This theme is recognised as the most important theme and why it is placed at the heart of this prototype, which organisations need to consider in changing the perception of the strategic value of design.
- 2) ‘Design as a tool in the organisations’ is the second key theme which emphasised design being a tool to deliver products and services, and for problem-solving. Airlines that make good use of design acknowledged the importance of using design as a tool.
- 3) ‘Structure and design capability’ is the third key theme, which included the clear position for design in organisational structure and design management capability.
- 4) ‘Design process’ is the next key theme, which included the systematic design process that had an impact on experts’ processes of practising design within their organisations.
- 5) ‘Design research capability’ is the subsequent key theme, which emphasised both critical analysis of competitors and customer research.
- 6) ‘Communication’ is the sixth key theme of this prototype, which included ‘cross-departmental collaboration’ with informative insights from each department.
- 7) Finally, the seventh key theme in the outer circle highlighted customer experience, which emphasised innovative and differentiated tangible and intangible touch points used in customer journey.

This chapter covered design experts’ research for study two, including all the key themes and sub-themes which addressed positive findings on how other airlines used design to develop their customer journey. The findings that were extracted formulated Prototype C. In the next chapter, study three investigates Saudia Airlines’ employees and design consultants. The findings will create the last prototype (Prototype D). After the completion of the prototypes, the researcher will extract the common key themes from all the prototypes to formulate the final DMCF, which is the main contribution of this study.

6. Study Three: Findings and Discussions Related to Saudia Airlines Employees and Design Consultants

The findings discussed in this chapter were collected from participants who worked at Saudia Airlines and as external design consultants. The results were used for data triangulation, as explained in Chapter 03 (see Figure 3.5). The Saudia Airline interviewees were responsible for the design developments of tangible and intangible designs of all service touch points in the customer journey. It is important to point out that not all Saudia employees who participated in the interviews had a design background and these respondents came from diverse disciplines, such as computer science, engineering and marketing but they managed design and took design decisions. Moreover, the airline outsourced work to design consultants to collaborate with the organisation to develop the design touch points in the customer journey and two of the interviewees were from the design consultancy firms that were based in the United Kingdom and Italy.

The main aims of the interviews was 1) to explore employees' perceptions of the strategic value of design, and 2) to reveal their practices in regard to developing tangible and intangible designs of all service touch points in the customer journey. By so doing, the following research questions were addressed.

RQ1.2. How could tangible and intangible designs contribute towards a company's strategic goals and/or objectives?

RQ2.2. What do airlines that employ the Silent Design approach perceive design to be and what is its strategic value?

RQ2.4. How do airlines that employ Silent Design actually manage design?

It was important to identify how Saudia Airlines, which uses a Silent Design approach, achieved their design goals/targets by developing tangible and intangible designs of all service touch points in the customer journey. These findings could help Saudia Airlines to understand the strategic value of design and manage design at the strategic level more effectively to improve customer experiences and create long-term competitive advantages. Seven key themes emerged from the analysis of the interview results, namely: 1) organisational mind-set, 2) external influence, 3) structure and design capability, 4) design process, 5) communication, 6) design research capability, and 7) customer experience (see

Appendices D1 and D2). The detailed descriptions of all seven themes are presented with their sub-themes and discussed in detail in the following section. These key themes and sub-themes will help formulate Prototype D, which will be presented in the last section of this chapter.

6.1 Key Theme 1: Organisational Mind-Set

This section discusses one of the key themes entitled *organisational mind-set* which emerged from the transcripts of the interviews held with employees and the external design consultants working on some of Saudia Airlines' projects. This key theme contains six sub-themes (see Table 6.1), which are discussed below.

Table 6.1 Key theme 1: Organisational mind-set

	Key theme		Sub-themes
1	Organisational mind-set	1.1	Limited appreciation of operational contributions of design
		1.2	Support and investment for design projects from senior management.
		1.3	Recognising the need for the better use design
		1.4	Moderate ambition for design
		1.5	Silent Design
		1.6	Importance of customer experience and design contributions

6.1.1 Sub-theme 1.1: Limited Appreciation of Operational Contributions of Design

There were only two comments suggesting that design contributions at the operational level (e.g. design projects) were appreciated. However, these two comments were considered significant enough to be considered as one of the sub-themes. In this case, one employee stated, '*design enhances customer satisfaction and services, sometimes all these factors contribute in the final output*' (SA1.1.1.1).⁵ Moreover, one external design consultant pointed out that '*they (Saudia Airlines) recognise design can create a nice environment that people would like*' (SA-DC2.1.1.1). Limited comments on the design contributions among Saudi Airlines' employees appeared to suggest that the organisation did not appreciate contributions of design. More comments were collected about the

⁵The breakdown for participants' numbers (e.g. SA1.1.1.2) in this chapter is as follows: (SA) Saudia Airlines employees or (SA-DC) Saudia Airlines design consultant, 1 is participant's number in this research, 1 is the first key theme in this chapter, 1 is the first sub-theme in this chapter and 2 is the number of the comment for this participant.

airlines that make good use of design and they seemed to appreciate both operational and strategic contributions of design. For example, one expert stated, *'I see design work at its best in the organisation. It can make a leap. It can move you into another world'* (DE1.1.1.1). Another participant asserted, *'the real product differentiation was the upper-class seat, which is a seat that turns into a bed and added enormous value to the customer satisfaction'* (DE5.1.1.2). Saudia Airlines should broaden their view and show appreciation for both operational and strategic contributions of design.

6.1.2 Sub-theme 1.2: Support and Investments for Design projects from Senior Management

Generally, Saudia Airlines' employees agreed that senior management provided sufficient support and investment in design projects. For example, one interviewee stated, *'senior management is looking at enhancing and introducing new products and services'* (SA1.1.2.2). Another respondent suggested that *'senior management supports design projects'* (SA4.1.2.1). Moreover, one employee explained that *'senior management engages with the design projects and allocates sufficient resources'* (SA5.1.2.2) whilst another participant stated, *'senior management is always looking to enhance and introduce new products and services'* (SA6.1.2.1).

Although employees reported that senior management did *'support'* and *'invest'* in design projects, it was observed that their tones of voice were rather different from those collected from the experts. For instance, one expert said, *'the head of Virgin Airlines mentioned the success of the projects, outlining how passenger numbers had gone up and waiting time gone down as a result of the design project'* (DE6.1.2.5). The experts discussed the *'support and investment on overall design agenda from senior management'*, which was mentioned in chapter 05 (see Section 5.1.2). The subtle differences in their tones of voice might suggest that Saudia Airlines do not show strong commitment to design and the strategic use of design.

Saudia Airlines' senior management's *'support'* and *'investments'* for design projects was because for many years the airline did not buy new airplanes or modernise their aircraft. One employee stated, *'in the last five years, especially in the last two years, we made a deal, and we bought around 80 new aircraft. So the investment was extreme in order to modernise the aircraft because we had problems in the quality and the quantity of the*

aircraft, many years had passed and we haven't bought airplanes and we didn't modernise the aircraft' (SA7.1.2.1).

6.1.3 Sub-theme 1.3: Recognise the Need for Better Use of Design

Employees' interview comments indicated that there was a need for a better use of design and the problems of the current use of design were addressed. One employee observed that *'Saudia Airlines have products which are out of date'* (SA2.1.3.1). He explained that *'we had offered products in a quick manner because it is new, it failed in the market and we launched the product before realising the problems'* (SA2.1.3.2). In addition, another respondent stated that the main problem was that the *'lack of understanding in design improvement can increase the cause of dissatisfaction for our customers'* (SA5.1.3.1).

This data suggested that Saudia Airlines made limited use of design and these might be the reasons behind the problems identified by their staff. Furthermore, it may indicate that the company focused on using design at the operational rather than the strategic level. The findings from customer interviews and the survey also noted that customers were dissatisfied with the service touch points in the customer journey (see Chapter 04). This highlighted the need for better use of design at Saudia Airlines. Saudia Airlines' employees did say that the airline recognised the need for the better use of design. For instance, one employee said, *'we did invest billions of Saudi Riyals (SAR) that includes reservations, ticketing, airport services and all the other complementary services are being renovated'* (SA7.1.3.1).

6.1.4 Sub-theme 1.4: Moderate Ambition for Design

A number of statements showed a high degree of *'moderate ambition for design'*. For example, one employee said, *'I don't think we can reach 4 star only by design'* (SA1.1.4.2). In addition, one employee stated, *'we are the engineering department and design means drawings'* (SA4.1.4.3). Moreover, one respondent said, *'design is not top of the priority list at this stage'* (SA5.1.4.1). Another employee added, *'The investments that Saudia do can't cope with more, we can't cope with other airlines to become a five star airline, which requires a budget more than we can accommodate. This is the major difference between Saudi Airlines and the other GCC Airlines'* (SA6.1.4.1). Furthermore, a participant stated, *'we want to be the best airline in the region, this is our goal for the coming five years, but we are not aiming to be the international leader, we have to be*

reasonable' (SA7.1.4.1). Comparing these statements with those of the experts, the experts appeared to be more confident and believed that design could help their organisations go beyond drawing and become the leader in the marketplace. For instance, one expert said, *'we always maintain a 5 star position and continue to achieve many awards'* (DE4.1.3.2). Another expert stated, *'design can make the airline stand out'* (DE3.1.3.3).

The moderate ambition for design might have resulted from the organisational focus where design was used to improve the business at the operational level. In addition, none of the statements from the employees suggested that they had a desire to become leaders in the market. Although Saudia Airlines might have spent a lot of money on design, as mentioned earlier in Section 6.1.3 (comment SA7.1.3.1), it would appear that strong ambition and clear direction were lacking and as such, the customer experiences were not necessarily meeting customers' expectations. For example, one frequent flyer stated, *'I am dissatisfied with the design, the setting, food, newspaper, all services in general. There is a big difference, excellent service when it comes to British Airways or Emirates Airline'* (P2.3.2) (see Chapter 04, Section 4.2.1). These comments appear to suggest that Saudia Airlines did not know how to or was unable to use design strategically. A certain degree of ambition for using design was evident in some of the interviews, but this was moderate.

6.1.5 Sub-theme 1.5: Silent Design

The employees who worked on service design touch points in the customer journey confirmed that all design decisions were made by people from non-design disciplines. They reported that this was because the organisation did not have a design department or a dedicated design team working on the customer journey: *'we are a team (of people who were responsible for design projects) but not a team of designers, we do not have a design team'* (SA1.1.6.1). Another employee said that the organisation had *'no designers in this department'* (SA2.1.6.1). Another interviewee explained, *'the engineering department would embrace those designs according to our (marketing department) inquiries, rather than taking part at the beginning of the project during the designing phase'* (SA3.1.6.6). Furthermore, another commented that the *'marketing group is responsible of the interior of the airplane'* (SA4.1.6.1). People who were responsible for the design projects did not always have a design background. Despite having no formal training in design, when discussing this point respondents expressed the belief that they could work on the design

projects and/or make key decisions about design. As was explained in the initial chapters, this confirms that Saudia Airlines employs the Silent Design approach.

In a highly competitive industry, Saudia Airlines should aim to increase their use of design. It is recommended that the company have a design manager and make sure that he/she is part of the product/service development team. It is also noted that a design manager could help to educate the organisation about the value of design and strategic use of design, as well as align design goals with business visions. This advice was similar to the idea proposed by Thomson (cited in Best 2006, p.202) that ‘the deeper approach calls for design managers to behave as teachers and mentors, proactively creating a climate for individual and team learning towards sharing goals’.

6.1.6 Sub-theme 1.6: Importance of Customer Experience and Design Contributions

The importance of the customer experience and how design can contribute to enhancing this was noted. Some respondents realised that improper use of design could negatively affect customer experience, with one employee reporting that ‘*Saudia Airlines go back in the process to customise and enhance the service to meet the customer expectations*’ (SA1.1.6.1). He explained that even small details such as ‘*mishandling of crew on-board*’ could ‘*spoil the customers’ experience, so that is the challenge we have to face*’ (SA1.1.6.2). Furthermore, another employee emphasised that it was important to ‘*treat our customers in the best way possible*’ (SA3.1.6.2). Some stressed how customers have high expectations and how design could contribute effectively to meeting their expectations: ‘*customers expect a lot more for the price they are paying, so design projects have changed the business*’ (SA3.1.6.1). It was observed that their comments and statements were not as strong, bold and/or confident as those from other airlines (see Chapter 05). While the design experts expressed that their organisations strived to be the best in the industry and deliver a unique experience, Saudia Airlines’ employees simply wanted customers to be satisfied. This humble goal in terms of design may be linked with negative reports obtained from some customers. For example, one frequent flyer commented, ‘*honestly, they should recruit staff having better communication skills. The staff still talk to you in a rude way... Look at the other airlines, for instance, from the moment you get on the plane, they always speak to you nicely*’ (P05.4.4) (see Chapter 4, Section 4.2.2). While Saudia Airlines’ employees recognised the importance of the customer experience and the

need to improve this, their previous answers showed that they might not have the knowledge and/or skills to use design effectively to improve their customer experience.

6.2 Key Theme 2: External Influence

This section discusses another of the key themes, *external influence*, derived from the transcripts of the interviews with employees of Saudia Airlines and external design consultants working for Saudia Airlines' projects. This key theme contains three sub-themes (see Table 6.2), which are discussed.

Table 6.2 Key theme 2: External influence

	Key themes		Sub-themes
2	External influence	2.1	Need to keep up with competitors
		2.2	Influence of trade bodies
		2.3	Influence of passengers

6.2.1 Sub-theme 2.1: Need to Keep up with Competitors

Narratives collected from the employees and design consultants acknowledged that there was a pressing need to keep up with competitors. Saudia Airlines thought highly of its competitors due to their high ranking in the industry and saw them as creators: *'5 star airlines are considered creators, they have creative ideas'* (SA1.2.1.1). Moreover, the GCC airlines could be considered benchmarks and one interviewee stated, *'Etihad Airways and Qatar Airways and Emirates Airlines give benchmarking for our region'* (SA2.2.1.3). One design consultant pointed out the need to investigate what their competitors were doing at the early stages of undertaking a design project for Saudia Airlines, and stated, *'when we started the project, if we were looking at the interiors of their cabins, one of the early things we did was travel on Qatar Airways and Emirates Airlines'* (SA-DC2.2.1.1).

Saudia Airlines recognised that they needed to keep up with these GCC airlines and they need to follow and offer what their competitors are providing for their customers. However, it appears that it is hard to keep up with competitors. For example, one employee stated, *'sometimes it is not easy to make the experience unique and comparing*

with others we try to match what they offer' (SA3.2.1.1). He explained that *'we are trying to do our best but face hard competition'* (SA3.2.1.2). In sum, Saudia Airlines' employees and design consultants emphasised they were trying their best to keep up with their competitors; they argued that it was difficult to make a unique offer so they tried just to match what other airlines were offering rather than differentiating themselves in the industry.

6.2.2 Sub-theme 2.2: Influence of Trade Bodies

The Saudia Airlines' interviewees and design consultants might have gained more awareness and confidence in the marketplace through the influence of trade bodies. For example, one respondent pointed out that *'we are in process in joining Sky Team Alliance'* (SA1.2.2.1). He added that *'we aim to become 4 star in Skytrax that ranks customer touch points in the customer journey'* (SA1.2.2.4). The guidelines that are given to all airlines by the trade bodies to improve the customer journey were thought to be helpful by some and one employee explained, *'Skytrax guidelines address details for all senior management that need to improve customer journey'* (SA2.2.2.2). Another participant stated, *'Skytrax evaluates the airlines and they put guidelines that all airlines have to fulfil. It is a reference for us that we depend on'* (SA6.2.2.1). Although some respondents were of the view that they should follow the trade bodies' guidance to survive in their competitive industry, one participant expressed that *'Saudi culture and religion might limit some services, which can affect our ranking in Skytrax'* (SA2.2.2.1).

To sum up, Saudia Airlines seemed to be favourably disposed to following the trade bodies' guidelines for the industry to improve their customer journey. By contrast, in the design experts' interviews it was recognised that there was no influence or no emphasis given to the trade bodies' guidelines. All experts seemed to be more confident about their own design processes within the industry.

6.2.3 Sub-theme 2.3: Influence of Passengers

Saudi passengers have the opportunity to travel on airlines other than Saudia Airlines. For example, one employee stated, *'passengers are using other airlines and compare it with Saudi Airlines'* (SA5.2.3.1). He added that *'passengers are now having the power to travel more and experience other airlines'* (SA5.2.3.3). In addition, some observed that their passengers had recently considered the airline poor in comparison to the other airlines in

the GCC region and one respondent said, *'passengers find Saudi Airlines having a bad reputation lately'* (SA5.2.3.2). The findings from customer interviews and the survey confirmed that customers were dissatisfied with the service touch points in the customer journey. For example, one passenger stated, *'I don't like these sliding cabin seats at all while sleeping'* (P4.5.2). Regarding airlines that make good use of design, their customers were completely satisfied with their customer experience, with one customer stating, *'Turkish Airlines and British Airways have fantastic seats, it is very comfortable, it is like a bed'* (P2.5.3) (see Chapter 04, Section 4.2.4).

6.3 Key Theme 3: Structure and Design Capability

This section discusses another key theme, *structure and design capability*, which emerged from the analysis of the transcripts of the interviews held with employees of Saudia Airlines and external design consultants working on Saudia Airlines' projects. This key theme contains two distinct sub-themes (see Table 6.3).

Table 6.3 Key theme 3: Structure and design capability

	Key themes		Sub-themes
3	Structure and Design Capability	3.1	Unclear position for design in organisational structure
		3.2	Lack of design and design management capability

6.3.1 Sub-theme 3.1: Unclear Position for Design in Organisational Structure

The data from the interviews with employees and hired consultants emphasised the unclear position for design in the organisational structure. One respondent stated, *'we look at everything, maintenance, design and cost (not only cost of design or cost of construction, even cost of maintenance)'* (SA4.3.1.2). Moreover, another participant noted that *'product management is under one of the divisions of marketing in Saudia Airlines'* (SA1.3.1.1). The fact that design was positioned as part of marketing meant it had no direct access to senior management. Saudia Airlines' senior management seemed to have a limited role and few responsibilities regarding design projects, being involved only in choosing the external design consultancies. One external design consultant pointed out that *'senior management choose us after the first presentation'* (SA-DC1.3.1.1). He explained, *'before designing we write a story, when it gets approved from senior*

management all the design team at CREA transform it into a design project (SA-DC1.3.1.1). All Saudia Airlines' employees highlighted not having design skills or a design background, therefore, their choices of design consultancies might impact negatively on customer experience. By contrast, the findings in Chapter 05 from the design expert interviews confirmed that they were responsible for everything that was related to design and outlined the clear position of design in their organisational structure.

Saudia Airlines' employees stressed the difficulty of getting budget approval for design projects, which seemed not to be considered a priority and they were without a designated budget for design projects. For instance, one employee said, *'getting budget approval at Saudia Airlines is a big issue if it is not an urgent case and not on the priority list. That's why we don't see many changes'* (SA5.3.1.1). In addition, another pointed out, *'we see the project and consider if it's worth it or not, how much will it cost the airline'* (SA4.3.1.4).

6.3.2 Sub-theme 3.2: Lack of Design and Design Management Capability

Some Saudia Airlines' employees highlighted that design was done within the marketing department and that these employees were managing and working on design projects without design and design management capabilities. Moreover, they usually outsourced to design consultancies to help in the design projects. For instance, one respondent stated, *'we have no design in-house and we outsource for customer journey projects'* (SA1.3.2.3). He explained that *'the ideas and process will take place in the marketing department, yet in many design projects we are depending on a third party'* (SA1.3.2.4). Another participant stressed that *'we outsource for development of products, which are supported by different departments in the organisation'* (SA2.3.2.2). Furthermore, one employee stated that the *'biggest disadvantage would be lack of creative thinking at Saudia Airlines'* (SA5.3.2.1). In sum, Saudia Airlines' respondents stressed their not having in-house design and that they outsourced their design projects. Furthermore, they considered it a big disadvantage that they lacked creative people within the organisation.

6.4 Key Theme 4: Design Process

This section discusses another of the key themes, *design process*. This was analysed from the transcripts of the interviews held with employees of Saudia Airlines and external design consultants working on Saudia Airlines' projects. This key theme contains just one sub-theme.

Table 6.4 Key theme 4: Design process

4. Design process	4.1	Design process
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6.4.1 Sub-theme 4.1: Design Process

Saudia Airlines’ employees and design consultants reported the importance of having a design process for design projects, yet some participants highlighted that there was an unclear process. For instance, one employee explained, *‘there is no clear process for design’* (SA2.4.1.1). He stressed that *‘I think it is very important to have a design process for each product’* (SA2.4.1.5). He also found *‘the marketing department in general is in charge of customer journey from the start to the end’* (SA2.4.1.6).

Moreover, respondents emphasised the role of the marketing department, which might not have involvement with other departments during the initial stages of design projects. For example, one respondent asserted, *‘our role in this area is to define the services and the requirements that we need. What are the type of seats this area needs, what are other support services that we need in the lounge. Then it goes to our engineering department’* (SA1.4.1.2). Furthermore, some Saudia Airlines’ employees were not sure if customer feedback was used as part of the developmental process of design projects and if customer research was done properly. One participant explained, *‘we do survey on-board, it is a good opportunity for getting passenger feedback, but not sure if they are used in the improvements for products in customer journey’* (SA3.4.1.1). Another respondent stated that the *‘lack of proper research and expertise had led to a waste of resources in the process’* (SA5.4.1.3). Yet some employees recognised that customer feedback was part of their design process to develop the customer journey to meet customers’ expectations. One employee explained, *‘the key matter is to insure that the customer satisfaction is fulfilled and based on the feedback of the customers, we always go back in the process [so] that we deliver and enhance the service to meet their expectation. So, mainly the design phase is a key milestone in the overall process to insure the requirements and expectations of our customers’* (SA6.4.1.1).

To sum up, Saudia Airlines’ employees and design consultants reported the importance of having a design process for the development of design projects for the customer journey. However, they might have a narrow view of how to manage a design process because they did not seem to have a clear process for design within their organisation. As a result, this

unclear process highlighted different findings from employees as some argued that they were not sure if they used customer feedback to develop the customer journey while some mentioned that they did. Therefore, Saudia Airlines might need to define clearly the design process for the development of design projects for the customer journey.

6.5 Key Theme 5: Design Research Capability

This section discusses the key theme of *design research capability* derived from the transcripts of the interviews with employees of Saudia Airlines and design consultants working on the company's design projects. This key theme contains one distinctive sub-theme: customer research.

Table 6.5 Key theme 5: Design research capability

5. Design research capability	5.1	Customer research
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6.5.1 Sub-theme 5.1: Customer Research

Some employees and design consultants acknowledged that there was a need for customer research. For example, one employee pointed out that *'we do sometimes survey and we do interact sometimes with the customer to get their feedback'* (SA1.5.1.1). He explained that *'once we did the customer research... we valued customer feedback because they will use the service when they travel'* (SA1.5.1.5). In addition, another participant stated that they do have an *'internal survey department for customer service but are slow to adjust to meeting customer requirements'* (SA5.5.1.1). He argued that *'Saudia Airlines studies confirmed that it is very important to increase the level of satisfaction in customer journeys'* (SA5.5.1.3). One design consultant stated, *'I don't think there is a great deal of customer research'* (SA-DC2.5.1.1).

To sum up, Saudia Airlines' employees and design consultants found customer research important and they appeared to value customer feedback. However, Saudia Airlines seem not to make a great deal of applying this customer research, as some respondents were uncertain that the research they gathered from customers was applied in the development of the customer journey.

6.6 Key Theme 6: Communication

This section discusses the key theme of *communication* which emerged in the transcripts of the interviews with employees of Saudia Airlines and design consultants working on design projects. This key theme contains one sub-theme: cross-departmental collaboration.

Table 6.6 Key Theme 6: Communication

6. Communication	6.1	Cross-departmental collaboration
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6.6.1 Sub-theme 6.1: Cross-departmental Collaboration

Most employees and design consultants explained that the marketing department mainly designed the design projects and they were the ones that did the initial phases of the project. In this way they would have cross-departmental collaboration, which involved certain departments under their supervision. For example, one respondent said, *‘for the lounge we only do the design... we finalize the layout and design concept with the engineering department based on the requirements that we placed initially. At a certain point of time, the engineering department will look for a construction company to implement the project’* (SA1.6.1.1). He explained, *‘then it will be handed to the contractors to implement it... we are looking after them, we are putting the procedures and the guidelines for our contractors to manage’* (SA1.6.1.2). Moreover, one employee confirmed that *‘our role, for example the lounge, we select what type of seats this area needs and services that we need in the lounge. Then it goes to our engineering department, who implement the design based on our requirements’* (SA2.6.1.1). Another employee not from the marketing department pointed out that *‘we are working on their projects as requested and how they designed it. That is the kind of cooperation’* (SA4.6.1.5).

Saudia Airlines’ cross-departmental collaboration appears to be controlled by the marketing department because they were assigned to design the products and services of the customer journey. In addition, their collaboration might have been limited to involving certain departments such as the engineering department and contractors.

6.7 Key Theme 7: Customer Experience

This section discusses another the key theme of *customer experience* derived from the transcripts of the interviews held with employees of Saudia Airlines and design consultants working on design projects. This key theme contains one sub-theme.

Table 6.7 Key Theme 7: Customer experience

7. Customer experience	7.1	Undifferentiated and off-the-shelf products
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6.7.1 Sub-theme 7.1: Undifferentiated and Off-the-shelf Products

Saudia Airlines' employees emphasised undifferentiated and off-the-shelf products. For example, one employee stated that they provided an '*on-demand entertainment system and mobile phone*' (SA3.7.1.2). He explained that they had '*developed a ticket office for passengers to use time effectively*' (SA3.7.1.4) and that '*there are requirements for seats, there's safety considerations and design strength consideration and so on; there are a limited number of seat suppliers in the market*' (SA3.7.1.6). Another participant asserted that '*design is left to the supplier to provide Saudia Airlines with different design options for senior management to select from*' (SA5.7.1.2). With regards to intangible design touch points some Saudia Airline employees were aware of this matter.

Overall, in the interviews it was clear that employees had a narrow view of how design could add value to their customer journey. Therefore, it can be concluded that the undifferentiated and off-the-shelf products offered by Saudia Airlines suggests that they do not aim to differentiate themselves from the other airlines and they purchase goods that are already available in the market.

The following research questions have been addressed by the researcher's findings and discussions presented in this chapter.

RQ1.2. How could tangible and intangible designs contribute towards a company's strategic goals and/or objectives?

Tangible and intangible designs contribute towards a company's goals and objectives in terms of customer experience, however, the contributions were rather limited. In this case Saudia Airlines' employees and design consultants did not emphasise being unique, innovative or feel the need to differentiate themselves from other airlines. Saudia Airlines'

employees and design consultants stressed offering off-the-shelf products, which is a narrow view of how design could add value to their tangible and intangible design touch points. For example, one participant stated, *'suppliers provide us with cabin seats. Limited suppliers in the market. We only choose the basic design feature like colour and materials'* (SA4.7.1.1). Furthermore, they acknowledged the importance of improving their design projects, which could help them to keep up with their competitors but this highlighted their moderate ambition for design. This is compared to the design experts' findings that emphasised creating innovative and unique design touch points that help differentiate the airline and gain a competitive advantage. For example, one expert stated, *'to design the experience is getting more important. It is the part that differentiates our airline'* (DE3.1.8.6).

The outcomes of study one (see Chapter 04) show that customer findings support the comparison between Saudia Airlines and the other airlines that make good use of design. For example, in the case of Saudia Airlines, a passenger commented, *'truthfully Saudia Airlines is way below the average on the lounge specifically; I didn't go to Jeddah but I went to Riyadh in the lounge and you know it was way below the average of their competitors'* (P6.3.1). By contrast, regarding the other airlines that make good use of design, one customer commented, *'Emirate Airlines in Dubai, the First Class lounge, it is part of heaven'* (P7.3.1) (see Chapter 04, Section 4.2.1). Therefore, Saudia Airlines need to elevate their perception of the strategic use of design to innovate and differentiate tangible and intangible design touch points.

RQ2.2. What do airlines that employ the Silent Design approach perceive design to be and its strategic value?

The research revealed that Saudia Airlines perceived design to be useful in improving customer experience. This perception suggested that Saudia Airlines had a narrow understanding of design and its potential contribution. For example, one employee emphasised his moderate ambition for design, when he stated, *'I don't think we can reach 4 star only by design'* (SA1.1.4.2). Furthermore, Saudia Airlines' employees and design consultants highlighted external influences such as the need to keep up with competitors by trying to follow what other airlines are doing rather than differentiating themselves from other airlines. For example, one employee stated, *'we try to make the check-in*

process easier. We used internet check-in, which may not be leading edge; other airlines have used it' (SA3.2.1.5). On the other hand, the design experts emphasised monitoring their competitors and focusing on their own strengths to improve the customer experience. For example, one design expert said, *'most of the time we look around to see what competitors are doing. We look around us but we are not focused on others we try to focus on our own strength'* (DE3.1.7.2).

RQ2.4. How do airlines that employ Silent Design actually manage design?

The findings of Saudia Airlines' employees and design consultants provided some evidence regarding how their airline, which employs Silent Design, actually manages design. The findings highlighted that for airlines that employ a Silent Design approach, the way of managing design could have a negative effect on the development of the customer journey.

1) They identified the mind-set of senior management, which supported and invested in design projects. However, senior management might have a narrow belief of the value of the strategic use of design because of the unclear position of design in the organisational structure. For example, a participant noted, *'product management is under one of the divisions of marketing in Saudia Airlines'* (SA1.3.1.1).

2) Moreover, their findings showed a lack of design and design management capabilities within the organisation. For instance, one employee stated that the *'biggest disadvantage would be lack of creative thinking at Saudia Airlines'* (SA5.3.2.1).

3) Therefore, this could lead employees and design consultants to have an unclear process for design projects. For instance, one employee explained that *'there is no clear process for design'* (SA2.4.1.1). By contrast, the design experts highlighted the management of a systematic design process. For example, one interviewee said, *'the core process never changes... design process doesn't change but you can add other steps sometimes because design can be done in different ways'* (DE1.4.1.2). This highlights that experts understand the core design process and they have the flexibility to change the steps according to the need of the projects, which indicates their capability for managing design effectively.

4) Furthermore, with respect to customer research, which is part of the design process, one participant at Saudia Airlines explained, *'we do survey on-board; it is a good opportunity for getting passenger feedback, but not sure if they are used in the improvements for*

products in customer journey' (SA3.4.1.1). Another employee stated, *'most of new design is not based on proper research on the requirements of the market. This was clear on many design projects, especially on one of the latest seat design, which caused many back problems to travellers'* (SA7.5.1.5) and in the customer research (study one) passengers stressed that the cabin seats caused customer dissatisfaction (see Chapter 04). For example, one passenger noted, *'I am not satisfied with the seats, honestly, of Saudia Airlines, because I am not comfortable with it'* (P2.5.3). Saudia Airlines might need to expand in their research by integrating it as part of their design process.

In contrast with the findings discussed in Chapter 05 (see Section 5.5), design experts emphasised that design research was managed as part of the design process of the development of the customer journey. Design experts stressed their design research capability by addressing both customer research and critical analysis of competitors.

In summary, Saudia Airlines' employees and design consultants recognised the need for development and the better use of design to improve the customer journey. Therefore, the findings of this research highlighted that Saudia Airlines might need to consider design management and the strategic use of the value of design, as addressed in Chapter 05. Dijk (cited in Best 2006, p.201) said, *'design management is one of the main strategic tools that the management of an organisation should use to define and realise change'*.

6.8 Final Prototype D

At the end of study three the researcher revisited Prototypes A, B and C. The structure and content of Prototype C were taken into consideration when developing Prototype D. As there were similar key themes captured in the research of the experts (study two), the sub-themes were more negative than the positive sub-themes that were addressed in the experts' research for Prototype C. Table 6.8 illustrates the key themes integrated into Prototype D. As a result six key themes were depicted in all prototypes as follows: 1) organisational mind-set, 2) structure and design capability, 3) design process, 4) design research capability, 5) communication, and 6) customer experience with one new key theme, *'external influence.'*

Table 6.8. The key themes integrated into prototype D

Structure of prototypes adapted from Sinek (2009) and Martin and Terblenche (2003)	Key themes of Prototype A	Key themes of Prototype B	Key themes of Prototype C	Key themes merged into Prototype D	
Why: strategy	Strategic direction and purpose of design		Organisational mind-set	Integrated from Prototypes A and C	Organisational mind-set
			Design as a tool in the organisation	Not included in Prototype A, B or C	External influence
How: structure support, mechanism, behaviour that encourages innovation and communication	Structure and design capability		Structure and design capability	Integrated from Prototypes A and C	Structure and design capability
	Design process		Design process	Integrated from Prototype A and C	Design process
			Design research capability	Not included in Prototype A or B. Integrated from Prototype C	Design research capability
	Communication			Integrated from Prototypes A, B and C	Communication
What	Customer experience			Integrated from Prototypes A, B and C	Customer experience

By incorporating practical issues extracted from Saudia Airlines' employees and design consultants' research into Prototype D, the research could ensure that Prototype D had a strong theoretical foundation. The structure of Prototype D remains the same (based on

Sinek's Golden Circle model); however the detailed descriptions were revised and refined based on the Saudia Airlines' employees and design consultants primary research findings (see Figure 6.1).

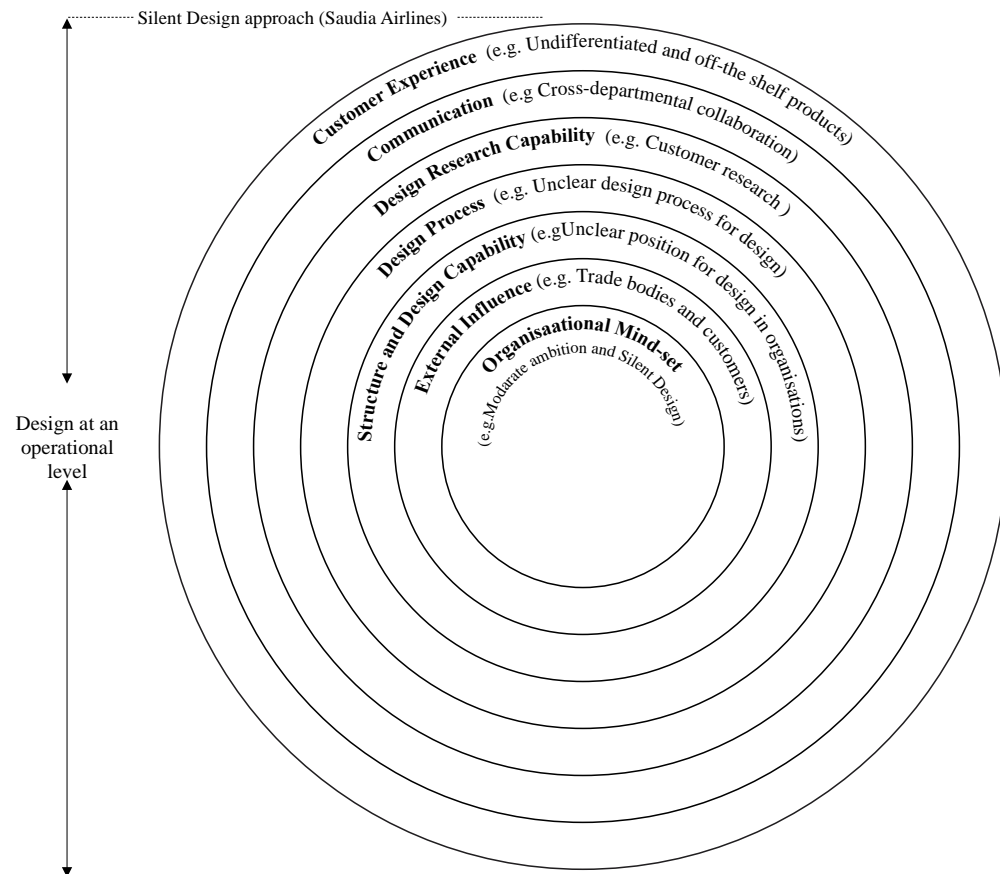


Figure 6.1 Prototype D (study three) - Saudia Airlines' employees and design consultants

1) Similar to Prototype C of the design experts' interview findings, Prototype D illustrates organisational mind-set in the inner circle. However, the sub-themes changed (e.g. limited appreciation of operational contributions of design, moderate ambition for design and recognising the need for the better use of design).

2) 'External influences' is the second key theme, which is right outside the inner circle. This emphasised several sub-themes (e.g. need to keep up with competitors and influence of passengers). In the case of Prototype C, the second key theme that followed organisational mind-set was design as a tool in the organisation (see Figure 6.1). Therefore, as mentioned in Chapter 05, the independent design experts were of the view that they did not need to be influenced by external stakeholders and they were much more

confident than Saudia Airlines' employees about asserting their own standards in the marketplace.

3) 'Structure and design capability' is the third key theme, which includes the unclear position for design in the organisational structure and the lack of design and design management capability.

4) 'Design process' is the fourth key theme, in which employees suggested that the unclear process for design could have an impact on their processes and practising of design within their organisation.

5) 'Design research capability' is the fifth key theme, which was limited to customer research; design experts commented on both customer research and critical analysis of competitors.

6) The sixth key theme pertains to 'communication', which includes cross-departmental collaboration, which was controlled by the marketing department because in Saudia Airlines they were in charge of the development of the customer journey. The other departments were just implementing their requests without contributing. In the case of the other airlines that make good use of design, design experts stated that their design management capability helped inform cross-departmental collaboration for their design projects.

7) Finally, the seventh key theme was customer experience, which included undifferentiated and off-the-shelf products.

In this chapter covering Saudia Airlines' employees and design consultants research (study three) all key themes and sub-themes negatively addressed how Saudia Airlines develop their customer journey. The findings that were extracted formulated Prototype D. Then the researcher merged Prototypes C and D to create Prototype CD that will be explained in the next chapter (see Chapter 07).

7. DMCF Formulation and Evaluation

This chapter will summarise the final iterative prototype development that helped in the formulation of the design management conceptual framework (DMCF). In addition, this chapter will cover the evaluation and modification process of the DMCF and will present the final version of the DMCF at the end, which is the main contribution of this study. This chapter describes in 7.1 the results of the iterative prototype process that includes the classification of initial prototype (7.1.1), the classification of Prototype B (7.1.2), and the classification of Prototype CD (7.1.3). In 7.2 the results of the iterative DMCF process are presented and in 7.2.1 the DMCF – Version 1 is presented. Then in 7.3 the validation process is presented and in 7.3.1 are the results from design experts. In 7.3.2 the DMCF – Version 2 is presented. Finally, in 7.4, the final validation of Saudia Airlines is presented.

7.1 Development of Prototypes

In this section, the results of the iterative prototype development process will be discussed in detail based on the findings of the secondary and primary research (Studies One, Two and Three). The researcher developed the prototypes (Prototype A, Prototype B, Prototype C and Prototype D), which were iteratively evaluated throughout the research (Appendix E1). As mentioned in Chapter 02 the final structures of the prototypes were based on Martin and Terblenche's model (2003) and Sinek's model (2009), which were presented and explained in detail in Chapters 02, 04, 05 and 06 (see Figures 2.30, 4.13, 5.1 and 6.1).

The aim of creating the prototypes helped formulate the DMCF by addressing the common key themes and sub-themes that emerged from the key stakeholders in the airline industry, which will be covered in the following section. The researcher addresses the relationship between all the prototypes by colour-coding each key theme to identify the common themes that helped in the development of the final conceptual framework.

7.1.1 Development of Prototype A

As explained in chapter 02 (see Section 2.7.1) the initial prototype was based on the key issues extracted from the literature review. The researcher identified the key issues of design management and the use of design at a strategic and operational level. In addition, the researcher investigated the organisational culture and key dimensions that can promote or hinder innovation within organisations. Case studies of different industries, especially the airline industry, that value the strategic use of design addressed these key dimensions

(strategy, structure, support mechanisms, behaviour that encourages innovation and communication) and were adapted from Martin and Terblanche's (2003) model (see Figure 2.20 in Chapter 02) that can encourage innovation within organisations. Figure 7.1 demonstrates Prototype A by colour, which was developed by sketching out several prototypes mirroring the process of an actual design project. In the iterative prototype process, the researcher sketched out many prototypes that were based on models in the literature that helped the prototype to evolve. This process was repeated as part of the development of the initial prototype (see Appendix E1). All prototypes had limited space to include all sub-themes; therefore, the researcher added the tables on the side of the prototypes to include most of the sub-themes. This was the case for most of the prototypes throughout this research.

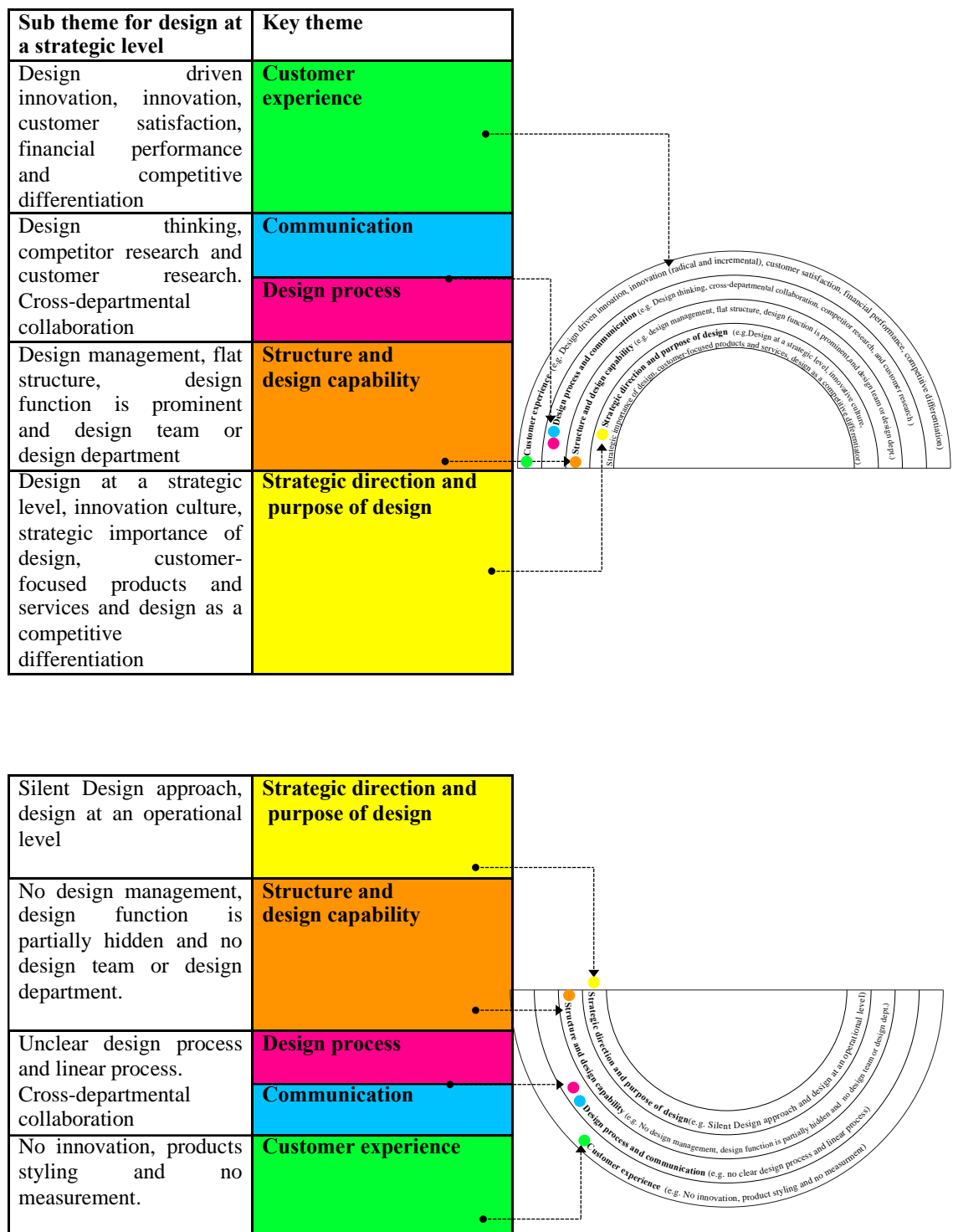


Figure 7.1 Diagram explaining how key dimensions enabling organisations to use strategic design and Silent Design were captured in Prototype A.

7.1.2 Development of Prototype B

As explained in Chapter 04 (see Section 4.3) Prototype B was based on the key themes and sub-themes extracted from the customer research (Study One). The themes were based

on the interview questions of frequent flyers who travelled with Saudia Airlines and the other airlines that make good use of design. Figure 7.2 demonstrates Prototype B by colour, which was developed by sketching out several prototypes mirroring the process of an actual design project. In the iterative prototype process, the researcher sketched out many prototypes that were based on models in the literature that helped the prototype to evolve and repeated this process as part of the development of Prototype B (see Appendix E1).

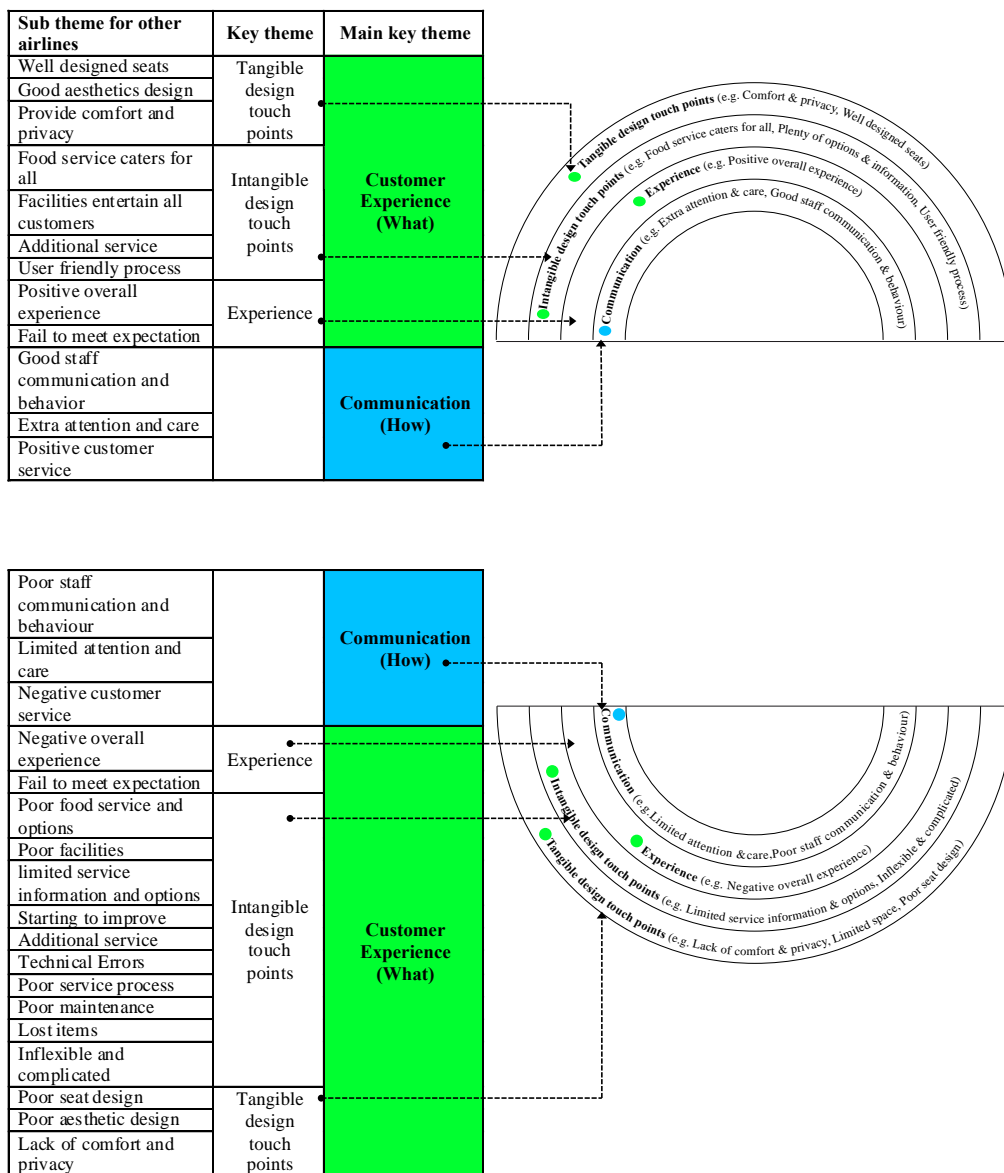


Figure 7.2 Diagram explaining how key themes emerged from the interviews were integrated into Prototype B (Study One, customer research).

7.1.3 Development of Prototype CD

Figure 7.3 demonstrates Prototype C and Prototype D by colour, which were developed by sketching out several prototypes mirroring the process of an actual design project. In the iterative prototype process, the researcher added more circles to these two prototypes and then combined them together.

As explained in Chapter 05 (see Section 5.8.1) Prototype C was based on the key themes and sub-themes extracted from the design expert research for airlines that make good use of design (Study Two) (See Figure 7.3). In addition, as explained in Chapter 06 (see Section 6.8.1), Prototype D was developed from the key themes and sub-themes extracted from Saudia Airlines' employee and design consultant research (Study Three) (See Figure 7.3).

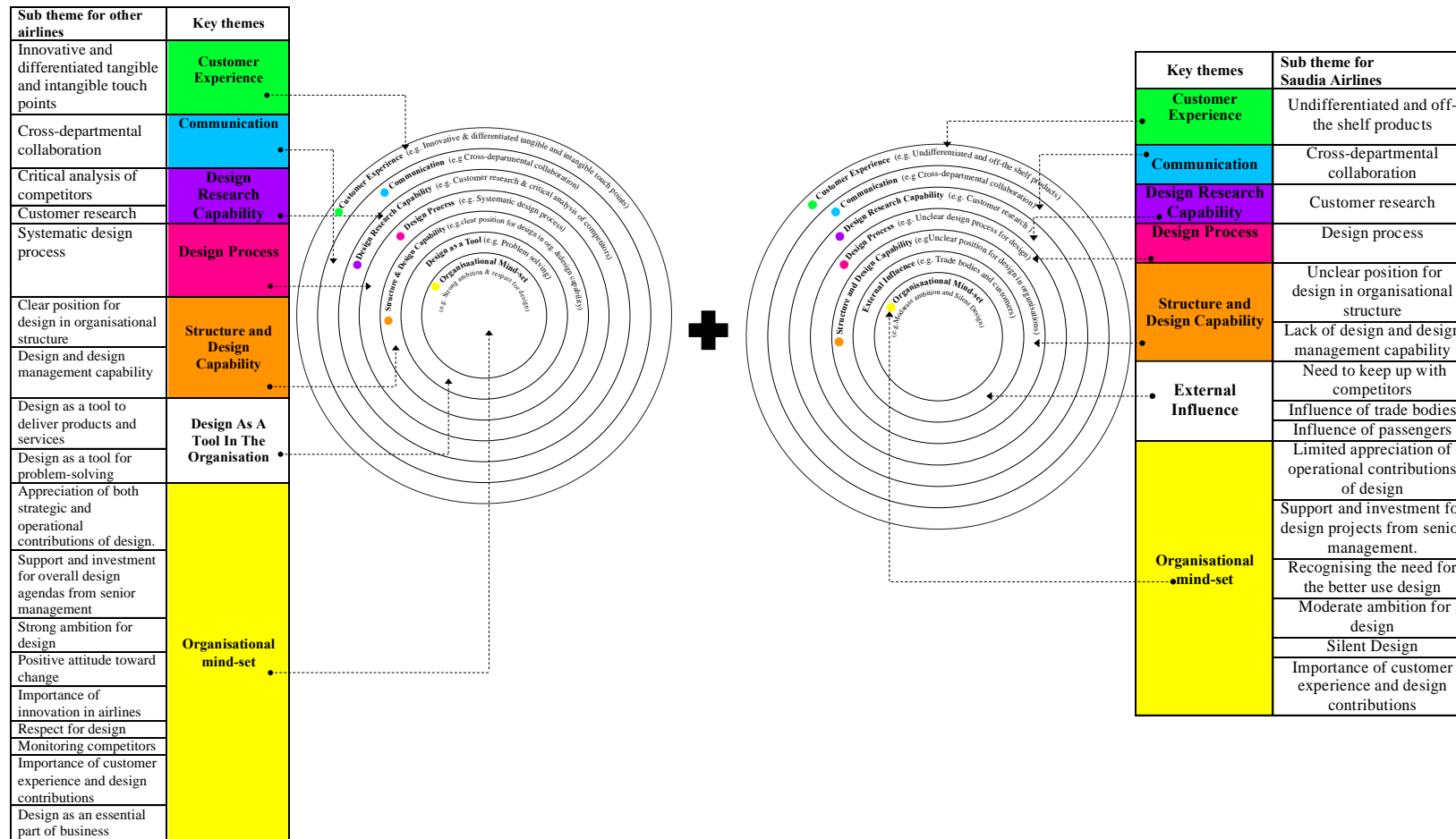


Figure 7.3 The left side the diagram explains how key themes that emerged from the interviews were integrated into Prototype C (Study Two, design experts). The right side explains how key themes that emerged from the interviews were integrated into Prototype D (Study Three, Saudia Airlines employees and design consultants)

All key themes and sub-themes were presented and discussed in detail in Chapters 05 and 06. Table 7.1 also summarises the key themes and identifies the similarities and differences between both prototypes (see Table 6.8).

Table 7.1 Key themes of Prototype C and Prototype D

Structure of prototype (see Chapter 02, Section 2.7)	Key themes of Prototype C and Prototype D		Similarities and differences
Adapted from Martin and Terblenche (2003) and Sinek (2009)	Key themes of Prototype C – design experts for airlines that make good use of design	Key themes of Prototype D – Saudia Airlines employees and design consultancies. Airline that has a Silent Design approach	Comparison between the two prototypes (similarity or difference)
Why: strategy	1. Organisational mind-set	Organisational mind-set	Same key theme, yet sub-themes differed
	2. Design as a tool in the organisation	External influence	For this second key theme both Prototype C and Prototype D are completely different
How: structure, mechanism support, behaviour that encourages innovation and communication	3. Structure and design capability	Structure and design capability	Same key theme, yet sub-themes differed
	4. Design process	Design process	
	5. Design research capability	Design research capability	
	6. Communication	Communication	
What- (not mentioned in Martin and Terblenche’s study)	7. Customer Experience	Customer Experience	Same key theme, yet sub-themes differed

After the researcher showed the similarities and differences between Prototype C (Study Two, design experts) and Prototype D (Study Three, Saudia Airlines’ employees and design consultants) she merged them, splitting the prototype in half to relate it to

Prototypes A and B. This created Prototype CD; in this way, Prototype C was the top half of the circle and Prototype D was the bottom half of the circle. This could help readers gain a better understanding of the differences between airlines that make good use of design on the top half and those that apply the Silent Design approach on the bottom half (see Figure 7.4).

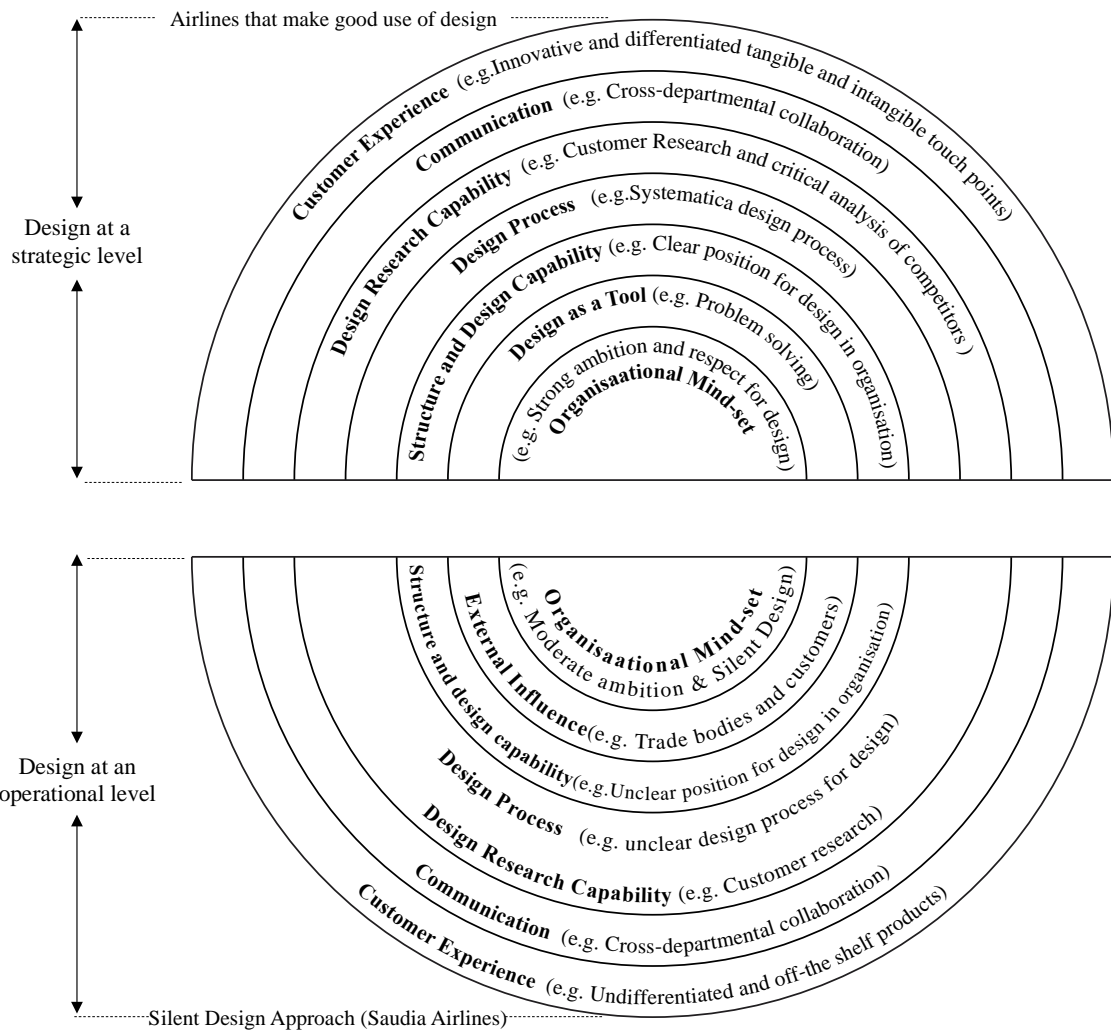


Figure 7.4 Final version of Prototype CD (comparison between Saudia Airlines and other airlines that make good use of design) that helped formulate the DMCF.

To sum up this section, the final result of all the prototypes were divided into two halves: the top half was for the use of design at a strategic level and the bottom half was for the use of design at an operational level with the Silent Design approach). Figures 7.5 and 7.6 show the final version of Prototype A and Prototype B respectively.

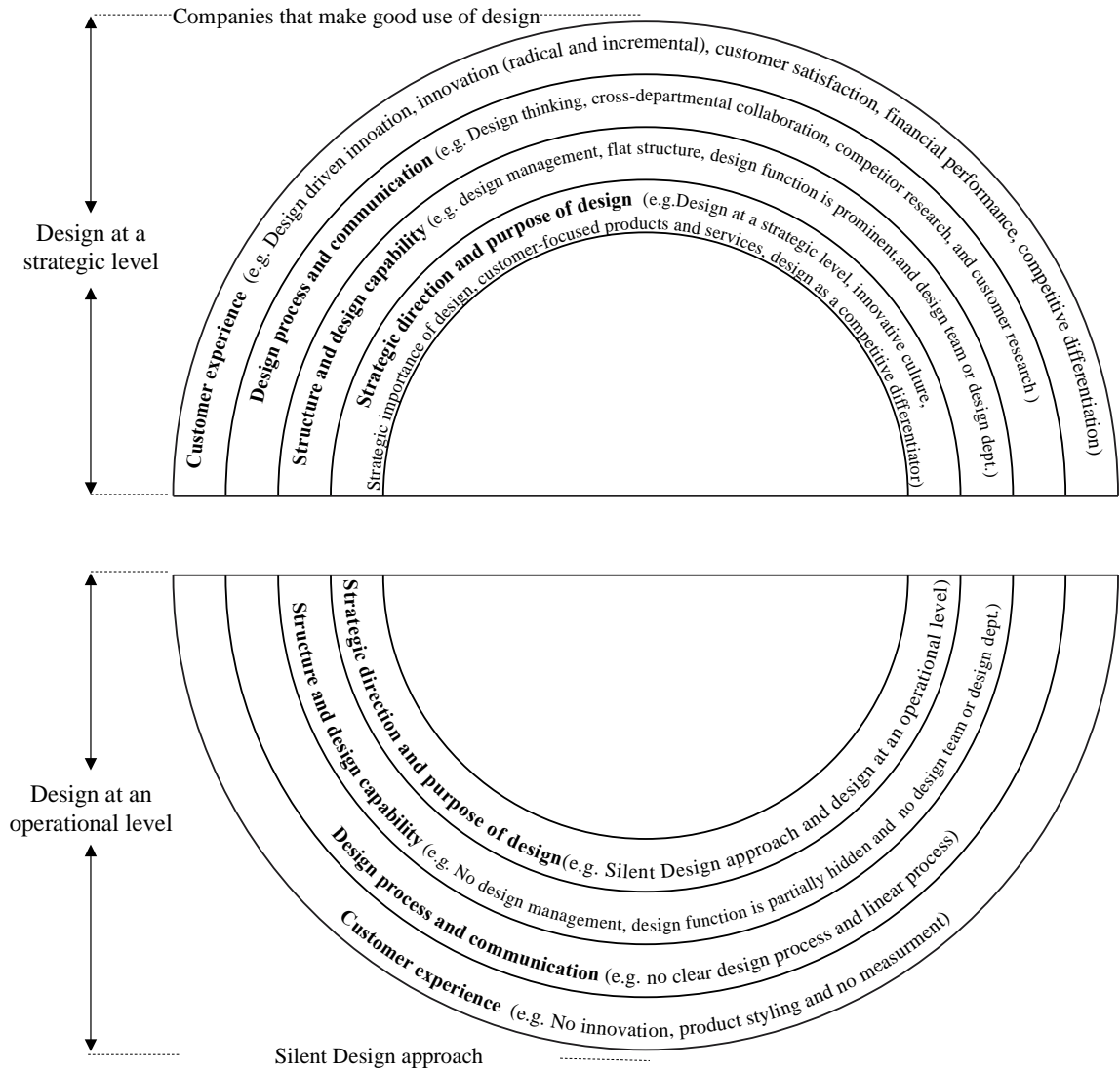


Figure 7.5 Final version of Prototype A that helped to formulate the DMCF

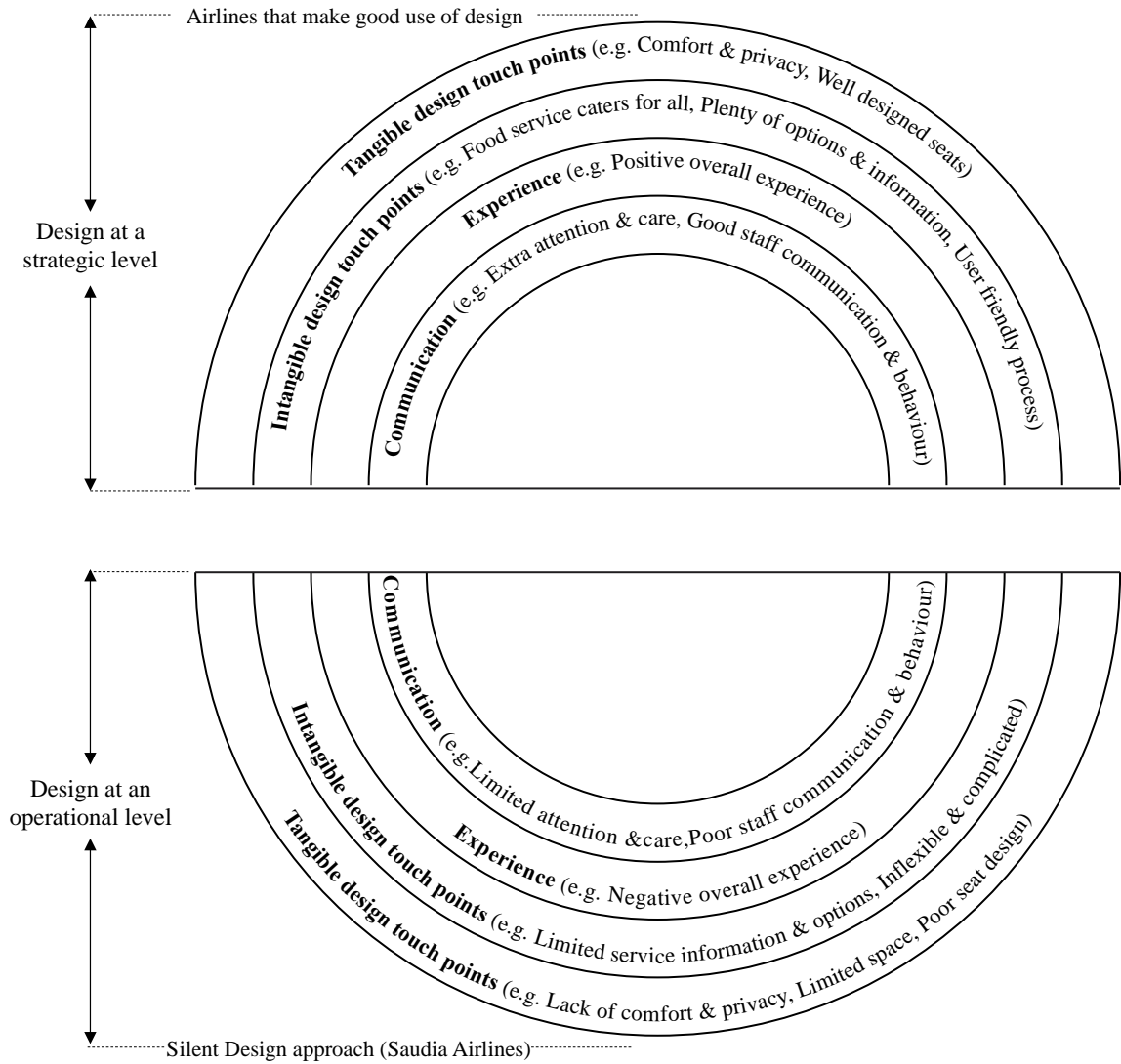


Figure 7.6 Final version of Prototype B that helped to formulate the DMCF

Table 7.2 shows the common key themes of all prototypes by colour that helped to formulate the DMCF. The terms of these key themes addressed in this table are the final terms after several prototype iterations.

Table 7.2 shows the entire common key themes of all prototypes

Structure of prototypes adapted from Sinek (2009) and Martin and Terblenche (2003)	Key themes of Prototype A	Key themes of Prototype B	Key themes of Prototype CD
Why: strategy	Strategic direction and purpose of design		Organisational mind-set
How: structure support, mechanism, behaviour that encourages innovation and communication	Structure and design capability		Structure and design capability
	Design process		Design process
	Communication	Communication	Communication
What: (not mentioned in Martin and Terblenche's study)	Customer experience	Customer experience	Customer experience

7.2 Results of the Iterative DMCF Process

In this section, the results of the iterative DMCF development process are addressed; the researcher sketched out several frameworks and repeated this process as part of the iterative prototype development process of the DMCF. Figure 7.7 shows one of the first iterations of the DMCF. The researcher addressed most of the key themes mentioned in the prototypes in the top row of the DMCF, which was a total of five key dimensions.

In the next row, the researcher addressed the airlines that make good use of design as the 'Strategic Design Culture', mentioning the sub-themes that were common to the main three prototypes (Prototypes A, B and CD) across the five key dimensions.

In the bottom row of the DMCF, the researcher covered the 'Silent Design Culture', mentioning the sub-themes that were common to the main three prototypes across the five

key dimensions. These two rows show a mirror image of each other, yet, the Strategic Design Culture shows a strong perception of the strategic use of design. However, the Silent Design Culture shows a moderate perception of the strategic use of design and they seemed to be using design at an operational level. This clearly showed a gap between the two cultures.

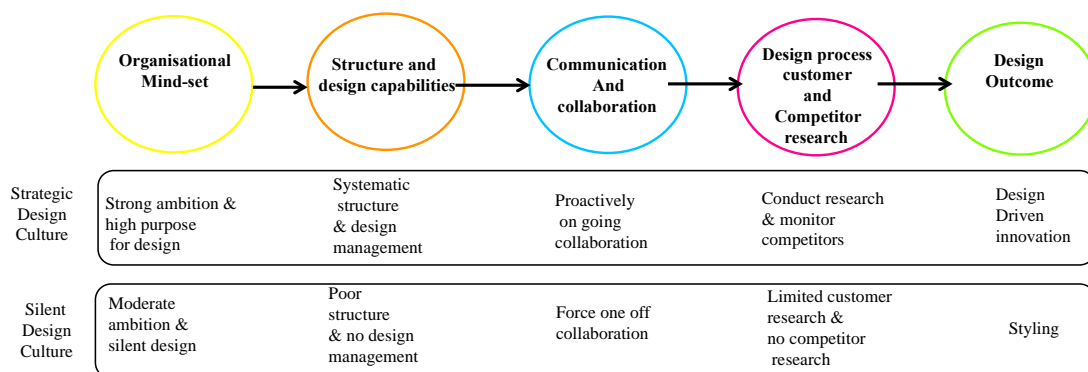


Figure 7.7 First main iterative DMCF prototype development process

The researcher showed the framework to her supervisor/reviewer for feedback. Following the reviewer’s comments, the researcher added a section to the framework to explain how a Silent Design Culture can elevate to a Strategic Design Culture, which was not included in this DMCF prototype (see Figure 7.7). In addition, the terms used for both key themes and sub-themes were also modified. For example, the term ‘design outcomes’ was changed to ‘customer experience’. This modification added more clarity and strengthened the meaning to make the framework understandable for people who are going to use the framework.

Figure 7.8 shows another development of the DMCF prototype of the conceptual framework. The researcher added a major part that was missing in the first iteration of the DMCF prototype, which was how to bridge the gap between the two types of airlines. This extra section explained how the conceptual framework could help elevate the Silent Design Culture airline to become a Strategic Design Culture company. In addition, the researcher grouped two key dimensions, design process and collaboration, together to reduce complexity. Furthermore, the researcher wanted to reduce complexity of the DMCF so one colour was used.

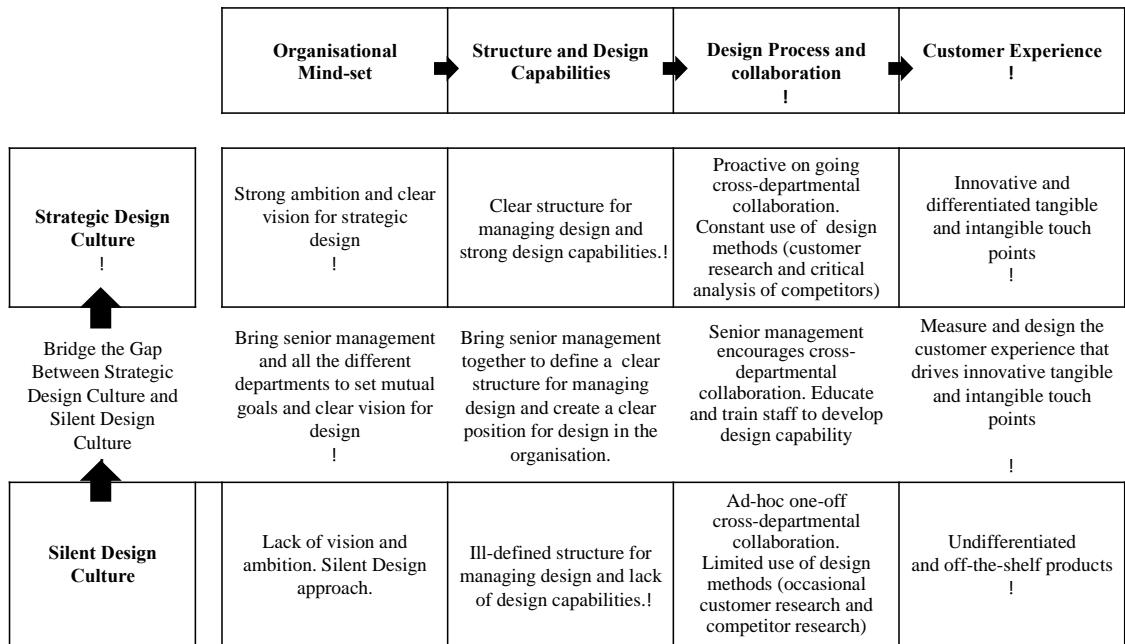


Figure 7.8 Second main iterative DMCF prototype development process

7.2.1 DMCF Framework Version 1

After several other iterative prototype developments, the researcher finalised the DMCF. One of the major developments in this last version was that the researcher moved the Silent Design Culture row to the top and the Strategic Design Culture row to the bottom. Figure 7.9 illustrates DMCF Version 1, which is the central contribution of this research based on the overall conclusion of the iterative prototyping process discussed in the previous section (see Section 7.2).

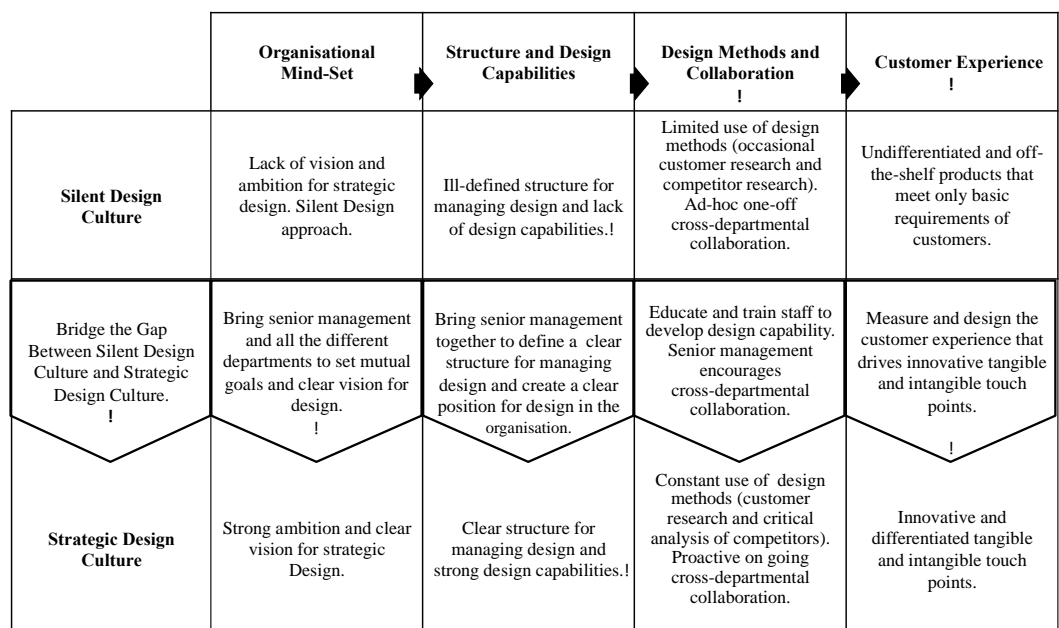


Figure 7.9 DMCF framework version 1

As mentioned previously, the researcher extracted from the main three prototypes the common and most important findings from the analysis of both the secondary and primary research, and synthesised this conceptual framework. This DMCF aims to assist senior management to facilitate change within the organisation. This conceptual framework is a starting point to help organisations that have a Silent Design Culture to promote the strategic use of design within the airline industry. This framework illustrates the perception and practice of design within two contrasting types of organisational cultures:

- 1) The first type were airlines that adopted the Silent Design approach (such as Saudia Airlines); this research has identified this as a Silent Design Culture.
- 2) The second type are airlines that make good use of design; this research has identified this as a Strategic Design Culture.

The DMCF Version 1 seeks to bridge the gap between Silent Design Culture and Strategic Design Culture. According to this research, the four key dimensions through which design can be facilitated are: 1) Why- organisational mind-set, 2) How- structure and design capability, 3) How- design process and collaboration, and 4) What- customer experience (see Figure 7.10).

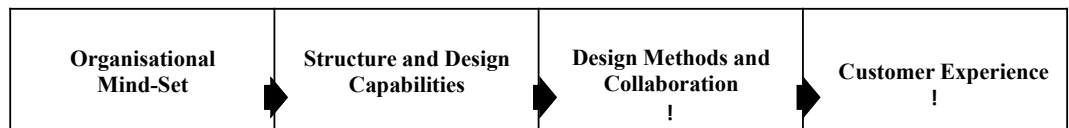


Figure 7.10 The four key dimensions for the DMCF

Organisational mind-set refers to the vision and ambition that senior management create within the organisation for positioning and differentiating the organisation within the industry. It also refers to the way senior management perceive design and its purpose within the organisation.

Structure and design capabilities refer to how design is embedded within the organisation. It also refers to the skills and resources that are deployed for executing design within the organisation.

Design methods and collaboration refer to the activities and stages that are followed to execute design. It also refers to the way the functions and stakeholders within the organisation interact and collaborate with one another.

Customer experience is the fourth dimension of the framework and is the result of the above three dimensions. It is the organisation's tangible and intangible design touch points

that customers experience. It is also the dimension that determines the organisation's actual position and differentiation within the industry.

Both types of organisations and their use of design across these four dimensions are demonstrated by the DMCF version 1:

- Silent Design Culture is the type of culture that is adapted by airlines such as Saudia Airlines.

	Organisational Mind-Set	Structure and Design Capabilities	Design Methods and Collaboration !	Customer Experience !
Silent Design Culture	Lack of vision and ambition for strategic design. Silent Design approach.	Ill-defined structure for managing design and lack of design capabilities.!	Limited use of design methods (occasional customer research and competitor research). Ad-hoc one-off cross-departmental collaboration.	Undifferentiated and off-the-shelf products that meet only basic requirements of customers.

Figure 7.11 The Silent Design Culture for the DMCF

- In an organisation that follows the Silent Design Culture senior management lack the vision and ambition for differentiating their organisation within the airline industry. Although they use design it is not strategically important to them.
- The structure and design capability of this type of organisation is characterised by ill-defined structures for managing design and lacks design capabilities. The embedding of design within their airline is not clearly defined. Additionally, they lack design skills and resources for managing and executing design.
- The Silent Design Culture in terms of design methods and collaboration has limited design capability (e.g. customer research and competitor research) and ad hoc cross-departmental collaboration. They do not follow the core design process for executing design. For example, some parts of the organisation conduct customer research and competitor research occasionally but the findings of their research are not always considered in the development of the customer experience.
- The final dimension, which is customer experience, created undifferentiated and off-the-shelf products. The resulting customer experience is characterised by undifferentiated products and services. Therefore, the overall result is that the Silent Design Culture organisations remain undifferentiated in the airline industry.

By contrast, Strategic Design Culture is the type of culture that is adapted by a number of leading airlines that make good use of design in this study.

	Organisational Mind-Set	Structure and Design Capabilities	Design Methods and Collaboration !	Customer Experience !
Strategic Design Culture	Strong ambition and clear vision for strategic Design.	Clear structure for managing design and strong design capabilities.!	Constant use of design methods (customer research and critical analysis of competitors). Proactive on going cross-departmental collaboration.	Innovative and differentiated tangible and intangible touch points.

Figure 7.12 The Strategic Design Culture for DMCF

- This type of organisation’s senior management create a strong vision and ambition throughout the airline to differentiate their airline in the industry. They are considering design to be of strategic importance to them.
- The structure and design capabilities of this type of organisation embed design

within their organisation through a systematic and clear structure. They invest in design-specific skills and resources for managing and executing design.

- In terms of design methods and collaboration, these types of airlines follow the core design methods for executing design. For example, they conduct critical analysis of competitors and do customer research constantly and their findings are always considered in the development of the customer experience.
- The final dimension, customer experience, is the result of the above three dimensions. The resulting customer experience is characterised by differentiating tangible and intangible design touch points in the customer journey. The overall result is that the Strategic Design Culture organisations maintain their position as innovators and differentiators within the airline industry.

In the above section the researcher explained the conceptual framework that was designed for an airline that had a Silent Design Culture, in this case Saudia Airlines. In the following section the DMCF illustrates how to bridge the gap between Silent Design Culture and Strategic Design Culture, across the four key dimension of the DMCF (see Figure 7.13).

	Organisational Mind-Set	Structure and Design Capabilities	Design Methods and Collaboration	Customer Experience
Silent Design Culture	Lack of vision and ambition for strategic design. Silent Design approach.	Ill-defined structure for managing design and lack of design capabilities.!	Limited use of design methods (occasional customer research and competitor research). Ad-hoc one-off cross-departmental collaboration.	Undifferentiated and off-the-shelf products that meet only basic requirements of customers.
Bridge the Gap Between Silent Design Culture and Strategic Design Culture.	Bring senior management and all the different departments to set mutual goals and clear vision for design.!	Bring senior management together to define a clear structure for managing design and create a clear position for design in the organisation.	Educate and train staff to develop design capability. Senior management encourages cross-departmental collaboration.	Measure and design the customer experience that drives innovative tangible and intangible touch points.
Strategic Design Culture	Strong ambition and clear vision for strategic Design.	Clear structure for managing design and strong design capabilities.!	Constant use of design methods (customer research and critical analysis of competitors). Proactive on going cross-departmental collaboration.	Innovative and differentiated tangible and intangible touch points.

Figure 7.13 How to bridge the gap between the types of cultures within the airline industry

- Firstly, for a Silent Design Culture to bridge the gap with a Strategic Design Culture in regards to their organisational mind-set, senior management need to

get the different departments to set out mutual goals and a clear vision for the strategic use of design to be understood within the organisation as a whole.

- Secondly, for a Silent Design Culture to have a structure and strong design capabilities like a Strategic Design Culture, their senior management need to agree on a clear and systematic structure for managing design. Their organisation needs to provide the necessary design capabilities that add value to design within the organisation.
- Thirdly, for a Silent Design Culture to facilitate design methods and collaboration between departments similar to Strategic Design Culture organisations, senior management need to educate and train staff to develop design capabilities. Furthermore, senior management need to encourage proactive cross-departmental collaboration. This allows the employees the flexibility and freedom to make decisions within the organisation.
- Finally, the Silent Design Culture, in regards to customer experience, should be measured according to the airline's innovations for the tangible and intangible design touch points in the customer journey.

7.3 Validation and Modification of DMCF

This section addresses Objective No. 6, 'to evaluate the potential of the proposed framework and revise it according to the feedback from key stakeholders'. The researcher first validated the DMCF with design experts and then with Saudia Airlines' senior management to find the significance of this conceptual framework within the airline industry and especially for airlines that would like to evaluate and elevate their perception of the strategic use of design.

7.3.1 Results of Expert Analyses

The main purpose of the validation is to examine the key aspects and the structure of the formulated conceptual framework: 1) the key dimensions, 2) Silent Design Culture, and 3) Strategic Design Culture within the airline industry. Furthermore, the researcher wanted to find out from experts if the recommendations suggested in the DMCF could help bridge the gap between Silent Design Culture and Strategic Design Culture. At the beginning of the survey, a description of the DMCF was presented before the respondents began to assess the framework in the questionnaire. In addition, the questionnaire was designed for experts to give their personal comments for each of the questions (see Appendix A6). This

study had limitations. A questionnaire sent by email cannot show the full extent of the research, and comments strengthened the quantitative results as they contained the experts' views. However, not all respondents wrote comments as this was an option for each question. The results concerning DMCF provided by the experts for each question are summarised below.

In this first stage, in Figure 7.14 shows that 8 out of 9 respondents agreed that the four key dimensions in the top row of the DMCF (see Figure 7.14) are the fundamental elements for bridging the gap between Silent Design Culture and Strategic Design Culture. Nearly all participants gave positive comments to these key dimensions as 44.44% chose 'partially agree' and 44.44% chose 'strongly agree'. Only one participant (11.11%) chose 'neither agree nor disagree'.

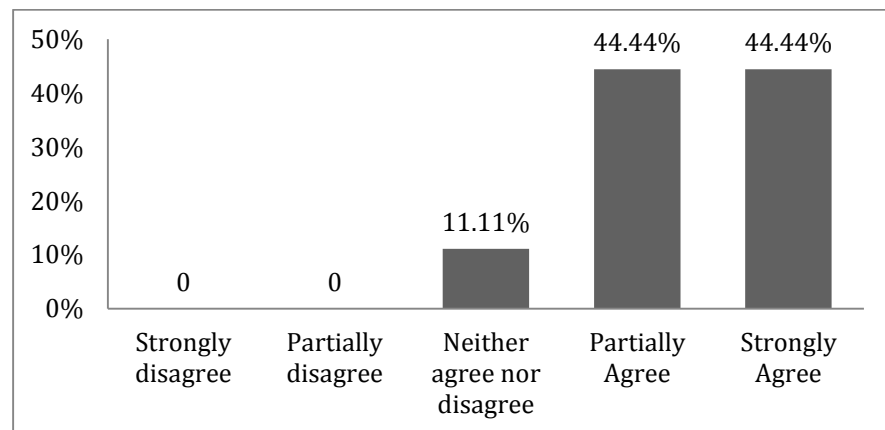


Figure 7.14 Evaluation results of the four key dimensions in the top row of DMCF

Most comments were also positive. For example, one expert said, *'to fulfil a functioning strategic design culture, each of these elements needs to be operating, more or less as you describe'* (DE-DMCF4.1). Another participant stated, *'in theory the points listed are correct, but I would also like to highlight that the decision making process and procedure greatly effects efficiencies and capabilities'* (DE-DMCF3.1).

In Figure 7.15 shows 8 out of 9 participants agreed on the description of Silent Design Culture. Nearly all participants gave positive comments on the description of Silent Design Culture, as 55.56% chose 'partially agree' and 33.3% chose 'strongly agree'. Only one participant (11.11%) chose 'neither agree nor disagree'.

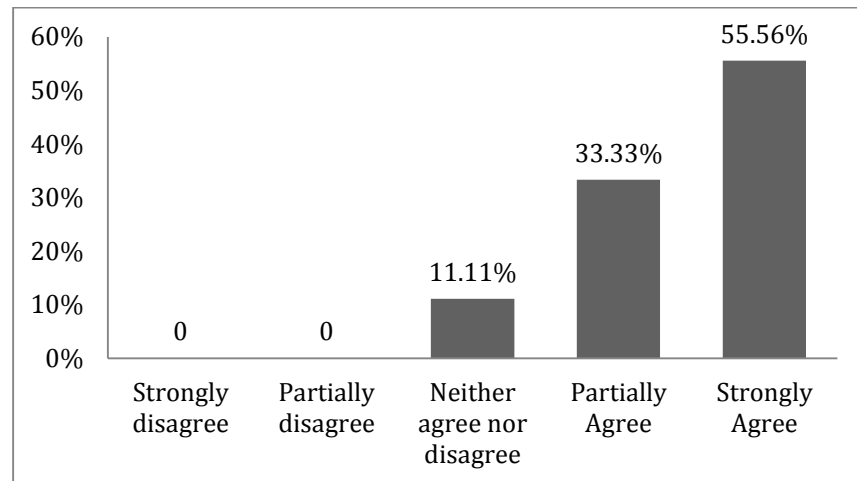


Figure 7.15 Evaluation results of the Silent Design Culture descriptions in the second row of DMCF

Most comments highlighted that airlines using Silent Design Culture did not understand design and did not use design strategically. For example, one participant said, *‘these descriptions are common in companies that aren’t using design effectively. Summarising them with the term Silent Design Culture is one way of defining it’* (DE-DMCF3.2). Moreover, one respondent said, *‘there are two main hurdles: (01) People don’t get it, i.e. they don’t really understand what design is and what it can do to make things better, (02) Everyone wants to be a designer and they treat design decisions too subjectively/superficially.’* Another expert stated that *‘the key word for silent design in the industry is ‘indifference’, which is born out of ignorance too’* (DE-DMCF4.2). Furthermore, one participant said, *‘I’ve also come across departments that have each started their own design processes independently, i.e. Ground Services and Onboard Product with different consultancies, resulting in an inconsistent and diluted brand experience for passengers’* (DE-DMCF6.2). Based on their experience in the airline industry, their comments supported the description of Silent Design Culture in the DMCF within airlines.

In Figure 7.16 below, 9 out of 9 respondents agreed on the description of Strategic Design Culture. Nearly all participants gave positive comments to the description of the Strategic Design Culture as 66.67% chose ‘partially agree’ and 33.3% chose ‘strongly agree’.

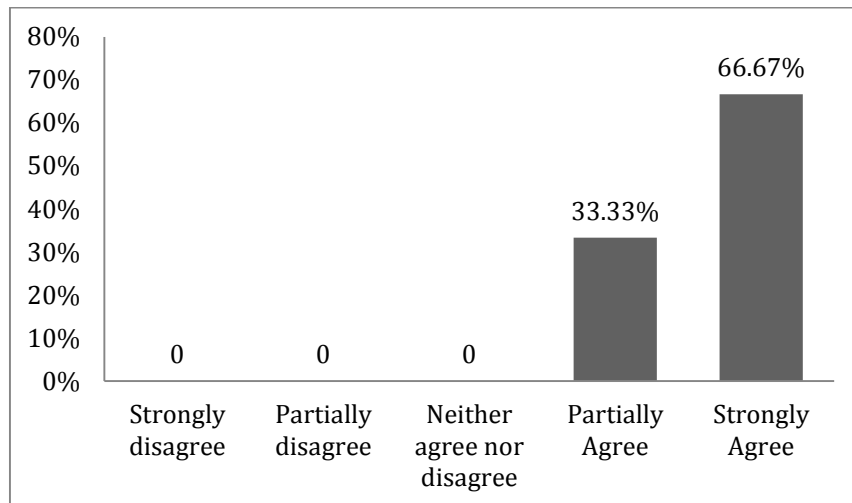


Figure 7.16 Evaluation of the Strategic Design Culture in the bottom row of DMCF

All comments supported the description of Strategic Design Culture in the conceptual framework. For instance, one expert commented on this culture and stated that *'there are broader aspects that should be grouped in the descriptions but it is a good top line of some as the key elements needed in a company with a good design culture'* (DE-DMCF2.3).

The third stage of the questionnaire evaluated experts' opinions on how the DMCF could help bridge the gap between Silent Design Culture and Strategic Design Culture through four recommendations. These four recommendations are located in the middle row between Silent Design Culture and Strategic Design Culture, and they are based on the four key dimensions in the conceptual framework (see Figure 7.17).

	Organisational Mind-Set	Structure and Design Capabilities	Design Methods and Collaboration	Customer Experience
Silent Design Culture	Lack of vision and ambition for strategic design. Silent Design approach.	Ill-defined structure for managing design and lack of design capabilities.!	Limited use of design methods (occasional customer research and competitor research). Ad-hoc one-off cross-departmental collaboration.	Undifferentiated and off-the-shelf products that meet only basic requirements of customers.
Bridge the Gap Between Silent Design Culture and Strategic Design Culture.	Bring senior management and all the different departments to set mutual goals and clear vision for design.	Bring senior management together to define a clear structure for managing design and create a clear position for design in the organisation.	Senior management encourages cross-departmental collaboration. Educate and train staff to develop design capability.	Measure and design the customer experience that drives innovative tangible and intangible touch points.
Strategic Design Culture	Strong ambition and clear vision for strategic Design.	Clear structure for managing design and strong design capabilities.!	Constant use of design methods (customer research and critical analysis of competitors). Proactive on going cross-departmental collaboration.	Innovative and differentiated tangible and intangible touch points.

Figure 7.17 Four recommendations highlighted in yellow to help bridge the gap

Figure 7.18 shows that 7 out of 9 respondents agreed on the recommendation given for the key dimension ‘*organisational mind-set*’ which suggests that the gap between Silent Design Culture and Strategic Design Culture can be bridged by senior management and all the different departments setting mutual goals and clear visions for design. Nearly all participants gave positive responses to this recommendation as 22.22% chose ‘partially agree’ and 55.56% chose ‘strongly agree’. One participant (11.11%) chose ‘neither agree nor disagree’ and another participant chose ‘strongly disagree’.

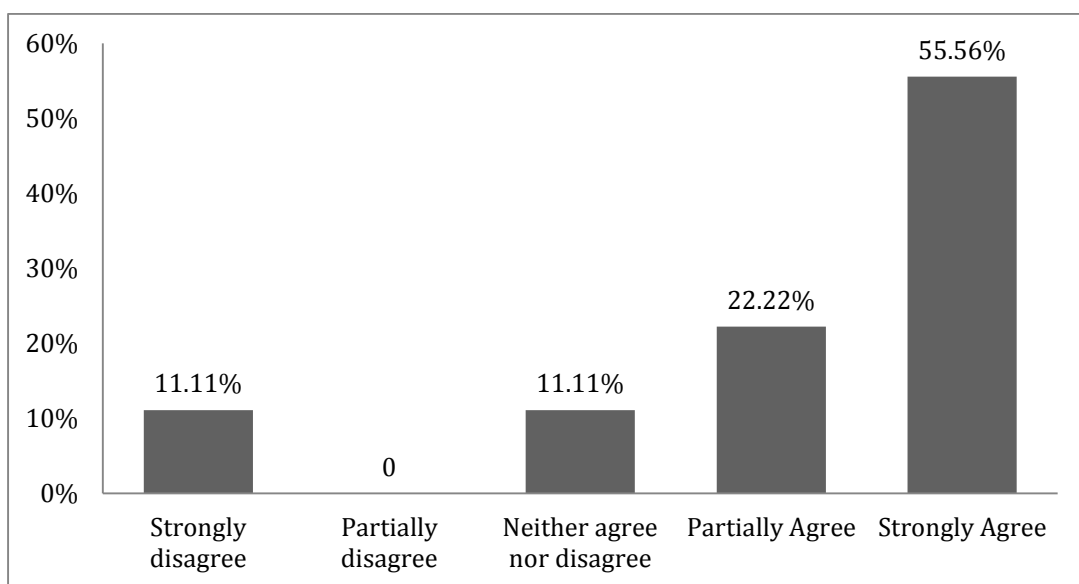


Figure 7.18 Evaluation for the recommendation addressed to ‘organisational mind-set’

Some experts expressed their concerns about senior managements' involvement. For example, one expert stated, *'without design leadership being acquired the meetings suggested may lack direction'* (DE-DMCF1.4). Moreover, one respondent said that *'not all senior managers need to be involved in the definition of design. An autonomy for the design leader tends to be more effective as does a leader who has great relationship management throughout the organisation'* (DE-DMCF3.4). Another participant said, *'I have felt at times the senior team understand the goals but they can't lead to the vision, and this is the start of such ineffective design'* (DE-DMCF6.4). Design experts' comments highlighted design leaders' organisational mind-set, which should offer a clear vision about design and they should be the ones that lead design within the organisation.

Figure 7.19 shows that 8 out of 9 respondents agreed on the recommendation used for the key dimension *'structure and design capabilities'*, which suggests that the gap between Silent Design Culture and Strategic Design Culture can be bridged by bringing senior management together to define a clear structure for managing design and creating a clear position for design in the organisation. Nearly all experts gave positive answers to this recommendation as 11.11% chose *'partially agree'* and 77.78% chose *'strongly agree'*. One participant (11.11%) chose *'partially disagree'*.

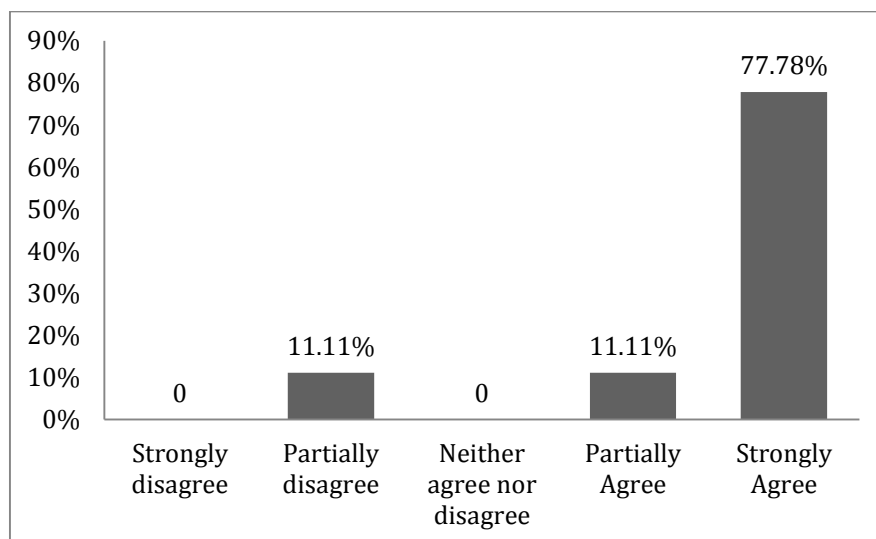


Figure 7.19 Evaluation for the recommendation addressed to *'structure and design capabilities'*

Some experts expressed their concerns about senior managements' involvement. For example one expert said, *'in essence these suggestions are positive and one would hardly argue against them. Non design staff are unlikely to develop 'design capability' at the levels required for the strategic use of design'* (DE-DMCF1.5). Another participant stated,

'I would get a great design leader in the organisation to understand the culture and the issues that need to be navigated to deliver design effectively. I would get them to be the champion of defining the way in which design will be managed and for them to position design in the organisation on the most appropriate way. There will be many agendas in any organisation not all of which will be conducive to the best positioning of design in the company. Collaboration from a design figure head with the key stakeholders in the business will be one way of position design in the most appropriate way' (DE-DMCF3.5). Some addressed appointing a design leader to manage the structure and design capabilities within the organisation. So far for these two recommendations the 'design leader' has emerged as an important figure to facilitate the strategic use of design within the organisation. Therefore the researcher should consider 'design leader' within the modified new version of the conceptual framework.

In Figure 7.20 below, 8 out of 9 respondents agreed on the recommendation used for the key dimension '*design methods and collaboration*' which suggests that the gap between Silent Design Culture and Strategic Design Culture can be bridged by senior management encouraging cross-departmental collaboration, and educating and training staff to develop design capability. Nearly all participants gave positive responses to this recommendation as 50.00% chose 'partially agree' and 37.50% chose 'strongly agree'. Only one participant (12.50%) chose 'neither agree nor disagree'.

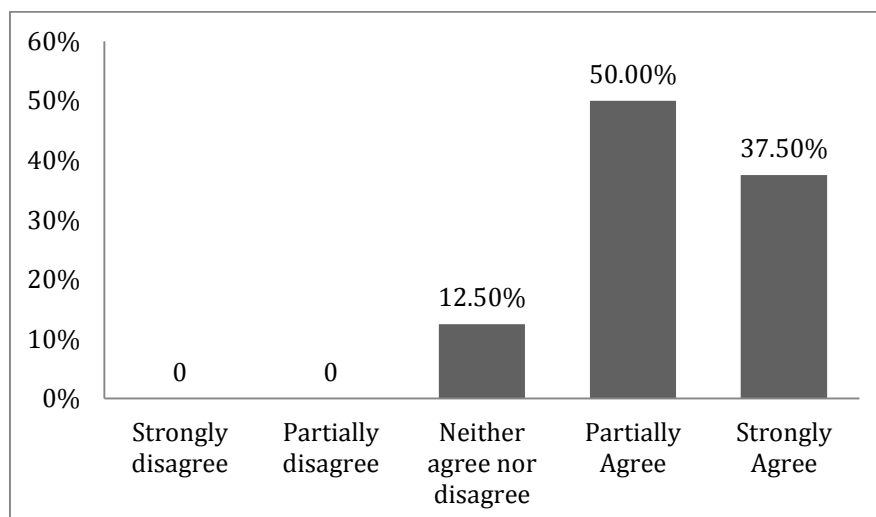


Figure 7.20 Evaluation for the recommendation addressing 'design methods and collaboration'

As a result, most experts' comments supported this recommendation and encouraged cross-departmental collaboration. For example one expert said, '*cross-functional teams are known to produce more robust solutions and to do so more quickly - but only when*

effectively led and directed. The descriptions/suggestions provided in the framework are all very positive but in terms of practical application will need to be tailored to suit different types and sizes of firms' (DE-DMCF1.6). Another participant stated, *'I think that this approach is the starting point for collaboration, but I think a dedicated department needs to be formed, or the use of external consultants and experts in the field. Cross-departmental collaboration is key to getting cohesive design implemented throughout an organisation'* (DE-DMCF6.6). In regard to educating and training staff to develop design capability, most experts supported this recommendation. For instance, one participant stated, *'I think this is absolutely spot-on. Design is almost always secondary to all the other processes within the airline - education and training would definitely change and improve this mind-set'* (DE-DMCF4.6). Yet, one expert argued that it is necessary for designers or employees to be involved in the development of design capabilities. For example, one respondent said, *'I don't think all staff need to be educated in design capabilities. Only the design teams need to be well trained. An appreciation for how design is delivered and the staff members specific role in that delivery is something that should be shared with staff that are affected by it'* (DE-DMCF2.6).

Figure 7.21 shows that 6 out of 9 respondents agreed on the recommendation given for the key dimension 'customer experience' which suggested the gap between Silent Design Culture and Strategic Design Culture can be bridged by measuring and designing the customer experience that drives innovative tangible and intangible touch points. In this question nearly all experts gave positive responses to the 'customer experience' as 22.22% chose 'partially agree' and 44.44% chose 'strongly agree'. Two experts chose 'neither agree nor disagree'.

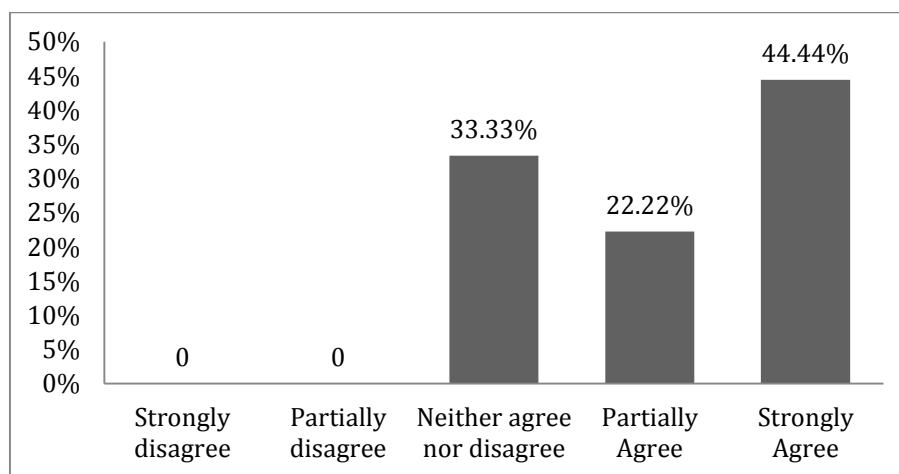


Figure 7.21 Evaluation for the recommendation addressing 'customer experience'

As a result, most experts' comments supported this recommendation; one stated '*customer experience is at the heart of good design innovation*' (DE-DMCF3.7). Another participant said that '*the customer experience must be holistic, looking for example at Apple, who do a great job of doing this. The detail that goes into not only their final product, but the packaging, the experience of unboxing the product, the shop environment and the retail space, and this also spans across to the customer service and the corporate communications. In summary, I think that bridging the gap between silent design structure and strategic design culture in the customer experience area requires a shift in the core company values*' (DE-DMCF6.7). However, one respondent said that customer experience '*doesn't always have to be innovative*' (DE-DMCF2.7).

For the final stage the researcher asked the respondents to give their overall feedback on whether they felt that the DMCF could help bridge the gap between Silent Design Culture and Strategic Design Culture. Figure 7.22 shows that 7 out of 9 respondents agreed as 33.33% chose 'partially agreed' and 33.33% chose 'strongly agreed'. Yet, 2 out of 9 experts selected 'neither agree nor disagree' (22.22%) and one expert recorded 'partially disagree' (11.11%).

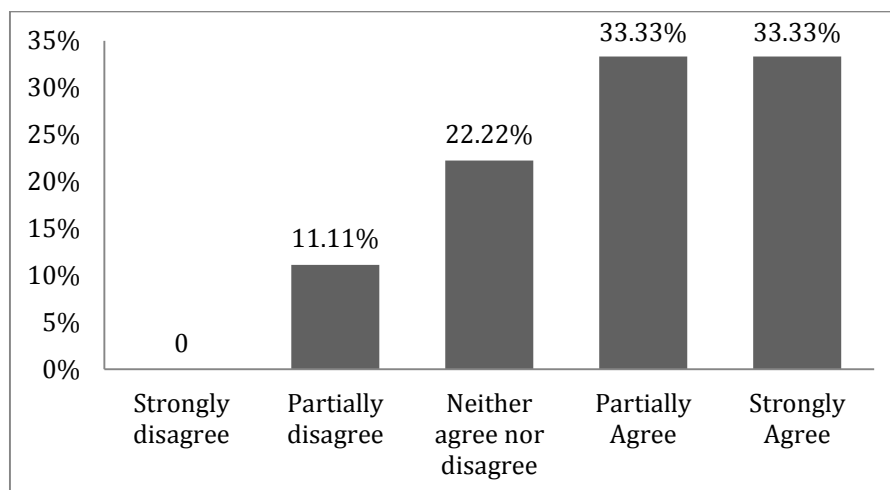


Figure 7.22 Evaluation for experts' overall feedback of DMCF

Regarding the DMCF validation, the findings indicated nearly all participants gave positive overall feedback. In addition, experts considered it as a good starting point and a useful guide for senior management who want to develop their strategic use of design within the airline industry. Most experts agreed that the conceptual framework is a good start for airlines to evaluate their perception of the strategic use of design. The conceptual

framework will help senior management to identify the difference between the two design cultures. However, some participants pointed out that there are many steps involved and organisations would have to be willing to change in order for the conceptual framework to be useful. Furthermore, some experts said this conceptual framework should be used by design managers/leaders. For example, one expert said, *'the framework effectively highlights the differences between these two scenarios (cultures) and suggests ways forward based on 'bringing senior management together' to create a structure for managing design more effectively, including inputs from customers'* (DE-DMCF1.8). In addition, one respondent said, *'I feel its interesting points made'* (DE-DMCF6.8). Another participant stated that *'I believe this is a beneficial road map for determining work cultures. Many steps will be involved in-between to jump from silent to strategic. All parties must be willing to change and make the effort'* (DE-DMCF2.8). Furthermore, one expert said, *'it's a good start and shows a willingness for change in the right direction'* (DE-DMCF3.8). Moreover, another expert said, *'it's a useful guide for a determined, hard-working and serious-minded Design Manager/Leader; it is nothing more than that. In other words, in itself it is of limited value; in the right hands it could prove useful, though experienced design managers will know and do most of this anyway'* (DE-DMCF5.8). This result indicates no difference in opinions between experts working in airlines and those working in design consultancies. Thus, the results of the questions in all stages could be considered highly positive regarding the process taken in the present study.

7.3.2 Framework Modification

Modifications were suggested by the design experts in order to improve the proposed conceptual framework and enhance practical feasibility. Consequently, the recommendations on how to bridge the gap between Silent Design Culture and Strategic Design Culture were modified. The areas highlighted in yellow show what needed to be modified according to the findings of the survey of the design experts (see Figure 7.23).

	Organisational Mind-Set	Structure and Design Capabilities	Design Methods and Collaboration !	Customer Experience !
Silent Design Culture	Lack of vision and ambition for strategic design. Silent Design approach.	Ill-defined structure for managing design and lack of design capabilities.!	Limited use of design methods (occasional customer research and competitor research). Ad-hoc one-off cross-departmental collaboration.	Undifferentiated and off-the-shelf products that meet only basic requirements of customers.
Bridge the Gap Between Silent Design Culture and Strategic Design Culture. !	Bring senior management and all the different departments to set mutual goals and clear vision for design. !	Bring senior management together to define a clear structure for managing design and create a clear position for design in the organisation.	Educate and train staff to develop design capability. Senior management encourages cross-departmental collaboration.	Measure and design the customer experience that drives innovative tangible and intangible touch points. !
Strategic Design Culture	Strong ambition and clear vision for strategic Design.	Clear structure for managing design and strong design capabilities.!	Constant use of design methods (customer research and critical analysis of competitors). Proactive on going cross-departmental collaboration.	Innovative and differentiated tangible and intangible touch points.

Figure 7.23 DMCF Version 1 showing areas needing to be modified

In the revised version of the conceptual framework (DMCF Version 2), the areas highlighted in yellow illustrate the modifications made, based on the findings of design experts (see Figure 7.24).

	Organisational Mind-set	Structure and Design Capabilities	Design Methods and Collaboration !	Customer Experience !
Silent Design Culture	Lack of vision and ambition. Silent Design approach.	Ill-defined structure for managing design and lack of design capabilities.!	Limited use of design methods (occasional customer research and competitor research) Ad-hoc one-off cross-departmental collaboration.	Undifferentiated, off-the-shelf products that meet only the basic requirements of customers.
Bridge the Gap Between Strategic Design Culture and Silent Design Culture !	Senior management appoints design leader. Design leader creates clear design vision and position for design in organisation.	Design leader defines a clear structure for managing design and builds appropriate design capabilities	Design leader facilitates cross-departmental collaboration by design team using design methods.	Design team evaluates and designs a customer experience that considers both customer needs and competitor products. !
Strategic Design Culture	Strong ambition and clear vision for strategic design	Clear structure for managing design and strong design capabilities.!	Constant use of design methods (customer research and critical analysis of competitors). Proactive on going cross-departmental collaboration.	Differentiated tangible and intangible touch points that delight customers and win awards.

Figure 7.24 DMCF Version 2 modified according to the recommendations

Since the experts gave positive responses to the DMCF's top row 'key dimensions' and second row 'Silent Design Culture', the researcher did not modify them (see Figure 7.24).

The bottom row of the conceptual framework on Strategic Design Culture, which reflects the key dimension '*customer experience*', was changed from '*innovation and differentiated tangible and intangible touch points*' to '*differentiated tangible and intangible touch points that delight customers and win awards*'. The researcher emphasised that customer experience '*doesn't always have to be innovative*' (DE-DMCF2.7), yet, it still needs to be differentiated to delight customers and help the airline win awards to sustain their position in the industry.

1. Experts agreed on the recommendations used for the key dimension '*organisational mind-set*' on how to help bridge the gap between Silent Design Culture and Strategic Design Culture. However, there was a concern about senior managements' ability to manage design. Subsequently, it was pointed out in the DMCF Version 2 that senior management should appoint a design leader for this. The design leader could help the airline create a vision and clear position for design in the organisation. The design leader could convince senior management to invest in design. Experts did mention that it is difficult to change mind-sets, therefore having design leadership could help in changing and influencing mind-sets within airlines. Based on these results, the modified method is that '*senior management appoints design leader. Design leader creates clear design vision and position for design in organisation*' (see Figure 7.24).

In empirical studies the subject of 'design leadership' has been a buzzword for the last decade. The term 'leadership' does not have one universal meaning; nonetheless, regardless of the diversity of views it has generally been considered as one person's action in leading a team or group of people to accomplish a goal (Avery, 2004; Gill, 2006; Kakabadse and Kakabadse, 1999; Vroom and Jogo, 2007). Lockwood (2009 cited in Best 2010)) stated, 'Design Leadership and design strategy can be viewed as output of effective design thinking and design management'. He added that the design leader contributes to planning, processes, resources and employees in building a culture for design. Similarly, Turner (2013) argued that design leadership helps companies to envision the future, whereas design management delivers design solutions in a useful and cost efficient way. Moreover, Roald (2006) argued that design leaders improvise to accomplish a synthesis between vision and reality. Furthermore, the United Kingdom Design Council (2013) has launched a programme called the 'Design Leadership Programme' for non-design companies and business, which reflects the concern for how design can contribute to success. To sum up, the modification of the DMCF by replacing senior management with

a design leader could add value to help Silent Design Culture to become a Strategic Design Culture.

2. Most respondents agreed with the recommendation on how to bridge ‘structure and design capabilities’ gaps. However, they recommended that a clear structure for managing design and building appropriate design capabilities should be defined by an appointed design leader rather than senior management. For example, a design team within the organisation can be responsible in the decision-making process for design in the organisation. As previously mentioned by one expert, *‘in theory the points listed are correct, but I would also like to highlight that the decision making process and procedure greatly effects efficiencies and capabilities’* (DE-DMCF3.1). Based on the results the modified recommendation is that the *‘design leader defines a clear structure for managing design and builds appropriate design capabilities’* (see Figure 7.24).

3. Most respondents agreed with the recommendation on how to bridge ‘design methods and collaboration’ gaps. However, they recommended that this design leader also facilitates cross-departmental collaboration by design team/department when appropriate using well-established design methods. For example, one expert said, *‘cross functional teams are known to produce more robust solutions and to do so more quickly - but only when effectively led and directed. The descriptions/suggestions provided in the framework are all very positive but in terms of practical application will need to be tailored to suit different types and sizes of firms’* (DE-DMCF1.6). Based on this result, the modified recommendation is that the *‘design leader facilitates cross-departmental collaboration by design team using design methods’*.

4. Most respondents agreed with the recommendation on how to bridge a ‘customer experience’ gap. However, they recommended that this design team/department evaluates and designs an experience that studies both customers’ needs and critically analyses competitors. Based on the results the modified recommendation is that the *‘design team evaluates and designs a customer experience that considers both customer needs and competitor products’*.

7.3.3 Results of Final Validation (Saudia Airlines’ Management)

This section also addresses Objective No. 6 ‘to evaluate the potential of the proposed framework and revise it according to the feedback from key stakeholders’. After validating and making minor improvements for the conceptual framework, the researcher

carried out another survey to conduct a final validation for the conceptual framework (DMCF Version 2) directly with Saudia Airlines' management who are involved in the development of customer experience (see Appendix A7). The results for each question concerning DMCF provided by the senior manager of Saudia Airlines are summarised below.

Figure 7.25 shows that 4 out of 4 respondents agreed on the four key dimensions of the DMCF, which are the fundamental elements: 1) Why- organisational mind-set, 2) How- structure and design capability, 3) How- design process and collaboration, and 4) What- customer experience within airlines in this research. All participants gave positive responses to these key dimensions as 25.00% chose 'partially agree' and 75.00% chose 'strongly agree'.

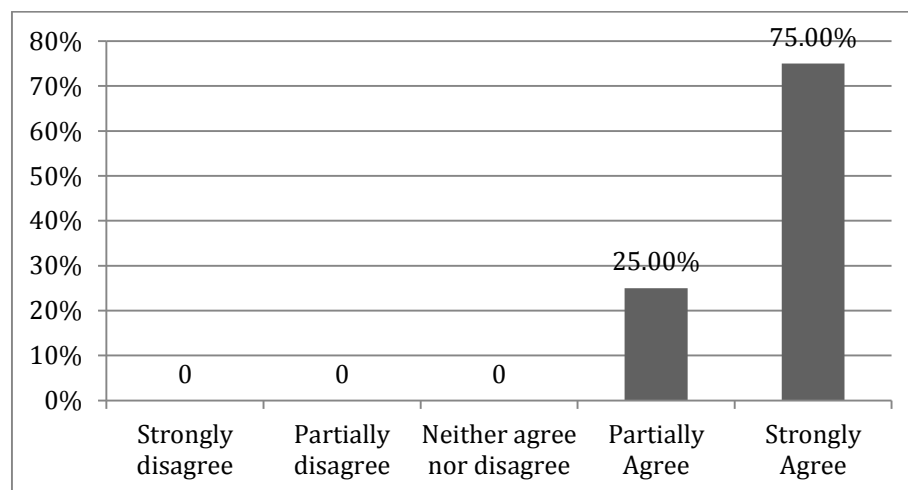


Figure 7.25 Agreeing on the four key dimensions of the DMCF

Figure 7.26 shows that 4 out of 4 respondents agreed that appointing a design leader could change the mind-set of Saudia Airlines' staff and senior management towards design. All participants gave positive responses to appointing a design leader, as 25.00% chose 'partially agree' and 75.00% chose 'strongly agree'.

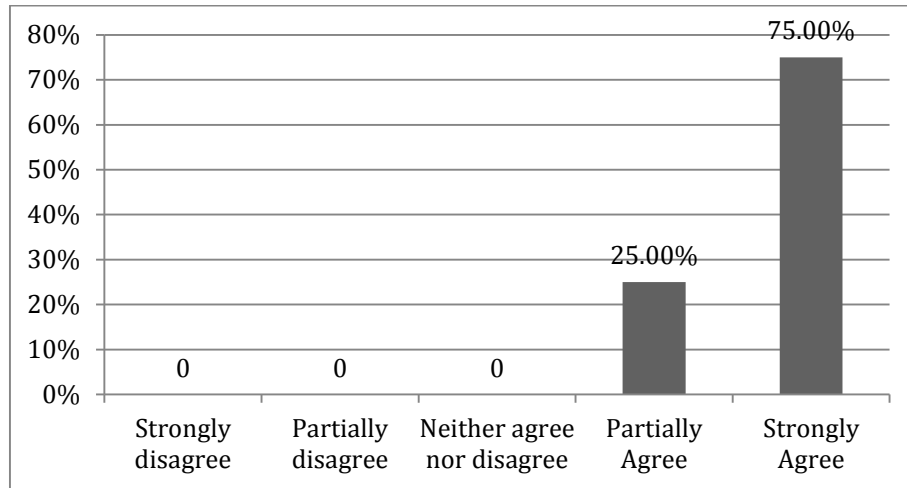


Figure 7.26 Agreeing on appointing a design leader within Saudia Airlines

Figure 7.27 shows that 4 out of 4 respondents agreed that building in-house design capabilities could enhance the perception and management of design at Saudia Airlines. All participants gave positive responses to building in-house design capabilities, as 25.00% chose ‘partially agree’ and 75.00% chose ‘strongly agree’.

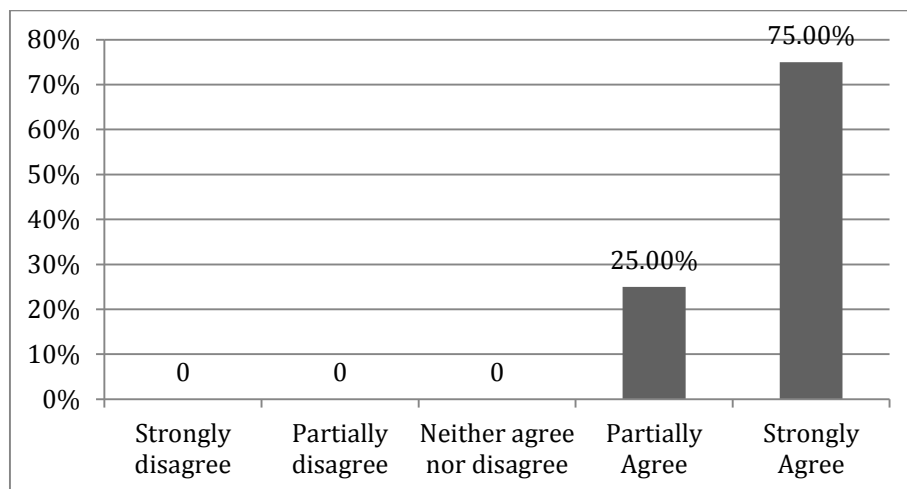


Figure 7.27 Agreeing on building in-house design capabilities within Saudia Airlines

Figure 7.28 shows that 4 out of 4 respondents agreed that Saudia Airlines’ ability to innovate could be enhanced by facilitating constant use of design methods and proactive on-going cross-departmental collaboration, with 100.00% choosing ‘strongly agree’.

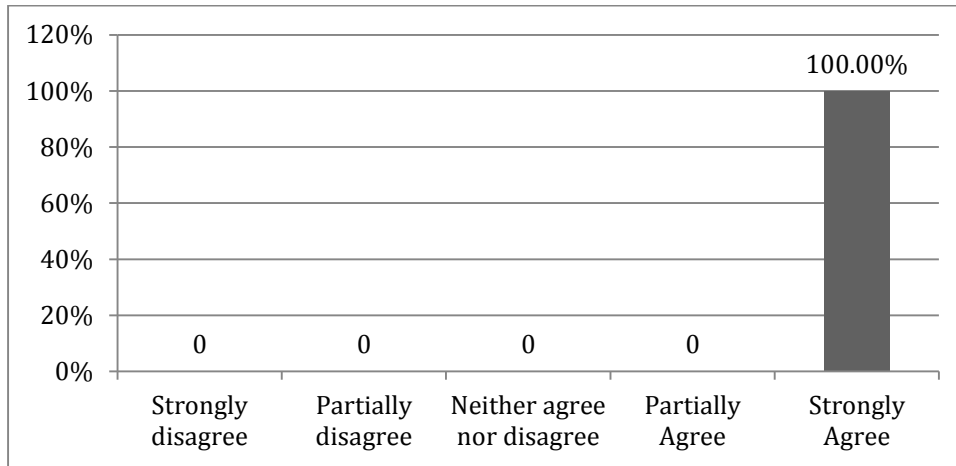


Figure 7.28 Agreed on constant use of design methods and proactive on-going cross-departmental collaboration within Saudia Airlines

Figure 7.29 shows that 4 out of 4 respondents agreed that Saudia Airlines’ customer experiences could be improved by considering customer needs and monitoring competitors’ products and services for a customer journey, with 100.00% choosing ‘strongly agree’.

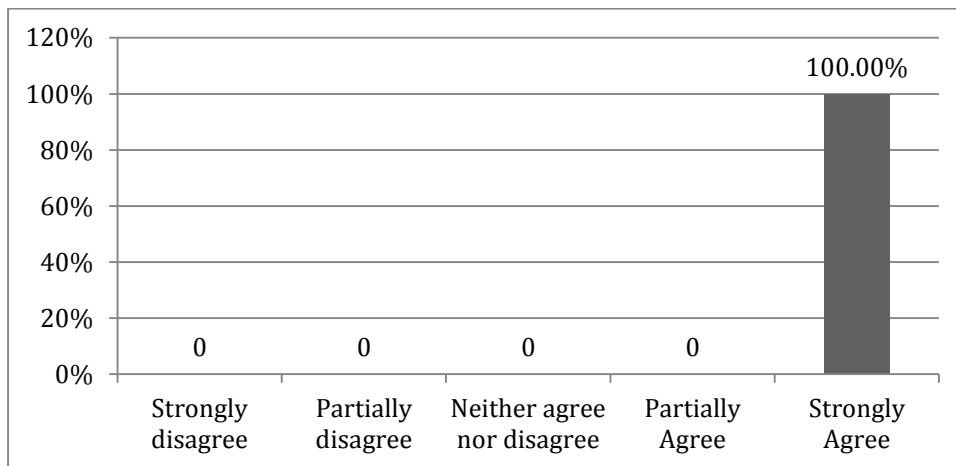


Figure 7.29 Agreeing on considering customer needs and monitoring competitors’ products and services for the customer journey

All Saudia Airlines’ senior management agreed on the four key dimensions that positively influence the perception and management of design in airlines: 1) organisational mind-set, 2) structure and design capabilities, 3) design methods and collaborations (internal and external), and 4) customer experience. Moreover, they agreed with the recommendations, as they concurred that these could enhance these four key dimensions within the airline.

Summary

This chapter explained the prototype iteration process of the DMCF throughout this PhD thesis. The researcher explained the three main prototypes (A, B and CD) and DMCF Version 1, which was formulated from the key themes and sub-themes of the prototypes. Then, the DMCF Version 1 was presented and explained in detail. Next, design experts from the airline industry validated the DMCF Version 1. The experts suggested that minor corrections should be made to the conceptual framework, specifically on how to bridge the gap between the Silent Design Culture and Strategic Design Culture; these were adopted for DMCF Version 2. Finally, further validation of the DMCF Version 2 was conducted with Saudi Airlines' management. These managers agreed with all suggestions on how to bridge the gap. It can be concluded that Saudia Airlines' managers found this DMCF useful and were of the view that it could help them improve design management in the organisation.

8. Conclusion

This research advances the knowledge in the field of design management, especially in the airline industry. To achieve this purpose, secondary research investigated several topics such as the strategic use of design and the use of design at an operational level, and the evolution of design management and how design is managed within organisations. Furthermore, design outcomes were identified for organisations that use design at the strategic level, which include several case studies. Then, the researcher addressed key stakeholders to investigate for the primary research (customers, design experts and a Silent Design airline such as Saudia Airlines). From the secondary and primary research several key themes and sub-themes emerged that created three main prototypes (A, B and CD) after several iterative prototype developments. These three prototypes formulated the DMCF that was the main contribution of this study. This chapter is a summary of the whole research and consists of three sections: 1) contributions of the research, 2) research limitations, and 3) suggestions for further research.

8.1 Contributions of the Research

1) This study is one of the first to explain ‘why’ airlines with well-developed design touch points were able to use design at the strategic level. The findings show that their mind-set and perception, which both follow the strategic value of design, enabled them to use strategic design effectively. The research also explained ‘how’ these airlines managed design and proved that ‘what’ they offered (well-developed touch points) did outperform that provided by competitors.

2) This study is one of the first to explain ‘why’ airlines that adopted the Silent Design Culture were unable to use design strategically. The findings showed that their mind-set (which had a narrow view of the potential of the design contribution) and perception (which valued some design contributions at an operational level only) prevented them from the use of design at a strategic level. The research also depicted ‘how’ design was managed in an ad hoc manner in these organisations. The result did prove that ‘what’ they offered (tangible and intangible touch points) was unable to exceed the expectations of customers and delight them in the same way that companies with good use of strategic design could.

3) This study advanced customer research in the airline industry. The research went beyond measuring their level of satisfaction; it investigated how design affected their

experiences. The research showed that tangible and intangible touch points developed by airlines that make good use of strategic design (Strategic Design Culture) created memorable experiences. On the other hand, tangible and intangible touch points offered by airlines adopting Silent Design were unable to exceed customer expectations and failed to delight.

In this section the research presents the main contribution of the study. Firstly, Figure 8.1 identifies the perception of the strategic value of design within a Silent Design Culture such as Saudia Airlines and a Strategic Design Culture such as Emirates Airlines, Etihad Airways and Qatar Airways.

	Organisational Mind-set	Structure and Design Capabilities	Design Methods and Collaboration !	Customer Experience !
Silent Design Culture	Lack of vision and ambition. Silent Design approach.	Ill-defined structure for managing design and lack of design capabilities.!	Limited use of design methods (occasional customer research and competitor research) Ad-hoc one-off cross-departmental collaboration.	Undifferentiated, off-the-shelf products that meet only the basic requirements of customers.
Bridge the Gap Between Strategic Design Culture and Silent Design Culture !	Senior management appoints design leader. Design leader creates clear design vision and position for design in organisation.	Design leader defines a clear structure for managing design and builds appropriate design capabilities	Design leader facilitates cross-departmental collaboration by design team using design methods.	Design team evaluates and designs a customer experience that considers both customer needs and competitor products. !
Strategic Design Culture	Strong ambition and clear vision for strategic design	Clear structure for managing design and strong design capabilities.!	Constant use of design methods (customer research and critical analysis of competitors). Proactive on going cross-departmental collaboration.	Differentiated tangible and intangible touch points that delight customers and win awards.

Figure 8.1 Silent Design Culture and Strategic Design Culture

This study identifies that there are four key dimensions: 1) organisational mind-set, 2) structure and design capabilities, 3) design methods and communication, and 4) customer experience through which the perception of both of these cultures (Silent Design and Strategic Design) can be evaluated and elevated.

	Organisational Mind-set	Structure and Design Capabilities	Design Methods and Collaboration !	Customer Experience !
Silent Design Culture	Lack of vision and ambition. Silent Design approach.	Ill-defined structure for managing design and lack of design capabilities.!	Limited use of design methods (occasional customer research and competitor research) Ad-hoc one-off cross-departmental collaboration.	Undifferentiated, off-the-shelf products that meet only the basic requirements of customers.
Bridge the Gap Between Strategic Design Culture and Silent Design Culture !	Senior management appoints design leader. Design leader creates clear design vision and position for design in organisation.	Design leader defines a clear structure for managing design and builds appropriate design capabilities	Design leader facilitates cross-departmental collaboration by design team using design methods.	Design team evaluates and designs a customer experience that considers both customer needs and competitor products. !
Strategic Design Culture	Strong ambition and clear vision for strategic design	Clear structure for managing design and strong design capabilities.!	Constant use of design methods (customer research and critical analysis of competitors). Proactive on going cross-departmental collaboration.	Differentiated tangible and intangible touch points that delight customers and win awards.

Figure 8.2 The four key dimensions

This study identifies recommendations through which the perception within a Silent Design Culture can be elevated to the perception found within a Strategic Design Culture across the four key dimensions.

	Organisational Mind-set	Structure and Design Capabilities	Design Methods and Collaboration !	Customer Experience !
Silent Design Culture	Lack of vision and ambition. Silent Design approach.	Ill-defined structure for managing design and lack of design capabilities.!	Limited use of design methods (occasional customer research and competitor research) Ad-hoc one-off cross-departmental collaboration.	Undifferentiated, off-the-shelf products that meet only the basic requirements of customers.
Bridge the Gap Between Strategic Design Culture and Silent Design Culture !	Senior management appoints design leader. Design leader creates clear design vision and position for design in organisation.	Design leader defines a clear structure for managing design and builds appropriate design capabilities	Design leader facilitates cross-departmental collaboration by design team using design methods.	Design team evaluates and designs a customer experience that considers both customer needs and competitor products. !
Strategic Design Culture	Strong ambition and clear vision for strategic design	Clear structure for managing design and strong design capabilities.!	Constant use of design methods (customer research and critical analysis of competitors). Proactive on going cross-departmental collaboration.	Differentiated tangible and intangible touch points that delight customers and win awards.

Figure 8.3 Recommendations used across the four key dimensions to elevate the perception of Silent Design Culture

The overall contribution of this research study is the design management conceptual framework (DMCF), which helps airlines that have a Silent Design Culture to both

evaluate and elevate their perception of the strategic value of design to develop into a Strategic Design Culture airline.

	Organisational Mind-set	Structure and Design Capabilities	Design Methods and Collaboration	Customer Experience
Silent Design Culture	Lack of vision and ambition. Silent Design approach.	Ill-defined structure for managing design and lack of design capabilities.!	Limited use of design methods (occasional customer research and competitor research) Ad-hoc one-off cross-departmental collaboration.	Undifferentiated, off-the-shelf products that meet only the basic requirements of customers.
Bridge the Gap Between Strategic Design Culture and Silent Design Culture	Senior management appoints design leader. Design leader creates clear design vision and position for design in organisation.	Design leader defines a clear structure for managing design and builds appropriate design capabilities	Design leader facilitates cross-departmental collaboration by design team using design methods.	Design team evaluates and designs a customer experience that considers both customer needs and competitor products.
Strategic Design Culture	Strong ambition and clear vision for strategic design	Clear structure for managing design and strong design capabilities.!	Constant use of design methods (customer research and critical analysis of competitors). Proactive on going cross-departmental collaboration.	Differentiated tangible and intangible touch points that delight customers and win awards.

Figure 8.4 Final design management conceptual framework (DMCF)

To sum up, no such framework has existed prior to this research study. For the first time the Silent Design Culture and Strategic Design Culture have been studied together in the airline industry. This is the first study that seeks to facilitate the elevating of an airline’s perception of the strategic value of design.

8.2 Limitations of research

There are several limitations of the research as summarised below:

- 1) There was very little academic literature that was dedicated to this research area; most academic papers concentrated on the strategic use of design of other industries such as automotive, technology and manufacturing. No framework addressed the key dimensions across organisations that are related to both the Silent Design Culture and Strategic Design Culture.

- 2) Many design experts in the airline industry declined the invitation to take part in the study (e.g. Emirates Airlines and Singapore Airlines). Since it is a highly competitive market their research and development involved large investments, especially for the customer journey, and was considered highly confidential.

3) Validation of framework was not included at the beginning of the research therefore limited time was available for validating both the design experts and Saudia Airlines' senior management. Thus, there are limitations in the sample size for Saudia Airlines' senior management because not a lot are involved in the development of the customer journey.

4) Due to time constraints the researcher only had time to interview First and Business class customers; these cabins have more innovative design touch points, as mentioned in the literature, than in Economy Class.

8.3 Suggestions for Further Research

Due to the limitations, there are certain parts of this research that require further study.

1. The conceptual framework can be strengthened and improved by further testing and research that focuses on the practical measures required for bridging the gap between the Silent Design Culture and Strategic Design Culture.
2. Further research should also show how a company using the Silent Design Culture goes through a transition to become a company that uses a Strategic Design Culture.
3. Further research should also be carried out to measure customer experience of Strategic Design Culture and Silent Design Culture. This would provide a clear view of how design contributes to business performance.
4. Safety is a major concern within the airline industry. Further research should investigate how design contributes to this strategically important issue.

Appendix A- Methodology

Appendix A1 - Pilot Study for Customer Research

Dear Participant,

I am currently carrying out a research to investigate the customer satisfaction level of customer journey at Saudia Airlines.

As a result, this questionnaire is designed to measure current customer satisfaction level. I would greatly appreciate it if you could spend 10 - 15 minutes to complete the survey. Could you please forward this survey to as many people you know that might have traveled on Saudia Airlines.

Your answers will be treated in strict confidence and no individual will be identified in the final thesis. Your answers will be treated as confidential and used for academic purposes only.

Please look through the following questions, and then provide the best answer you can. If you have any questions or concerns about completing the questionnaire or about being in this research, please contact me. I greatly appreciate your help.

Best regards,

Maha Shams

Research student at Brunel University

Tel: (+44)-0787 611 5285

E-Mail: shamsmaha@gmail.com

1. Are you a Saudia Airline customer?

- Yes
- No

2. In your opinion, how would you rate SAA?

(One-star is the lowest score for an airline and five-star is the highest score for an airline)

- One-star Two-star Three-star Four-star Five-star
-

3. What class do you normally travel?

- First Class
- Business
- Economy

4. Nationality?

- Saudi
- Arab and Middle Eastern
- Asian and Australian
- European and North American
- South American

5. How often do you fly per year with SAA?

- Less than once a year
- Once a year
- 2 to 3 times a year
- 4 to 5 times a year
- More than 5 times a year

6. Please rate ALL design touch points according to your satisfaction

(1 =very dissatisfied; 5 = very satisfied)

		Very	Somewhat	Neutral	Somewhat	Very
--	--	------	----------	---------	----------	------

		dissatisfied	dissatisfied		satisfied	Satisfied
	Pre-flight					
6.1	Online booking	1	2	3	4	5
6.2	Lounge area					
	On-board	1	2	3	4	5
6.3	Cabin crew service	1	2	3	4	5
6.4	Cabin meals	1	2	3	4	5
6.5	Cabin Seats					
	Post- flight					
6.6	Special Assistance	1	2	3	4	5
6.7	Luggage handling	1	2	3	4	5

7. What is your overall satisfaction rating with SAA?

- Very Satisfied
- Somewhat Satisfied
- Neutral
- Somewhat Dissatisfied
- Very Dissatisfied

Appendix A2 - Final Customer Survey

Dear Participant,

I am currently carrying out a research to investigate the customer satisfaction level of customer journey at Saudia Airlines.

As a result, this questionnaire is designed to measure current customer satisfaction level. I would greatly appreciate it if you could spend 10 - 15 minutes to complete the survey. Could you please forward this survey to as many people you know that might have traveled on Saudia Airlines.

Your answers will be treated in strict confidence and no individual will be identified in the final thesis. Your answers will be treated as confidential and used for academic purposes only.

Please look through the following questions, and then provide the best answer you can. If you have any questions or concerns about completing the questionnaire or about being in this research, please contact me. I greatly appreciate your help.

Best regards,

Maha Shams

Research student at Brunel University

Tel: (+44)-0787 611 5285

E-Mail: shamsmaha@gmail.com

0%

Part I:

1. Did you fly with Saudia Airlines? *

Yes No

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Powered by SmartSurvey (<https://www.smartsurvey.co.uk>)

33%

2. Please rate ALL factors according to your satisfaction with Saudia Airlines

(1 = completely dissatisfied; 5 = completely satisfied)

Pre-Flight

*

	Completely dissatisfied	Dissatisfied	Neutral	Satisfied	Completely Satisfied
2.1 On-line booking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.2 Lounge Area	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

On Board:

*

	Completely dissatisfied	Dissatisfied	Neutral	Satisfied	Completely Satisfied
2.3 Cabin Crew Service	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.4 Cabin Meals	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.5 Cabin Seats	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Post-Flight: *

	Completely dissatisfied	Dissatisfied	Neutral	Satisfied	Completely Satisfied
2.6 Special Assistance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.7 Luggage Handling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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67%

Part II:

3. What is your overall satisfaction rating with
Saudia Airlines? *

- Completely Dissatisfied Dissatisfied Neutral Satisfied
 Completely Satisfied

4. In your opinion, how would you rate Saudia Airlines?
(One-star is the lowest score for an airline and five-star is the highest score for an airline)
*

- One-star Two-star Three-star Four-star Five-star

5. What class do you travel? (You can tick more than one) *

- First Class Business Class Economy Class

6. How often do you fly per year with Saudia Airlines? *

- Once a year 2 to 3 times a year 4 to 5 times a year
 More than 5 times a year

7. Nationality: *

- Saudi Arab\ Middle Eastern European\North American
 Asian\ Australian African

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[Finish Survey](#)

Appendix A3 - Customer Research (Study One)

Interview questions for frequent flyer customers (First Class and Business Class)

1) Warm-up questions

- Occupation
- Reason to travel with Saudia Airlines
- List all airline companies that you had a good experience with.
- Frequency of traveling (per year) with Saudi Airlines and other airlines.

2) All three stages in a customer journey: 1) pre-flight, 2) on-board, and 3) post-flight will be discussed.

- Explain all three stages in a customer journey: 1) starting from pre-flight, 2) then on-board, and 3) finally post-flight
- Compare the design touch points of Saudia Airlines and other airlines that make good use of design.

Appendix A4 - Design Expert Research (Study Two)

1. Warm up questions include:
 - **Job title**
 - Years of experience in the airline industry
2. Could you please describe your role and position of design in the airline company?
3. In your opinion explain the airline company's perception of the strategic use of design?
4. In your opinion did/do senior management support design within the airline?
5. Explain how did/does the airline company manage design in regards to the development of tangible and intangible design touch points in customer journey?
6. In your opinion explain what are the key factors that allow design to flourish in the airline company?
7. Explain how did/does the airline company differentiate it's self from competitors in terms of customer experience?
8. To conclude is there anything else that you would like to raise that you consider of great importance to the design in terms of future engagement?

Appendix A5 - Saudia Airlines' Employees and Design Consultants Research (Study Three)

1. Warm up questions include:
 - **Job title**
 - Years of experience at Saudia Airlines
2. Could you please describe your role and position of design at Saudia Airlines?
3. In your opinion explain Saudia Airlines' perception of the strategic use of design?
4. In your opinion do senior management support design within Saudia Airlines?
5. Explain how does the airline company manage design in regards to the development of tangible and intangible design touch points in customer journey?
6. In your opinion explain what are the key factors that allow design to flourish in the airline company?
7. Explain how does the airline company differentiate it's self from competitors in terms of customer experience?
8. To conclude is there anything else that you would like to raise that you consider of great importance to the design in terms of future engagement?

Appendix A6 - Validation of Design Experts (Survey)

Design Management Conceptual Framework

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1. Design Management Conceptual Framework (DMCF)

Page 1 of 10

This is the Design Management Conceptual Framework (DMCF) for my Phd thesis. It was based on a study of the use of design in the airline industry. An Iterative prototype process has been used for it's development. This DMCF aims to help airline companies that have a Silent Design Culture to elevate their use of design to a Strategic Design Culture. Through the primary and secondary research four key dimensions have arisen through which the Silent Design Culture organisation can bridge the gap and achieve a Strategic Design Culture. These four key dimensions are presented as the vertical elements of the DMCF. The middle row of the DMCF indicates how this gap between Silent Design Culture and Strategic Design Culture could be bridged within the airline industry.

	Organisational Mind-Set	Structure and Design Capabilities	Design Methods and Collaboration	Customer Experience
Silent Design Culture	Lack of vision and ambition for strategic design. Silent Design approach.	Ill-defined structure for managing design and lack of design capabilities.	Limited use of design methods (occasional customer research and competitor research). Ad-hoc one-off cross-departmental collaboration.	Undifferentiated and off-the-shelf products that meet only basic requirements of customers.
Bridge the Gap Between Silent Design Culture and Strategic Design Culture.	Bring senior management and all the different departments to set mutual goals and clear vision for design.	Bring senior management together to define a clear structure for managing design and create a clear position for design in the organisation.	Educate and train staff to develop design capability. Senior management encourages cross-departmental collaboration.	Measure and design the customer experience that drives innovative tangible and intangible touch points.
Strategic Design Culture	Strong ambition and clear vision for strategic Design.	Clear structure for managing design and strong design capabilities.	Constant use of design methods (customer research and critical analysis of competitors). Proactive on going cross-departmental collaboration.	Innovative and differentiated tangible and intangible touch points.

Your answers will be treated in strict confidence and no individual will be identified in the final thesis. Please look through the following questions, and then provide the best answer you can. If you have any questions or concerns about completing the questionnaire or about being in this research, please contact me. I greatly appreciate your help.

Best regards,

Maha Shams
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Design Management Conceptual Framework

10%

1. In your opinion are these four key dimensions (highlighted in yellow) the fundamental elements for bridging the gap between Silent Design Culture and Strategic Design Culture?

	Organisational Mind-Set	Structure and Design Capabilities	Design Methods and Collaboration	Customer Experience
Silent Design Culture	Lack of vision and ambition for strategic design. Silent Design approach.	Ill-defined structure for managing design and lack of design capabilities.	Limited use of design methods (occasional customer research and competitor research). Ad-hoc one-off cross-departmental collaboration.	Undifferentiated and off-the-shelf products that meet only basic requirements of customers.
Bridge the Gap Between Silent Design Culture and Strategic Design Culture.	Bring senior management and all the different departments to set mutual goals and clear vision for design.	Bring senior management together to define a clear structure for managing design and create a clear position for design in the organisation.	Educate and train staff to develop design capability. Senior management encourages cross-departmental collaboration.	Measure and design the customer experience that drives innovative tangible and intangible touch points.
Strategic Design Culture	Strong ambition and clear vision for strategic Design.	Clear structure for managing design and strong design capabilities.	Constant use of design methods (customer research and critical analysis of competitors). Proactive on going cross-departmental collaboration.	Innovative and differentiated tangible and intangible touch points.

- Strongly Disagree
 Partially Disagree
 Neither agree nor disagree
 Partially Agree
 Strongly Agree

Comments:

Design Management Conceptual Framework

20%

2. In your opinion are these accurate descriptions (highlighted in yellow) of Silent Design Culture?

	Organisational Mind-Set	Structure and Design Capabilities	Design Methods and Collaboration	Customer Experience
Silent Design Culture	Lack of vision and ambition for strategic design. Silent Design approach.	Ill-defined structure for managing design and lack of design capabilities.	Limited use of design methods (occasional customer research and competitor research). Ad-hoc one-off cross-departmental collaboration.	Undifferentiated and off-the-shelf products that meet only basic requirements of customers.
Bridge the Gap Between Silent Design Culture and Strategic Design Culture.	Bring senior management and all the different departments to set mutual goals and clear vision for design.	Bring senior management together to define a clear structure for managing design and create a clear position for design in the organisation.	Educate and train staff to develop design capability. Senior management encourages cross-departmental collaboration.	Measure and design the customer experience that drives innovative tangible and intangible touch points.
Strategic Design Culture	Strong ambition and clear vision for strategic Design.	Clear structure for managing design and strong design capabilities.	Constant use of design methods (customer research and critical analysis of competitors). Proactive on going cross-departmental collaboration.	Innovative and differentiated tangible and intangible touch points.

- Strongly Disagree
 Partially Disagree
 Neither agree nor disagree
 Partially Agree
 Strongly Agree

Comments:

Design Management Conceptual Framework

30%

3. In your opinion are these accurate descriptions (highlighted in yellow) of Strategic Design Culture?

	Organisational Mind-Set	Structure and Design Capabilities	Design Methods and Collaboration	Customer Experience
Silent Design Culture	Lack of vision and ambition for strategic design. Silent Design approach.	Ill-defined structure for managing design and lack of design capabilities.	Limited use of design methods (occasional customer research and competitor research). Ad-hoc one-off cross-departmental collaboration.	Undifferentiated and off-the-shelf products that meet only basic requirements of customers.
Bridge the Gap Between Silent Design Culture and Strategic Design Culture.	Bring senior management and all the different departments to set mutual goals and clear vision for design.	Bring senior management together to define a clear structure for managing design and create a clear position for design in the organisation.	Educate and train staff to develop design capability. Senior management encourages cross-departmental collaboration.	Measure and design the customer experience that drives innovative tangible and intangible touch points.
Strategic Design Culture	Strong ambition and clear vision for strategic Design.	Clear structure for managing design and strong design capabilities.	Constant use of design methods (customer research and critical analysis of competitors). Proactive on going cross-departmental collaboration.	Innovative and differentiated tangible and intangible touch points.

- Strongly Disagree
 Partially Disagree
 Neither agree nor disagree
 Partially Agree
 Strongly Agree

Comments:

The Use Of Design At A Strategic Level

50%

4. The research pointed out that an organisation should explore how the design team/department could facilitate the use of well-established design methods, such as critical analysis of competitors and customer research. This could promote wider cross-departmental collaboration and cross-pollination of ideas for innovation. In your opinion, could Saudia Airlines' ability to innovate be enhanced by facilitating constant use of design methods and proactive on going cross-departmental collaboration?

- Strongly Disagree
- Partially Disagree
- Neither agree nor disagree
- Partially Agree
- Strongly Agree

Comments:

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Design Management Conceptual Framework

50%

5. In your opinion does this method (highlighted in yellow) could help bridge the gap in terms of the organisation's structure and design capabilities?

	Organisational Mind-Set	Structure and Design Capabilities	Design Methods and Collaboration	Customer Experience
Silent Design Culture	Lack of vision and ambition for strategic design. Silent Design approach.	Ill-defined structure for managing design and lack of design capabilities.	Limited use of design methods (occasional customer research and competitor research). Ad-hoc one-off cross-departmental collaboration.	Undifferentiated and off-the-shelf products that meet only basic requirements of customers.
Bridge the Gap Between Silent Design Culture and Strategic Design Culture.	Bring senior management and all the different departments to set mutual goals and clear vision for design.	Bring senior management together to define a clear structure for managing design and create a clear position for design in the organisation.	Educate and train staff to develop design capability. Senior management encourages cross-departmental collaboration.	Measure and design the customer experience that drives innovative tangible and intangible touch points.
Strategic Design Culture	Strong ambition and clear vision for strategic Design.	Clear structure for managing design and strong design capabilities.	Constant use of design methods (customer research and critical analysis of competitors). Proactive on going cross-departmental collaboration.	Innovative and differentiated tangible and intangible touch points.

- Strongly Disagree
 Partially Disagree
 Neither agree nor disagree
 Partially Agree
 Strongly Agree

Comments:

Design Management Conceptual Framework

60%

6. In your opinion does this method (highlighted in yellow) could help bridge the gap in terms of the organisation's design methods and collaboration?

	Organisational Mind-Set	Structure and Design Capabilities	Design Methods and Collaboration	Customer Experience
Silent Design Culture	Lack of vision and ambition for strategic design. Silent Design approach.	Ill-defined structure for managing design and lack of design capabilities.	Limited use of design methods (occasional customer research and competitor research). Ad-hoc one-off cross-departmental collaboration.	Undifferentiated and off-the-shelf products that meet only basic requirements of customers.
Bridge the Gap Between Silent Design Culture and Strategic Design Culture.	Bring senior management and all the different departments to set mutual goals and clear vision for design.	Bring senior management together to define a clear structure for managing design and create a clear position for design in the organisation.	Educate and train staff to develop design capability. Senior management encourages cross-departmental collaboration.	Measure and design the customer experience that drives innovative tangible and intangible touch points.
Strategic Design Culture	Strong ambition and clear vision for strategic Design.	Clear structure for managing design and strong design capabilities.	Constant use of design methods (customer research and critical analysis of competitors). Proactive on going cross-departmental collaboration.	Innovative and differentiated tangible and intangible touch points.

- Strongly Disagree
 Partially Disagree
 Neither agree nor disagree
 Partially Agree
 Strongly Agree

Comments:

Design Management Conceptual Framework

70%

7. In your opinion does this method (highlighted in yellow) could help bridge the gap in terms of the organisation's customer experience?

	Organisational Mind-Set	Structure and Design Capabilities	Design Methods and Collaboration	Customer Experience
Silent Design Culture	Lack of vision and ambition for strategic design. Silent Design approach.	Ill-defined structure for managing design and lack of design capabilities.	Limited use of design methods (occasional customer research and competitor research). Ad-hoc one-off cross-departmental collaboration.	Undifferentiated and off-the-shelf products that meet only basic requirements of customers.
Bridge the Gap Between Silent Design Culture and Strategic Design Culture.	Bring senior management and all the different departments to set mutual goals and clear vision for design.	Bring senior management together to define a clear structure for managing design and create a clear position for design in the organisation.	Educate and train staff to develop design capability. Senior management encourages cross-departmental collaboration.	Measure and design the customer experience that drives innovative tangible and intangible touch points.
Strategic Design Culture	Strong ambition and clear vision for strategic Design.	Clear structure for managing design and strong design capabilities.	Constant use of design methods (customer research and critical analysis of competitors). Proactive on going cross-departmental collaboration.	Innovative and differentiated tangible and intangible touch points.

- Strongly Disagree
 Partially Disagree
 Neither agree nor disagree
 Partially Agree
 Strongly Agree

Comments:

Design Management Conceptual Framework

80%

8. Overall do you feel this DMCF could help to bridge the gap between Silent Design Culture and Strategic Design Culture?

	Organisational Mind-Set	Structure and Design Capabilities	Design Methods and Collaboration	Customer Experience
Silent Design Culture	Lack of vision and ambition for strategic design. Silent Design approach.	Ill-defined structure for managing design and lack of design capabilities.	Limited use of design methods (occasional customer research and competitor research). Ad-hoc one-off cross-departmental collaboration.	Undifferentiated and off-the-shelf products that meet only basic requirements of customers.
Bridge the Gap Between Silent Design Culture and Strategic Design Culture.	Bring senior management and all the different departments to set mutual goals and clear vision for design.	Bring senior management together to define a clear structure for managing design and create a clear position for design in the organisation.	Educate and train staff to develop design capability. Senior management encourages cross-departmental collaboration.	Measure and design the customer experience that drives innovative tangible and intangible touch points.
Strategic Design Culture	Strong ambition and clear vision for strategic Design.	Clear structure for managing design and strong design capabilities.	Constant use of design methods (customer research and critical analysis of competitors). Proactive on going cross-departmental collaboration.	Innovative and differentiated tangible and intangible touch points.

- Strongly Disagree
 Partially Disagree
 Neither agree nor disagree
 Partially Agree
 Strongly Agree

Comments:

Design Management Conceptual Framework

90%

9. If you have any further suggestions or comments, please add below.

10. Name: *

11. Which airline company do/did you work for? *

12. What is/ was your job description at the airline company? *

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Appendix A7 - Validation of Saudia Airlines' Management (Survey)

The Use Of Design At A Strategic Level

0%

1. Introduction

Page 1 of 8

I am a doctoral researcher conducting research in the Engineering and Design School at Brunel University in London, UK. I am contacting you to enquire if you are willing to participate in a brief survey that will validate my framework of elevating the perception of the strategic use of design in airline companies.

I have conducted a research with all key stakeholders in the airline industry namely:

- Frequent flyers that travelled with many leading airlines including Saudia Airlines.
- Design experts working in leading airline companies.
- Saudia Airlines' employees and design consultancies that are involved in the development of tangible and intangible touch points in customer journey.

Based on this above research, I have identified four key dimensions positively influencing the perception and the management of design in airline companies: 1) organisational mind-set, 2) structure and design capabilities, 3) design methods and collaborations (internally and externally), and 4) customer experience. I also came up with a number of recommendations that could enhance these four key dimensions.

Your answers will be treated in strict confidence and no individual will be identified in the final thesis. Please look through the following questions, and then provide the best answer you can. If you have any questions or concerns about completing the questionnaire or about being in this research, please contact me. I greatly appreciate your help.

Best regards,

Maha Shams
Research student at Brunel University
Tel: (+44)-0787 611 5285
E-Mail: shamsmaha@gmail.com

The Use Of Design At A Strategic Level

12%

1. Do you think these four key dimensions are useful and have potential to help an airline improve its perception and management of design?

- **Organisational mind-set**
- **Structure and design capabilities**
- **Design methods and collaborations (internally and externally)**
- **Customer experience**

- Strongly Disagree
- Partially Disagree
- Neither agree nor disagree
- Partially Agree
- Strongly Agree

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The Use Of Design At A Strategic Level

25%

2. The research suggested that the organisational mind-set toward design could be improved by appointing a design leader to create a clear vision and a position for design within the organisation. In your opinion, could appointing a design leader change the mind-set of Saudia Airlines' staff and senior management toward design?

- Strongly Disagree
- Partially Disagree
- Neither agree nor disagree
- Partially Agree
- Strongly Agree

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The Use Of Design At A Strategic Level

38%

3. The research revealed that the structure for managing design and developing appropriate design capabilities could be improved by establishing an in-house design team or design department. In your opinion, could building in-house design capabilities enhance the perception and management of design at Saudia Airlines?

- Strongly Disagree
- Partially Disagree
- Neither agree nor disagree
- Partially Agree
- Strongly Agree

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The Use Of Design At A Strategic Level

50%

4. The research pointed out that an organisation should explore how the design team/department could facilitate the use of well-established design methods, such as critical analysis of competitors and customer research. This could promote wider cross-departmental collaboration and cross-pollination of ideas for innovation. In your opinion, could Saudia Airlines' ability to innovate be enhanced by facilitating constant use of design methods and proactive on going cross-departmental collaboration?

- Strongly Disagree
- Partially Disagree
- Neither agree nor disagree
- Partially Agree
- Strongly Agree

Comments:

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The Use Of Design At A Strategic Level

62%

5. The research recommended that employing design throughout the whole customer journey constantly by considering customer needs and monitoring competitors' products could delight customers and win awards. In your opinion, could Saudia Airlines' customer experiences be improved by considering customer needs and monitoring competitors' products and services in a customer journey?

- Strongly Disagree
- Partially Disagree
- Neither agree nor disagree
- Partially Agree
- Strongly Agree

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The Use Of Design At A Strategic Level

75%

6. If you have any further suggestions or comments, please add below.

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The Use Of Design At A Strategic Level

88%

7. Name: *

8. What is your job title? *

9. What is your job description at Saudia Airline? *

10. Number of years you have worked at Saudia Airlines? *

11. What's your major? *

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[Finish Survey](#)

Appendix B - Customer Research (Study One)

Appendix B1 - Pre-Flight – Raw Data and Sub-themes

	Pre-Flight / Online booking for Saudia Airlines	
	Raw Data	Sub-Themes
P1	P1.1.1 Saudia Airlines online On-line booking is good	Positive overall experience
	P1.1.2 Booking is not practical	Poor service process
	P1.1.3 Very rigid and not flexible	Inflexible and complicated
	P1.1.4 Hanged from time to time,	Technical errors
	P1.1.5 Sometimes you can book the seat and sometimes you cannot. Some times you can pay online sometimes you cannot.	Inflexible and complicated
	P1.1.6 felt the service was poor for the online service of Saudia Airlines.	Poor service process
P2	P2.1.1 Saudi is a little bit complicated.	Inflexible and complicated
	P2.1.2 I think Saudi started to give options as well	Starting to improve
	P2.1.3 Saudia Airlines as for the reservation, it is very easy.	User friendly process
	P2.1.4 The problem is that let's assume I bought the ticket and for some reason I decided not to go, and I want to refund my money back. To get the money from them it is a hassle; while in other airlines they just put it back to your account credit card.	Inflexible and complicated
	P2.1.5 If I want to change the ticket I bought from a travel agent. If the travel agent is closed, Saudia Airlines can not change my flight there is no flexibility this is a disadvantage in Saudi Airlines.	Inflexible and complicated
P3	P3.1.1 found the online service of Saudia Airlines terrible.	Negative overall experience
P4	P4.1.1 Travel agent all the time	
P5	P5.1.1 Booking online with Saudia Airlines was generally good	Positive overall experience
	P5.1.2 The Saudia Airlines website, you enter the date and it displays the flights available only on that date, not a day before or after it.	Limited service information and options
P6	P6.1.1 To issue the ticket it was 'complex' now I know they have probably moved to E tickets but when I was using it a lot there was no E tickets it was a paper ticket. So I had to get my driver to go and get the ticket and bring it to me you know these kind of things on logistics	Inflexible and complicated

	basis it was very complex.	
P7	P7.1.1 I tried once and twice to book and faced many issues	Poor service process
	P7.1.2 The website is bad	Negative overall experience
	P7.1.3 I stopped it.	Negative overall experience
	P7.1.4 It didn't meet my ambitions	Fail to meet expectation

Pre-Flight / Online booking for Other Airlines		
	Raw Data	Sub-Themes
P1	P1.1.1 Online booking for British Airlines is excellent.	Positive overall experience
	P1.1.2 British Airways the website is quite flexible, easy to use and fully supported from their technician.	User friendly process
	P1.1.3 Qatari Airlines was also excellent	Positive overall experience
P2	P2.1.1 The booking in British Airways they give you information about the different prices, like two or three different prices.	Plenty of options and information
	P2.1.2 British Airways they could give you a cheap ticket to Business Class. However, they would say you have to book your seats through the website, when you try to book the seat, they charge for it.	Inflexible and complicated
P3	P3.1.1 I am completely satisfied with the booking of British Airway.	Positive overall experience
	P3.1.2 Lufthansa satisfied,	Positive overall experience
	P3.1.3 Lufthansa I have a problem with the language in their website because the English language is complex not like in British Airways, German sometimes use unclear English terms.	Negative overall experience
	P3.1.4 They Emirates are very good ,I am really satisfied. Can't say it is as perfect as the British airways because I had problem with booking and I had to book through an agent, then I had to return back to Emirates Airlines as they messed up my booking.	Inflexible and complicated
	P3.15 Emirates Airlines their dealing with problems was okay.	Positive overall experience
P4	P4.1.1 British Airways online booking are very easy, smooth, especially the prices, I felt comfortable with it.	User friendly process
	P4.1.2 Other Airlines, it was done through a travel agency	
P5	P5.1.1 I go to an office. Emirate Airlines booking by an office, honestly their service was excellent.	Positive overall experience
	P5.1.2 British Airways website is even better.	Positive overall

		experience
	P5.1.3 Emirate Airline's booking is easy and they think of everything. They also ask you about what you prefer and don't prefer about the flight.	Plenty of options and information
	P5.1.4 The British Airways website it gives you information about all the flights going to Miami from New York or other routes.	Plenty of options and information
	P5.1.5 British Airways and Emirate Airlines gives you extra information, this information may help you if you need to know more.	Plenty of options and information
P6	P6.1.1 The website is pretty fast especially when you download pages.	User friendly process
	P6.1.2 What I like is when you choose your dates of travel and your destination then you have a table and the table gives you some flexibility to say okay if I delay my flight by one-day you know I save \$50 or whatever,	Plenty of Options and Information
	P6.1.3 So you have a lot of flexibility on the framework.	User friendly process
	P6.1.4 You have a table you can choose your dates and choose the price.	User friendly process
	P6.1.5 I think all of them are pretty fast by five clicks you can get your reservation.	User friendly process
P7	P7.1.1 Emirates Airlines is excellent and Etihad Airways is excellent.	Positive overall experience
	P7.1.2 One of the comfortable things in the Emirates Airlines and Etihad Airways, that they have different options.	Plenty of Options and Information
	P7.1.3 Emirates Airlines and Etihad Airways always offer choices.	Plenty of Options and Information

Pre-Flight / Lounge area for Saudia Airlines		
	Raw Data	Sub-Themes
P1	P1.3.1 Saudia Airlines lounge meals, services, they are all below the standards	Negative Overall Experience
P2	P2.3.1 Saudi I am dissatisfied with lounge because the lounge is not really as other airlines, British Airlines lounge or Emirates Airlines lounge, big difference.	Negative Overall Experience
	P2.3.2 I am dissatisfied with the design, the setting, food, newspaper, all services in general. There is a big difference, excellent service when it comes to British Airways or Emirates Airline.	Negative Overall Experience
P3	P3.3.1 Saudia Airlines lounge is bad of course even for what they call First Class lounge in Jeddah,	Negative Overall Experience

	Saudia Arabia is very bad even after development.	
	P3.3.2 It does not look like first class.	Poor aesthetic design
	P3.3.3 Seats were next to each others, no privacy.	Limited Space
	P3.3.4 Only one TV	Poor facilities
	P3.3.5 Food was not good	Poor Food Service and Options
P4	P4.3.1 Ugly	Poor aesthetic design
P5	P5.3.1 In comparison between other airlines their service is not that good.	Negative Customer Service
	P5.3.2 In comparison between other airlines, especially in food they're not that good.	Poor Food Service and Options
	P5.3.3 Honestly they don't offer good service in the lounge.	Negative Customer Service
P6	P6.3.1 Truthful Saudia Airlines is way below the average on the lounge specifically I didn't go to Jeddah but I went to Riyadh in the lounge and you know it was way below the average of their competitors.	Negative Overall Experience
P7	P7.3.1 The lounges in the Saudi Airlines are so bad, it really sucks.	Negative Overall Experience
	P7.3.2 The basic human needs are very bad.	Fail to meet expectations
	P7.3.3 The toilets it selves miserable.	Poor facilities
	P7.3.4 In general, when you get to the lounge you won't feel that there is anything distinguished.	Poor aesthetic design
	P7.3.5 Saudia Airlines is getting better within one to two years, not that perfect. In Jeddah they are trying to improve.	Staring to Improve

Pre-Flight / Lounge area for Other Airlines		
	Raw Data	Sub-Themes
P1.	P1.3.1 British Airways lounge, the service, calling for the flight and food. All the facilities offered were really good.	Positive Overall Experience
	P1.3.2 Etihad Airways their lounge is excellent.	Positive Overall Experience
	P1.3.3 Etihad Airways their services are superior. You feel the hostess serves only you, though they serve others, but you feel you are number one.	Positive Customer Service
	P1.3.4 The Qatar also the same regarding the service.	Positive Customer Service

P2.	P2.3.1 The design, the setting, food, newspaper and all services in general were excellent service when it comes to British Airways or Emirates Airline.	Positive Customer Service
	P2.3.2 Emirates Airlines is the best of all.	Positive Overall Experience
P3	P3.3.1 The Emirates Airlines was the best one between all Airlines.	Positive Overall Experience
	P3.3.2 Emirates Airlines was very good.	Positive Overall Experience
	P3.3.3 For example in the kind of food; there are food for different kind of people like vegetarian, high protein, and diabetes, all kind of people whatever the diet you follow you find the food that suits for you.	Food Service Caters for All
	P3.3.4 So for food number one is Emirates and then British.	Food Service Caters for All
	P3.3.5 I think that the pressure on the British Airways service becomes poor, Sometimes British Airway during lunch time special for Business Class passengers it would be really full and you can't find a place to sit down.	Negative Customer Service
P4	P4.3.1 British Airways when I go to the first class lounge, it is quiet, comfortable and nice.	Provide comfort and privacy
	P4.3.2 Qatar Airways marvellous.	Positive Overall Experience
	P4.3.3 So amazing Qatar Airways.	Positive Overall Experience
	P4.3.4 Qatar Airways I feel good in their lounge.	Positive Overall Experience
P5	P5.3.1 The best was Emirate Airlines lounge	Positive Overall Experience
	P5.3.2 Also the British Airways lounge was excellent.	Positive Overall Experience
	P5.3.3 Emirates Airlines lounge has a massage, a hairdresser, they also have pedicure, and of course there is also internet. Also a children's playroom, so they could play.	Facilities Entertain All Customers

	P5.3.4 The food in the Emirates Airlines lounge is excellent.	Food Service Caters for All
	P5.3.5 British Airways their service is good.	Positive Customer Service
	P5.3.6 British Airways their lounge is comfortable	Provide comfort and privacy
P6	P6.3.1 The best lounge I think is Emirate Airlines in Dubai.	Positive Overall Experience
	P6.3.2 Emirate Airlines have terminal three, which is a specific lounge a whole floor actually that was a terrific lounge.	Positive Overall Experience
	P6.3.3 British Airways lounge in London is also terrific.	Positive Overall Experience
	P6.3.4 British Airways their space is very large.	Provide comfort and privacy
	P6.3.5 British Airways I like the space.	Provide comfort and privacy
	P6.3.6 I like the design, which is minimalist so your eyes don't get tired because you are not looking for luxury and the lounge in my opinion you look for relaxing space.	Good aesthetic design
	P6.3.7 The design feels relaxing you know it's not plenty of colours or very complex it's very minimalist.	Good aesthetic design
	P6.3.8 British Airways lounge need to serve generic food that you can eat at any time of the day, so sometimes they service breakfast when it is evening time this kind of thing.	Poor Food Service and Options
P7	P7.3.1 Emirate Airlines in Dubai, the first class lounge, it is part of heaven.	Positive Overall Experience
	P7.3.2 Emirates, Etihad Airways and Qatari Airways I tried all. They all have special buildings.	Positive Overall Experience
	P7.3.3 The Emirates Airlines in New York, for example, they have a lounge which contains almost 20 PCs, 4,5 printers. I printed a full book of 150 pages	Facilities Entertain All Customers

P7.3.4 Emirates Airlines have marvellous services in the lounge.	Positive Customer Service
P7.3.5 Emirates Airlines in their lounge if you arrived 4 hours early you will be sure you won't be bored. They have a children's area, a play station area, Massaging, spa etc.	Facilities Entertain All Customers
P7.3.6 The Qatar Airways has a whole building for the lounge, 7 star service, excellent services and spa.	Positive Customer Service
P7.3.7 The Qatar Airways foods of all cuisines and beverages were excellent.	Food Service Caters for All
P7.3.8 The Qatari Airways lounge has of course a business centre, spa and Jacuzzi.	Facilities Entertain All Customers
P7.3.9 Etihad Airways they have one problem only their lounge was small, but they are working on expanding it. In the high seasons, they are stressed, so if you arrived one hour early you won't be able to book for the spa.	Limited Space
P7.3.10 Etihad Airways the food options are a wide variety and excellent.	Food Service Caters for All

Appendix B2 - Pre-Flight - Key Themes and Sub-Themes

B2-1 Pre-Flight/online booking for Saudia Airlines and Other Airlines

The tables below show the most of the themes that emerged from the mapping process of the **pre-flight/Online booking** for both Saudia Airlines and Other Airlines.

Key themes		Sub-themes for Online booking	Respondents' comments	
			Saudia Airlines	Other airlines
Experience	1.	Positive overall experience	2	8
	2.	Negative overall experience	3	1
	3.	Fail to meet expectation	1	0
Intangible design touch points	4.	Plenty of options and information	0	7
	5.	Starting to improve	1	0
	6.	User friendly process	1	6
	7.	Limited service information and options	1	0
	8.	Technical errors	1	0

	9.	Poor service process	3	0
	10.	Inflexible and complicated	6	2
			19	24
Total comments			43	

	Pre-Flight: Online booking: Positive overall experience			
	Saudia Airlines			
1	P1.1.1 Saudia Airlines online booking is good.			
2	P5.1.1 Booking online with Saudia Airlines was generally good.			
	Other Airlines			
1	P1.1.1 Online booking for British Airlines is excellent			
2	P1.1.3 Qatari Airlines was also excellent			
3	P3.1.1 I am completely satisfied with the booking of British Airway.			
4	P3.1.2 Lufthansa satisfied.			
5	P3.1.5 Emirates Airlines their dealing with problems was okay			
6	P5.1.1 Emirate Airlines booking by an office, honestly their service was excellent.			
7	P5.1.2 British Airways website is even better.			
8	P7.1.1 Emirates Airlines is excellent, Etihad Airways is excellent			

	Pre-Flight/Online booking: Negative overall experience			
	Saudia Airlines			
1	P3.1.1 the online service of Saudia Airlines was terrible.			
2	P7.1.2 The website is bad			
3	P7.1.3 I stopped it.			
	Other Airlines			
1	P2.1.2 British Airways they could give you a cheap ticket to Business Class. However, they would say you have to book your seats through the website, when you try to book the seat, they charge for it.			

	Pre-Flight/Online booking: Fail to meet expectation			
	Saudia Airlines			
1	P7.1.4 It didn't meet my ambitions			
	Other Airlines			
0	None of the respondents addressed this theme regarding the other airlines.			

	Pre-Flight/Online booking: Plenty of options and information for Saudia Airlines and other airlines			
--	--	--	--	--

Saudia Airlines	
0	None of the respondents addressed this theme regarding the Saudia Airlines.
Other Airlines	
1	P2.1.1 The booking in British Airways they give you information about the different prices, like two or three different prices.
2	P5.1.3 Emirate Airline's booking is easy and they think of everything. They also ask you about what you prefer and don't prefer about the flight.
3	P5.1.4 The British Airways website it gives you information about all the flights going to Miami from New York or other routes.
4	P5.1.5 British Airways and Emirate Airlines gives you extra information, this information may help you if you need to know more dates or routes.
5	P6.1.2 What I like is when you choose your dates of travel and your destination then you have a table and the table gives you some flexibility to say okay if I delay my flight by one-day you know I save \$50 or whatever.
6	P7.1.2 One of the comfortable things in the Emirates Airlines and Etihad Airways, that they have different options.
7	P7.1.3 Emirates Airlines and Etihad Airways always offer choices

Pre-Flight/O-line booking: User friendly process for other airlines	
Saudia Airlines	
1	P2.1.3 Saudia Airlines as for the reservation, it is very easy.
Other Airlines	
1	P1.1.2 British Airways the website is quite flexible, easy to use and fully supported by the airlines
2	P4.1.1 British Airways online booking is very easy, smooth, especially the prices, I felt comfortable with it.
3	P6.1.1 The website is pretty fast especially when you download pages.
4	P6.1.3 So you have a lot of flexibility on the framework.
5	P6.1.4 You have a table you can choose your dates and choose the price.
6	P6.1.5 I think all of them are pretty fast by five clicks you can get your reservation.

Pre-Flight/Online booking: Starting to Improve for Saudia Airlines	
Saudia Airlines	
1	P2.1.2 I think Saudi started to give options as well.
Other Airlines	
0	None of the respondents addressed this theme regarding the other airlines.

Pre-Flight/Online booking: Limited service information and options for Saudia Airlines	
Saudia Airlines	
1	P5.1.2 Saudia Airlines online booking you enter the date and it displays the flights availability only on that date, not a day before or after it.
Other Airlines	
0	None of the respondents addressed this theme regarding the other airlines.

	Pre-Flight Online booking: Poor service process for Saudia Airlines and other airlines
Saudia Airlines	
1	P1.1.2 booking is not practical
2	P1.1.6 felt the service was poor for the online service of Saudia Airlines.
3	P7.1.1 I tried once and twice to book and faced many issues
Other Airlines	
0	None of the respondents addressed this theme regarding the other airlines.

	Pre-Flight/Online booking: Technical errors for Saudia Airlines
Saudia Airlines	
1	P1.1.4 hanged from time to time,
Other Airlines	
0	None of the respondents addressed this theme regarding the other airlines.

	Pre-Flight/Online booking: Inflexible and complicated for Saudia Airlines
Saudia Airlines	
1	P1.1.3 very rigid and not flexible
2	P1.1.5 Sometimes you can book the seat and sometimes you can not. Some times you can pay online sometimes you can not.
3	P2.1.1 Saudi is a little bit complicated.
4	P2.1.5 The problem is that let's assume I bought the ticket and for some reason I decided not to go, and I want to refund my money back. To get the money from them it is a hassle, while in other airlines they just put it back to your account credit card.
5	P2.1.6 Change the ticket he bought from a travel agent. Saudia Airlines can not change his flight if the travel agent is closed, no connection between Saudia Airlines and the travel agent this is a disadvantage in Saudia Airlines.
6	P6.1.1To issue the ticket it was 'complex' now I know they have probably moved to E tickets but when I was using it a lot there was no E tickets it was a paper ticket. So I had to get my driver to go and get the ticket and bring it to me you know these kind of things on logistics basis it was very complex.
Other Airlines	
1	P3.1.3 Lufthansa I have a problem with the language in their website because the English language is complex not like in British Airways, German sometimes use unclear English terms.
2	P3.1.4 They Emirates are very good ,I am really satisfied. Can't say it is as perfect as the British airways because I had problem with booking and I had to book through an agent, then I had to return back to Emirates Airlines as they messed up my booking.

B2-2 Pre-Flight/Lounge Area for Saudia Airlines and Other Airlines

The tables below show the themes that were emerged from the mapping process of **Lounge Area at Airport** of the respondents for both Saudia Airlines and Other Airlines.

Key themes		Sub-themes for lounge area	Respondents' comments	
			Saudia Airlines	Other airlines
Experience	1.	Positive overall experience	0	13
	2.	Negative overall experience	6	0
	3.	Fail to meet expectations	1	0
Tangible design touch points	3	Good aesthetic design	0	2
	4.	Provide comfort and privacy	0	6
	5.	Poor aesthetic design	3	0
	6.	Limited space	1	1
Intangible design touch points	7.	Food service caters for all	0	5
	8.	Facilities entertain all customers	0	4
	9.	Starting to improve	1	0
	10.	Poor facilities	2	0
	11.	Poor food service and options	2	1
Communication	12.	Positive customer service	0	6
	13.	Negative customer service	2	1
			18	39
Total comments			57	

Pre-Flight/Lounge: Positive overall experience for Saudia Airlines and other airlines	
Saudia Airlines	
0	None of the respondents addressed this theme regarding the Saudia Airlines.
Other Airlines	
1.	P1.3.1 British Airways lounge, the service, calling for the flight and food. All the facilities offered were really good.
2.	P1.3.2 Etihad, their lounge is excellent.
3.	P2.3.2 Emirates Airlines is the best of all.
4.	P3.3.1 The Emirates Airlines was the best one between all Airlines.
5.	P3.3.2 Emirates Airlines was very good.
6.	P4.3.2 Qatar Airways marvellous.
7.	P4.3.3 So amazing Qatar Airways.
8.	P4.3.4 Qatar Airways I feel good in their lounge.
9.	P5.3.1 The best was Emirate Airlines lounge
10.	P5.3.2 Also the British Airways lounge was excellent.
11.	P6.3.1 The best lounge I think is Emirate Airlines in Dubai.
12.	P6.3.3 British Airways lounge in London is also terrific.
13.	P7.3.1 Emirate Airlines in Dubai, the First Class lounge, it is part of heaven.

Pre-Flight/Lounge: Negative overall experience for Saudia Airlines and other airlines	
Saudia Airlines	

1	P1.3.1 Saudia Airlines lounge meals, services, they are all below the standards.
2	P2.3.1 Saudi I am dissatisfied with lounge because the lounge is not really as other airlines, British Airlines lounge or Emirates Airlines lounge, big difference.
3	P2.3.2 I am dissatisfied with the design, the setting, food, newspaper, all services in general. There is a big difference, excellent service when it comes to British Airways or Emirates Airline.
4	P3.3.1 Saudia Airlines lounge is bad of course even for what they call First Class lounge, Saudia Arabia is very bad even after development.
5	P6.3.1 Truthful Saudia Airlines is way below the average on the lounge specifically I didn't go to Jeddah but I went to Riyadh in the lounge and you know it was way below the average of their competitors.
6	P7.3.1 The lounges in the Saudi Airlines are so bad.
Other Airlines	
0	None of the respondents addressed this theme regarding the other airlines.

	Pre-Flight/Lounge: Provide comfort and privacy for Saudia Airlines and other airlines
Saudia Airlines	
0	None of the respondents addressed this theme regarding the Saudia Airlines.
Other Airlines	
1.	P4.3.1 British Airways when I go to the first class lounge, it is quiet, comfortable, and nice.
2.	P5.3.6 British Airways their lounge is comfortable
3.	P6.3.2 Emirate Airlines have terminal three, which is a specific lounge a whole floor actually that was a terrific lounge.
4.	P6.3.4 British Airways their space is very large.
5.	P6.3.5 British Airways I like the space.
6.	P7.3.2 Emirates, Etihad Airways and Qatari Airways I tried all. They all have special buildings.

	Pre-Flight/Lounge: Limited space
Saudia Airlines	
1	P3.3.3 Seats were next to each others, no privacy.
Other Airlines	
1	P7.3.9 Etihad Airways they have one problem only their lounge was small, but they are working on expanding it. In the high seasons, they are stressed, so if you arrived one hour early you won't be able to book for the spa.

	Pre-Flight/Lounge: Good aesthetic design
Saudia Airlines	
0	None of the respondents addressed this theme regarding Saudia Airlines
Other Airlines	
1	P6.3.6 I like the design, which is minimalist so your eyes don't get tired because you are not looking for luxury and the lounge in my opinion you look for relaxing space.

2	P6.3.7 The design feels relaxing you know it's not plenty of colours or very complex it's very minimalist.
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	Pre-Flight/Lounge: Poor facilities
Saudia Airlines	
1	P3.3.4 Only one TV
2	P7.3.3 The toilets it selves miserable.
Other Airlines	
0	None of the respondents addressed this theme regarding the other airlines.

	Pre-Flight/Lounge: Poor aesthetic
Saudia Airlines	
1	P3.3.2 It does not look like first class.
2	P4.3.1 Ugly
3	P7.3.4 In general, when you get to the lounge you won't feel that there is anything distinguished.
Other Airlines	
0	None of the respondents addressed this theme regarding the other airlines.

	Pre-Flight/Lounge: Food service caters for all
Saudia Airlines	
0	None of the respondents addressed this theme regarding the Saudia Airlines.
Other Airlines	
1	P3.3.3 For example in the kind of food; there are food for different kind of people like vegetarian, high protein, and diabetes, all kind of people whatever the diet you follow you find the food that suits you.
2	P3.3.4 So for food number one is Emirates and then British.
3	P5.3.4 The food in the Emirates Airlines lounge is excellent.
4	P7.3.7 The Qatar Airways foods of all cuisines and beverages were excellent.
5	P7.3.10 Etihad Airways the food options are a wide variety and excellent.

	Pre-Flight/Lounge: Facilities entertain all customers for Saudia Airlines and other airlines
Saudia Airlines	
0	None of the respondents addressed this theme regarding the Saudia Airlines.
Other Airlines	
1	P5.3.3 Emirates Airlines lounge has a massage, a hairdresser, they also have pedicure, and of course there is also internet. Also a children's playroom, so they could play.
2	P7.3.3 The Emirates Airlines in New York, for example, they have a lounge which contains almost 20 PCs, 4,5 printers. I printed a full book of 150 pages.

3	P7.3.5 Emirates Airlines in their lounge if you arrived 4 hours early you will be sure you won't be bored. They have a children's area, a play station area, Massaging, spa...etc.
4	P7.3.8 The Qatari Airways lounge has of course a business centre, spa and Jacuzzi.

	Pre-Flight/Lounge: Starting to improve for Saudia Airlines
Saudia Airlines	
1	P7.3.5 Saudia Airlines is getting better within one to two years, not that perfect. In Jeddah they are trying to improve.
Other Airlines	
0	None of the respondents addressed this theme regarding the other airlines.

	Pre-Flight/Lounge: Poor food service and options for Saudia Airlines and other airlines
Saudia Airlines	
1	P3.3.5 Food was not good
2	P5.3.2 In comparison between other airlines, especially in food they're not that good.
Other Airlines	
1	P6.3.8 British Airways lounge need to serve generic food that you can eat at any time of the day, so sometimes they service breakfast when it is evening time this kind of thing.

	Pre-Flight/Lounge: Negative customer service for Saudia Airlines and other airlines
Saudia Airlines	
1	P5.3.1 In comparison between other airlines their service is not that good.
2	P5.3.3 honestly they don't offer good service in the lounge.
Saudia Airlines	
1	P3.3.5 I think that the pressure on the British Airways service becomes poor, Sometimes British Airway during lunch time special for Business Class passengers it would be really full and you can't find a place to sit down.

Appendix B3 - Onboard – Raw Data and Sub-themes

	Onboard/Cabin Crew Service for Saudia Airlines	
P1	P1.4.1 You book the seats but all of a sudden you find some one asking you to move.	Negative overall experience
	P1.4.2 Everything is not organised	Negative overall experience
	P1.4.3 They are not dedicating seats for the families, like other airlines.	Limited attention and care
	P1.4.4 the cabin crew service is below standards	Negative customer service
P2	P2.4.1 I am dissatisfied with the service of the cabin crew.	Negative customer service
	P2.4.2 Sometimes if you asked them a question they show you it is not their job or responsibility. If you asked for your bag, they act like help yourself.	Poor communication and behaviour
	P2.4.3 Their attitude is a little bit not nice, compared to other airlines they have to work on that	Poor communication and behaviour
P3	P3.4.1 I'm completely not satisfied with Saudia Airlines's service in general.	Negative customer service
	P3.4.2 They don't care about how old is the passenger, old people, kids and women this is totally not considered.	Limited attention and care
	P3.4.3 sometimes in Saudia Airlines you booked Business Class and suddenly you figured out they have downgraded even without notifying you that you have been downgraded for certain reason! You only find out once you are in the plane.	Negative customer service
	P3.4.4 British Airways wherever you look you will see it, unlike Saudi only see logo on the cabin crew's uniform and the screen.	Lack of brand communication
	P3.4.6 Maybe the ones (who are responsible on this) think these details have no influence on the passenger. Actually it gives the passenger kind of loyalty to this airline. As I see their logo everywhere I'll memorize this airline and automatically when I do any future reservation I will go to this airline.	Lack of brand communication

P4	P4.4.1 honestly, it is very good actually	Positive overall experience
	P4.4.2 they were very friendly when I got on board	Positive overall experience
	P4.4.3 When I was travelling international from the UK to Saudi Arabia I was impressed with their service. I was in a very bad mood, but they were very friendly, the food and the service was good.	Positive customer service
	P5.4.3 It varies according to the staff on board. Sometimes the staff is very good but other times very bad.	Negative customer service
P5	P5.4.1 the service on board is very bad.	Negative customer service
	P5.4.2 Everything is bad .	Negative overall experience
	P5.4.3 It varies according to the staff on board. Sometimes the staff is very good but other times very bad.	Negative customer service
	P5.4.4 Honestly, they should recruit staff having better communication skills.	Poor communication and behaviour
	P5.4.5 The staff still talks to you in a rude way.	Poor communication and behaviour
	P5.4.6 Saudia Airlines cabin crew they aren't flexible	Inflexible and complicated
P7	P7.4.1 I see that the service is bad.	Negative customer service
	P7.4.2 Service was very poor.	Negative customer service
	P7.4.5 Saudia Airlines they are always divided, no one is responsible for the service of the other, you feel there is no cooperation between them. However they should be one staff in the same organisation.	Negative customer service

	Onboard/Cabin Crew Service for Other Airlines	
	P1.4.1 Completely satisfied with services of other airlines.	Positive customer service
	P2.4.1 Completely satisfied	Positive overall experience

	P3.4.1 Lufthansa is perfect	Positive overall experience
	P3.4.2 The cabin crew staff constantly checked on me, if I needed anything because I told them I had a surgery, they really offered amazing care.	Extra attention and care
	P3.4.3 British airways! They are excellent.	Positive overall experience
P4	P4.4.1 All were good in fact	Positive overall experience
	P4.4.2 Singapore Airlines excellent service	Positive customer service
	P4.4.3 British Airways the service was excellent the same as Singapore Airlines.	Positive customer service
P5	P5.4.1 'in Malaysian Airlines, their planes are very clean because the cabin crew gave extra care and regularly removed the litter and cleaned the cabin during the flight, even before the plane landed at the airport.'	Extra attention and care
	P5.4.2 'last time when we were flying back from Malaysia, it was Ramadan, the cabin crew staff in Malaysian Airlines, they insisted for all passengers that were fasting to stay in order to be served meals before leaving the airplane.	Extra attention and care
	P5.4.3 The people who stayed for the meals were then provided with a shuttle bus to take them to the airport.	Positive customer service
	P 5.4.6 the British Airways, for instance, from the moment you get on the plane, they smile and always speak to you nicely.	Good communication and behaviour
P6	P6.4.1 The Business Class service for British Airways and Etihad Airways is great.	Positive customer service
	P6.4.2 Qatar Airways is putting more effort than the average to have a nice service to have a nice staff.	Extra attention and care
	P6.4.3 Qatar Airways cabin crew come to you every hour to ask you if you want something else or if things are fine...etc.	Extra attention and care
	P6.4.4 Maybe Qatar Airways is slightly ahead of the others.	Positive overall experience
	6.4.5 Sometimes the British Airways cabin crew are more lazy.	Negative overall experience
	P 6.4.8 I think they are still nice I mean for me I don't need too much service but for example once I saw a lady she had to pull her bag on the overhead locker and the staff told her sorry I can't do it because it's not good for my back. So I help the lady.	Good communication and behaviour
P7	P 7.4.1 Emirate Airlines, once in First Class, the entertainment screen was out of order and it was a long flight from USaudia Airlines to Dubai. The manager of the cabin crew came to apologise.	Extra attention and care
	P 7.4.2 The manager was very sincere and considerate.	Extra attention

	The manager offered me gift vouchers just to please me.	and care
	P 7.4.3 Emirates Airlines gave their staff the flexibility to take decisions and actions just to comfort and satisfy their passengers.	Good communication and behaviour
	P 7.4.4 Emirates Airlines gives their staff the target to satisfy people. Do whatever you can to let the people enjoy and be satisfied.	Good communication and behaviour
	P 7.4.5 I know the manager has an administration that will support him, my job description is ABC, and he could have told me it is not part of my job description. I liked the touch he offered me. I know he went beyond his power to please me.	Positive customer service
	P 7.4.6 but the manager tried to get out of the box to help me.	Extra attention and care
	P7.4.7Again upon arrival, the manager said I can't apologize enough, it is a technical problem, we are all one institution and I do apologize on behalf the airlines .	Extra attention and care

	Onboard/Cabin Meals for Saudia Airlines	
P1	P1.6.1 Meals of Saudia Airlines come last in comparison to other airlines.	Negative overall experience
P2	P2.6.1 Saudia Airlines food isn't bad.	Positive overall experience
	P2.6.2 food is good.	Positive overall experience
P4	P4.6.1 The cabin meals was good	Positive overall experience
P5	P5.6.1 Meals of Saudia Airlines are of low quality.	Negative overall experience
P6	P6.6.2 Food is important to me and Saudia Airlines was always below the average in my opinion to be transparent.	Negative overall experience
	P6.6.3 I found that the food is always the same.	Poor service and options.
	P6.6.4 Cabin meals of Saudia Airlines were not prepared very well.	Negative overall experience
	P6.6.5 so usually I wouldn't eat in Saudia Airlines and it wasn't only me. I had many colleagues were taking the same flight and all of them before the flight they went to eat something to make sure they were not hungry on the flight.	Poor service and options.
P7	P7.6.1 I was travelling on the Saudia Airlines and I asked for extra food, so food was good.	Positive overall experience

	Onboard/Cabin Meals for Other Airlines	
P1	P1.6.1 I am completely satisfied, with the meals of Etihad Airways and Qatar Airways.	Positive overall experience.
P2	P2.6.1 All airlines are the same.	Positive overall experience.
	P2.6.2 However the other airlines they have more selections	Wider Selection
P3	P3.6.1 Lufthansa food is perfect.	Positive overall experience
P5	P5.6.1 the Malaysian Airlines offered food to all the people who were fasting and the Economy Class passengers were brought to the First Class cabin to be serviced as well.	Food service caters for all
	P5.6.2 They served a variety of food they got us dates, fruits and everything.	Food service caters for all
P6	P6.6.1 The Emirate Airlines and Etihad Airways are better in	Positive overall

	terms of food.	experience
	P6.6.2 The other airlines they have more selections.	Wider Selection

	Onboard/Cabin Seats for Saudia Airlines	Sub-Themes
P1	P1.5.1 the seats are ok, but need maintenance.	Poor maintenance
	P1.5.2 The seats are old and damaged, the screens don't work and the tables are loose.	Poor maintenance
P2	P2.5.1 Saudia Airlines cabin seats are not good at all comparing to British Airways.	Negative overall experience.
	P2.5.2 Saudia Airlines big big difference comparing to other Airlines, which are much better.	Negative overall experience.
	P2.5.3 I am not satisfied with the seats honestly at all of Saudia Airlines, because I am not comfortable with it.	Lack comfort and privacy
	P2.5.4 If I have to choose between the Saudia Airlines and Turkish Airlines and the Saudia Airlines and British Airways, I will choose the other airlines. Cabin seats are the most important thing. I can deal with ok services, but the seats are the most important thing to me is to be sitting comfortably and privacy.	Lack comfort and privacy
P3	P3.5.1 The space of the seat was good, but sometimes you find that your seat is broken!	Poor maintenance
P4	P4.5.1 Saudia Airlines their cabin seats are not comfortable.	Lack comfort and privacy
	P4.5.2 I don't like these sliding cabin seats at all while sleeping.	Poor seat design
	P4.5.3 their planes need major change, it is unpleasant, and their uniform as well.	Poor aesthetic design
P5	P5.5.1 Saudia Airlines seats are annoying and not comfortable. The cabin seats were very annoying. I was supposed to be flying in Business Class but still the seats were annoying.	Lack comfort and privacy
	P5.5.2 Saudia Airlines only the planes that fly to USaudia Airlines had socket facilities the other Saudia Airlines airplanes do have the sockets.	Poor facilities
	P5.5.3 Saudia Airlines cabin seats were a little tighter than the other airlines.	Poor seat design
P6	P6.5.1 I think they were really good and wide they were okay. I had a short flight usually one hour and 40 minutes.	Well Designed Seating

	Onboard/Cabin Seat for Other Airlines	
P01	P1.5.1 First Class is First Class, but British Airways and Etihad best.	Positive overall experience
	P1.5.2 The cabin seats are large in Etihad Airways.	Well Designed Seating
	P1.5.3 British Airways First Class, their layout is excellent	Well Designed Seating
	P1.5.4 I prefer privacy while travelling this is what I like. Etihad Airways and British Airways provide you with privacy	Provide comfort and privacy
	P1.5.5 Qatar Airways does not provide the same privacy, you may have someone sitting beside you.	Lack comfort and privacy
P2	P2.5.1 Turkish Airlines and British Airways have fantastic seats.	Positive overall experience
	P2.5.2 Turkish Airlines for example are very comfortable seats, the Business Class is the best class.	Provide comfort and privacy
	P2.5.3 Turkish Airlines and British Airways have fantastic seats, it is very comfortable, it is like a bed.	Well Designed Seating
	P2.5.4 The most comfortable cabin seats are the British Airways and Turkish Airlines.	Provide comfort and privacy
P3	P3.5.1 Lufthansa has perfect cabin seats.	Positive overall experience
	P3.5.2 British Airways cabin seats compared to others airlines is not good.	Negative overall experience
	P3.5.3 So if you want to sleep, you will find it comfortable and you have your own personal space.	Provide comfort and privacy
	P3.5.4 The seats of Emirates Airlines, Qatar Airways and Etihad Airways airlines are excellent, Emirates Airlines spends a lot in improving the airline.	Positive overall experience
P4	P4.5.1 The best was the British airways, because Saudia Airlines it wasn't comfortable	Provide comfort and privacy
	P4.5.2 I love the British Airways cabin seats	Positive overall experience
	P4.5.3 I don't like these sliding cabin seats at all while	Poor seat

	sleeping for example Qatar Airways.	design
P5	P5.5.1 the thing that I liked about British Airways is that their seats are comfortable and have good space. The seats aren't too close to each other there is space. For example in the middle of the plane, there are two seats facing each other but on the sides a pair of chairs beside each other.	Provide comfort and privacy
	P5.5.2 British Airways cabin seats have a nice layout.	Well Designed Seating
	P5.5.3 Also, there are curtains between each pair of chairs, which is something comfortable regarding privacy. They also have the same at Emirates, so nobody can see or bother you.	Provide comfort and privacy
	P5.5.4 Honestly, British Airways and Emirates Airlines very good.	Positive overall experience
	P5.5.5 In addition, on board of Emirates Airlines plane, you have a mini bar beside you containing everything you need.	Facilities Entertain All Customers
	P5.5.6 Emirates Airlines has TV screens that were great. We had a big screen.	Facilities Entertain All Customers
	P5.5.7 Malaysian Airlines fly with new planes that have wide seats and comfortable	Provide comfort and privacy
P6	P6.5.1 Etihad and British Airways are at the same level regarding the seats because they have seats, which lies 180°. So if you have a long flight you can sleep very comfortably and there is enough space between the chairs.	Provide comfort and privacy
	P6.5.3 The design of the cabin seats itself I found that Etihad Airways has a good design and the selection of colors are beautiful.	Well Designed Seating
	P6.5.4 So it is important to have something also smooth to the eye you know when you are in the flight you are in a bad mood usually you have a long flight you're tired so you want to have something very simple too many colours is not good.	Well Designed Seating
	P6.5.5 Etihad Airways have good seat design space is very important and comfortable seats is key for me.	Well Designed Seating
P7	P7.5.1 Emirates Airlines excellent	Positive overall experience

Appendix B4 – Onboard - Key Themes and Sub-themes

B4-1 Onboard/Cabin Crew Service for Saudia Airlines and Other Airlines

The tables below show the themes that were emerged from the mapping process of **cabin crew service** of the respondents for both Saudia Airlines and Other Airlines

Key themes		Sub-themes for cabin crew services	Respondents' comments	
			Saudia Airlines	Other airlines
Experience	1.	Positive overall experience	2	5
	2.	Negative overall experience	3	1
Intangible design touch points	1.	Inflexible and complicated	1	0
Communication	1.	Positive Customer Service	1	7
	2.	Negative Customer Service	10	0
	3.	Extra attention and care	0	9
	4.	Limited attention and care	2	0
	5.	Good communication and behaviour	0	4
	6.	Poor communication and behaviour	4	0
	7.	Lack of brand communication	2	0
			25	26
Total comments			50	

Onboard/Cabin Crew Service Positive Overall Experience	
Saudia Airlines	
1.	P4.4.1 honestly, it is very good actually
2.	P4.4.2 they were very friendly when I got on board
Other Airlines	
1.	P2.4.1 Completely satisfied
2.	P3.4.1 Lufthansa is perfect
3.	P3.4.3 British airways! They are excellent.
4.	P4.4.1 All were good in fact
5.	6.4.4 Maybe Qatar Airways is slightly ahead of the others.

Onboard/Cabin Crew Service Negative Overall Experience	

Saudia Airlines	
1.	P1.4.1 You book the seats but all of a sudden you find some one asking you to move.
2.	P1.4.2 Everything is not organised
3.	P5.4.2 Everything is bad.
Other Airlines	
1.	6.4.5 Sometimes the British Airways cabin crew are more lazy.

Onboard/Cabin Crew Service Inflexible and complicated	
Saudia Airlines	
1.	P5.4.6 Saudia Airlines cabin crew they aren't flexible
Other Airlines	
1.	None of the respondents addressed this theme regarding other airlines

Onboard/Cabin Crew Service Positive Customer Service	
Saudia Airlines	
1.	P4.4.3 When I was travelling international from the United Kingdom to Saudi Arabia I was impressed with their service. I was in a very bad mood, but they were very friendly, the food and the service was good.
Other Airlines	
1.	P 1.4.1 Completely satisfied with services of other airlines.
2.	P 4.4.2 Singapore Airlines excellent service
3.	P 4.4.3 British Airways the service was excellent the same as Singapore Airlines.
4.	P 5.4.3 The people who stayed for the meals were then provided with a shuttle bus to take them to the airport.
5.	P 6.4.1 The Business Class service for British Airways and Etihad Airways is great.
6.	P 7.4.5 I know the manager has an administration that will support him, my job description is ABC, and he could have told me it is not part of my job description. I liked the touch he offered me. I know he went beyond his power to please me.

Pre-Flight/Cabin Crew Service Negative Customer Service	
Saudia Airlines	
1.	P1.4.4 the cabin crew service is below standards

2.	P2.4.1 I am dissatisfied with the service of the cabin crew.
3.	P3.4.1 I'm completely not satisfied with Saudia Airlines's service in general.
4.	P3.4.3 sometimes in Saudia Airlines you booked Business Class and suddenly you figured out they have downgraded even without notifying you that you have been downgraded for certain reason! You only find out once you are in the plane.
5.	P5.4.1 the service on board is very bad.
6.	P5.4.3 It varies according to the staff on board. Sometimes the staff is very good but other times very bad.
7.	P7.4.1 I see that the service is bad.
8.	P7.4.2 Service was very poor
9.	P7.4.5 Saudia Airlines they are always divided, no one is responsible for the service of the other, you feel there is no cooperation between them. However they should be one staff in the same organisation.
Other Airlines	
1.	None of the respondents addressed this theme regarding other airlines

	On board/Cabin Crew Service Limited attention and care
Saudia Airlines	
1.	P1.4.3 They are not dedicating seats for the families, like other airlines.
2.	P3.4.2 They don't care about how old is the passenger, old people, kids and women this is totally not considered.
Other Airlines	
1.	None of the respondents addressed this theme regarding other airlines

	Onboard/Cabin Crew Service Good communication and behaviour
Saudia Airlines	
0	None of the respondents addressed this theme regarding Saudia Airlines
Other Airlines	
1.	P 5.4.6 the British Airways , for instance, from the moment you get on the plane, they smile and always speak to you nicely.
2.	P 6.4.8 I think they are still nice I mean for me I don't need too much service but for example once I saw a lady she had to pull her bag on the overhead locker and the staff told her sorry I can't do it because it's not good for my back. So I help the lady.
3.	P 7.4.3 Emirates Airlines gave their staff the flexibility to take decisions and actions just to comfort and satisfy their passengers.
4.	P 7.4.4 Emirates Airlines gives their staff the target to satisfy people. Do whatever you can to let the people enjoy and be satisfied.

	Onboard/Cabin Crew Service Poor communication and behaviour
Saudia Airlines	
1.	P2.4.2 Sometimes if you asked them a question they show you it is not their job or responsibility. If you asked for your bag, they act like help yourself.
2.	P2.4.3 Their attitude is a little bit not nice, compared to other airlines they have to work on that
3.	P5.4.4 Honestly, they should recruit staff having better communication skills.
4.	P5.4.5The staff still talks to you in a rude way.
Other Airlines	
1.	None of the respondents addressed this theme regarding other airlines

	Onboard/Cabin Crew Service Lack of brand communication
Saudia Airlines	
1.	P3.4.4 British Airways wherever you look you will see it, unlike Saudi only see logo on the cabin crew's uniform and the screen.
2.	P3.4.6 Maybe the ones (who are responsible on this) think these details have no influence on the passenger. Actually it gives the passenger kind of loyalty to this airline. As I see their logo everywhere I'll memorize this airline and automatically when I do any future reservation I will go to this airline.
Other Airlines	
1.	None of the respondents addressed this theme regarding other airlines

B4-2 Onboard/Cabin Meals for Saudia Airlines and Other Airlines

The tables below show the themes that emerged from the mapping process of **cabin meals** for both Saudia Airlines and Other Airlines.

Key Themes		Sub-Themes for cabin meals	Respondents Comments	
			Saudia Airlines	Other Airlines
Experience	1.	Positive Overall Experience	4	4
	2.	Negative Overall Experience	3	0
Intangible design touch points	3.	Poor Food Service and Options	4	0
Communication	4.	Limited attention and care	1	0
			12	4
Total comments			16	

	On board/Cabin Meals: Positive Overall Experience for Saudia Airlines and Other Airlines
Saudia Airlines	
1	P2.6.1 Saudia Airlines food isn't bad.
2	P2.6.2 food is good.
3	P4.6.1 The cabin meals was good
4	P7.6.1 I was travelling on the Saudia Airlines and I asked for extra food, so food was good.
Other Airlines	
1	P1.6.1 I am completely satisfied, with the meals of Etihad Airways and Qatar Airways.
2	P2.6.1 All airlines are the same.
3	P3.6.1 Lufthansa food is perfect.
4	P6.6.1 The Emirate Airlines and Etihad Airways are better in terms of food.

	Onboard/Cabin Meals: Negative Overall Experience for Saudia Airlines and Other Airlines
Saudia Airlines	
1.	P1.6.1 Meals of Saudia Airlines come last in comparison to other airlines.
2.	P5.6.1 Meals of Saudia Airlines are of low quality.
3.	P6.6.2 Food is important to me and Saudia Airlines was always below the average in my opinion to be transparent.
Other Airlines	
0	None of the respondents addressed this theme regarding the Other Airlines.

	Onboard/Cabin Meals Poor Service and Options for Saudia Airlines and Other Airlines
Saudia Airlines	
1	P2.6.3 However the other airlines they have more selections
2	P6.6.1 The other airlines they have more selections.
3	P6.6.3 I found that the food is always the same.
4	P6.6.5 so usually I wouldn't eat in Saudia Airlines and it wasn't only me. I had many colleagues were taking the same flight and all of them before the flight they went to eat something to make sure they were not hungry on the flight.
Other Airlines	
0	None of the respondents addressed this theme regarding the Other Airlines.

	Onboard/Cabin Meals Limited attention and care for Saudia Airlines and Other Airlines
Saudia Airlines	
1.	P6.6.4 Cabin meals of Saudia Airlines were not prepared very well.
Other Airlines	
0	None of the respondents addressed this theme regarding the Other Airlines.

B4-3Onboard/Cabin Seat - for Saudia Airlines and Other Airlines

The tables below show the themes that emerged from the mapping process of **cabin seat** for both Saudia Airlines and Other Airlines.

Key themes		Sub-themes for cabin seat	Respondents comments	
			Saudia Airlines	Other airlines
Experience	1.	Positive overall experience	0	7
	2.	Negative overall experience	2	1
Tangible design touch points	3.	Well-designed seating	1	7
	4.	Provide comfort and privacy	0	9
	5.	Poor seat design	2	0
	6.	Poor aesthetic design	1	0
	7.	Lack of comfort and privacy	4	1
Intangible design touch points	8.	Facilities entertain all customers	0	2
	9.	Poor facilities	1	0
	10.	Poor maintenance	3	0
			14	27
Total comments			41	

	On board/Cabin Seat: Positive Overall Experience for Saudia Airlines and Other Airlines
Saudia Airlines	
0	None of the respondents addressed this theme regarding the Saudia Airlines.
Other Airlines	
1.	P1.5.1 First Class is First Class, but British Airways and Etihad best.
2.	P2.5.1 Turkish Airlines and British Airways have fantastic seats.
3.	P3.5.1 Lufthansa has perfect cabin seats.
4.	P3.5.4 The seats of Emirates Airlines, Qatar Airways and Etihad Airways airlines are excellent, Emirates Airlines spends a lot in improving the airline.

5.	P4.5.2 I love the British Airways cabin seats
6.	P5.5.4 Honestly, British Airways and Emirates Airlines very good.
7.	P7.5.1 Emirates Airlines excellent

	Onboard/Cabin Seat: Negative Overall Experience
Saudia Airlines	
1.	P2.5.1 Saudia Airlines cabin seats are not good at all comparing to British Airways.
2.	P2.5.2 Saudia Airlines big big difference comparing to other airlines, which are much better.
Other Airlines	
1.	P3.5.2 British Airways cabin seats compared to others airlines is not good.

	Onboard/Cabin Seat: Well-Designed Seating
Saudia Airlines	
1.	P6.5.1 I think they were really good and wide they were okay. I had a short flight usually one hour and 40 minutes.
Other Airlines	
1.	P1.5.2 The cabin seats are large in Etihad Airways.
2.	P1.5.3 British Airways First Class, their layout is excellent
3.	P2.5.3 Turkish Airlines and British Airways have fantastic seats, it is very comfortable, it is like a bed.
4.	P5.5.2 British Airways cabin seats have a nice layout.
5.	P6.5.3 The design of the cabin seats itself I found that Etihad Airways has a good design and the selection of colors are beautiful.
6.	P6.5.4 So it is important to have something also smooth to the eye you know when you are in the flight you are in a bad mood usually you have a long flight you're tired so you want to have something very simple too many colours is not

	good.
7.	P6.5.5 Etihad Airways have good seat design space is very important and comfortable seats is key for me.

	Onboard/Cabin Seat: Provide comfort and privacy
Saudia Airlines	
0	None of the respondents addressed this theme regarding the Saudia Airlines.
Other Airlines	
1.	P1.5.4 I prefer privacy while travelling this is what I like. Etihad Airways and British Airways provide you with privacy and comfort.
2.	P2.5.2 Turkish Airlines for example are very comfortable seats, the Business Class is the best class.
3.	P2.5.4 The most comfortable cabin seats are the British Airways and Turkish Airlines.
4.	P3.5.3 So if you want to sleep, you will find it comfortable and you have your own personal space.
5.	P4.5.1 The best was the British airways, because Saudia Airlines it wasn't comfortable
6.	P5.5.1 the thing that I liked about British Airways is that their seats are comfortable and have good space. The seats aren't too close to each other there is space. For example in the middle of the plane, there are two seats facing each other but on the sides a pair of chairs beside each other.
7.	P5.5.3 Also, there are curtains between each pair of chairs, which is something comfortable regarding privacy. They also have the same at Emirates, so nobody can see or bother you.
8.	P5.5.7 Malaysian Airlines fly with new planes that have wide seats and comfortable
9.	P6.5.1 Etihad and British Airways are at the same level regarding the seats because they have seats, which lies 180°. So if you have a long flight you can sleep very comfortably and there is enough space between the chairs.

	Onboard/Cabin Seats Poor Seat Design for Saudia Airlines and Other Airlines
Saudia Airlines	

1.	P4.5.2 I don't like these sliding cabin seats at all while sleeping.
2.	P5.5.3 Saudia Airlines cabin seats were a little tighter than the other airlines.
Other Airlines	
0	None of the respondents addressed this theme regarding the other airlines.

	Onboard/Cabin Seats Lack of comfort and privacy for Saudia Airlines and Other Airlines
Saudia Airlines	
1.	P2.5.3 I am not satisfied with the seats honestly at all of Saudia Airlines, because I am not comfortable with it.
2.	P2.5.4 If I have to choose between the Saudia Airlines and Turkish Airlines and the Saudia Airlines and British Airways, I will choose the other airlines. Cabin seats are the most important thing. I can deal with ok services, but the seats are the most important thing to me is to be sitting comfortably and privacy.
3.	P4.5.1 Saudia Airlines their cabin seats are not comfortable.
4.	P5.5.1 Saudia Airlines seats are annoying and not comfortable. The cabin seats were very annoying. I was supposed to be flying in Business Class but still the seats were annoying.
Other Airlines	
1.	P1.5.5 Qatar Airways does not provide the same privacy; you may have someone sitting beside you.

	Onboard/Cabin Seats Facilities Entertain All Customers for Saudia Airlines and Other Airlines
Saudia Airlines	
0	None of the respondents addressed this theme regarding the Saudia Airlines.
Other Airlines	
1.	P5.5.5 In addition, on board of Emirates Airlines plane, you have a mini bar beside you containing everything you need.
2.	P5.5.6 Emirates Airlines has TV screens that were great. We had a big screen.

	Onboard/Cabin Seats Poor facilities for Saudia Airlines and Other Airlines
Saudia Airlines	
1.	P5.5.2 Saudia Airlines only the planes that fly to USaudia Airlines had socket facilities the other Saudia Airlines airplanes do have the sockets.
Other Airlines	
0	None of the respondents addressed this theme regarding the Other Airlines.

	Onboard/Cabin Seats Poor Maintenance for Saudia Airlines and Other Airlines
Saudia Airlines	
1.	P1.5.1 the seats are ok, but need maintenance.
2.	P1.5.2 The seats are old and damaged, the screens don't work and the tables are loose.
3.	P3.5.1 The space of the seat was good, but sometimes you find that your seat is broken!
Other Airlines	
0	None of the respondents addressed this theme regarding the Other Airlines.

Appendix B5 - Breakdown of total number of comments for design touch points of customer journey

		Design touch points of customer journey																			
		Pre-flight						On-board						Post-flight							
		On-line booking		Check-in		Lounge		Cabin Crew Service		Cabin Seats		Cabin Meals		Special Assistance		Luggage Handling		Loyalty Card			
Key Themes	Sub-Themes	SA	Other	SA	Other	SA	Other	SA	Other	SA	Other	SA	Other	SA	Other	SA	Other	SA	Other	Total of all comments of each sub-themes	Sum of all comments of sub-themes for each key Themes
Experience	Positive overall experience	2	8	3	7	0	13	2	5	0	7	4	4	0	1	0	0	2	5	63	100
	Negative overall experience	3	1	0	1	6	0	3	1	2	1	4	0	1	1	0	0	3	1	28	
	Fail to meet expectation	1	0	0	0	1	0	0	0	0	0	0	0	2	0	1	2	2	0	9	
Tangible design touch points	Well designed seats	0	0	0	0	0	0	0	0	1	7	0	0	0	0	0	0	0	0	8	38
	Good aesthetic design	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	
	Provide comfort and privacy	0	0	0	0	0	6	0	0	0	9	0	0	0	0	0	0	0	0	15	
	Poor seat design	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	2	
	Poor aesthetic design	0	0	0	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	4	
	Lack of comfort and privacy	0	0	0	0	0	0	0	0	4	1	0	0	0	0	0	0	0	0	5	
	Limited space	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	2	
Intangible design touch points	Food service caters for all	0	0	0	0	0	5	0	0	0	0	0	2	0	0	0	0	0	0	7	68
	Facilities entertain all customers	0	0	0	0	0	4	0	0	0	2	0	0	0	0	0	0	0	0	6	
	Plenty of options and information	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	
	Additional service	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0	3	
	User friendly process	1	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	
	Starting to improve	1	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
	Limited service information and options	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
	Poor facilities	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	3	
	Poor food service and options	0	0	0	0	2	1	0	0	0	0	2	0	0	0	0	0	0	0	5	
	Technical Errors	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
	Poor service process	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
	Poor maintenance	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	0	3	
	Lost items	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	
Inflexible and complicated	6	2	0	0	0	0	1	0	0	0	0	0	0	0	0	3	0	1	13		
Communication	Positive customer service	0	0	2	3	0	6	1	7	0	0	0	0	0	0	0	3	0	1	23	65
	Extra attention and care	0	0	0	0	0	0	0	9	0	0	0	0	0	4	0	1	0	0	14	
	Good staff communication and behavior	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	1	0	0	5	
	Poor staff communication and behavior	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	4	
	Lack of brand communication	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	2	
	Limited attention and care	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	3	
	Negative customer service	0	0	0	1	2	1	9	0	0	0	0	0	0	1	0	0	0	0	14	
Total comments of Saudia Airlines (SA) and Other Airlines		19	24	8	12	18	39	24	26	14	27	10	6	3	9	5	11	8	8	271	271
Total		43		20		57		50		41		16		12		16		16		271	

Appendix B6 - Total Number of Comments Received

In Chapter04 the researcher only discussed the design touch points that had the most comments. Passengers considered these design touch point the most important and effective touch points in their journey.

Total number of comments received	Design touchpoints of the customer journey	Key Themes	Most frequent arising Sub-Themes	Saudia Airlines	Other Airlines
57/271	Lounge Area	Experience	Positive overall experience	0	13
			Negative overall experience	6	0
		Tangible design touchpoints	Provide comfort and privacy	0	6
		Intangible design touchpoints	Food service caters for all	0	5
			Facilities entertain all customers	0	4
		Communication	Positive customer service	0	6
50/271	Cabin Crew Service	Experience	Positive overall experience	2	5
		Communication	Positive customer service	1	7
			Negative customer service	10	0
			Extra attention and care	0	9
			Good staff communication and behaviour	0	4
			Poor staff communication and behaviour	4	0
43/271	Booking	Experience	Positive overall experience	2	8
		Intangible design touchpoints	Plenty of options and information	0	7
			User friendly process	1	6
			Inflexible and complicated	6	2
41/271	Cabin Seats	Experience	Positive overall experience	0	7
		Tangible design touchpoints	Well-designed seats	1	7
			Provide comfort and	0	9

			privacy		
			lack of comfort and privacy	4	1
20/271	Check-in	Experience	Positive overall experience	3	7
16/271	Cabin Meals	Experience	Positive overall experience	4	4
			Negative overall experience	4	0
16/271	Luggage Handling	Intangible design touchpoints	Lost items	4	0
16/271	Loyalty Card	Experience	Positive overall experience	2	5
12/271	Special Assistance	Communication	Extra attention and care	0	4

Appendix C - Design Experts Research (Study Two)

Appendix C1 – Example of Mapping the Raw Data of Design Expert Interviews



Appendix C2 - Key Themes and Sub-themes of Design Expert Interviews

Summary of the key themes and sub-themes			
	Key themes		Sub-themes
1	Organisational mind-set	1	Appreciation of both strategic and operational contribution of design.
		2	Support and investment for overall design agenda from senior management
		3	Strong ambition for Design
		4	Positive attitude toward change
		5	Importance of innovation in airlines
		6	Respect for Design
		7	Monitoring competitors
		8	Importance of customer experience and design contributions
		9	Design as an essential part of business
2	Design as a Tool in the Organisation	1	Design as a tool to deliver products and services
		2	Design as a tool for problem-solving
3	Structure and Design Capability	1	Clear position for design in organisational structure
		2	Design and design management capability
4	Design Process	1	Systematic design process
5	Design Research Capability	1	Critical analysis of competitors
		2	Customer research
6	Communication	1	Cross-departmental collaboration
7	Customer Experience	1	Innovation and differentiated tangible and intangible touch points

		Key Theme: Organisation mind-set
	Participant	Sub-Theme: Appreciation of both operational and strategic contribution of design.
1	DE 1:1.1.1	I see design work at its best in the organisation. It can make a leap. It can move you into another world.
2	DE 1:1.1.2	Apple's success was because they have design at the heart of their business.
3	DE 1:1.1.3	Apple successful is because design brings in the people's voices into the business at least if it is done right.
4	DE 2:1.1.1	Seats are becoming light weight, it is also improving the customer experience for the airline.
5	DE 2:1.1.2	People's mind-set affects greatly what is performed and what is done in terms of design and innovation
6	DE 2:1.1.3	We have very different mind-sets in the organisation that might not always agree.
7	DE 3:1.1.1	Design is a distinguishing factor
8	DE 5:1.1.1	the airline industry gets the important need for design and innovation.
9	DE 5:1.1.2	The real product differentiation was the upper-class seat, which is a seat that turns into a bed and added enormous value to the customer satisfaction.
10	DE 5:1.1.3	Seats was a real product differentiation and the customers loved it.
11	DE 5:1.1.4	VAA was one of the first companies to have screens in every seat, followed by most of the airlines.
12	DE 5:1.1.5	Design is pretty paramount in order to achieve its competitive edge.
13	DE 5:1.1.6	Appreciate designers.

Key Theme: Organisation mind-set		
	Participant	Sub-Theme: Support and investment on overall design agenda from senior management
1	DE 2:1.2.1	Design ideas depend on the reason and benefit it will add to the airline. If senior management disapprove they will not support the idea.
2	DE 2:1.2.2	If senior management are the ones that want to implement a design idea they will support it. If it was coming from designers it might not be supported (bottom up approach).
3	DE 2:1.2.3	If senior management does not support a design project it will be difficult to get it across.
4	DE 2:1.2.4	Design is divided into different departments. Senior management review all those departments and how they can work together.
5	DE 4:1.2.1	Senior management continue to support customer care at all stages.
6	DE 5:1.2.1	In order to embrace design it needs to come from the top then cascade down
7	DE 5:1.2.2	Senior management support design.
8	DE 5:1.2.3	Senior management are very supportive.
9	DE 5:1.2.4	If companies are not serious about investing in design and do it begrudgingly, plus they do not allow design managers to engage at the senior level it might not succeed.
10	DE 5:1.2.5	if there is an idea that would fix the company that idea would be implemented.
11	DE 5:1.2.6	We were fortunate to have a leader who understood the value of design, innovation and what it can do to the brand
12	DE 6:1.2.1	How to make experience very simple and smooth for the customer there are a number of things that have to take place behind the scenes.
13	DE 6:1.2.2	Senior management support design.
14	DE 6:1.2.3	The existence of a design department depends on the top management.
15	DE 6:1.2.4	Virgin Airlines investing in service design was a worthwhile thing to do.
16	DE 6:1.2.5	The head of Virgin Airlines mentioned the success of the projects, outlining how passenger numbers had gone up and waiting time gone down as a result of the design project.

Key Theme: Organisation mind-set		
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	Participant	Sub-Theme: Strong ambition for Design
1	DE 2:1.3.1	To be the best airline in the world.
2	DE 2:1.3.2	Our innovations are ahead of their time.
3	DE 2:1.3.3	Set ourselves to be the best, so we introduce the latest and best services.
4	DE 2:1.3.4	Try to be years ahead of our competitors
5	DE 3:1.3.1	Go with time and flexibility and aim for the best.
6	DE 3:1.3.2	To stand out with everything we design.
7	DE 3:1.3.3	Design can make the airline stand out.
8	DE 4:1.3.1	Our ambition is to build a reputation that operates the best fleets in the sky
9	DE 4:1.3.2	Always maintain a 5 star position and continue to achieve many awards.
10	DE 4:1.3.3	Always focus on providing premium products.
11	DE 4:1.3.4	Constant aim at promoting our 5 star products and services to reflect our brand.

		Key Theme: Organisation mind-set
	Participant	Sub-Theme: Positive attitude toward change
1	DE 2:1.4.1	Technology really changing the playing fields of design products on board.
2	DE 3:1.4.1	Risk taken always try to aim for new products.
3	DE 3:1.4.2	We have to grow or we will miss the boat... our airline is not afraid to change or improve... we learn from our mistakes and learn from others... design made a lot of improvement in the airline
4	DE 3:1.4.3	Aware of change.
5	DE 4:1.4.1	We deal with market change.
6	DE 5:1.4.1	Embrace change.
7	DE 5:1.4.3	The airline was able to sacrifice short-term financial expenses (because you are paying to make changes) in exchange for long-term value, for the customer journey

		Key Theme: Organisation mind-set
	Participant	Sub-Theme: Importance of innovation in airlines
1	DE 1:1.5.1	Apple there is an abundance of new thinking all the time coming out of those industries and customers get to choose from that. I don't think that's the case with the Airline Industry.
2	DE 2:1.5.1	Our recent release of products, which is an effort for several years was to drive innovation because at that time we wanted to create innovations that are ahead of their time.
3	DE 2:1.5.2	We can start working on the next generation as well but at the same time we are years ahead of the competitors.
4	DE 2:1.5.3	We always have to improve design or else our competitors will catch up
5	DE 3:1.5.1	The airline is really aware of innovation. Innovation drives people at our airline. Innovation is really important part of our job.
6	DE 5:1.5.1	We were one of the first companies to have screens in every seat, followed by most of the airlines.
7	DE 6:1.5.1	They are interested in doing something out of the ordinary and ensuring it was a great experience.

		Key Theme: Organisation mind-set
	Participant	Sub-Theme: Respect for Design
1	DE 1:1.6.1	Design was respected at British Airways.
2	DE 1:1.6.2	They held design in very high regards.
3	DE 2:1.6.1	Design should not be underestimated, design is held pretty highly as one of our values
4	DE 3:1.6.1	Unique design plays a big part.
5	DE 3:1.6.2	Design is part of our DNA
6	DE 5:1.6.2	our company as a whole perceived design as a good thing.
7	DE 5:1.6.3	To help people understand design is difficult it depends on the organisational culture.
8	DE 5:1.6.4	Some people saw design important but others didn't.
9	DE 5:1.6.5	We have designers that are very good at design with a design background

		Key Theme: Organisation mind-set
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	Participant	Sub-Theme: Monitoring competitors
1	DE 2:1.7.1	We have a lot of competitors that we monitor. I think Virgin Airlines are always providing the new technologies such as hand-held devices. I think that is a really good addition to have on an airline and I think that is something that people really like. So that is something that we need to always think about.
2	DE 2:1.7.2	See other airlines and how they approach design.
3	DE 2:1.7.3	We try to monitor what the competitors are doing.
4	DE 3:1.7.1	Go with time and flexibility and aim for the best.
5	DE 3:1.7.2	Most of the time we look around to see what competitors are doing. We look around us but we are not focused on others we try to focus on our own strength.
6	DE 4:1.7.1	Highly competitive industry
7	DE 5:1.7.1	We have to offer the best and latest designs to survive because the airline industry is a competitive industry.
8	DE 5:1.7.2	Me too formula that copy Virgin Airlines, which are leaders in the industry.

		Key Theme: Organisation mind-set
	Participant	Sub-Theme: Importance of customer experience and design contributions
1	DE 2:1.8.1	We like to create the experiences.
2	DE 2:1.8.2	Create a pleasurable experience.
3	DE 3:1.8.1	Personalize the airline experience.
4	DE 3:1.8.2	Sell an experience.
5	DE 3:1.8.3	Remember the time on the airplane, those hours were special.
6	DE 3:1.8.4	Unique experience.
7	DE 3:1.8.5	Design is part of customer experience.
8	DE 3:1.8.6	To design the experience is getting more important. It is the part that differentiates our airline.
9	DE 4:1.8.1	Efforts to develop the customer experience and differentiate it from competitors.
10	DE 4:1.8.2	We aim to identify what is important for our customers and what is their experience like all the time.
11	DE 5:1.8.1	Do something out of the ordinary ensuring great experience.
12	DE 5:1.8.2	Want the customer experience to be special.
13	DE 5:1.8.3	The airlines is very proud of the customer experience and make a big deal of it more than others.
14	DE 5:1.8.4	Rely on designers and design consultancies for the development of customer experience.
15	DE 6:1.8.1	Virgin Atlantic Airlines is famous for its great customer experience
16	DE 6:1.8.2	Virgin Airlines was proud of customer experience.
17	DE 6:1.8.3	if you are designing the service to improve it, the emphasis in the way we work would be on the customer experience. For example working closely with people and with all the key design tools, this can achieve a good customer experience

Key Theme: Organisation mind-set		
	Participant	Sub-Theme: Design as essential part of business
1	DE 1:1.9.1	The organisation understood the value design added to business.
2	DE 1:1.9.2	I think design makes business better by adding value and save money.
3	DE 2:1.9.1	Our designs can be simple as adding a bigger screen or could be as complex as adding more space in cabin effectively.
4	DE 2:1.9.2	I was looking at antimicrobial and humidified environment that help reduce the amount of germs that are spreading.
5	DE 2:1.9.3	We focus on maintenance and the ability to be easily replaced or fixed if something happens.
6	DE 2:1.9.4	Designing something is really important because if that is not done correctly, it remains on plane until it's pulled off.
7	DE 2:1.9.5	Aircraft products that are damaged need a good design to replace and be able to maintain.
8	DE 2:1.9.6	Things that could possibly break if they are simply made, then they can easily be replaced. They can also withstand a lot more because a simple design usually lasts a lot longer than complex designs more focus of failure.
9	DE 3:1.9.1	Design can improve everyday life
10	DE 3:1.9.2	When we change a design we try to measure what people think of it and if it increased their satisfaction level.
11	DE 5:1.9.1	Design is a long term investment
12	DE 5:1.9.2	In design there are tricks and ways of increasing the comfort level and there are some products in the market that do that.
13	DE 6:1.9.1	Design is an investment rather than a short term pay off.

Key Theme: Design as a Tool in the Organisation		
	Participant	Sub-Theme: Design as a tool to deliver products and services
1	DE 1: 2.1.1	Design is a useful tool
2	DE 2: 2.1.1	The key factor is to ensure function and form.
3	DE 3: 2.1.1	Design is a broad term. Design is in everything.

4	DE 3: 2.1.2	Everything that is visible is really important.
5	DE 3: 2.1.3	Design is getting more broad not 2D but 3D. Broader spectrum visual design.
6	DE 4: 2.1.1	Design is used as a tool to introduce products and services, which they market in line with their five star brand
7	DE 4: 2.1.2	Design differentiates our products and services from other airlines in the region
8	DE 5: 2.1.1	Virgin Airlines competing on product and service differentiation.
9	DE 6: 2.1.1	Design helped Virgin Atlantic Airlines to develop service design because they were mainly product oriented

		Key Theme: Design as a Tool in the Organisation
	Participant	Sub-Theme: Design as a tool for problem-solving
1	DE 1: 2.2.1	Proactively, as British Airways is a large organisation there is a place to use design more...In this case the design team goes to the organisation to say there is a problem here and to give ways on how we can solve it
2	DE 1: 2.2.2	British Airways, this is the perception of the design team: reactively the organisation comes to the design team and says we have a problem here, how can we solve it?
3	DE 1: 2.2.3	Design team address that there is a problem here and we have some solutions and some ways to solve it.
4	DE 1: 2.2.5	People would come to the design team and ask for help in solving problems.
5	DE 2: 2.2.1	I help them understand how design can help.

		Key Theme: Structure and Design Capability
	Participant	Sub-Theme: Clear position for design in organisational structure
1	DE 1:3.1.1	Within the organisation there was a knowledge that this design team existed and that they had a vision.
2	DE 2:3.1.1	Visual communication department/marketing and advertisement I am the interior designer in that department.
3	DE 2:3.1.2	Design from our end up depends on the idea proposed and then the person in charge to make it happen from the top.
4	DE 2:3.1.3	We have a hierarchy approach at the airline.
5	DE 2:3.1.4	Very structured approach a lot are involved.

6	DE 5:3.1.1	We have senior people in a design role and close collaboration with the CEO and COO
7	DE 6:3.1.2	We have a pretty flat structure (we all get involved)

Key Theme: Structure and Design Capability		
	Participant	Sub-Theme: Design and design management capability
1	DE 1:3.2.1	The way we involved different people at different times is the skill of the design manager
2	DE 1:3.2.2	Design is a conduit that allows business to align what they are offering to customers'
3	DE 2: 3.2.1	We have also done products that are on our own, so internal design projects without the design consultancies.
4	DE 2: 3.2.2	Design in-house, we do small projects such as seats.
5	DE 2: 3.2.3	We have well-established processes and large budgets for design, so we can get people all over the world and we have hired design consultancies for large projects'
6	DE 2: 3.2.4	I have the ability to do in-house design on small projects
7	DE 2: 3.2.5	Etihad have a lot of designers
8	DE 2: 3.2.6	The most part the aircraft interior side it is only our department I am the designer there
9	DE 2: 3.2.7	From experience if people are thinking that our seats are not as comfortable as the should be we ask questions such as level of comfort. Comfort we need to add how much money ...etc.
10	DE 3: 3.2.1	We have a design department and designers.
11	DE 3: 3.2.2	We have design agencies that work for us but we try to do the most projects ourselves
12	DE 3: 3.2.3	A lot of departments in KLM there are 30,000 people working for KLM. KLM is a big company and a lot going on
13	DE 3: 3.2.4	Responsibility of visual communication is to strengthen KLM brand.

14	DE 3: 3.2.5	We try to aim at our own strengths and our own strengths are; that we are Dutch and that is a unique thing and Dutch means not only tulips and wooden clogs...we have a lot of races of people of colours and we always have been a country that has had some colonies all around the world – like for example Surinam, India and Indonesia...Dutch heritage and Dutch design, style and we're a kind of a multicultural environment and always have been multicultural...we have some unique things that we want to tell the world and yeah that is our main focus... Dutch heritage, Dutch design and Dutch style...we try to attract the best Dutch designers
15	DE 3: 3.2.6	Customer satisfaction is really important it is a really large department.
16	DE 3: 3.2.7	We have design consultancies we hire when we need more designers to work on projects.
17	DE 3: 3.2.8	We have an innovation department.
18	DE 4: 3.2.1	I believe Qatar continues to recruit employees from a variety of cultures to ensure the company is well equipped.
19	DE 6: 3.2.1	Service design would be very comprehensive because they would cover environmental, behaviour, system and products.

		Key Theme: Design Process
	Participant	Sub-Theme: Systematic design process
1	DE 1:4.1.1	There was a magic that we brought to the business and I think the magic was the design process.
2	DE 1:4.1.2	The core process never changes...design process doesn't change (the five steps), but you can add other steps sometimes because design can be done in different ways.
3	DE 2:4.1.1	The design process at Etihad takes a long time for urgent innovation or something related to technology which changes really quickly.
4	DE 2:4.1.2	We start with the product definition and then the things we need to achieve which takes a long produces.
5	DE 2:4.1.3	We prototype we review those prototype we develop those into the final products.
6	DE 2:4.1.4	There is no single way to do a design project.

7	DE 3:4.1.1	We think from the point of view of the passengers and that makes different choices.
8	DE 3:4.1.2	Ask a lot of questions and think from the point of view of the passengers.
9	DE 3:4.1.3	Asking questions is a key factor for a successful design.
10	DE 3:4.1.4	The golden circle (why, what and how) is really important in design especially when it comes to concept and brainstorming.
11	DE 3:4.1.5	The concept of the golden circle (why, what and how) we all think the same way in the organisation.
12	DE 3:4.1.6	The concept of the golden circle (why, what and how) is in our minds and we try to implement it throughout the organisation
13	DE 4:4.1.1	Design process is considered one of the most important and valuable processes which the company carries out.
14	DE 5:4.1.1	A lot of people are involved in the design process of customer journey.
15	DE 5:4.1.2	Our foundation was the double diamond but I think we ended up with about six diamonds... it was a derivative of the double diamond, lot more complex the double diamond is a very sophisticated version of how you manage design and it's a linear process.
16	DE 6:4.1.1	We would be looking for the existence of key tools and methods such as co-creation with customers.
17	DE 6:4.1.2	Working closely with people and visual communication and all the key design tools achieve good design projects
18	DE 6:4.1.3	We are dealing with everything from how to make the experience very simple and smooth for customers.
19	DE 6:4.1.4	The objective was how to get passengers from point A to point B in customer journey in a few minutes a lot of things needed to be considered...sometimes during the actual research the idea comes up and sometimes we need to have a structured process.
20	DE 6:4.1.5	Customers get looked at again and can identify further improvements or innovations so it's a continuous cycle of improvement

		Key Theme: Design Research Capability
	Participants	Sub-Theme: Critical analysis of competitors
1	DE2:5.1.1	For our research we will look at innovation or new developments (product or services) of competitors.
2	DE2:5.1.2	We do market research to determine if our products are satisfying the customers.
3	DE3:5.1.1	Most of the time we look around to see what competitors are doing.
4	DE 6:5.1.1	We do competitor analysis and make sure that our products is still better than their products.

		Key Theme: Design Research
	Participant	Sub-Theme: Customer research
1	DE 1:5.2.1	Design projects focus on a particular groups of people. In order to try to design a product or service for.
2	DE 1:5.2.2	Focus on that group of users or customers until you get their feedback and make sure they are happy with it.
3	DE 1:5.2.3	The airline industry never really generated the new ideas. It's always the airline talking to their customers that created a new idea
4	DE 2:5.2.1	As far as customer satisfaction we try to hear what our guests are saying we try to incorporate those features on the aircraft and into the experience.
5	DE 2:5.2.2	we do market research to determine if our products are satisfying the customers, which we call our guests.'
6	DE 3:5.2.1	We measure every opinion and we are aware of passengers and we try to learn from it.
7	DE 3:5.2.2	We will follow closely what passengers say of our products, our designs, and everything, we try to learn from it and make it better to improve it.
8	DE 4:5.2.1	Managing the feedback of customers is important to us.
9	DE 4:5.2.2	Customer care issues are looked at all the time.
10	DE 4:5.2.3	A lot of research is done on customer care issues in our airline.
11	DE 5:5.2.3	We were aware of challenges that customers were facing.
12	DE 5:5.2.4	We were only willing to revisit themes that customers thought were compulsory and just change them around so that they added more convenience to customers.
13	DE 5:5.2.5	Focusing on the customer was a great way of ensuring that we challenged every aspect.
14	DE 5:5.2.6	Whole department for customers service dealing with any problems that customers may have, certainly anything that was related to design that was dissatisfying for customers we would look at it.
15	DE 5:5.2.7	Customers have different expectations and different levels that relate to whether they are happy or not. There was a whole department devoted to ensure that complaints were listened to and appropriate actions are taken.
16	DE 6:5.2.1	We are interested in trying to get to the bottom of where people are coming from and what they really need
17	DE 6:5.2.2	Customer touchpoints get looked at all the time and that can identify further improvements and innovation, it's a continuous cycle of improvement

18	DE 6:5.2.3	Methods of measuring customer happiness a lot of feedback from customers in various different stages
19	DE 6:5.2.4	We go in very heavily to research customers
20	DE 6:5.2.5	We are looking at the customer experience.
21	DE 6:5.2.6	We do user studies.
22	DE 6:5.2.7	Performance experiment- having them to sit in the seats for certain period of time, try it out then we can base some of our research on that.
23	DE 6:5.2.8	Client involvement becomes slightly stronger towards end and customer involvement less sometimes.
24	DE 6:5.2.9	There is a lot of customer engagement at the beginning but we try to keep them engaged all throughout the design project.
25	DE 6:5.2.10	If an organisation starts out with some research around the customer then the next step they might be able to use that research to see what they think needs to be done to improve the experience for the customers.

		Key Theme: Communication
	Participant	Sub-Theme: Cross-departmental collaboration
1	DE 1:6.1.1	The biggest advantage is that you are internal, so that means you can get under the skin of things in the organisation.
2	DE 2:6.1.1	Departments will always ask for specific features and other features that may not be related to the design project. So we help the departments.
3	DE 2:6.1.2	We have to involve all or at least 5 different departments and all of those departments have to buy in and sign off it takes a very big effort.
4	DE 2:6.1.3	We have to involve many departments such as network management fleet premier departments, guest service department contract department and financial department.
5	DE 2:6.1.4	All the departments get a complete agreement, so we can get innovation or new features or something on fleet .
6	DE 2:6.1.5	Departments get involved it depends on the scope of work and how large the project.
7	DE 2:6.1.6	Large projects such the entire cabin we will have to outsource
8	DE 2:6.1.7	Collaboration with different departments conflict may occur...we like the fact that you went for this but this is way over the budget...this is not going to fit... this is not meeting our needs.
9	DE 2:6.1.8	We need their input to help insure that we are being checked
10	DE 2:6.1.9	We really work closely with all of our departments to make sure that we can get all the features that we need because one person

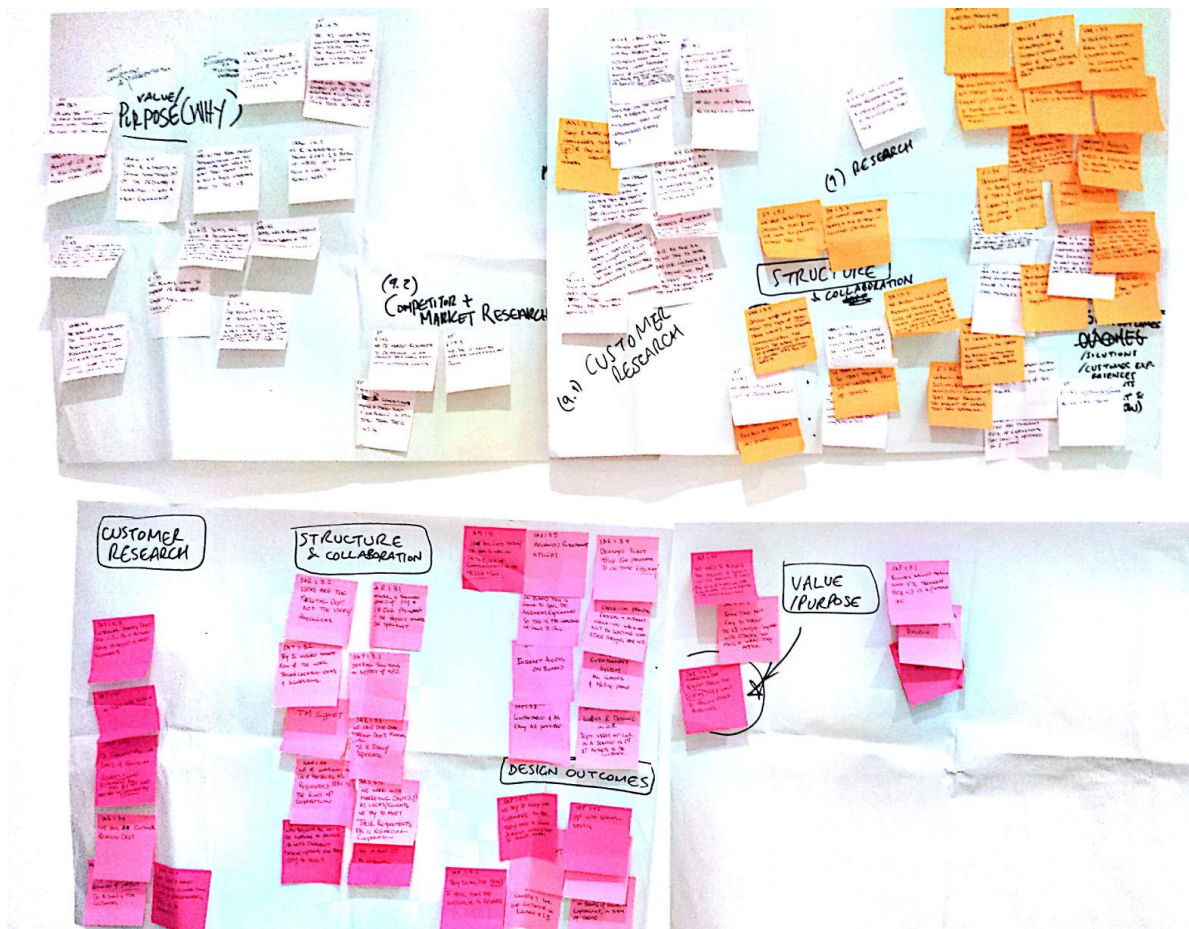
		cannot
11	DE 2:6.1.10	Each department specialize in their certain area so that we can make sure everything is corrected.
12	DE 2:6.1.11	A lot of departments are involved in design projects.
13	DE 3:6.1.1	The direction and brand is my direct boss.
14	DE 3:6.1.2	A lot of departments have projects, we work for all departments this is the factor that gives us exposure.
15	DE 3:6.1.3	Departments responsible for flight sales/ the food / technical maintained/ communication
16	DE 3:6.1.4	Everywhere in KLM Airlines people can have an opinion or design something new
17	DE 3:6.1.5	We work together with innovation department in different projects but not always
18	DE 3:6.1.6	We work together with innovation department to a achieve innovative outcomes.
19	DE 5:6.1.1	Design team, chief financial office and communication director work together to protect the brand.
20	DE 6:6.1.1	I think clients involvement has to be pretty high all the way through because you are asking different questions at different times and these phases it is how can we make it happen.

		Key Theme: Customer Experience
	Participant	Sub-Theme: Innovation and differentiated tangible and intangible touch points
1	DE 1:7.1.1	British Airways end project is still out there looks great. People like it. I think we got the design process about right.
2	DE 2:7.1.1	Customers - guests as we call them.
3	DE 2:7.1.2	Make sure Etihad brand follows our marketing, long term and insurance maintenance.
4	DE 2:7.1.3	Our marketing is really important.
5	DE 3:7.1.1	Need to excel you need something unique.
6	DE 3:7.1.2	Signage on airport/planes/outside plane/website/package is all design.
7	DE 5:7.1.1	Virgin Airlines has a strong brand.
8	DE 5:7.1.2	We are in business to make money. The measure was customer journey and revenue.
9	DE 5:7.1.3	Success of Virgin. Great products.

10	DE 5:7.1.4	Trying to create a better environment for them by adding facilities and immunities that could make their journey more comfortable.
11	DE 5:7.1.5	Passengers had their own private security corridor as they got out of the car their luggage was taken away and were given their ticket, so that differentiated them from others.
12	DE 5:7.1.6	Chauffeur driver service
13	DE 5:7.1.7	In-flight therapists and give you a massage.
14	DE 5:7.1.8	Integrated seating foam so similar level in economy like upper-class suite.
15	DE 5:7.1.9	Invested heavily on in-flight entertainment.
16	DE 5:7.1.10	We had lounges where we had spas and cinemas and playrooms and fine dining a place to wait for a flight instead of just giving them a hard chair and some sandwiches.
17	DE 5:7.1.11	We created whole environment that was similar to a private five star members club.
18	DE 5:7.1.12	The entertainment system I think was the highest rated of many of the airlines.
19	DE 5:7.1.13	The potential customer on board the A380 because of its extra space, there are different sorts of experiences that could be affected.

Appendix D - Saudia Airlines Employees and Design Consultants Research (Study Three)

Appendix D1- Example of mapping the raw data of Saudia Airlines employees and design consultants interview



Appendix D2 - Key themes and sub-themes of Saudia Airlines employees and design consultants interview

Summary of the key themes and sub themes			
	Key themes		Sub themes
1	Organisational mind-set	1	Limited appreciation of operational contributions of design
		2	Support and investments for design projects from senior management.
		3	Recognise the need for the better design
		4	Moderate ambition for design
		5	Silent Design
		6	Importance of customer experience and design contribution
2	External Influence	1	Need to keep up with competitors
		2	Influence of trade bodies
		3	Influence of passengers
3	Structure and Design Capability	1	Unclear position for design in organisational structure
		2	Lack of design and design management capability
4	Design Process	1	Design process
5	Design Research Capability	1	Customer research
6	Communication	1	Cross-departmental collaboration
7	Customer experience	1	Undifferentiated and off-the shelf products

Key Theme: Organisation mind-set		
	Participant	Sub Theme: Limited appreciation of operational contributions of design
1	SA1:1.1.1	Design enhances customer satisfaction and services, sometimes all these factors contribute in the final output.
2	SA-DC2: 1.1.1	They recognise (Saudia Airlines) design can create a nice environment that people would like.

Key Theme: Organisation mind-set		
	Participant	Sub Theme: Support and investments for design projects from senior management.
1	SA 1:1.2.1	To position ourselves, we have to see what we want to be and then build on that.
2	SA 1:1.2.2	Senior management looking at enhancing and introducing new products and services.
3	SA 3:1.2.1	We are going to have to be more flexible and we are already more flexible in term of responding to the market.
4	SA 3:1.2.2	The support of managers is to deal with new challenges.
5	SA 4:1.2.1	Senior management supports design projects.
6	SA 5:1.2.1	Senior management see the value of design as an important part.
7	SA 5:1.2.2	Senior management engages with the design projects and allocates sufficient resource.
8	SA-DC1:1.2.1	The trust of senior management for design team is a good start of the design project.
9	SA-DC1:1.2.2	Senior management chose us as a design consultancy after our presentation.
10	SA-DC1:1.2.3	Senior managers strongly supported the new concept design and presented the drawing in the magazine.
11	SA-DC1:1.2.4	The perfect relationship and trust among the senior management and manager cooperation.
12	SA-DC2:1.2.1	Interviewed all the senior managers of the company and all the people involved with the development of the customer journey.

Key Theme: Organisation mind-set		
	Participant	Sub Theme: Recognise the need for the better design
1	SA 2:1.3.1	Saudia Airlines have products which are out of date.

2	SA 2:1.3.2	We had offered products in a quick manner because it is new, it failed the market and we launched the product before realising the problems.
3	SA 3:1.3.1	Colour scheme is one very important aspect make people calm.
4	SA 5:1.3.1	Lack of understanding in design improvement can increase the cause of dissatisfaction for our customers.
5	SA 5:1.3.2	Saudia Airlines products should be much better.
6	SA 5:1.3.3	Biggest disadvantage would be lack of creative thinking at Saudia Airlines
7	SA 7:1.3.1	We did invest billions of Saudi Riyals (SAR) that includes reservations, ticketing, airport services and all the other complementary services are being renovated
8	SA-DC2:1.3.1	It is not up to design consultancy to contact Saudia Airlines customer.
9	SA-DC2:1.3.2	We don't get involved in customer research, they need to do their own customer research.

		Key Theme: Organisation mind-set
	Participant	Sub Theme: Moderate ambition for design
1	SA 1:1.4.1	Main focus is to enhance products in customer journey for Saudia Airlines.
2	SA 1:1.4.2	I don't think we can reach 4 star only by design.
3	SA 1:1.4.3	Design really fulfils certain goals.
4	SA 1:1.4.4	Design is not always cost saving.
5	SA 2:1.4.1	Saudia Airlines has a great role in the airline industry but we have limitation.
6	SA 3:1.4.1	We are looking much further ahead than we used to.
7	SA 4:1.4.1	We go always for simple things.
8	SA 4:1.4.2	We want the customer to be happy
9	SA 4:1.4.3	We are engineering department and design means drawings.
10	SA 4:1.4.4	Not always design can save or make money but it supposed to happen.
11	SA 4:1.4.5	SA we have a problem in the management of design.

12	SA 5:1.4.1	Design is not on top of the priority list at this stage.
13	SA 5:1.4.2	One of the largest airline in the Middle East.
14	SA 5:1.4.3	Our strategy is to renew our fleet with the latest aircraft, proper design, comfort and best safety.
15	SA 6:1.4.1	The investments that Saudia do can't cope with more, we can't cope with other airlines to become a five star airline, which requires a budget more than we can accommodate. This is the major difference between Saudi Airlines and the other GCC Airlines.
16	SA 7:1.4.1	We want to be the best airline in the region, this is our goal for the coming five years but we are not aiming to be the international leader, we have to be reasonable.

		Key Theme: Organisation mind-set
	Participant	Sub Theme: Silent Design
1	SA 1:1.6.1	We are a team (of people who were responsible for design projects) but not a team of designers, we do not have a design team'
2	SA 1:1.6.2	Background Computer Science - Most of my career is related to marketing.
3	SA 1:1.6.3	The marketing department is looking at the producers that directly interact with products and services in customer journey.
4	SA 1:1.6.4	Lounges are designed within the marketing department there are no designers, what we look at is the service that adapts to the customer.
5	SA 2:1.6.1	No designers in this department.
6	SA 3:1.6.1	The engineering department would embrace those designs according to our (marketing department) inquiries, rather than taking part at the beginning of the project during the designing phase'
7	SA 4:1.6.1	Marketing group is responsible of the interior of the airplane.

Key Theme: Organisation mind-set		
	Participants	Sub Theme: Importance of customer experience and design contribution
1	SA 1:1.6.1	Saudia Airlines go back in the process to customise and enhance the service to meet the customer expectations.
2	SA 1:1.6.2	'Mishandling of crew on-board' could 'spoil the customers experience, so that is the challenge we have to face
3	SA 1:1.6.3	We want the customer to be happy and relaxed.
4	SA 3:1.6.1	Customers expect a lot more for the price they are paying, so design projects have changed the business.
5	SA 3:1.6.2	Treat our customers in the best way possible
6	SA 4:1.6.1	We do all the things to make our customers feel relaxed.

Key Theme: External Influence		
	Participant	Sub Theme: Needs to keep up with competitors
1	SA 1: 2.1.1	5 star airlines are considered creators, they have creative ideas.
2	SA 2: 2.1.1	5 star airlines offer something new to the airline industry.
3	SA 2: 2.1.2	We started with more than one methodology. First we started with benchmarks in the region and European Airlines.
4	SA 2: 2.1.3	Etihad Airways and Qatar Airway and Emirates Airlines give benchmarking for our region
5	SA 3: 2.1.1	In order to survive airlines became much more competitive in the market.
6	SA 3: 2.1.2	Very competitive market we have so many competitors.
7	SA 3: 2.1.3	It's a competitive market
8	SA 3: 2.1.4	We do have to respond to competition, and at the same time we have to be innovative and come up with new ideas and try to attract customers.
9	SA 3: 2.1.5	We try to make the check-in process easier. We used internet check-in, which may not be leading edge other airlines have used it.
10	SA 4: 2.1.1	Users/ Marketing department request from us the engineering department that they want to follow other airlines.
11	SA 5: 2.1.1	High competition on price and service in airline industry.

12	SA-DC1: 2.1.1	When we started the project, if we were looking at the interiors of their cabins, one of the early things we did was travelled on Qatar Airways and Emirates Airlines.
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		Key Theme: External Influence
	Participant	Sub Theme: Influence of trade bodies
1	SA 1:2.2.1	We are in process in joining Sky Team Alliance.
2	SA 1:2.2.2	They have their own guidelines that Saudia Airlines rely on to deliver and become a member.
3	SA 1:2.2.3	Mainly the source we depend on is Sky Team Alliance.
4	SA 1:2.2.4	We aim to become 4 star in Skytrax that ranks customer touch points in customer journey .
5	SA 2:2.2.1	Saudia Airlines culture and religion limit some services, which can affect our ranking in skytrax.
6	SA 2:2.2.2	Skytrax guidelines addresses details for all senior management that need to improve customer journey.
7	SA 2:2.2.3	Strategic project for Saudia Airlines is to become 4 star in Skytrax.
8	SA 2:2.2.4	Saudia Airlines object 4 star and continuance improvement to become 5 star.
9	SA 2:2.2.5	Improvement to become 4 star airlines.
10	SA 3:2.2.1	I would say I think the 4 star object is our goal.
11	SA 6:2.2.1	Skytrax evaluates the airlines and they put guidelines that all airlines have to fulfil. It is a reference for us that we depend on.

		Key Theme: External Influence
	Participant	Sub Theme: Influence of passengers
1	SA 5:2.3.1	Passengers are using other airlines and compare it with Saudi Airlines.
2	SA 5:2.3.2	‘passengers find Saudi Airlines having a bad reputation lately’
3	SA 5:2.3.3	Passengers are now having the power to travel more and experience other airlines.
4	SA 5:2.3.4	If SA does not meet the experiences they had with others customer satisfaction will be affected.
5	SA 5:2.3.5	Pressure on SA because of demanding customer. SA trying to do the best to meet demands with available resources.

Key Theme: Structure and Design Capability		
	Participant	Sub Theme: Unclear position for design in organisational structure
1	SA 1:3.1.1	Product Management is one of the divisions of marketing in Saudia Airlines.
2	SA 1:3.1.2	We bring third party to help in design projects.
3	SA 2:3.1.1	Development of design projects comes through the specialist.
4	SA 4:3.1.1	We are engineering department focus on different design disciplines such as interior design and architecture.
5	SA 4:3.1.2	We look at everything, maintenance, design and cost not only cost of design or cost of construction, even cost of maintenance.
6	SA 4:3.1.3	Every company has abroad of directors and a certain structure.
7	SA 4:3.1.4	We see the project and consider if its worth it or not, how much will it cost airline.
8	SA 4:3.1.5	We have our own CEO. Reports to Senior Management in Saudia Airlines mother company.
9	SA 5:3.1.1	Getting budget approval at Saudia Airlines is a big issue if it is not on an urgent case and not on priority list. That's why we don't see many changes.
10	SA-DC1:3.1.1	Senior management who choose us after the first presentation
11	SA-DC1:3.1.2	Before designing we write a story when it gets approved from senior management, all the design team at CREA transform it into a design project.
12	SA-DC1:3.1.3	Discussion should highlight the facts that design was positioned as part of Marketing team (far away from the top management - no direct access to senior management). The structure was ill-defined - no clear role and responsibility. No design disciplines in house

Key Theme: Structure and Design Capability		
	Participant	Sub Theme: Lack of design and design management capability
1	SA 1:3.2.1	They can do the lounge design concept. Definitely we are depending on third party.
2	SA 1:3.2.2	we have no in-house design team. All external we are depending on third party.
3	SA 1:3.2.3	We have no design in-house and we outsource for customer journey projects
4	SA 1:3.2.4	The ideas and process will take place in the marketing department, yet in many design projects we are depending on third party.
5	SA 2:3.2.2	We outsource for developments of products, which are supported by different department in the organisation.

6	SA 2:3.2.3	We outsource designers.
7	SA 3:3.2.1	We have a consultant that deals with the branding side of the business - and they would then recommend certain colours - a certain colour palette that should be used by the airline in all of its areas.
8	SA 4:3.2.2	We work with marketing department for the development of customer journey.
9	SA 5:3.2.1	Biggest disadvantage would be lack of creative thinking at Saudia Airlines.

		Key Theme: Design Process
	Participant	Sub Theme: Design process
1	SA 1:4.1.1	Once the implementation is done, it is definitely the sales team that looks after the products. The sales team support whatever solutions we design and deploy.
2	SA 1:4.1.2	Our role in this area is to define the services and the requirements that we need. What are the type of seats this area needs, what are other support services that we need in the lounge. Then it goes to our engineering department.
3	SA 1:4.1.3	So through the audits, not only in the lounge, but also on board we have all this team just to check that everything is set up.
4	SA 1:4.1.4	We decide about the product, we implement it and follow up. So after certain months we go back to the office we check the full scenario.
5	SA 1:4.1.5	Design, implementation, audit and follow up, and then we repeat the cycle.
6	SA 1:4.1.6	Audits for other airlines were performed, as well as benchmarking, interviews with the executives in the organization. This eventually led to develop a new product.
7	SA 2:4.1.1	There is no clear process for design
8	SA 2:4.1.2	They start by studying the product before they handle the financing and the budgeting they see the idea is accepted or not and if it is needed.
9	SA 2:4.1.3	I work as Project Manager. We did a design template how to propose the idea and object.
10	SA 2:4.1.4	We are simple. Offering sample service base on that we develop our design projects.
11	SA 2:4.1.5	I think it is very important to have a design process for each product.
12	SA 2:4.1.6	The marketing department in general is in charge of customer journey from the start to the end.
13	SA 3:4.1.1	We do survey on board it is a good opportunity for passengers feedback, but not sure if they are used in the improvements for

		products in customer journey.
14	SA 5:4.1.1	Crea did the booking office all over the world.
15	SA 5:4.1.2	We consider the Middle East an important area. Saudia Airlines brand like Italian and they like our way of story telling and unique methods.
16	SA 5:4.1.3	Lack of proper research and expertise had led to a waste of resources in the process.
17	SA 6:4.1.1	The key matter is to insure that the customer satisfaction is fulfilled and based on the feedback of the customers, we always go back in the process that we deliver and enhance the service to meet their expectation. So, mainly the design phase is a key milestone in the overall process to insure the requirements and expectations of our customers.

		Key Theme: Design Research Capability
	Participant	Sub Theme: Customer Research
1	ISA 1:5.1.1	We do sometimes survey and we do interact sometimes with the customer to get their feedback
2	SA 1:5.1.2	We called in our loyal customers, frequent flyer customers to take their feedback on certain issues, on the meals we will be serving and the new menu.
3	SA 1:5.1.3	We have a quality assurance department, frequent visits and continuance visits to station, and they travel from one destination to other and provide reports about their opinion based on certain criteria.
4	SA 1:5.1.4	This is one area that we are depending on which is the feedback from quality insurance department, surveys, customer relations department feedback the other area....
5	SA 1:5.1.5	Once we did the customer research...we valued customer feedback because they will use the service when they travel
6	SA 1:5.1.6	We have as customer relation department.
7	SA 3:5.1.1	Dealing with customers and their problems.
8	SA 4:5.1.1	We do at the beginning of project do a survey for customers.
9	SA 4:5.1.2	We don't have a direct connection with the passengers. This is a problem.
10	SA 4:5.1.3	In the past the queue for check-in counters were so long. The current new image is based on long studies and analysis.
11	SA 5:5.1.1	Internal survey department for customer service but are slow to adjust to meeting customer requirements.

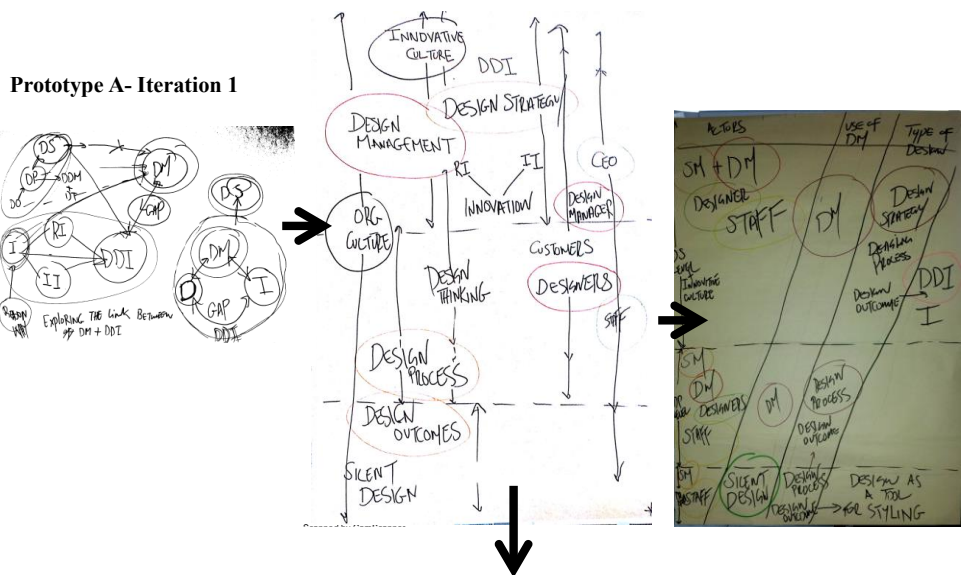
12	SA 5:5.1.2	Lack of proper research and expertise had led to waste of resources.
13	SA 5:5.1.3	Saudia Airlines studies confirmed that it is very important to increase level of satisfaction in customer journey.
14	SA 5:5.1.4	lack of proper research and expertise had led to waste of resources.
15	SA 5:5.1.5	Most of new design is not based on proper research on the requirements of the market .This was clear on many design project specially on one of the latest seat design, which caused many back problems to travellers.
16	SA-DC2:5.1.1	I don't think there is a great deal of customer research.

		Key Theme: Communication
	Participant	Sub Theme: Cross-departmental collaboration
1	SA 1:6.1.1	For the lounge we only do the design...we finalize the layout and design concept with the engineering department based on the requirements that we placed initially. At a certain point of time, the engineering department will look for a construction company to implement the project.
2	SA 1:6.1.2	Then it will be handed to the contractors to implement it...we are looking after them we are putting the procedures and the guidelines for our contractors to manage
	SA 2:6.1.1	Our role for example the lounge, we select what type of seats this area needs and services that we need in the lounge. Then it goes to our engineering department, who implement the design based on our requirements
3	SA 4:6.1.1	As SA real estate company we do get involved with the development of the lounge, but we are a separate company from SA mother company. So we work together with the marketing department that is fully incharge
4	SA 4:6.1.2	We met once but still we didn't get authorization as a engineering party.'
5	SA 4:6.1.3	Teamwork is formed composed of project management and 3 or 4 engineers. Then the project includes other specialist.
6	SA 4:6.1.4	We deal with the marketing department as our users, we try to meet their requirements. This is regarding cooperation.
7	SA 4:6.1.5	We are working on their projects as requested and how they designed it. That is the kind of cooperation.

Key Theme: Customer Experience		
	Participant	Sub Theme: Undifferentiated and off-the shelf products
1	SA 1:7.1.1	Advanced entertainment in flight.
2	SA 3:7.1.1	We try to provide comfortable.
3	SA 3:7.1.2	On-demand entertainment system and mobile phone.
4	SA 3:7.1.3	Internet access on board.
5	SA 3:7.1.4	Developed a ticket office for passenger to use time effectively.
6	SA 3:7.1.5	Customers know SA from their colour scheme.
7	SA 3:7.1.6	There are requirements for seats, there's safety considerations and design strength consideration and so on - there are limited number of seat suppliers in the market.
8	SA 3:7.1.7	I would say customers are intertwined by design and colour because when you look at ads and advertisement or offices, I think it has an impression on the company.
9	SA 3:7.1.8	We provide comfort for our customers to feel they had a good service and would like to travel again.
10	SA 4:7.1.1	Suppliers provide us with cabin seats. Limited suppliers in the market. We only choose the basic design feature like colour and materials.
11	SA 5:7.1.1	New projects are left to the suppliers to provide Saudia Airlines with different designs for Senior Management to select.
12	SA 5:7.1.2	Design is left to supplier to provide Saudia Airlines with different design options for Senior Management to select from.

Appendix E – Iterative prototype development process

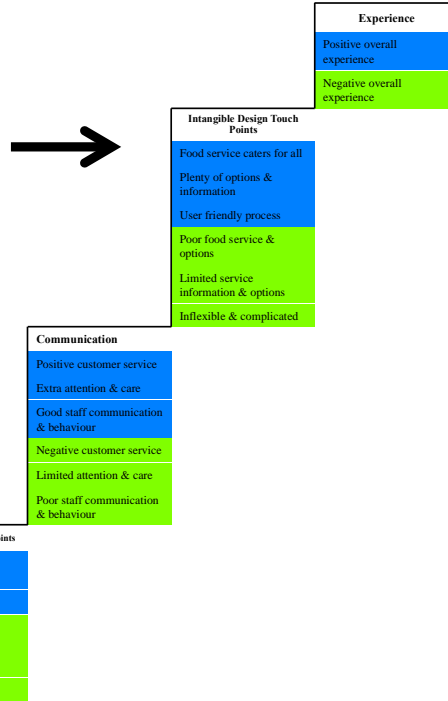
Appendix E1 Iterative prototype development process for all the prototypes.



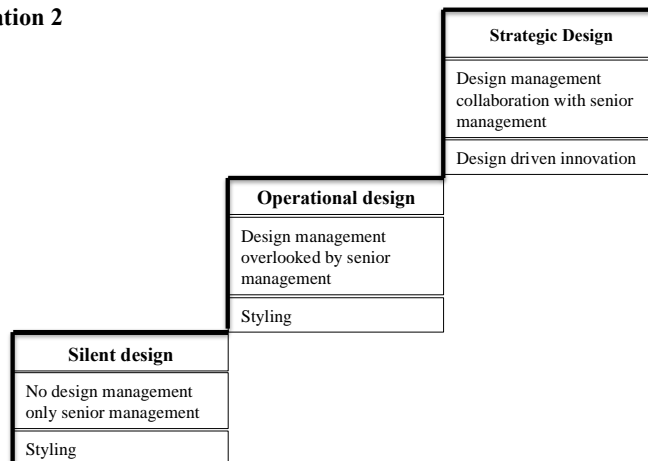
Actors	Use of Design management	Type of design
Innovative Culture		
Senior Management Design Manager Designer Staff	Design Management	Design Strategy Design Process Design Outcome Design Driven Innovation
Organisational Culture		
Senior Management Staff Design Manager Designer	Design Management	Styling
Design as a strategic level		
Senior Management Staff	Silent Design	Styling
Design as an operational level		

Prototype B- Iteration 1

Key Themes and Sub-Themes of the Other Airlines and Saudia Airlines	
Other Airlines	Saudia Airlines
Experience	
Positive overall experience	Negative overall experience
Fail to meet expectation	Fail to meet expectation
Intangible design touch points	
Food service caters for all	Poor food service and options
Facilities entertain all customers	Poor facilities
User friendly process	Poor service process
Plenty of options and information	Limited service information and options
Additional service	Additional service
Inflexible and complicated	Inflexible and complicated
	Starting to improve
	Technical Errors
	Poor maintenance
	lost items
Communication	
Positive customer service	Negative customer service
Extra attention and care	Limited attention and care
Good staff communication and behaviour	Poor staff communication and behaviour
	Lack of brand communication
Tangible design touch points	
Well designed seats	Poor seat design
Good aesthetics design	Poor aesthetics design
Provide comfort and privacy	Limited Space
	lack of comfort and privacy

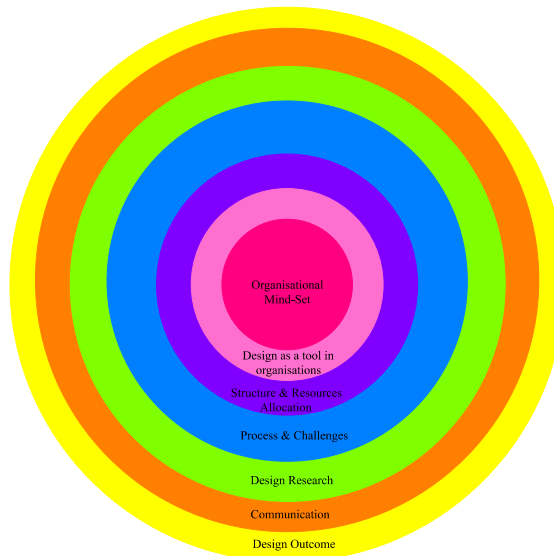
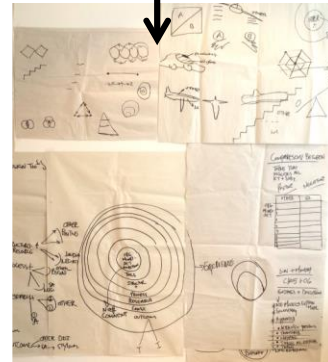
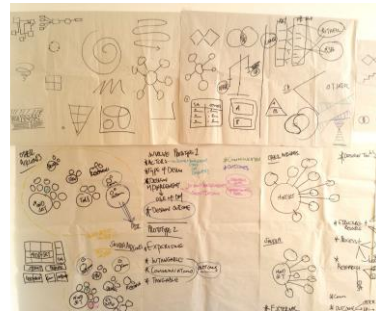


Prototype A- Iteration 2



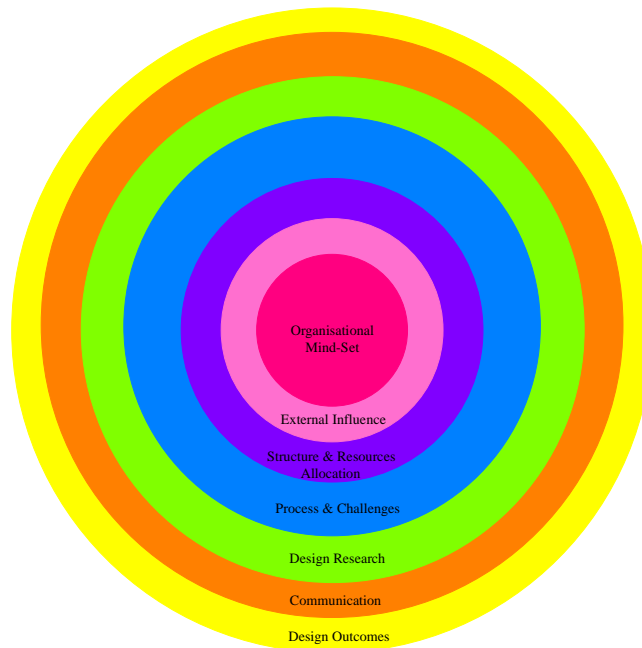
Prototype C- Iteration 1

Summary of the key themes and sub-themes			
	Key themes	Sub-themes	
1	Organisational mind-set	1	Appreciation of both strategic and operational contribution of design.
		2	Support and investment for overall design agenda from senior management
		3	Strong ambition for Design
		4	Positive attitude toward change
		5	Importance of innovation in airlines
		6	Respect for Design
		7	Monitor competitors
		8	Importance of customer experience and of designing it
		9	Design as an essential part of business
2	Design as a tool in organisations	1	Design as a tool to deliver products and services
		2	Design as a tool for problem-solving
		3	Design as a tool for improving business performance
3	Structure and Resource Allocation	1	High priority for design and a systematic structure
		2	Holistic view for resource allocation for design
4	Process and Challenges	1	Facing design and innovation challenges
		2	Systematic design process
5	Design research	1	Competitor market research
		2	Customer research
6	Communication	1	Cross-departmental collaboration
7	Design Outcome	1	Results after undertaking design

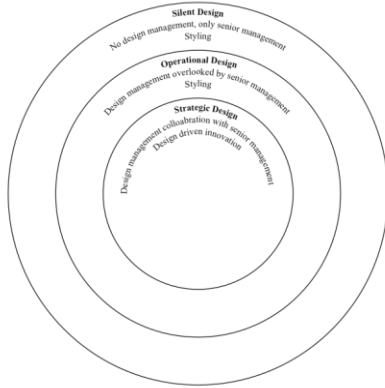


Prototype D- Iteration 1

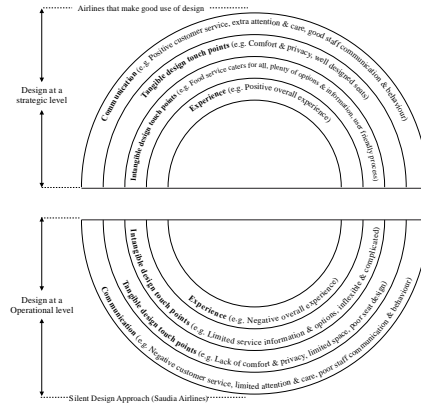
Summary of the key themes and sub-themes		
	Key themes	Sub-themes
1	Organisational mind-set	1 Appreciate operational contributions of design
		2 Support and investments for design projects from senior management.
		3 Recognise the need for design at a strategic level
		4 Moderate ambition for design
		5 Design as a tool for improving business performance
		6 Silent design
		7 Importance of customer experience and of designing it
2	External Influence	1 Need to keep up with competitors
		2 Influence of culture
		3 Influence of passengers
		4 Influence of trade bodies
2	Structure and Resource Allocation	1 Low priority shown towards design and poor structure.
		2 Narrow view for resource allocation for design
3	Process and Challenges	1 Challenges of practising design
		2 Systematic design process
4	Design research	1 Customer research
5	Communication	1 Cross-departmental collaboration
6	Design Outcome	1 Results after undertaking design



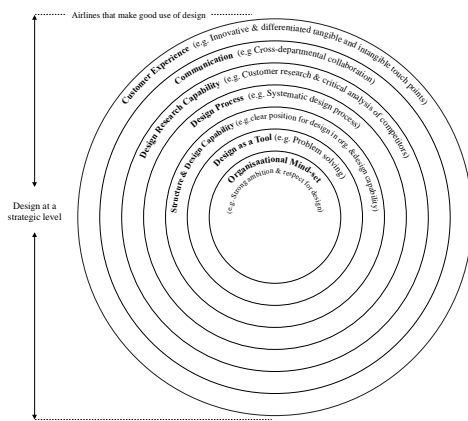
Prototype A-Iteration 3



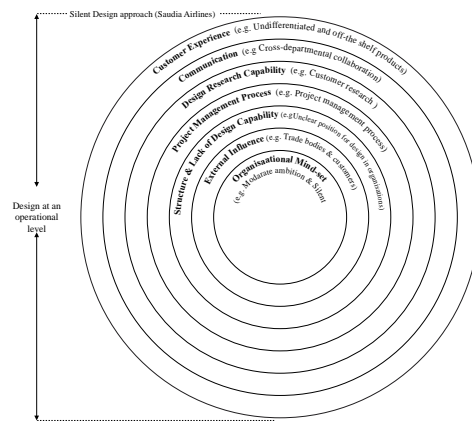
Prototype B- Iteration 2



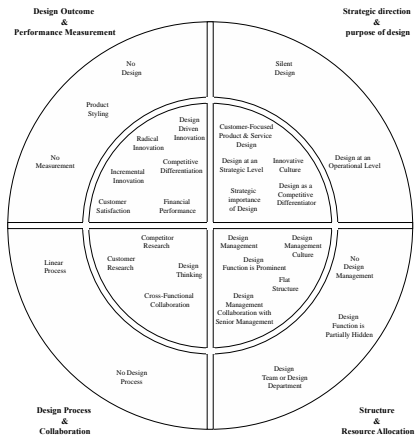
Prototype C- Iteration 2



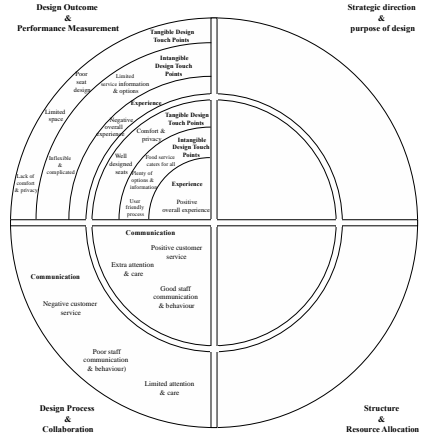
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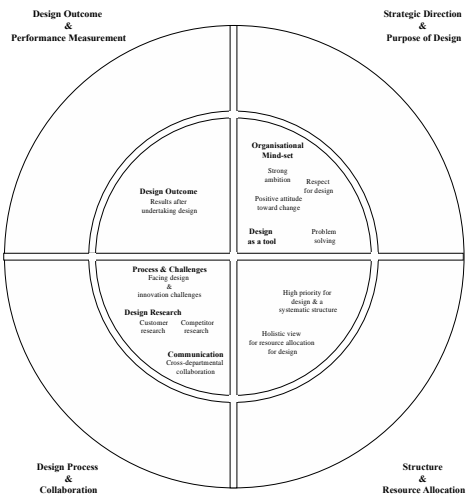
Prototype A-Iteration 4



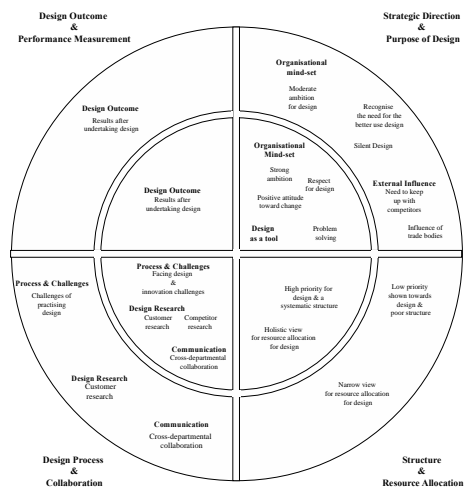
Prototype B- Iteration 3



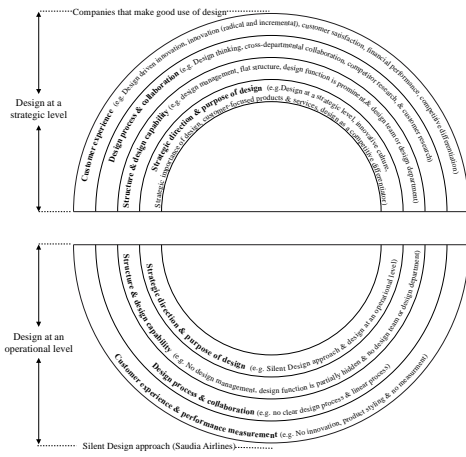
Prototype C- Iteration 3



Prototype D- Iteration 3



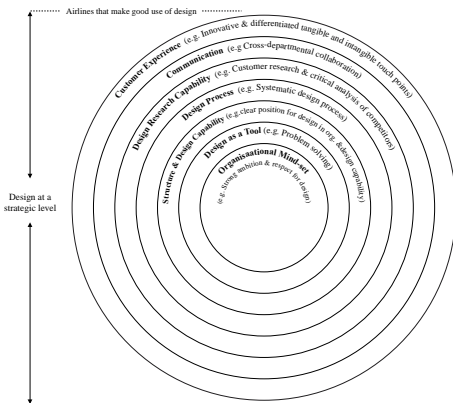
Prototype A- Iteration 5



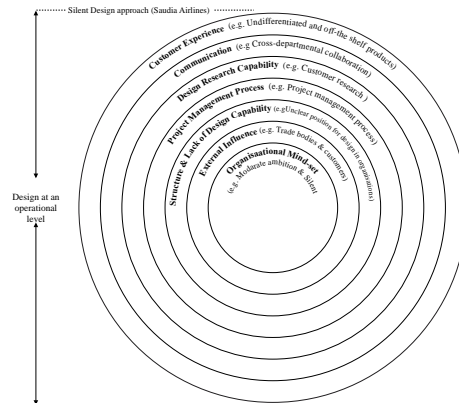
Prototype B- Iteration 4



Prototype C- Iteration 4



Prototype D- Iteration 4



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