ASHESI UNIVERSITY

RESTRUCTURED PROCESS MAP FOR SOLVING BROADBAND AND MOBILE DATA COMPLAINTS AT VODAFONE GHANA

Undergraduate Applied Project Submitted to The Department of Business Administration, Ashesi University College in Partial Fulfilment of the Requirement for the Award of Bachelor of Science Degree in Business Administration

B.Sc. Business Administration

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DECLARATION

I hereby declare that this dissertation is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

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I hereby declare that the preparation and presentation of the Applied Project were supervised in accordance with the guidelines on supervision of Applied Project laid down by Ashesi University College.

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Supervisor's Name: Mrs Emefa Dako

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EXECUTIVE SUMMARY

Vodafone Ghana previously, Ghana Telecom is a company in the telecommunications industry in Ghana that delivers a widespread of services including voice, messaging, data and fixed communications. In increasing Vodafone's market share and maintaining Vodafone's relevance in the market, a needs assessment was conducted to identify the gaps in their services and later a proposed solution was provided.

From the needs assessment, the gap identified was the differences in the time the company uses to solve a broadband or mobile data complaint and the time the customers expect their complaints to get solved. It was concluded that Vodafone had and issue concerning service quality and needed a system that will ensure efficiency and increase customer satisfaction.

Reviewed literature revealed that Vodafone had a problem with the responsive aspect of their services. In relation to this problem identified, reviewed articles continued to highlight on the importance of service quality and how it is important in increasing both customer satisfaction and customer loyalty. In addition, the study provided ways in which service providers in the telecommunication industry could enhance their services which informed the proposed solution which was a service blueprint in association with the value stream mapping tool. The proposed solution suggested that Vodafone had to look at their value stream, to take out non value added processes that reduce the responsive aspect of their service quality. The removal of non-value added processes will not only ensure that Vodafone's services are efficient but will ensure that the preferences of customers are catered for.

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CHAPTER 1: INTRODUCTION

1.1 Chapter overview

This chapter provides an overview of the firm, the justification for choosing the company, external and macroeconomic industry analysis. The porters' five forces were used for the external industry analysis, and the PEST analysis was used to assess the macroeconomic factors that affect the company.

1.2 Company profile

Vodafone Ghana previously, Ghana Telecom is a company in the telecommunications industry in Ghana that delivers a widespread of services including voice, messaging, data and fixed communications. Vodafone Ghana functions under Vodafone Group Plc., which is the world's prominent mobile telecommunications company, with an extensive existence in Europe, the Middle East, Africa, Asia Pacific and the United States (Vodafone, 2018).

The vision of this company is to provide connectivity and state-of-the-art services to advance people's livelihoods and quality of life. In accomplishing their vision, they would dwell on managing their operations in a responsible and ethical way (Vodafone, 2018).

Vodafone has about forty-three branches and retail shops, employing about four thousand people across the sixteen regions of Ghana. As of July 2018, the total number of both voice and data subscriptions was 9,534,186 and 4,041,889 which represented 23.78% and 18.43% of the market share respectively (National Communications Authority, 2018). This sets them at the third position, behind the

first and second market leaders MTN and AirtelTigo, in the telecommunications industry in Ghana.

1.2.1 Vodafone's key stakeholders

- End users, conisisting of individuals and businesses.
- Resellers and Distributors.
- The customer service interfacing personnel.
- Technical support for resolving customer issues at Vodafone.
- The telecommunication industry regulator – National Communications Authority.

1.3 Rationale for study

1.3.1 Reason for selecting the telecommunication industry

The telecommunications industry provides services that are customer-centric thereby highlighting the importance of customer service in the industry. Telecom companies struggle to support their customers and their present services as multifaceted new offerings continue to increase. These result in customers analysing service quality which is associated with their complaints.

Customers of the telecommunication companies (MTN, Vodafone, Glo, and AirtelTigo) in Ghana are dissatisfied with the poor services being offered to them. These poor services include; the time it takes to get feedback after complaints have been made, network cramming, call drops, call breaks, declining data, Internet intermissions which have forced some users to subscribe to two or more service providers (Bokpe, 2017).

The delivery of these poor services has also forced the National Communications Authority to fine operators more than two million Ghana Cedis for the numerous faults that affect service quality also, the National Communications Authority (2013) banned service providers from selling new sim cards because of persisting call drops and declining services (Bokpe, 2017).

Though service providers argue that problems threatening the telecom industry, include; "the breaking of cables by contractors, stealing of cables, frequent power outages and high fees charged by landowners", it does not seem to be accepted by mobile phone users because in the year 2013, they requested that the National Communications Authority offer stiffer penalties to service providers who disobey the code of practice (Bokpe, 2017). Similarly, in the year 2010, the complaints made by the customers on the service providers pushed the Consumer Protection Agency (CPA) to help protest against "defective services" provided by the service providers by demanding all network customers to put off their phones for six hours.

1.3.2 Reason for selecting Vodafone

Currently, the dynamics of the telecommunication industry has been changing (MTN introducing 4G and the AirtelTigo Merger) therefore putting pressure on Vodafone to build up strategies to grow their market share. Though it is important for them to establish strategies to grow their market base, it is also important for them to solve problems that currently exist in their operations in order to hold onto the customers they reach.

Furthermore, from the year 2012 to 2015, Vodafone has been fined at a summed amount of GHS 9,140,000 for nonfulfillment of different service quality

requirements. These fines could have been prevented if Vodafone paid more attention to improving the negative aspects of their service quality.

Based on my prior knowledge from Operations management, Vodafone was selected to propose a more efficient way of solving customer complaint. This is because, due to the fierce competition, it is important that Vodafone solves customer complaints within the shortest possible time to prevent their customers from adopting services from their rivals.

1.4 External industry analysis

1.4.1 Telecommunication industry in Ghana

The telecommunication industry in Ghana has various segments which include; the mobile voice market, the fixed telephony market and the mobile data market (including broadband data).

The mobile voice market consists of four key players namely; MTN, AirtelTigo, Vodafone and Glo. The total number of mobile voice subscriptions as at 2018 was 40,934,875 (National Communications Authority, 2018) with MTN being the first market leader, AirtelTigo being the second market leader, Vodafone taking the third position whiles Glo takes the last position on the market as seen in the figure below.

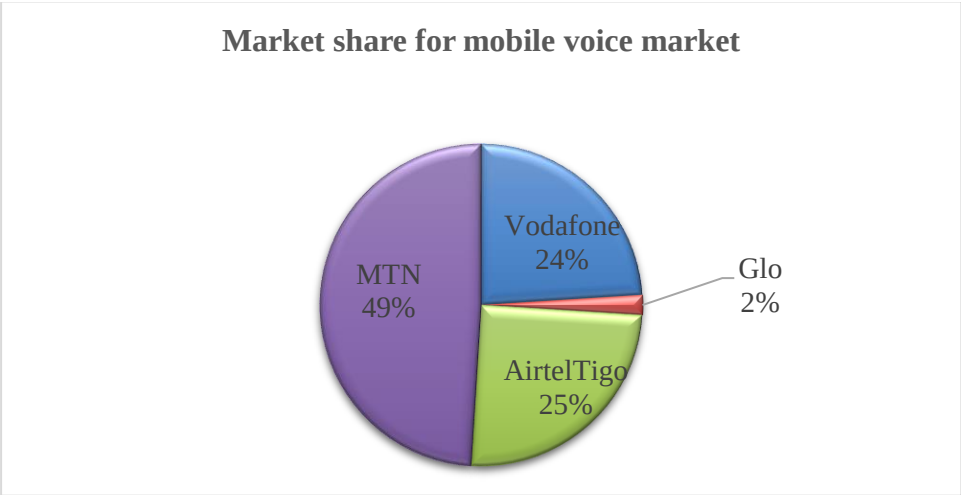

Figure 1 Market share for mobile voice market

Source: National Communications Authority (2018), Industry data

Similarly, the positions of the market leaders hold in the mobile data market with 26,184,235 subscribers (National Communications Authority, 2018) is as seen in the figure below.

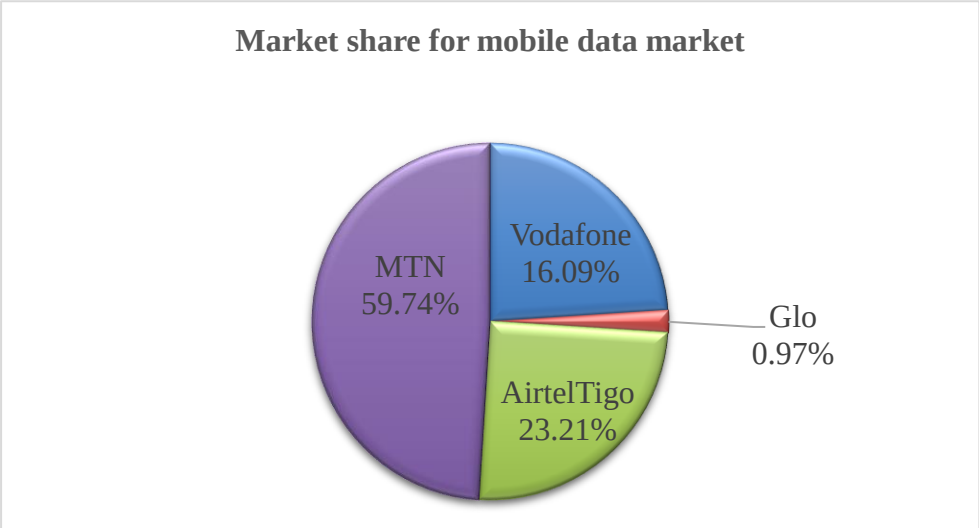

Figure 2 Market share for mobile data market

Source: National Communications Authority (2018), Industry data

In the fixed telephony segment, there are two main players namely; Vodafone and AirtelTigo. The total number of subscriptions for fixed line services as at 2018 was 278,379 (National Communications Authority, 2018) with Vodafone taking 98% of the market share whiles AirtelTigo takes up the remaining 2%. This project focuses on the mobile voice and mobile data market.

1.4.2 Porters' five forces

The telecommunications industry in Ghana was analysed with respect to Vodafone, using the porters' five forces. The porters' five forces is a tool used to assess the intensity of competition in a specific industry. Also the tool assesses the attractiveness of the industry in terms of its current profitability rates (Martin, 2018). As compared to the other tools used for external industry analysis, the porters' five forces help businesses to define their key concerns also helps businesses to control their strengths and develop their weaknesses.

Rivalry amongst existing firms

Vodafone deals with fierce rivalry from its competitors (AirtelTigo, MTN, and Glo) because they continuously offer advanced products and services to their clients, influencing Vodafone to offer the same products and services. For example, when MTN introduced the concept of "mobile money" their customers increased by a total of 484,000 people, increasing their total subscribers to 16.2 million customers (Myjoyonline, 2018). This gave Vodafone the idea to introduce a similar concept "Vodafone Cash", to keep their market share and to prevent customers from moving to other network providers because of the new products they offered.

Threat of new entry

The barriers in this industry are high because of the high costs of subscription to new technology required to attract market share in the industry as well as the wide range of regulatory concerns in the industry. With regards to the high costs of subscription to new technology, both Vodafone and MTN for example, had to acquire 30,000,000 dollars to get a 4G license in Ghana. It will be quite difficult for a new

entrant to acquire 30,000,000 dollars as they are starting up and therefore become a barrier for them to enter.

The regulatory framework for the telecommunication industry includes; several regulations, legislations, guidelines and codes that must be adhered to. The subscriber identity module registration regulations, mobile number portability regulations, special numbering resources guidelines and the mast and towers guidelines are a few of the many regulatory concerns in the industry (National Communications Authority, 2016).

Bargaining power of suppliers

Vodafone's suppliers provide network equipment, towers and sometimes handsets. Due to the high intensity of competition, the bargaining power of suppliers is high because they can negotiate with Vodafone without difficulty because they can change to any of Vodafone's opponents since there are a lot of alternatives existing in the industry.

Bargaining power of buyers

The bargaining power of buyers in the telecommunications industry is high owing to the fierce competition and absence of differentiated products. For example, voice, messaging, data and fixed communication services are not only offered by Vodafone but by MTN and the other network providers. This gives the buyers the power to influence a company’s profitability because the companies tend to look at other factors that could make their undifferentiated products attractive and unique to the customers. Vodafone has therefore invested a lot in establishing innovative strategies around stakeholder management and their design of the customer service

process which involves the process of improving their service quality (Myjoyonline, 2017).

Threat of substitutes

There are many options that may be used in place of the mobile phone, because of the rapid development of new technology in Ghana. Video conference has become a prevalent service that many depend on. In addition, VOIP services like; Skype, Yahoo and Messenger, are now popular because of its low costs of communication (Tsai, Lo and Chou, 2009). This results in the threat of substitutes being high.

1.4.3 Porters' five forces summary

The table below provides a summary of the fives forces where a "high" level of intensity signifies that the force has a significant effect on the decisions Vodafone takes as well as their profitability levels (cost and revenue). A "low" level of intensity signifies that the force has a minimal or insignificant effect on the decisions Vodafone takes as well as their profitability levels (cost and revenue).

Table 1

Porters' five forces summary

Type of force	**Level of intensity**	**Causes**	**Effect on Vodafone's profitability**
Bargaining power of buyers	High	• Undifferentiated products	When there are undifferentiated products in the industry, service providers are forced to reduce their prices to attract a larger market share and this decreases their profitability

			because revenue reduces as cost remains constant.
Rivalry amongst existing firms	High	• Innovation	For service providers to cope and keep up with constant innovation, they have to make sure they spend funds to be kept abreast with new technologies and the likes. This decreases their profitability because cost increases as revenue remains constant.
Threat of substitutes	High	• Low switching cost	To prevent customers from switching to substitute products, prices need to decrease to prevent the customers from adopting services from other service providers. This decreases their profitability because revenue decreases as cost remains constant.
Threat of new entrants	Low	• Government policy • High cost of subscription to new technology	For service providers already existing in the industry, their profitability remains unchanged due to cost and price relatively remaining the same. Profitability

			switches on if changed policies have a direct effect on either their cost or revenue.
Bargaining power of suppliers	High	• Low concentration	For service providers to keep their main suppliers, they need to offer them attractive payment plans as compared to their opponents. This decreases their profitability because as the cost of paying suppliers increases, revenue remains relatively the same.

1.5 Macroeconomic analysis

This section focuses on larger aggregates of factors in the country and its effects on Vodafone, using the PEST analysis. The PEST analysis is a tool used to assess the political, economic, social and technological factors that affect and cause changes in Vodafone's business setting. As compared to the other macroeconomic analysis tools, the PEST analysis helps one to understand the business on a deeper level, makes one highly attentive to threats and offers methods to exploit opportunities (Frue, 2016).

Economic factor

According to the Africa Centre for Energy policy (2017), Ghana's energy cost is the highest in West Africa which causes a significant threat to the telecommunications industries since most of their operations depend on energy. Mr Kwaku Sakyi-Addo,

the Chief Executive Officer (CEO) of the Ghana Chamber of Telecommunication highlighted on the fact that the high energy tariffs contributed to about 60% of the industry's operation cost.

Ghana's cedi has been depreciating; with its greatest of GHS 4.95 to a dollar in the year 2018 which greatly links to the inflation rate increasing to a rate of 9.9% (TradingEconomics, 2018). This poses a threat on the telecommunications industry because the investments of the telecommunication industry in Ghana include foreign exchange.

In the month of July 2018, Gabby Asare Otchere-Darko special personal assistant to President Akuffo Addo and primary member of NPP (New Patriotic Party) indicated that there will be an increase in communications service tax from 6% to 12%. This increase in tax will increase the expenses of the telecommunications industry.

Social factor

According to the World Bank, the rural population of Ghana stands at a rate of 44.593% as at 2017. This shows the market share the telecommunication industry is losing considering the difficulty they have in expanding their services to the rural areas. This difficulty in expanding their services has affected the quality of health care in some regions like the upper east region. This is caused by the poor network connections when searching for an ambulance or when trying to issue a patient transfer. Taking these issues into consideration, the National Communication authority of Ghana asked Mobile network operators with prevailing 2G authorisations to set out Universal Mobile Telecommunication Systems for the job. This is aimed at increasing data or internet accessibility to the underserved communities across Ghana (National Communications Authority, 2018).

In addition, the population of Ghana keeps increasing with its greatest at 29,165,070 in the year 2018 (United Nations Department of Economic and Social Affairs; Population Division, 2018) thus proposing the need for more people to communicate thereby causing an increase in requests for more services from the telecommunication industry.

Technological factor

In Ghana, there has been a lot of changing dynamics with regards to technology in the telecommunications industry. In the year 2016, MTN introduced the 4G internet service across the then ten regions in Ghana (Myjoyonline, 2016). This enabled MTN to obtain the largest market share, at a month over month growth rate ranging from 2-7% (National Communication Authority, 2016). The introduction of the 4G service led to an increase in MTN's revenue by 23.3%, as at 2017 whereas Vodafone's month over month growth rate stayed within a negative range because they were stuck on the older technology (3G), which provided slower internet connectivity as compared to the 4G network.

Political factor

Though Ghana is a peaceful and democratic country, there is a lack of continuity in policy implementation when there is a change in government. This has led to fluctuating tariff charges on the telecommunication industry. In the year 2014 when John Mahama was president, it was announced by the Head of Licensing and Regulatory Administration at the National Communications Authority, Mr Kwame Baah-Acheamfuor, that tariffs on the telecommunication industry were to go up by 50%. This "50%" policy by John Mahama was modified in the year 2018, when Nana Akuffo Addo was made president of Ghana. This was because when Nana Akuffo

Addo came into power, he created new tax laws which had a trickle-down effect on the telecommunication industry. This led to an increase in charges from GHS 4 pesewas per minute to GHS 60 pesewas per minute (NCA, 2018), which led to a huge protest by the customers against the new tax laws.

1.6 Conclusion

After identifying the problem of service quality generally in telecommunication industry which includes the service provider Vodafone, it is therefore pressing to identify the gaps that cause the nonfulfillment of the different service quality requirements. The identification of these gaps would be done in the next chapter, which will later influence the formation of a viable solution for the company.

CHAPTER 2: NEEDS ASSESSMENT

2.1 Chapter overview

This chapter focuses on the various methods used in collecting data for the identification of gaps in the quality of services provided by Vodafone. This will be done by comparing the disparity of responses from both the customers and operations manager of Vodafone Ghana. After the data is collected, insights will be further analysed and explained in this chapter.

2.2 Needs assessment

Needs assessment is a planning tool or process used to study and define gaps between actual results and anticipated results. After these gaps are identified, they are prioritised in order of importance (Kaufman, 1998). In the process of the needs assessment, a subject is focused on which in this project is, Vodafone Ghana.

The purpose of the needs assessment was to evaluate the process map of solving broadband and data complaints by engaging all the significant stakeholders which include; Vodafone Ghana and the customers of Vodafone. In the evaluation of the process map of solving broadband and data complaints at Vodafone Ghana, concerns and data sources were considered and identified, target groups were determined in order to acquire adequate information, data was gathered and analysed, needs were prioritized which later informed the solution.

2.3 Research design

With the aim of getting detailed information and validating research on the complaints made by customers of Vodafone Ghana, the mixed research technique was employed. The mixed research method includes both the quantitative and qualitative research techniques. Data analytics of the questionnaires gathered from the customers of Vodafone Ghana, formed the quantitative aspect of the mixed research technique whiles the in depth interviews conducted with the operations and risk manager of Vodafone Ghana formed the qualitative aspect of the mixed research technique.

This research technique was employed to get a deeper understanding of the research problem as compared to the qualitative or quantitative technique being employed independently.

2.4 Research population and sampling technique

The customers, operations and risk department of Vodafone Ghana were the target groups for this study. The customers focused on were the broadband and the mobile data customers. In getting information from the mobile data customers and the broadband customers, the convenience sampling technique was employed. The convenience sampling was employed because the responses of the customers were derived based on their availability to fill the questionnaires. The sampling technique ensured that the responses received were unbiased because there was clearly no identified criterion for the selection of the participants. The convenience sampling technique was employed over other sampling techniques because it was cheaper to implement and the assembling of information can be facilitated within a short period of time.

On the other hand, information from the operations and risk manager was derived using the purposive sampling technique. The purposive sampling technique was employed because based on judgment; both operations and the risk department will have information on the problems persisting in Vodafone Ghana and the innovation around various ideas to curb those problems. The purposive sampling technique was employed over other sampling techniques because it focuses more on certain features of a population that are of importance, which will best enable the questions of this study to be answered.

2.5 Data collection

For this study, in depth interviews and questionnaires were employed to gather information. The in-depth interviews were conducted using a semi structured system, with the aid of a voice recorder. The semi structured method was employed for the in-depth interview to make room for follow up questions, depending on the answers provided by both the operations and risk managers of Vodafone on previous questions. The purpose of the follow up questions is to gain more insights on aspects of the project that were not explicitly stated or noted down. Likewise, the purpose of the in-depth interview was to gain insights and understanding on the complaints made by the customers of Vodafone.

Questionnaires were also administered to the customers of Vodafone to get their perspective on their satisfaction level and the problems they had with the services provided by Vodafone. The questionnaire included a project brief, multiple choice questions, open ended and close ended questions. These types of questions

were asked because they were easy to analyse and most importantly, it captured the "true" feelings of the respondents.

2.6 Data analysis methods

The quantitative aspect of the information gathered will be analysed using pie charts. The pie charts will visualize the analytics of data gathered from surveys of the Vodafone customers. On the other hand, the qualitative aspect of the information gathered will be analysed by interpreting and explaining the data received from both the operations and risk manager of Vodafone using tables.

The gap analysis was later adopted to evaluate the variances in Vodafone's operations and the requirements of the customers of Vodafone and if it was met successfully.

2.7 Key findings

2.7.1 Questionnaires

Demographics

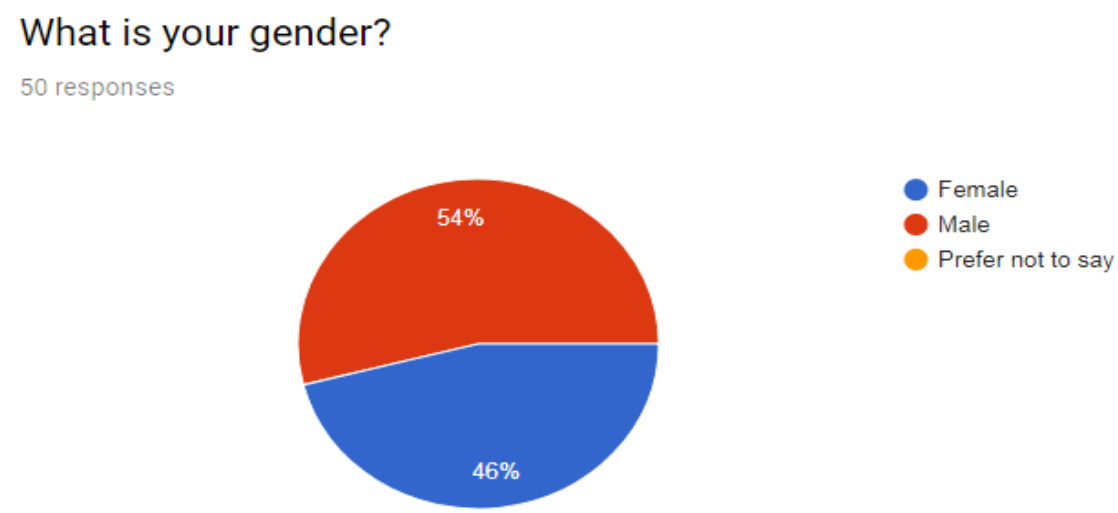

Figure 3 Gender of questionnaire respondents

Table 2

Summary of responses on gender

Male	46%
Female	54%

There were 50 respondents of the survey of which 46% of them were males with the remaining 54% of the respondents were females.

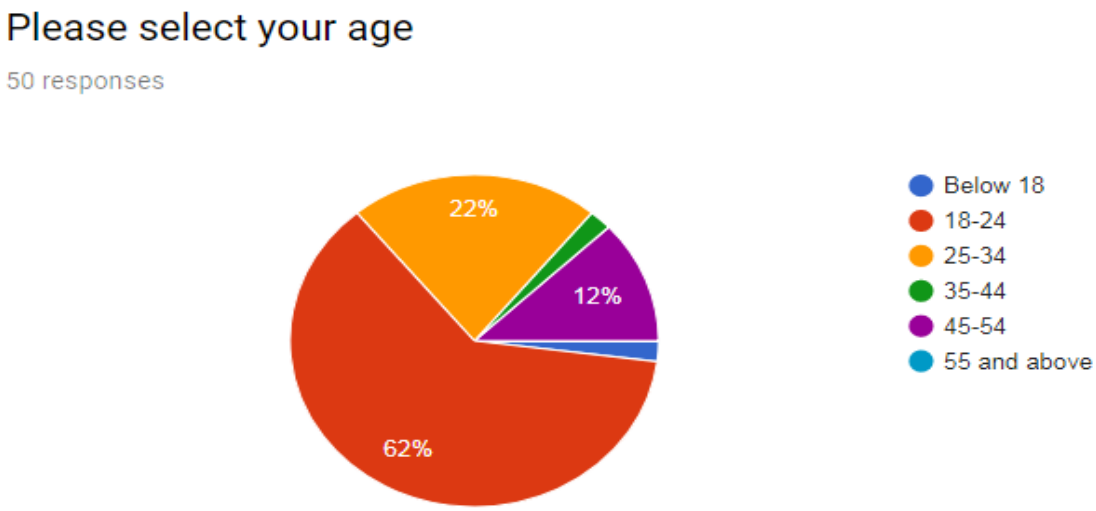

Figure 4 Age of questionnaire respondents

Table 3

Summary of responses on age

Below 18	2%
18-24	62%
25-34	22%
35-44	2%
45-54	12%

55 and above	-

Out of the 50 respondents, 2% of them were below 18, whiles 92% of the respondents were between the ages of 18 to 54. There were no responses from customers of Vodafone within the age of 55 and above.

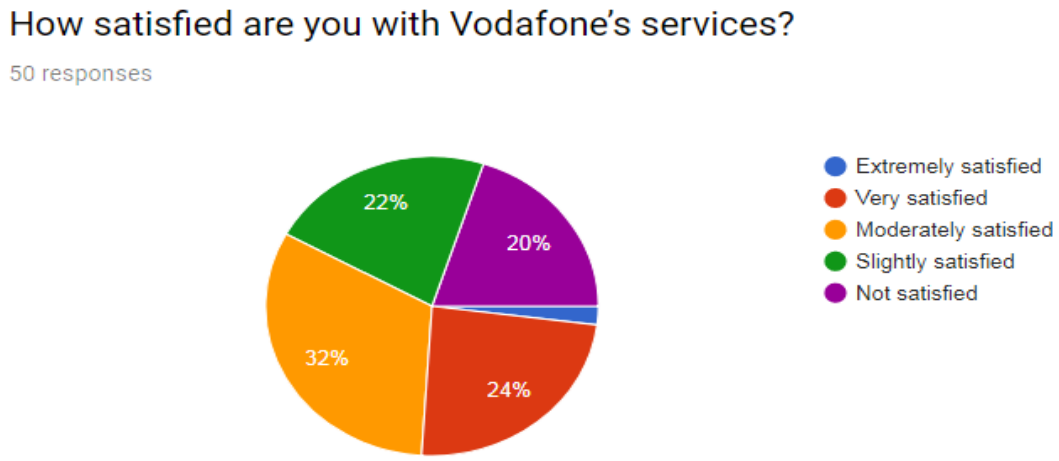

Figure 5 Age of questionnaire respondents

Table 4

Summary of responses on satisfaction level

Extremely satisfied	2%
Very satisfied	24%
Moderately satisfied	32%
Slightly satisfied	22%
Not satisfied	20%

From the 50 respondents, about 74% of the respondents were somewhat dissatisfied with the services Vodafone provided

Most frequent complaints

Table 5

Summary of responses on most frequent complaints

Call drops	Technical
Short lifespan of bundles	Technical
Network coverage	Technical
Long time frame of Vodafone's complaint resolution process	Possible to work on

The respondents were later asked about the services they were dissatisfied with which included; call drops, short lifespan of bundles, network coverage and long time frame of Vodafone's resolution process. The problems of the call drops, short lifespan of bundles and network coverage are technical issues that Vodafone needs to solve, which is beyond what this project can solve. On the other hand, the long time frame of Vodafone's complaint resolution process could be easily focused on and solved. This project was then focused on the long time frame of Vodafone's complaint resolution process.

The 50 respondents were further asked whether or not they had either walked into a Vodafone office or called the customer service line to make a complaint about the services they were dissatisfied about. 17.4% of the respondents neither used the Vodafone office nor the customer service line to make a complaint whiles the

remaining 82.6% of the respondents had employed one or both of the means of getting their complaints heard and solved.

In order to understand the gap between the time customers expect to get their complaints solved by Vodafone and the actual time Vodafone takes to get a complaint solved, the customers were questioned on their preference of time to get their complaints solved whiles Vodafone was asked about the time they take to get a complaint solved. On the average, customers of Vodafone are kept on hold on the customer service line for about 10 minutes before their complaints were heard, per the responses of the survey. In addition, customers were kept waiting for about 15 minutes, when they walk into a Vodafone office to get their complaints heard by a customer service personnel. From the survey, 86.9% of the respondents expected their complaints to get solved as soon as it was made whiles the remaining 13.1% expected their complaints to get solved within a day.

2.7.2 Interviews

Most frequent complaints

To verify the information gathered from the customers of Vodafone, Vodafone was questioned on their most frequent complaints from their customer. Vodafone similarly stated the complaints that were outlined form the surveys that were gathered. The most frequent complaints included; network cramming, call drops, call breaks, declining data and Internet intermissions, courtesy of staff and unreliable resolution processes.

In understanding the customer mobile data and broadband complaint resolution process, Vodafone Ghana provided a documented detailed process map to clearly outline the process. The fully outlined process map can be found in appendix 4 below.

Vodafone was later asked the time it takes to get both a mobile data and broadband complaint solved in order to detect if there was a gap in the responses from both the customers of Vodafone and Vodafone Ghana itself. On the average, Vodafone takes 24 hours to solve mobile data complaints whiles they take 120 hours to solve a broadband complaint.

The gap was then identified from the responses from both perspectives which were the differences in the time the company uses to solve a broadband or mobile data complaint and the time the customers expect their complaints to get solved.

Identified Gap= Vodafone Hours for Complaint Resolution – Customer Expected Hours for Complaint Resolution.

2.8 Conclusion

This chapter provided insights from research conducted and identified a gap in Vodafone's services. The next chapter focuses on the review of existing literature on the gap identified and ways to close the gap.

CHAPTER 3: LITERATURE REVIEW

3.1 Chapter overview

This chapter reviews literature concerning the topic, service quality. The review provides basic understanding of the elements of the service quality model broadly and specifically, that of the telecommunication industry. The literature also focuses on ways to improve service quality in the telecommunication industry.

3.2 The SERVQUAL model

According to Parasuraman et al. (1985), service quality deals with the inconsistencies pertaining to both the expectations and performances along the quality dimensions. Service quality therefore deals with identifying the value streams of companies and seeing whether they can be improved. Parasuraman et al. (1985) continued to identify ten valuable specifications for the assessment of service quality by customers and they include; “reliability, responsiveness, tangibles, communication, credibility, security, competence, courtesy, understanding the customers and service accessibility” (Parasuraman et al., 1985).

These ten specifications for the assessment of service quality by customers led to the suggestion of a service quality scale (SERVQUAL), which is a universal tool that consists of the 5 significant measures of service quality. These measures include; reliability, responsiveness, assurance, empathy and tangibles (Parasuraman et al., 1985). Where reliability refers to how service companies are capable of offering assurances to customers promptly. On the other hand, responsiveness refers to how customers observe the willingness of service companies to assist them on time whiles

assurance refers to how service companies are able to communicate trust to their customers. In addition, empathy refers to the understanding of customer needs or preferences also the care and importance service companies provide to individual customers. Finally, tangibility is the proof of amenities, employees, and communication resources utilised by the service companies when providing services to their customers (Hernon et al., 2001).

3.3 Service quality gap

When there is variance or inconsistency between the customers' view of the performance of a firm and their initial expectation, it is termed as a gap (Zeithaml and Bitner, 2003). Observed service quality by customers is the result of comparing both their expectations of the services the companies need to offer as opposed to their observation of the performance provided by the service company (Rowley, 1997).

In managing service quality, firms place emphasis on minimizing the gap between customer expectations and customer perceptions to increase customer satisfaction (Gronroos, 1988). When positive service quality is attained, it results in high customer loyalty and in the long run influences profits and market share of the company (Heskett et al, 1997). It is therefore important for companies to understand what customer satisfaction really is.

3.4 Customer satisfaction

The subjective reaction of satisfaction or dissatisfaction due to the assessment of services offered by a firm to an individual with respect to their expectations is

termed as customer satisfaction (Oliver, 1980). It has been perceived that customer satisfaction is a requirement to customer retention therefore service providers often place high importance on customer satisfaction.

When customers are highly satisfied, they turn to visit stores and patronise products repeatedly and indirectly promote the products as they make comments about their satisfaction from the products used up. Customer satisfaction also allows customers to stay loyal to the company's a bit longer with the mind-set of patronising their products later in the future (Anderson et al., 1994). In contrast, when customers are dissatisfied it has been associated to the rate at which they make complaints (Amstrong, 2006).

Three factors that affect customer satisfaction were also identified by Matzler et al., (2002) and they include; the basic factors, performance factors and the excitement factors. The basic factors are the lowest desires that customers require in a product or service. Although the basic factors do not essentially cause satisfaction, when they are absent, it causes some level of dissatisfaction. On the other hand, the performance factors are the elements that essentially cause satisfaction for example, consistency and responsiveness.

These factors cause satisfaction or dissatisfaction if they are either fulfilled or not fulfilled. Lastly, the excitement factors are elements that surges customer fulfilment if achieved but does not lead to dissatisfaction if it is not achieved.

3.5 Link between Service Quality and Customer Satisfaction

Parasuraman et al. (1985) back the point that service quality links to customer satisfaction. Parasuraman et al. (1985) continue to suggest that when observed service

quality is high, there is a surge in customer satisfaction. Saravanah & Rao (2007) and Lee et al. (2000) agree with Parasuraman et al. (1985) on the point that service quality can have either a positive effect or negative effect on customer satisfaction. Negi (2009), after an exploration of the topic, "significance of observed service quality in determining customer satisfaction in the telecommunication industry", also realised that there was a link between service quality and customer satisfaction. In addition, Negi (2009) found out that responsiveness, reliability and network quality were the main factors used in assessing service quality by customers in the telecommunication industry.

Similarly, Fen & Lian (2005) realised there was a positive correlation between service quality and customer satisfaction. In addition, they concluded that service quality and customer satisfaction have a positive influence on the plans of customers to re-patronise products and services. Fen & Lian (2005) thereby highlighted the importance of service quality and customer satisfaction with regards to how it is essential to the survival of any business in a highly competitive market. Likewise, Sureshchandar et al. (2002) after an investigation found out that there was a link between service quality and customer satisfaction. They concluded that there is great reliance between both service quality and customer satisfaction which means that, an increase one can increase the other.

In addition, Sureshchandar et al. (2002) highlighted the fact that service quality is more abstract than customer satisfaction because, customer satisfaction reveals how customers feel about any experiences they have had with a service company on one hand, while service quality is either affected by views of value or the bad experiences others might have had. Though Anderson & Sullivan (1993) believe that there is a strong positive correlation between service quality and customer

satisfaction, they also believe that little research has been made on the importance of service quality in influencing customer satisfaction.

The figure below provides a summary of the relationship between service quality and customer satisfaction.

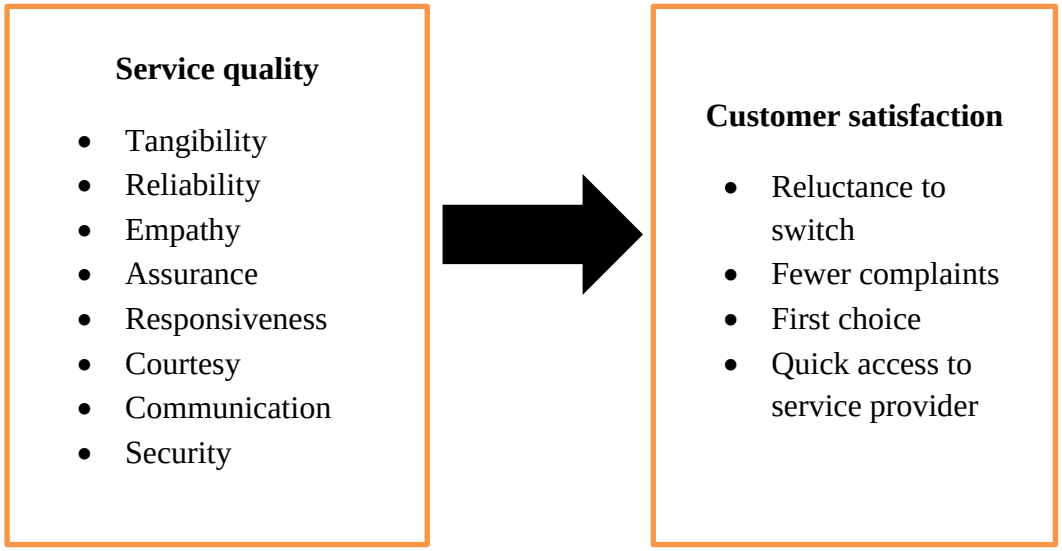

Figure 6 Relationship between service quality and customer satisfaction

Source: Dehghan (2006), Relationship between Service Quality and Customer Satisfaction

3.6 Service quality in the telecommunication industry

In the telecommunication industry, there are four key indicators of service quality and they include; network quality, convenience, customer service and pricing plan. Network quality in the telecommunication industry deals with; voice clarity, coverage area and the regularity of dropped calls (Wang et al., 2002). Service providers place emphasis on network quality because it is essential for both data services and voice calls. On the other hand, convenience deals with the ability of customers to easily subscribe to or change their service providers due to the responsiveness of staff (Asubonten et al., 1996).

Convenience is an equally important indicator because it an important basis of "relationship quality with the customers and customer loyalty" (Rosen and Karwan, 1994). Similarly, customer service deals with the value stream relating to offering services to customers before, during and after the sale and purchasing process of products or services (Churchill and Surprenant, 1982).

Customer service also deals with the success and responsiveness of the problem resolution process, the manners of customer service agents, the services offered by the call centres and the provision of regular advice (Carman, 1990). Lastly, the pricing plan has to do with service providers planning and making sure that consumers acquire some monetary benefits by subscribing to their mobile or data services (Kotler and Armstrong, 2010).

3.7 Insight related to project

Insights derived from literature conclude that there is a service quality gap with regards to Vodafone because there is a difference between the expectations of the customers and the actual performance provided by Vodafone. In addition, Vodafone seems to be having issues with all the key indicators of service quality in the telecommunication industry. These problems include customer service under which they are having problems with the responsive aspect of their service quality, which the project is addressing.

3.8 Ways of enhancing service quality in the telecommunication industry

Value stream mapping

The value stream mapping tool is a lean manufacturing tool that helps in understanding and refining various methods or procedures to carry out work. The value stream mapping tool helps companies categorise, validate and reduce waste in their processes (Vendan and Sakhtidashan, 2010).

The value stream usually contains problem solving activities, information management activities and physical transformation activities (Womack and Jones, 2003). When using the value stream mapping tool, activities regarding the delivery of products and services to the end user are listed. After these activities are listed, they are visually represented for better understanding of various work processes. The activities are later examined to check if there is waste or non-value adding items to ensure that processes are faster and to match customer preferences for product delivery, including; the quality and timing of the product (Keyte and Locher, 2004).

Time function mapping

The time function tool is a flowchart with indicated time included on the horizontal axis (Heizer et al., 2008). This tool allows service providers in the telecommunication industry, to outline various activities and the flow of those activities. In outlining the various activities, the various service providers can recognise and remove waste such as extra steps, repetition, and delay, to increase efficiency (Heizer et al., 2008).

Service blueprinting

Service blueprinting tool is a flowchart that focuses on the clients and the service provider's interaction with the customer in the telecommunication industry. The tool includes; events that are under the control of the client, events of the service providers relating with the clientele and events that are performed away from, and not instantly noticeable to, the client.

This tool guides service providers in the telecommunication industry with regards to their service implementation plans because sequences of steps needed to be followed to deliver their services are outlined (Heizer et al., 2008).

3.9 Proposed solution

Reviewing literature and the needs assessment conducted, Vodafone has to look at their value stream, to take out non value added processes that reduce the responsive aspect of their service quality. In addressing the responsive aspect of their services, they first have to identify all the activities in their value stream with the aid of the service blueprint. Secondly, they have to check the activities that are value adding items and those that are non-value items. Lastly, they would have to restructure their process map with regards to the responsive aspect of the quality of their service. To get their process map restructured, they would have to employ the use of the value stream mapping tool. The time function tool is not the most suitable tool to solve the problem as there is no time against each stage on the process map because it was deemed confidential information to be given by the company, Vodafone.

3.10 Conclusion

This chapter provided insights from the review of existing literature on the gap identified and ways to close the gap. This chapter combined insights from the previous chapter to propose certain tools to close the gap. The next chapter will expound on the tools being used on the gap identified.

CHAPTER 4: SOLUTION AND IMPLEMENTATION PLAN

4.1 Chapter overview

This chapter presents a viable solution and ties all information gathered from the first three chapters which contain; the review of existing literature, industry analysis and the needs assessment. The tool established will address the gap identified in the process of the needs assessment which is the difference in Vodafone hours for complaint resolution and the customers expected hours for complaint resolution.

4.2 Background of solution

Considering the difference in Vodafone hours for complaint resolution and the customers expected hours for complaint resolution, Vodafone will first have to list out all the activities involved in getting a complaint solved. These activities will be clearly outlined with the use of a service blueprint, which will help in identifying the problem areas of Vodafone's processes. The service blueprint involves; physical evidence, customer actions, employee on-stage actions, employee back-stage actions and process support.

Physical evidence involves the tangible items that influence the perception of customers on the service or product they receive. The employee on-stage actions involve the processes employees go through as they have face to face interactions with customers on the other hand, the employee back-stage actions involve the processes that are not visible to customers as they have interactions with the employees of the company. Customer actions are the processes that customers go through in conjunction with the service delivery process. Lastly, the support processes

are processes that are carried out by employees who are not in contact with the company all the time but have a huge stake in the service delivery process.

These elements in the service blueprint with regards to Vodafone are outlined and displayed below.

Element	**Processes**
Physical evidence	Website, token machine, sim allotment, counters, buildings, parking area, reception, retail shops, TV adverts and billboards.
Customer action	Enters office for face to face interactions with customer service interfacing personnel or makes phone calls to the customer care line, receives a token number, waits in queue, receives necessary information with regards to either a complaint or on a new service adopted or yet to be adopted, makes payments for any service that requires payments, exits the Vodafone office or cuts the call line.
Employee on-stage action	Security guard's greeting/ customer service introduction/ customer service thank you note, gives information required by customers, documents complaints made and sends to managers and technical team, revert to a customer if a complaint has been solved by technical team/ managers.
Employee back-stage action	Verification of token number, technical team works on complaint, record payment.
Support processes	customer care report, records of information given, and complaints received.

Figure 7 Elements of Vodafone's service blueprint

Source: Vodafone (2018), Service activities

4.3 Vodafone's original service blueprint

The figure below displays Vodafone's service blueprint before the projects solution is applied. The non value adding items have been identified and and highlighted.

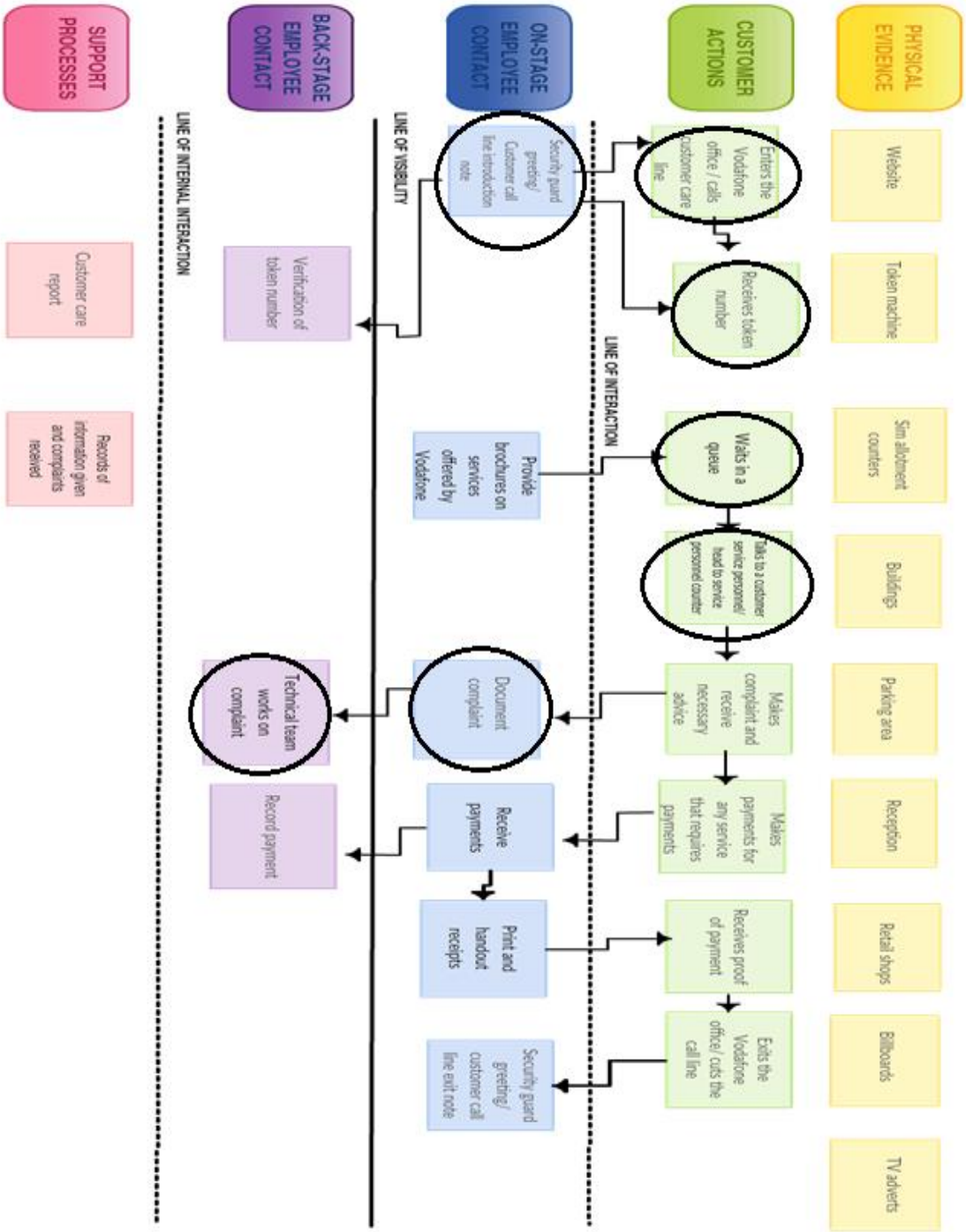

Figure 8 Vodafone's service blueprint

Source: Vodafone (2018), Service activities

From the graph and the table above, there is time wasted in the customer action processes, the employee on-stage action and the employee backstage actions. This will be solved by taking out the non-value adding processes and replacing them with other suggestions that will make the process more efficient with regards to time.

4.4 Solving customer and employee on stage processes

Customers of Vodafone acquire the services of a customer service agent either through the customer care line or through the actual Vodafone office to make enquiries as well as get their complaints heard.

Vodafone office

When a customer enters the Vodafone office, they are usually greeted by a security man and given a token number to which they wait in a queue to be served. Though the handing of the token number is important to ensure the consistency and organisation of the queue system, the complaint of the customer should be known before their token number is given to save time. To ensure that the security man plays his sole role of protecting the building, there should be Vodafone personnel that listen to the complaints of the customers at the entrance of the Vodafone office.

The Vodafone personnel will not only listen to the complaints or the purpose of visit of the customers but will record it in a database that will be linked to the information systems of the front-line customer service personnel. The Vodafone personnel at the entrance will also have the duty of segmenting the customers that come in and giving the customers their token numbers based on their identified segments. These segments can include; network complaints, internet connectivity complaints, broadband complaints, Vodafone cash complaints, data and credits

complaints and other complaints that cannot be categorised. After customers have been segmented and are placed in their specified segmented queue, customers should be offered either a beverage or savouries in an environment with soft music. This will not only keep the customers calm and engaged but these actions will remind the customers of their importance to the company, which will increase customer loyalty.

In segmenting the customers, the front-line customer service personnel will also have to be segmented to ensure that each employee focuses on one area of the company to ensure efficiency which will be measured by the number of complaints solved in a day. The front-line customer service personnel will also be assisted by a representative from the specified segmented department to ensure that there is no back and forth in communication with the front-line customer service person and the specified department when the complaint is made. The representative will be equipped with the necessary knowledge to assist employees with the answers they need and the time it will take to solve a complaint, if it is made by the customer.

Benefits of the solution

- Eliminates long queues at the Vodafone office as service personnel do not communicate with backstage personnel due to the introduction of a department representative.
- Increases customer loyalty as customers are treated as highly important people.
- Information is recorded and utilised quickly through the connection of databases from the Vodafone personnel at the entrance to the front-line customer service personnel.

- Efficiency can be measured per department as stations have been segmented. This also leads to healthy competition as each segment strives to have the highest number of complaints solved.

The refined service blueprint for Vodafone Ghana is outline in the figure below.

4.5 Vodafone's refined service blueprint (Vodafone office)

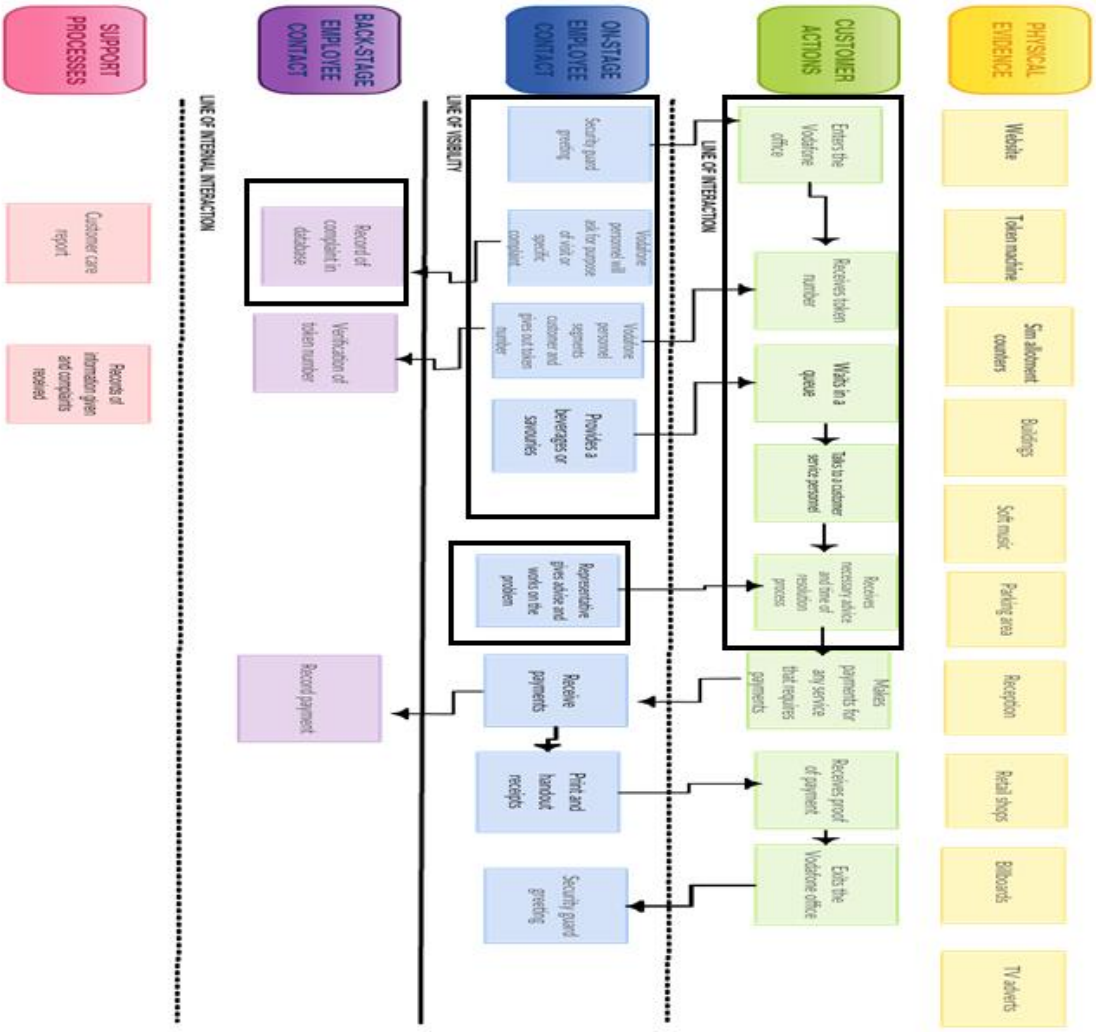

Figure 9 Vodafone's refined service blueprint

Source: Vodafone (2018), Service activities

Vodafone customer care line

When a customer calls the customer care line “100”, the customers usually want to have a conversation with a customer service agent. Before a customer has the option to talk to a customer service agent, the customer must select a language of choice, select the area of interest be it; mobile, fixed broadband and Vodafone cash. All these options before that of the “talk to customer service agent” option should be deleted as it wastes time and creates a longer queue for customers using the customer care line. The options for selections are redundant because the customer service agents, on attending to a customer, ask for the customer’s purpose for calling again.

To make the customer care line effective, after a customer selects a language of choice, the customer should be directly linked a customer service agent. After the customer service agent makes his or her introduction to the customer, the customer will be prompted with the list of complaints or enquiry areas to choose from which will be recorded and linked to a redirection line which will link the specified complaint or enquiry area to the specified department that can handle it. Though this solution seems very simple, it will provide a lot of benefits to Vodafone as they increase customer satisfaction.

Benefits of the solution

- Eliminates long queues on the phone as the customer service agents redirect the line to a specified department in the backstage processes.
- Eliminates waiting time as the various options before the “talk to customer service agent” are deleted.
- Keeps all departments engaged and less idle as call lines are directly linked to them.

4.6 Vodafone's refined service blueprint (Customer care line)

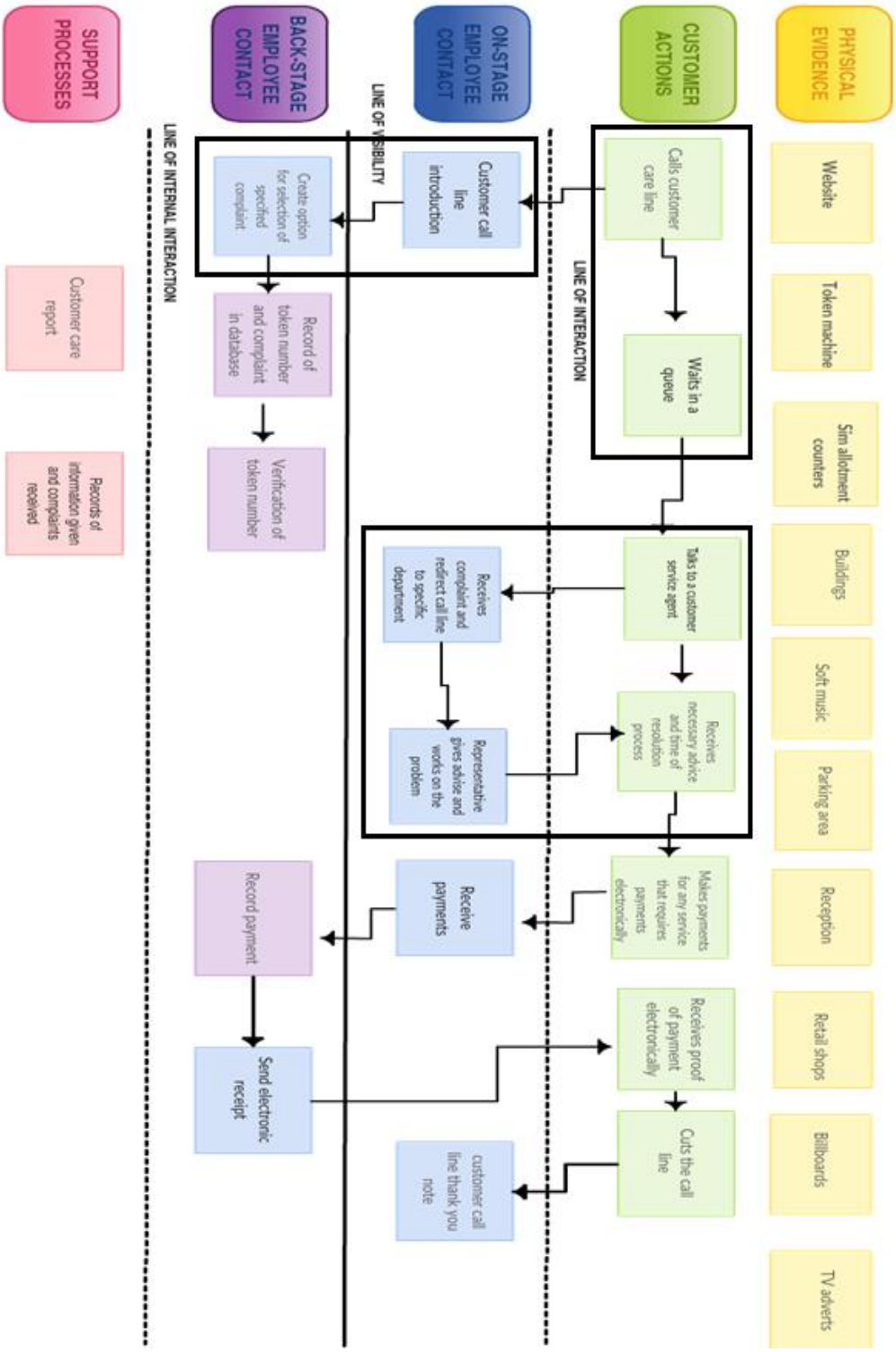

Figure 10 Vodafone's refined service blueprint

Source: Vodafone (2018), Service activities

4.7 Implementation plan

Vodafone as a company, consults many parties in their decision making processes thus, an introduction of a new solution will take a longer period to be implemented. This resulted in the creation of a communication plan which will provide more information on the solution and the channels which will be utilised to distribute that information to the staff of Vodafone. Furthermore, an implementation plan was created to ensure that the processes and strategies outlined in the previous chapter, are actualised in the Vodafone office.

Table 6

Communication plan

Person	**Role title**	**Goal**	**Channel**	**Timeline**
Mr Aryeh	Risk manager	Communicate with Mr Aryeh to review the solution with his team in conjunction with other important decision makers to get the solution presented in chapter 4, signed off.	Emails and phone calls.	Date sent- 04/04/2019 Date to receive feedback- 30/04/2019

Mr Ayertey	Head of HR Centre of Expertise	Incase the chapter 4 is not signed off for possible implementation, a presemtation will be put together to further influence the staff on the importance of the proposed solution.	Face to face meeting.	Scheduled for the time favourable to the Vodafone staff.

Table 7

Implementation plan for proposed solution

Solution	**Team responsible**	**Implementation**	**Timeline**
Customer care line restructuring	Technical team	Redirection link between customer line and department line / deleting options before the "talk to customer service agent".	1 working month

Vodafone personnel at the entrance of the office	Human resource team	Employ and train potential employees on databases and policies of the company.	2 working weeks
Segmentation of front-line personnel	Operations team	Redesign layout to accommodate representatives of departments at the front-line station.	1 working week
Database system	Technical team	Connect database from Vodafone personnel at entrance to the frontline and backstage.	1 working month
Employee training	Human resource team and operations team	Train entire employee population on the change in structure of operations.	1 working week

4.7.1 Limitations to implementation plan

- Since Vodafone is a huge organisation, it might take a longer time than that which is estimated.
- There might be some disruption of services as the technical team works on internal issues like the database.
- Cost of retraining the entire employee population.
- Cost of maintaining databases.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1 Chapter overview

This chapter highlights the various factors that hindered the smooth running of the entire project and the various techniques Vodafone can adopt to capitalize on the proposed solution. In addition, this chapter gives an overall conclusion of the project.

5.2 Recommendations regarding the proposed solution

- In ensuring that the business processes of Vodafone are always efficient, the database aspect of the proposed solution, should be frequently maintained and updated. This will be made possible with the help of a very assertive and up to date technical team.
- Vodafone must create time for assessing the loop holes in the processes of
- their service blueprints at least, every quarter of the year to always ensure that there is efficiency.

5.3 Recommendations regarding other problems that were identified but not solved

- Vodafone must check all telecommunication stations because there were many complaints on poor network and internet connectivity. Even with the introduction of the 4G network, Vodafone customers have already started complaining about the service which should not be the case because new technology is always faster and better.

- Though Vodafone gives a prompt when ones data bundle is 90% utilised, there should also be a prompt when the data bundle is 100% utilised. This is because after the bundle is exhausted, the users are charged per the data used with the credits available, which is usually more expensive. This pushes customers to feel that Vodafone has a part in “stealing” their credits obtained.

5.4 Limitations regarding the entire project

- Difficulty in getting information essential to the project: This was as a result of the large number of parties that had to be consulted before information was given. These parties had to be consulted because the organisation had categorized information into that which was confidential and the other which could be available for public use.
- The distance between Ashesi University and the Vodafone office made it difficult to attain information as Vodafone preferred face-to-face meetings occasionally.

5.5 Conclusion

For Vodafone to be successful, their first priority must involve satisfying the preferences of their customers because that it is the only way they can increase customer loyalty and be relevant in the industry. Therefore, Vodafone has to constantly assess their activities to ensure that they are in line with the feedback they get from their customers to increasee customer satisfaction which will later increase the market share of the company.

In assessing their activities constantly and ensuring that they are solving negative customer feedback, Vodafone has to outline their activities with the help of the service blueprint. The service blueprint will help them identify the value adding items as well as their non-value adding items. After these items have been identified, the non-value adding items will be eliminated with the aid of the value stream mapping to ensure that processes are faster and to match customer preferences for product delivery (Keyte and Locher, 2004).

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APPENDIX

Appendix 1 Consent form

The purpose of this study is to gain insights on customer experiences with the products offered by Vodafone Ghana. The insights on the customer experiences will therefore inform decisions to either improve or maintain the products or services of Vodafone Ghana. The forms are being issued by a final year student of Ashesi University and have been assessed and approved by the Ashesi Institutional Review Board for Human Subjects.

If you have any questions you can contact Maame Afua Haizel via whatsapp (+233205791857) or by email (maame.haizel@gmail.com). In search for further information, you can contact the Human Subjects Review Committee (irb@ashesi.edu.gh) or the supervisor via whatsapp (+233544338667) or by email (Emefadako@gmail.com).

Take into account that that your feedback is necessary to assist Vodafone Ghana to help improve their products or services to fulfil your requests. There is therefore no right or wrong format in filling these forms and subjects are allowed to voluntary participate and may withdraw at any time without negative consequences.

…….

Participants' signature

Appendix 2 Questionnaire guide for customers

1. What is your gender?
   a) Male
   b) Female

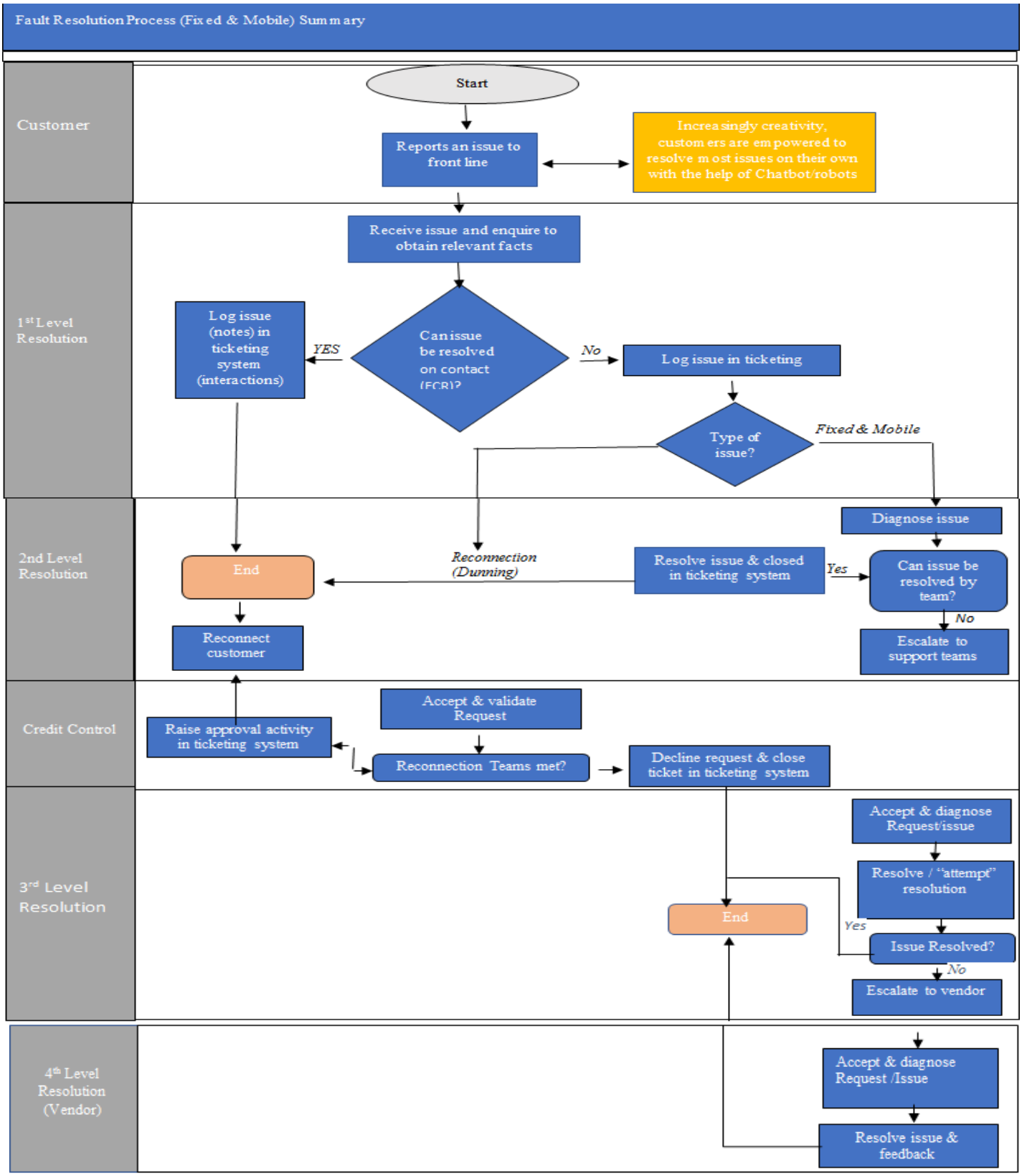
2. Please select your age a) Below 18 b) 18-24 c) 25-34 d) 35-44 e) 45-54 f) 55 and above
3. How satisfied are you with Vodafone's services? a) Extremely satisfied b) Very satisfied c) Moderately satisfied d) Slightly satisfied e) Not satisfied
4. Please specify the services you are dissatisfied with …….....
5. How long are you put on hold on the customer service line? a) Minutes (please specify)…….. b) Hours (please specify)…….. c) Days (please specify) ……... d) Other (please specify)……
6. How long are you kept waiting when you walk into a Vodafone office to meet customer service personnel? a) Minutes (please specify)…….. b) Hours (please specify)…….. c) Days (please specify) …… d) Other (please specify)……
7. How long do you expect your complaints to get solved?

a) Minutes (please specify)……. b) Hours (please specify)…….. c) Days (please specify) …… d) Other (please specify)……
If you want to make enquiries or want to hear more about the study, please share your contact details Telephone number: _____ Email address: _____ Name: _____

Appendix 3 Interview guide for the operations manager of Vodafone Ghana

How many customers do you currently have?
How do you segment these customers?
What is your most frequent customer complaint?
What is the number of mobile data customers?
What is the number of broadband customers?
What is the number of mobile broadband customers?
What are the product offerings for broadband customers?
What is your customer broadband complaint resolution process?
What is your customer mobile data complaint resolution process?
What is your broadband service delivery KPI's in hours?
What is your mobile data service delivery KPI's in hours?

Appendix 4 Detailed process map of Vodafone Ghana



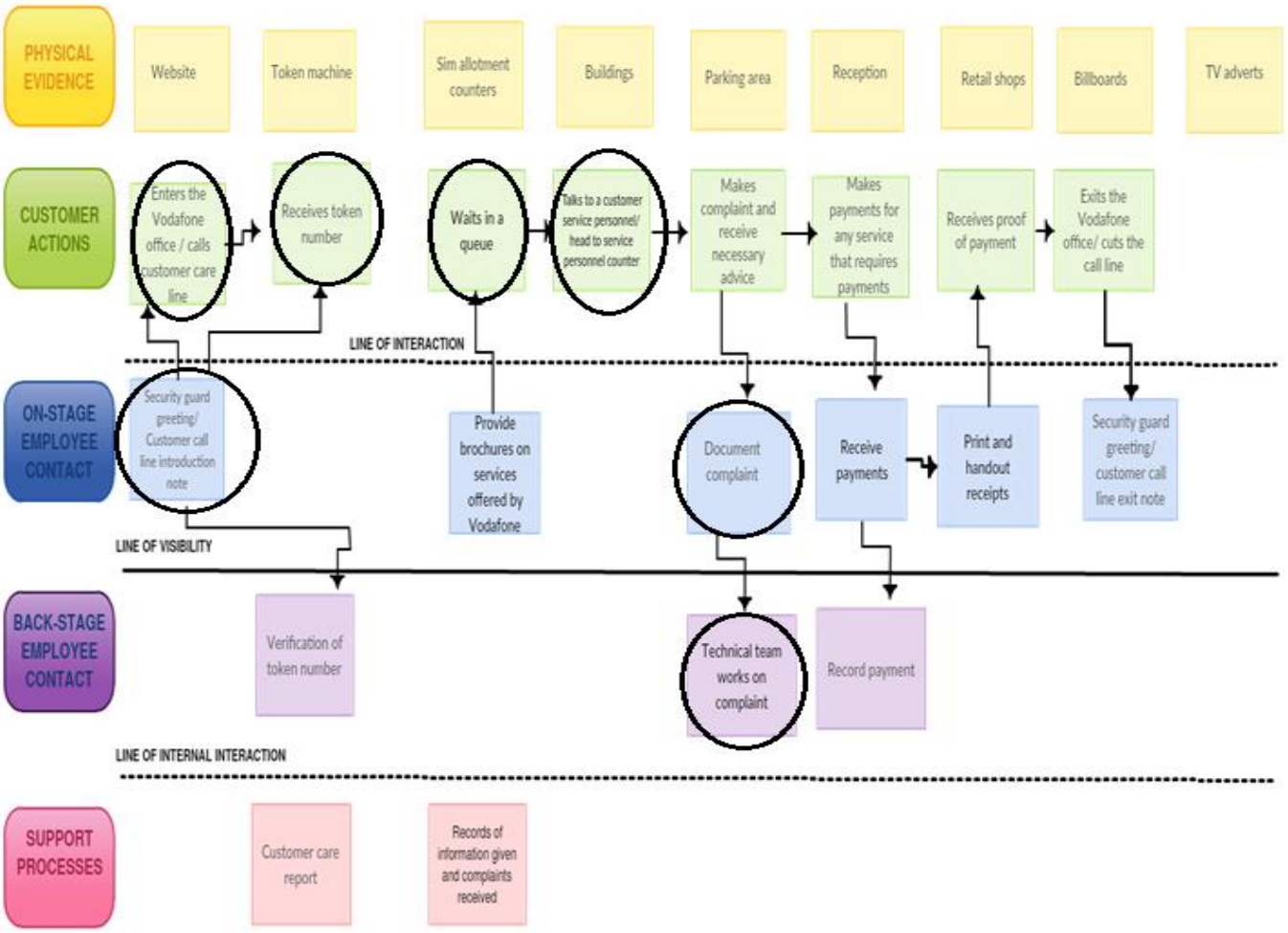
Appendix 5 Dashboard attachment

Problem identified: The differences in the time the Vodafone uses to solve a broadband or mobile data complaint and the time the customers expect their complaints to get solved

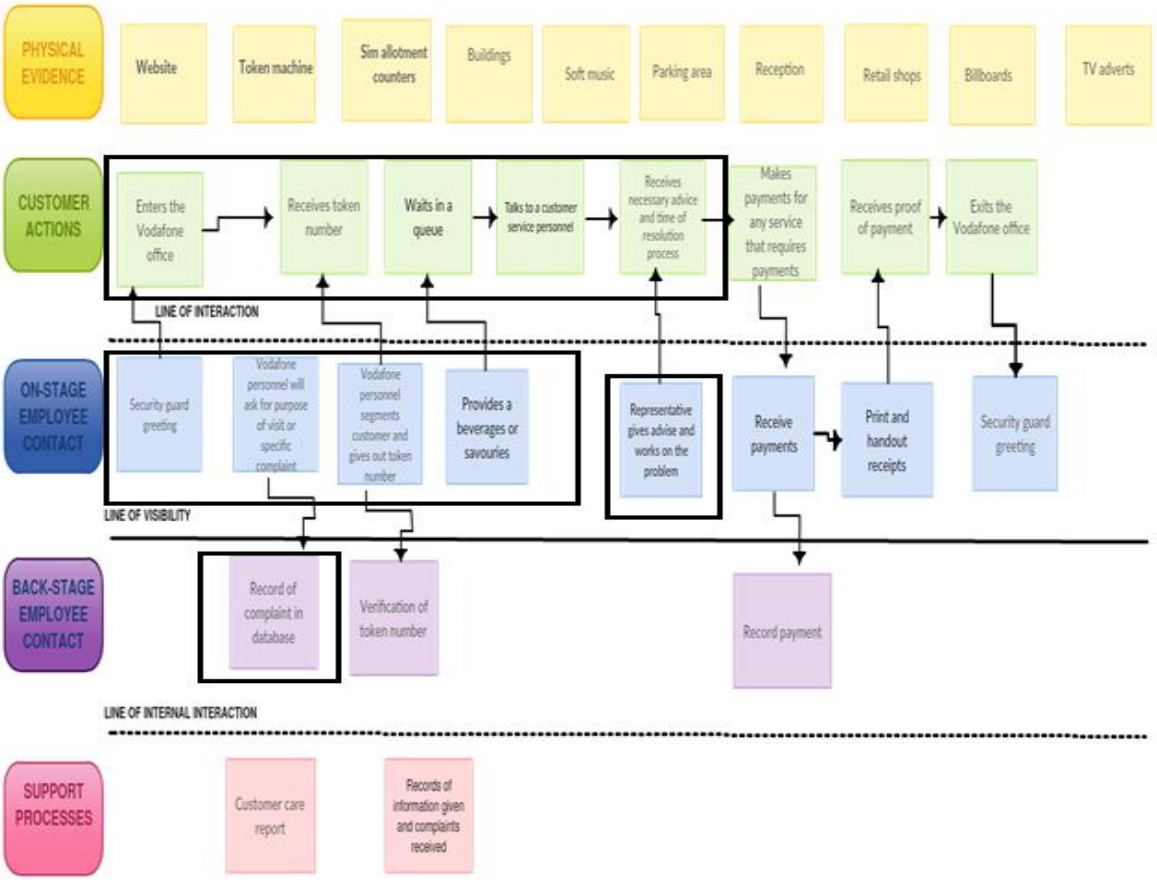
Proposed solution: Vodafone has to look at their value stream, to take out non value added processes that reduce the responsive aspect of their service quality. The removal of non-value added processes will not only ensure that Vodafone's services are efficient but will ensure that the preferences of customers are catered for.

The solution on the problem identified can be found below.

Vodafone's orginal Service Blueprint



Vodafone's refined Service Blueprint (Vodafone office).



Vodafone's refined Service Blueprint (Customer care line)