



**ASHESI UNIVERSITY**

**IMPROVING VALUE FULFILLMENT IN THE HEALTHCARE INDUSTRY;**

**THE CASE OF MPHARMA CO.**

Undergraduate Applied Project Submitted to The Department of Business Administration,  
Ashesi University in Partial Fulfillment 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.

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Date: .....

## ACKNOWLEDGMENTS

The stone which the builders rejected Has become the chief cornerstone.

~Psalm 118:22

These are the very words my mother always told me in my difficult moments. Without the love, constant prayers, support and encouragement from family, I would not have been here today. My sincerest appreciation goes to the Agyeman-Prempeh family – my parents – Rev. & Mrs. Judith Osei Agyeman-Prempeh, my amazing siblings, Akwasi, Denzel, Nana Opoku, Daisy, Prophet, Michael and Kristen. My nieces, nephews, aunties, uncles, cousins and in-laws who all supported me in any way in my education right from kindergarten to university. Chris Owusu-Ansah, Maame Agyeman-Prempeh, Serwaa Afia Attrams, Kwasi and Kwabena Osei-Kusi God bless you all for your contribution in my life. My dear Daisy, thank you.

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## EXECUTIVE SUMMARY

mPharma is a group purchasing organization (G.P.O.) with the mission of making prescription drugs easily accessible and affordable for all. The company seeks to provide quality and accessible drugs to users on the African continent. By forming partnerships and relationships with key partners, mPharma is able to cut down costs get quality products right from the manufacturers or key country suppliers.

A needs assessment conducted revealed that, a business unit, Mutti, that had a different target segment as compared to their principal business unit is in need of an efficient way of delivering products and services very well to clients in order to increase value and increase their customer base of a hundreds.

Literature reviews studied showed that, client provision and access to products and services were critical factors that benefited the customer base of a company. Other models used by global companies that related to this area were explored as well.

And the end of this study, the writer proposes a solution to address value delivery in Mutti. The solution sought to increase value fulfillment and product delivery. By employing a solution framework prior to implementing the solution, the writer hopes to eliminate redundant processes in Mutti. The solution seeks to improve value fulfillment once certain conditions and recommendations are followed.

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## CHAPTER1: INTRODUCTION – THE HEALTHCARE SECTOR

### 1.1 Chapter Overview

mPharma is the only group purchasing organization in Ghana that seeks to sell drugs at an affordable rate to people all over Africa. As a result of this mission, cutting down cost is very essential. With it comes skilled professionals who will ensure that the right work is done at a high value to clients. Forming partnerships in Nigeria and Ghana specifically, the prospects of mPharma is promising. This chapter gives a general overview and objective of the project, the company profile, and an analysis of various models including the porters five forces and the PESTEL (Political, Economic, Social, Technology, Environmental and Legal) tool.

### 1.2 Background and Objective of Project

Value fulfilment is an important factor in how businesses are run. Clients are constantly looking for ways to get value for money. In this technological era and increased competition, several frameworks and tools have been developed to enhance this. One important component that makes this work is the human resource and how to use them. The objective of this project is to understand and recommend a way in which value can be attained in mPharma using available resources through the products that they already serve their clients with.



### 1.3 Company Profile – Internal Organizational Content & SWOT Analysis

mPharma company is a Group Purchasing Organization (G.P.O.) start-up aged less than ten years. It serves as a distributor and vendor for multiple facilities to obtain pharmaceutical suppliers (syringes, antibiotics, etc.) at lower prices by leveraging on their ability to acquire stock at low prices. It was established to help the healthcare industry as it faced several challenges regarding quality and service delivery. Headquartered in Accra, the mission of mPharma is to make prescription drugs easily accessible and affordable as well. Their mindset is fixed on ensuring that quality drugs are delivered to patients at affordable prices. They have partners to help them attain their mission. These are mainly hospitals, pharmacies and, healthcare institutions. As a result, mPharma does not have direct relationships with patients though they have expressed significant interest in including hardware products for hospitals. These hardware products include surgical tools, band-aid, masks, accessories used in the day-to-day activities in hospitals among others. The main line of business which they have impeccably strengthened is moving drugs from their suppliers and manufacturers to the institutional health partners. This augments the importance of the supply chain department in the company.

Value is created if the benefits given to users supersedes the costs that they incur. mPharma consistently puts in efforts to ensure that they are delivering the best value; however, with obstruction in the flow of products from the makers to buyers, value is not attained at its highest potential. This is where the author of this thesis finds an opportunity in value fulfillment; bringing together the opportunities the firm has and finding how the movement from the maker to the buyer is made seamless, affordable while maintaining its quality. It is in

this light that the value fulfillment can be obtained to help the company deliver its primary goal – through the supply chain.

mPharma's significant strengths are the partnerships it has formed with many health institutions in the country. It has proven to deliver excellent services to its clients. As a result of this, it faces a potent threat against other pharmaceutical powerhouses such as Ernest Chemists. It has an opportunity to scale up and widen its gap since it already has built its competitive advantage through its strategy. mPharma is gradually becoming an industry leader. Supporting the company with my final applied senior project capstone will allow me to use my knowledge to the running of the business to streamline their value provision process which at this stage, is a potential weakness to the firm.

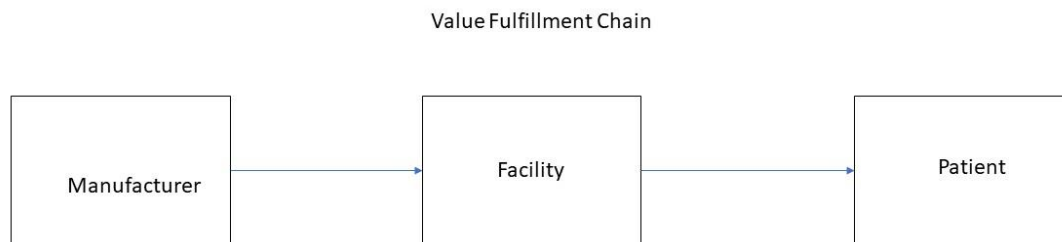


Figure 1: mPharma service delivery

#### 1.4 The Healthcare Sector

The healthcare sector is a highly cost-intensive specialized sector that involves precision, delicate services, and efficient means of provision in different departments and divisions. This system ensures the proper and efficient delivery of services to patients and key stakeholders (Versteegh, Weistra, Ortuijn, Grot, Redekop, Rutten and Davis, 2014). This phenomenon

augments the reason for value provision and value delivery. Value provision and delivery are the essential reasons why companies exist, and with this comes value fulfillment. Value fulfillment encapsulates the delivery of different service within the firm efficiently. Since every industry has its means of value delivery, it is imperative to explore the general healthcare environment. The healthcare industry/sector has a critical role to play in the achievement of goals in Ghana. The focus of the healthcare industry which is also called the medical sector of the health economy provides well-structured goods and services to treat patients with care, and preventive care. Some key success factors or determinants of success in the health economy are, innovation, quality services it provides, operations management and strong relationships with partners (Brent, 2017).

### 1.5 Industry Analysis

Industry analysis is conducted first to determine the scope of the sector and how various forces including buyers and suppliers influence it. This analysis will give a general overview of the healthcare industry. The industry analysis conducted was made possible by a porters five forces competitive analysis. This is an important model because it defines the framework in which the healthcare industry thrives (Dälken, 2018). Below elucidates this model.

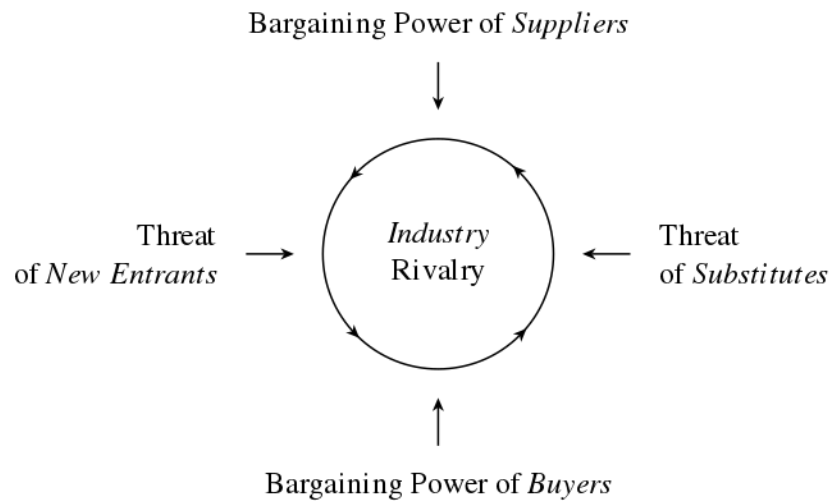


Figure 2: Porter's five forces

#### 1.5.1 The Threat of new entrants

In this paragraph, the writer defines new entrants as new competition that can potentially enter the market or industry to tighten competition. In the healthcare industry, competition is very intense, and many firms do a lot of work to enter. To succeed in this industry means, being of high quality and being willing to adhere to strict regulations. There are thousands of healthcare providers across the globe, and especially there are thousands of healthcare providers all over the world, and especially in Africa where there are strong endeavors to capture a large share of the market, forming strong partnerships with key industry/business stakeholders within the value chain. Due to the high barriers of entry in the healthcare sector in Ghana including strict Governmental regulations and other factors, mPharma faces a low threat of entry with or other firms., mPharma faces a low threat of entry by other firms (Kauffman, 2018).

#### 1.5.2 Threat of substitutes

In every industry, there are various factors which influence the market share and the allocation of profits between firms located in that respective industry. The healthcare industry is

no other. With a stern competition on the market, there is an equal chance of rivalry. Firms are ensuring that they produce well-differentiated drugs and even hospital hardware that are sometimes cheaper and easily accessible to patients and stakeholders in the industry. In the case of Ghanaian company mPharma, they face a high chance of firm substitution if they do not meet industry standards. Switching costs are low here as well. This increases the chances of a possible change by newer entrants (Wendling & Wilson, 2014).

### 1.5.3 Bargaining power of buyers

The health economy has several buyers. Notable amongst them are pharmaceutical companies, hospitals, clinics, and patients. This low concentration of buyers brings about a low bargaining power due to mPharma's differentiating technique and differentiating strategy that sets them apart from other companies in the same field. Buyers here are unable to determine prices and the profitability of other firms. There also isn't a chance of backward or forward integration by buyers as well.

### 1.5.4 Bargaining power of suppliers

Supplier power is defined as how suppliers can exert pressure or control on firms within a particular industry. In a highly specialized industry as the healthcare industry that comes with many restrictions and regulations, not many firms can meet the mark and industry standards. They are often disproved by regulating bodies and or are not able to continue with the work. This causes there to be few suppliers around. This gives them some power over their buyers as well. Suppliers of mPharma can raise prices and even alter the availability of products.

### 1.5.5 Industry Rivalry

Switching costs of health providers in the health industry are low. Customers can move freely to other competitors. This toughens competition. Product differentiation is low here as well. mPharma doesn't determine the products being produced but serves as an intermediary between manufacturers and distributors. From the short analysis made above, it is evident that there is an intense rivalry in this industry, essentially, can give the best, quality product at a cheaper cost can to supersede their rivals. Hence, the importance of value fulfillment in this industry.

### 1.6 The PESTEL Analysis of the Healthcare Industry

The PESTEL analysis below expands this sector and shows how various macro and external factors affect the healthcare industry and the impact it can have on it – how it affects performance. The infographic below shows the various components that make up this model

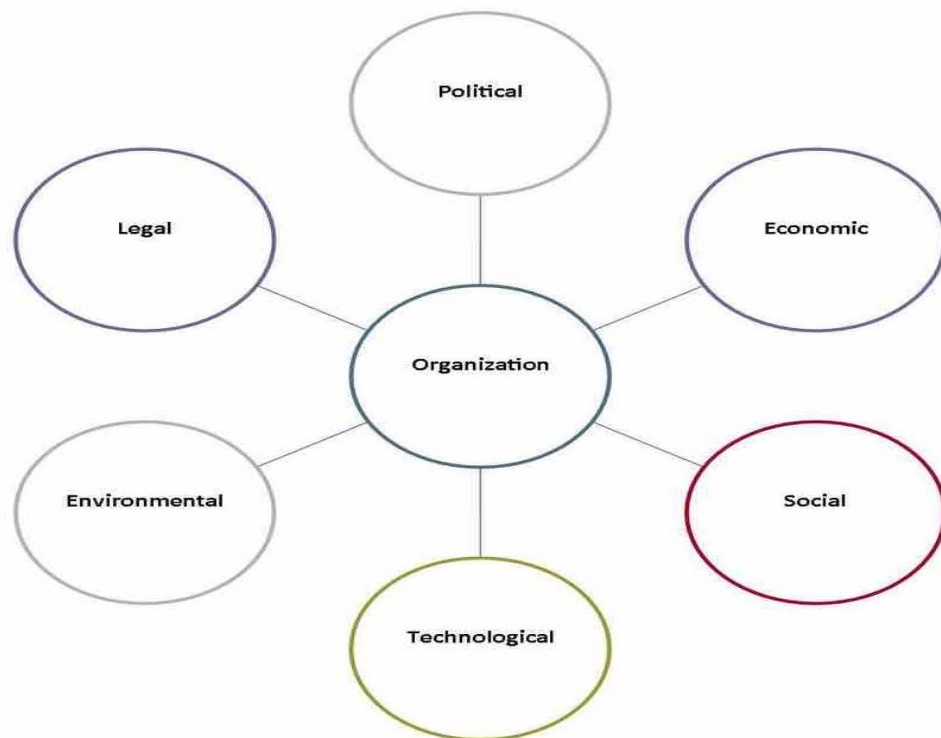


Figure 3: The PESTEL graph

#### 1.6.1 Political External Forces

Political external forces go a high way in determining what happens in the healthcare sector especially in Ghana. The strict regulations and bureaucracy in attaining licenses to operate, prevents healthcare providers from providing their services in an optimum manner. On the other hand, the strict supervision and checks and balances ensures that industry is thriving at its best or abilities for the total populace in the country.

#### 1.6.2 Economic External Forces

Healthcare access is one of the independent essentialities of human nature. Irrespective of the current economic conditions prevailing, its access pertaining to price and provision stays the same. Healthcare is expensive. Many firms and even governments have done a lot of work in providing insurance packages and benefits to people to be able to escape these costs. Though there is a proliferation of insurance coverage and many people are benefitting, healthcare continues to become expensive mainly due to its recent improvement and diverse needs. On continents like Africa that have a large percentage of its countries still developing, it is hard to operate in such an industry as economic sustainability is not the best. With a lot of people being poor, it is hard to sell expensive drugs – some of which are needed. This has accounted to the fact that people have produced counterfeit medicines and others are equally doing an excellent job at providing these drugs at much lower prices.

#### 1.6.3 Social External Factors

Social external factors take into consideration age, background, gender, and even culture. The healthcare industry thrives no matter what when it comes to social external factors and it has proven agility when it comes to changes in the social environment. Good health is a necessity and

people will readily accept the opportunity to get their necessary health provisions catered for irrespective of their color or where they come from.

#### 1.6.4 Technological External Factors

This by far has had the most significant influence on healthcare and medicine – technology. Technology has disrupted the healthcare industry in many ways and has proven to make life better for billions of people. The improvement of technology has made health professionals uncover various innovative ways of providing services to patients, has streamlined the processes involved in healthcare services and has made the healthcare industry generally better.

#### 1.6.5 Environmental External Services

Humans form part of the external influencers of the healthcare industry. It is the basis upon which this industry has thrived for centuries. In Africa especially, the environment is a crucial part of the chain of life, and its sustainability has helped humans thrive. In tandem to this, the deterioration of the environment has affected human life and has caused many diseases, sicknesses and has generally altered the standard of life for humans. It has created an opportunity for the healthcare industry to “boom and thrive.”

#### 1.6.6 Legal External Factors

Legal external factors are one of the most critical factors governing the healthcare sector all over the world. It serves as a governing body to ensure that stakeholders and players in this industry do not overstep boundaries and can operate efficiently as human lives are at stake. Without legal frameworks and institutions, the health industry would have broken to crumbles. Perhaps, the human would have been used to make inhumane experiments.



This PESTEL analysis gives a brief review of what it is to thrive and operate in the healthcare industry. Following this analysis is a write-up that elucidates more on the choice of organization for my applied senior project.

#### 1.6.7 Conclusion

This chapter introduces the internal and external environment in which mPharma G.P.O. operates. It highlights a few strengths and weaknesses and various factors affecting the company. The next chapter identifies the exact need in product delivery. This further informs the solution which the writer, in this project suggests to the institution.

## CHAPTER 2: PROJECT NEED ANALYSIS

### 2.1 Overview of Chapter

This chapter seeks to expand the need that has been observed in mPharma group purchasing organization. This will help streamline the solution process towards attaining one goal of fixing the problem at hand. Qualitative research in the form of interviews was conducted at this stage to help understand the various pain points and processes that mPharma passes through. With a highly intricate and sophisticated service delivery, it is vital that value and quality are achieved. The need analysis hitherto elucidated below has been taken from an analysis of all the information obtained from research conducted. The sampling and data collection mode are also discussed in this section. This chapter hopes to throw more light on the need, problem or challenges facing mPharma. A needs assessment allows one to identify a pressing issue or challenge facing a subject matter or scope of the study, validating or helping obtain the difference between current results or state and the expected or desired results.

### 2.2 Summary of Service Delivery

As indicated in the figure above, mPharma group purchasing organization has a simple product and service fulfillment chain. Product – medicine and medicine related materials move from the manufacturer or the local distributor of international manufacturers to the mPharma storage facility. From the storage facility, they move straight to the company's clients. In every

aspect of the value fulfillment, mPharma has designated employees that work in every aspect of the value chain to ensure that delivery is done on time and done correctly.

### 2.3 Scope of service delivery

mPharma's major clients are pharmacies and hospitals. They need high quality drugs that cost a lot of money. mPharma for long has been employing ways of reducing their interaction with go-betweens and local suppliers to work directly from the source while still delivering their service and value proposition. This reduces the costs incurred and the lengthy processes involved in getting the products. If they can eliminate local suppliers and go-betweens, they can create more value and increase efficiency by

- i. Increasing their rate of fulfillment since some suppliers sometimes withhold drugs because they see them as an increasing threat.
- ii. Being able to have a physical verification system and an efficient way of performing stock their counts.

### 2.4 Methodology

In conducting the needs analysis, research was done to provide valuable insights into how the organization was run. The study aimed to validate or add up to the information that has been obtained about the organization. The target population of the research was managers and team leaders in several departments in the mPharma specifically the product team, the finance team, the supply chain management team and the office of the country director who oversaw the activities from the planning to the delivery of products. Due to the very small size of the company, qualitative research was the best and most efficient way to conduct the investigation. The closely-knit departments had valuable insights to share. Using a qualitative research method, structured

and unstructured interview instruments were used in making the analysis. Below are major findings from the research.

## 2.5 Major Business Units

From the thorough research conducted, it was identified that mPharma has two key business units. Before examining the findings obtained, it is important to understand the key business units, so it gives some perspective to the responses received.

### 2.5.1 QualityRx

mPharma QualityRx is a service that mPharma provides to pharmacies and health institutions. The company realized that many of its pharmacies that they either were partnered with or wanted to partner with had back infrastructure like leaky roof, broken shelves and above all, low and inconsistent stock. To solve this problem, mPharma established QualityRx to provide funds for the management of the pharmacy through physical infrastructure, providing stock access to quality and affordable drugs. Pharmacies have to go through extensive screening, be qualified and endorsed to be able to partner with mPharma to enjoy and benefit from this program. The stock of goods that they get is provided by mPharma from their product fulfillment chain.

### 2.5.2 Mutti

Mutti is another product designed by mPharma that also improves and ensures that quality and affordable drugs are delivered to people. Unlike the QualityRx system that targets pharmacies and institutions, Mutti targets individuals or persons by providing a loyalty points-based system that allows individual clients of any geography or demography to sign onto. This gives users access to discounts and the chance to enroll onto flexible payment plans in order to get the drugs that they want. People who sign up receive a card that they use for their transactions. Users get access to drugs from QualityRx pharmacies – quality and affordable.

## 2.6 Research Method - Qualitative Research

The research method used, and other tools used in conducting the research is highlighted in this section.

### 2.6.1 Structured and Unstructured Interviews

Having structured and unstructured interviews were the best form of instruments used for the research phase of this project. Firstly, structured questions were determined to provide insights to the various operations of mPharma. In the course of the interview, there was a need for unstructured questions to set in. This was as a result of the interaction and allowed a natural flow of information. Question here were generated spontaneously. Using this hybrid of instruments, the interviewers and interviewees were able to give their best to obtain the right information.

### 2.6.2 Sampling Method

Due to the size of mPharma and the breadth of information needed, it was essential that the right people were interviewed. Due to this, a purposive sampling method was adopted. This sampling method deals with subjects that best suits the best purpose or the intention of the project. The product manager, an associate from the supply chain management team, the country manager and key stakeholders were interviewed to obtain valuable information to help identify the problem and need.

### 2.6.3 Defined Need

mPharma has developed a supply-chain software that enables them to implement vendor managed inventory. mPharma takes over inventory procurement of retail and hospital pharmacies while remotely running pharmacy operations using proprietary technology infrastructure with key stakeholders that they have (Rockson, 2018).

From research conducted, mPharma group purchasing organization is in need of an efficient system to obtain and deliver quality drugs at cheaper alternatives while giving their customers the flexible financing options that they have. With their ability to run both a push and pull supply chain, it is imperative that they combine, with a strong technological framework deliver products to clientele efficiently. Being able to provide a framework or tool that highlights any of the components that affect this will greatly reduce their costs. This need is what this applied project will further access to create a solution for.

Below summarizes the findings obtained from the research conducted. Using qualitative analysis, the responses from top level management and key stakeholders are summarized and simplified below.



Summary: Some more key findings after research was conducted

## CHAPTER THREE: LITERATURE REVIEW & MASTERY OF SUBJECT MATTER

### 3.1 Chapter Overview

This chapter presents an empirical study of relevant literature in this area of study. This is done by analyzing very key themes that have been obtained from the needs assessment and problem identification stage. The primary focus of this chapter is to examine how existing literature obtained supports the claims observed and those that debunk them as well. Analyses made from both spectrums will give a clear and better understanding of this field of study, herein, value fulfillment. The observed themes that are all analyzed in sub sections are the principal field of study, value fulfillment, followed by inventory management as in the supply chain of mPharma. The sub sections continue with client provision and how it's accessed, two models that are used to analyze value fulfillment and two case studies in these areas as well.

### 3.2 Value Fulfillment

Companies and several institutions are constantly putting together efforts to ensure that customers or clients attain the value a major company is offering. Value fulfillment stems from a system that has been proven and collaborates the different efforts of employees of a firm to deliver value to its clients (Syque, 2019). Proponents strongly argue that Value fulfillment involves every necessary component that ensures that every business unit within an organization delivers its value (Kaufman, 2019). Kaufman, 2019 in his book, *The Personal MBA, master the art of business*. He highlights the specifics of value streams existing in a business and value creation. Both components come together to help deliver value for clients. The overall running of a business is a value delivery system.

Conversely, some experts have emphasized the importance of sustainable competitive advantage, and other aspects of competition based in rivalry to the ideal way businesses can



survive. However, Harris et al. (2000) argued, focusing on competitors leads strategic partners to competitive advantage but focusing on customers leads them to the notion of value. The customer is the key to the company's prospects.

The rationale behind delivering exceptional value to customers is supported by Harris et al. (2000) is that products or services may have better functionality and will do the job better, faster or efficiently. In the business-to-business context, it means that the service or the product given to clients enables businesses to charge its own prices while working efficiently, attaining the mission and vision and still making profits in some way. In the case of mPharma G.P.O., they do have an opportunity to deliver their service and products to clients while leveraging on the benefits that comes with attaining value.

The company has the opportunity to clearly define various ways they can create this advantage by focusing on the clients. This can be done through efficiently running their supply chain and improving their service delivery of products that they offer.

### 3.3 Inventory Management

Inventory management is an important part of the supply chain and value delivery of an organization. It evolves around the mechanisms concerning the control of inventory, its storage, ordering and the general principle of controlling the amount of inventory available in a given time. mPharma is not new to this management system as they are constantly, replenishing their warehouses with orders of drugs for clients and other customers. Due to this, mismanagement of this system would cause an inventory shortage or surplus which can negatively impact business numbers. This results in loss of sales and even clients (Heizer & Render, 2011). Inventory, when managed well, helps bridge the gap between investments made towards inventory and services rendered to customers as argued out by Heizer and Render (2011) in their book.

The major or primary objectives of an effective inventory management system are to ensure that the number of products needed is well projected and in constant supply. Ensuring that the risk of being overstocked or understocked is drastically reduced after that. This management system also ensures that, records are kept and monitored. Research by Johnson and Mattsson (2008) points out that, inventory management practices are very key in the tactical planning level that balances supply and demand. Moreover, managers must also consider how inventory items can be classified and how accurate inventory records can be maintained to efficiently manage them plans (Heizer & Render, 2011). As in the case of mPharma, an enterprise resource planning (ERP) system is being installed to contribute towards their inventory management practices. An ERP system brings together all the essential components used in forecasting and making an inventory management efficient under one architectural roof, making management processes more seamless and smoother.

Abuhilal, Rabadi and Sousa-Poza (2006), strongly highlight the importance of inventory management in managing the value stream or supply chains of a service or product delivery. They highlight a push and pull system and how it is relevant in effective management. With mPharma working on both systems, a just in time (JIT), or materials requirement planning (MRP) will be ideal. The MRP system essentially, helps control demand inventory by providing what is needed at the right time (Amoah, 2017).

### 3.4 Client Provision and Access

Client provision and access deals largely with the ability of clients to obtain, with ease, the product or service that a company is offering. It includes how they are able to understand the product, its usability and how it will benefit them. In a highly competitive and regulated market, occupants of this industry must ensure that customer relationships are harnessed by not only quality of service but by the availability of products, ensuring that there is decision simplicity.

Spenner and Freeman (2012) argue that, creating an efficient path minimizes the information that customers touch giving them convenience in their final product purchase. Large global brands do this by personalizing and making value streams seamless.

Conversely, there is a challenge as to how product delivery teams can detect when a client or customer begins the purchasing journey. They can analyze this by having a smooth system where products flow through a seamless value chain. It is incumbent that the value stream process is easily relatable and comprehensive for clients to understand, building trust and customer loyalty. A key characteristic that supersedes product branding (Spenner & Freeman, 2012).

### 3.4 Existing Product and Operations Fulfillment Models

Below expands four value and business operations models and processes that promote and ensure businesses run smoothly and gain some advantage over their competitors. There is no known well-integrated model that improves product delivery for customers, specifically in the healthcare industry. Providing an avenue for more research needs to be done in the context of mPharma.

### 3.4.1 The Promotion Fulfillment Center (PFC) Model

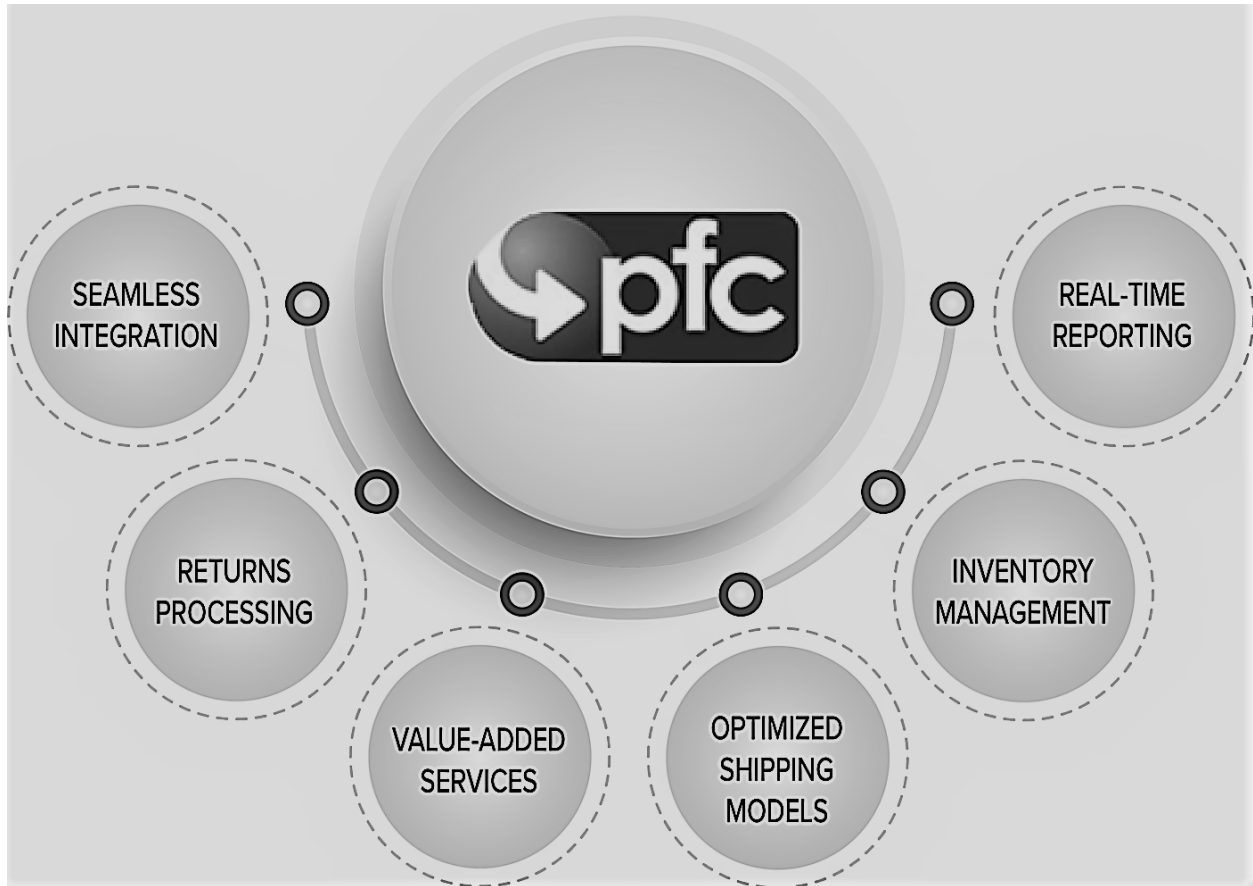


Figure 4: The pfc model

The promotion fulfillment center developed a model that addresses operational issues and delivers world-class services with speed, accuracy, ease of accuracy and provides significant cost savings. They provide services to global giant companies such as Amazon, eBay, Shopify, PayPal, Yahoo and Newegg.com. The table below summarizes the components of the PFC model.

Component of the PFC model	Purpose
Seamless Integration	Provides a platform that ensures that sales are delivered to businesses and integrate technologies with existing ones including

	enterprise resource planning (ERP) systems and orders that need shipping.
Returns Processing	Provides a cost-effective returns processing platform that ensures that all processes regarding the returns activity promptly. This includes replacement, refurbishment, disposal and recycling of stock
Value Added Service	Provides product enhancement opportunities from building product displays to wrapping systems and supporting the delivery process
Optimized Shipping Models	Provides an optimal shipping technology that assesses all factors that will ensure that products are delivered on time and in an efficient manner, providing discount opportunities to clients as well.
Inventory System	Provides a strong assessment of inventory and monitors product amounts available and reorder points as well.
Realtime-Reporting	Provides a platform for analyzing data including inventory, orders, backorders, shipments and returns. On any device making it easily accessible, 24/7.

This model employs a returns processing that is cost-effective, transparent, keeping client interaction and requests smooth. By employing value added services to the usual processes being run. Customers enjoy a wide variety of benefits under one product. Using improved technology, there is real time reporting and inventory management ensuring that products kept in stock are well balanced based on demand and the right supply.

### 3.4.2 The Customer Delivery Ease Model



Figure 5: The Customer Delivery Ease Model (a)

Other business models such as this, also ensure that clients are able to enjoy product and service delivery wherever they are. Through direct and indirect retailers and delivery nodes, the model ensures customers are the focus. The strategic management of a firm is very important. Proponents of the healthcare industry including buyers and suppliers must design revolutionary strategies focused on maximizing value for clients or customers and patients (Speziale, 2015).

It is imperative that there is a connection and integration between the back-end processes, and the frontline part of the business such that, information from customers move freely, effectively and efficiently.

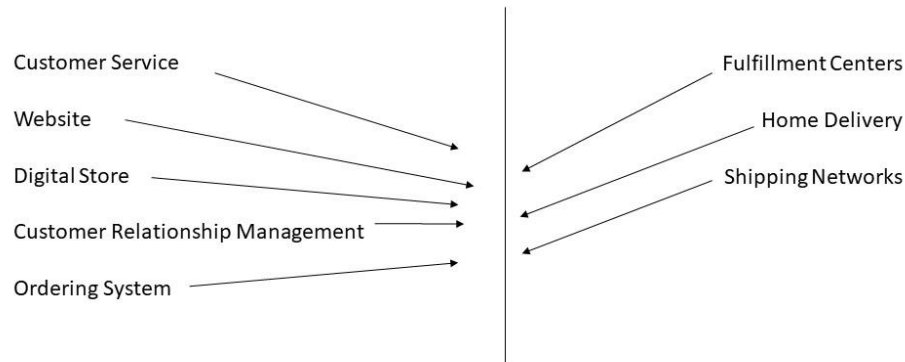
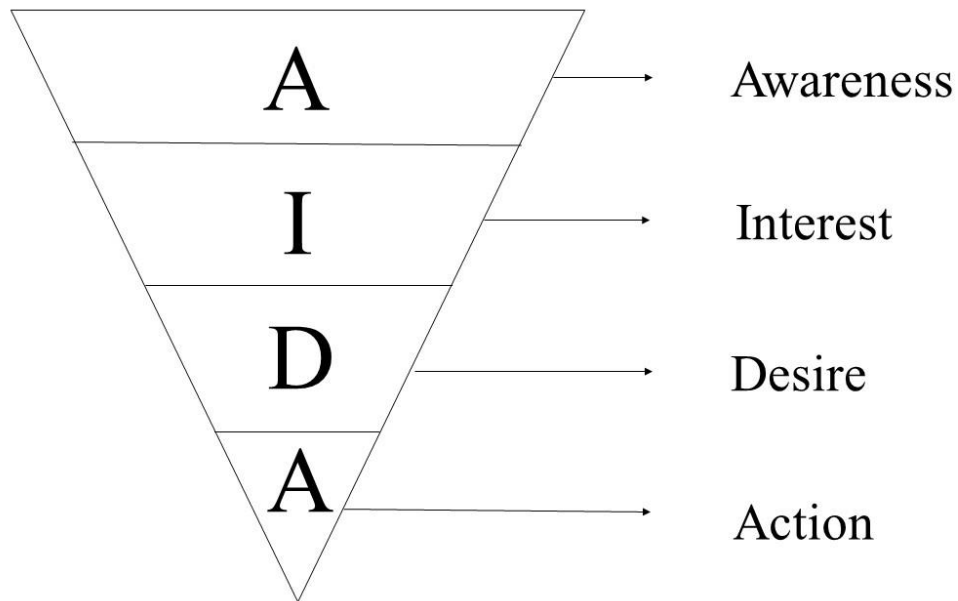


Figure 6: The Customer Delivery Ease Model (b)

### 3.4.3 The AIDA model

Customer sentiments are highly important in determining and maintaining value. To deliver value, the customer must take a series of bold decisions before and after an order is made. These decisions are influenced largely by the company, its brand, awareness and how they approach customers. Understanding the decision-making process and what factors that influence customers decisions is very essential. The AIDA model tests how customers do this (Hanlon, 2019). Having a good company brand, seamless business processes and a customer-centric system of service or product delivery influences the AIDA model used to access how customers make decisions.

Below explains the AIDA model.



Model Component	Definition
Awareness	Brand knowledge of the product or service to create an affiliation
Interest	Benefits of the product prompt a keen interest that hastens the customer to learn more about the product
Desire	A connection established by the customer that heightens the need to acquire the product or service
Action	Buyer is moved to take a prevalent action to interact with the company



### 3.4.4 The Service Blueprint

Blueprints serve as guides for doing something. Often time patterns that when followed achieve a goal. Many organizations find the need in outlining certain steps to undertake. The service blueprint serves this purpose. It maps out organizational response to the actions or steps taken by customers (Bitner, Ostrom and Morgan, 2007). Service blueprinting has a major focus on the customer's experience and it allows the clear visualization of service processes. Several proponents have highlighted that the blueprint focuses on a high-level view of business processes and fails to explore the crux of business processes. However, the effectiveness of this blueprint provides a clear visualization of dynamic service processes. Below is a representation of a service blueprint.

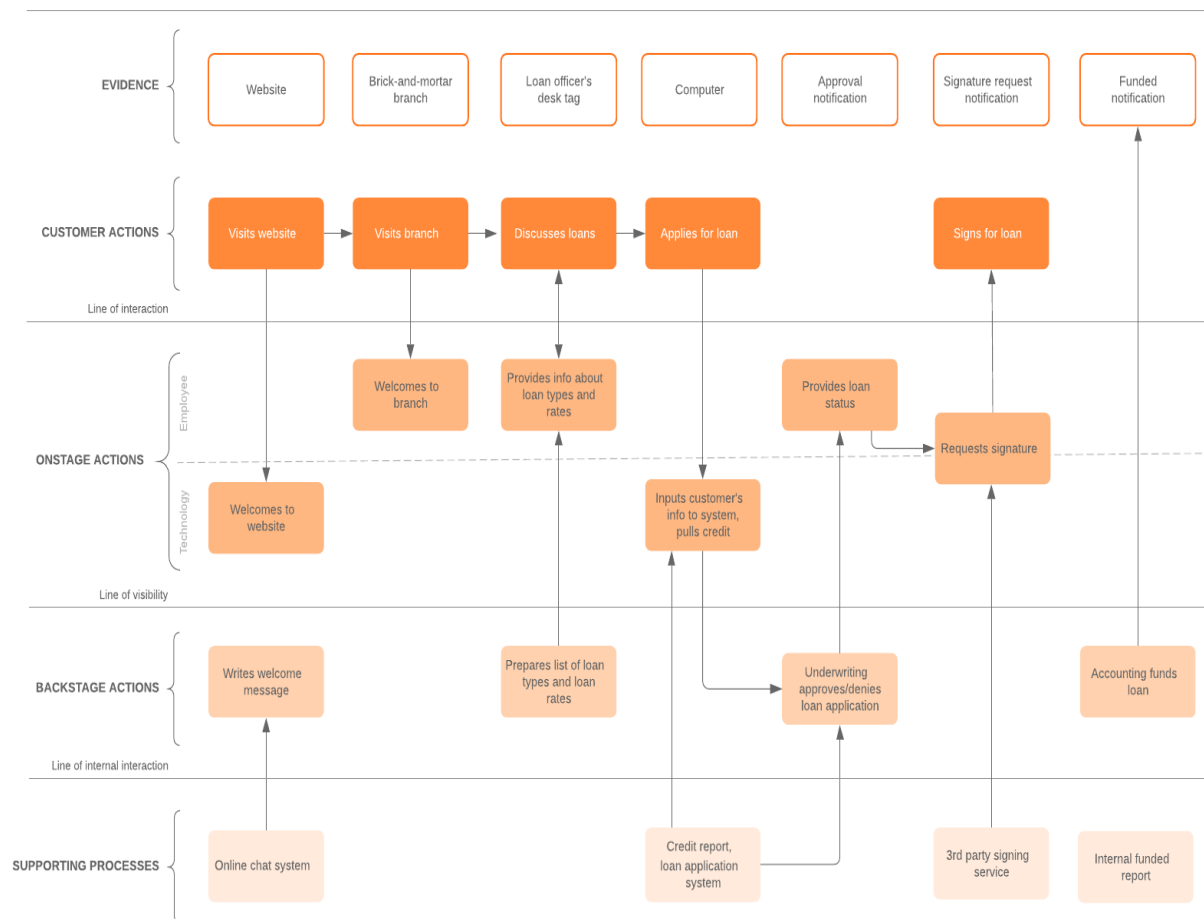


Figure 7: The Service Blueprint

## CHAPTER 4 – SOLUTION AND IMPLEMENTATION

### 4.1 Overview

Value fulfillment in mPharma G.P.O. is an essential part of the company's success and a critical measure in the company's key metrics. It involves all the chain of processes that moves from the producer or manufacturer to the employees or inhouse resources to the systems and processes put in place and finally the consumer, who receives the service. Throughout this project, several research has been conducted and key stakeholders have been spoken to, to give a clear understanding of the depth of this field of operations support.

The objective of this project is to design a solution that addresses value fulfillment in the production and distribution of drugs and health-related products for mPharma G.P.O. As highlighted in chapter 3, there are two core business functions in the company. QualityRx and Mutti. In summary, unlike the QualityRx system that focuses on institutional clients, the Mutti system targets individual clients and provides a rewards, loyalty discount system for users to purchase high quality and affordable drugs in QualityRx shops.

### 4.2 Reason for choosing solution

The focus of this solution is particularly targeted to the Mutti system and how it runs in the bid to help create value for its users. In coming up with the solution, insights were taken from responses and observation. Moreover, several concepts, models and ideas used by top global giants who deliver impeccable value to their clients were accessed and influenced the solution developed. This chapter will augment the proposed solution but prior to that, provide a framework that will create a conducive working condition for the solution to work. It will be in the form of two parts. First, a model and secondly, a developmental plan. Both solutions come

together by intricately synergizing the benefits both of them create to deliver value or to provide value fulfillment.

#### 4.3 Framework for the solution to work

Before the final solution is implemented, certain factors must be present. These elements are highlighted in the framework below. The writer designed this framework to ensure that the processes in the solution are done efficiently so that value delivery is at its optimum. It is imperative that organizations understand the objective and necessities of projects or solutions that are being designed. Global digital marketing strategist, Michael Smart highlights the importance of frameworks prior to implementation (2018). They provide an agile framework for tailored implementation. Essentially, companies must provide a framework that ensures that products being launched, markets being entered or even solutions being adopted be given a critical look in the company before implementation. This is done by providing frameworks that must be satisfied with or before the implementation for the solution to work effectively. Below is a designed structured representation of the various foundational frameworks mPharma G.P.O must introduce relative to the Mutti section of the company.

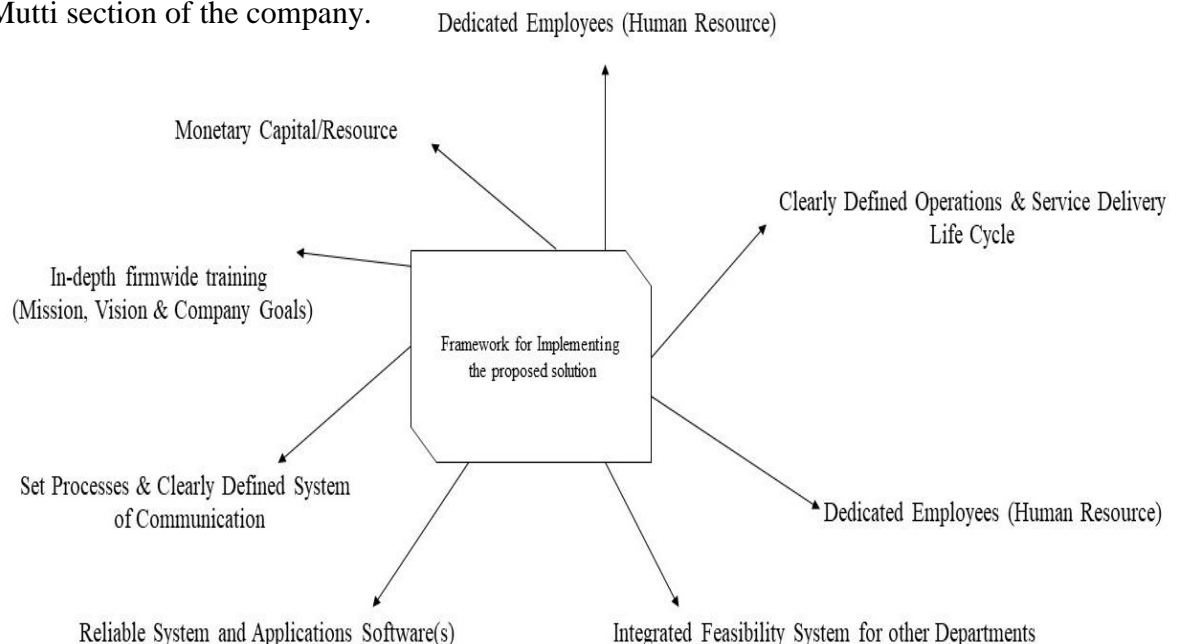


Figure 8: The Pre-Implementation Model

<b>Pre-Implementation Factor</b>	<b>Supporting Logic</b>
Monetary Capital/Resource	To fund and support business process and provide equipment's that will contribute towards value fulfillment
In-depth Firmwide Training	To ensure there is a mutual understanding of vision, to address weaknesses and ultimately teach employees how to transition into adopting new system (solution)
Set Processes & Clearly Defined System of Communication	To ensure direct and smooth flow of information between employees with a clear line of communication to ensure decisions are clear as much as possible
Reliable System & Application Software(s)	To facilitate the efficient use and flow of information
Dedicated Employees (Human Resource)	Ensures that the right people willing to learn and work with an open and teachable spirit are employed and implement the solution
Defined Operations & Service Delivery Life Cycle	Outlines the system of information and product flow from client sign up, to execution and delivery of orders.

Integrated Feasibility System for other Departments	A thought-out plan/roadmap that outlines how other departments support each other to ensure that processes run smoothly
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4.3.1 Monetary Capital/Resource: It is important that monetary capital be obtained to help fund several aspects of the value fulfillment process such as purchasing of tools, equipment, software, add-ons and other peripherals and miscellaneous expenses that will facilitate and make the process smooth and seamless. Thereby, contributing towards the fulfilment of value.

4.3.2 In-depth Firmwide Training: Training forms an important part of an organization. It ensures that employees are given the right amount of information needed to succeed and run a specific or several parts of a company. Providing the right amount of training ensures that there is mutual understanding of the vision, address weaknesses and ultimately teach employees how to transition into adopting the new system (solution).

4.3.3 Set Processes & Clearly Defined System of Communication: It is important that there is a clear manner of interaction between departments and teams. With the new system, teams must know who to communicate with and to what extent they should handle issues and queries. A clear system of communication will ensure that there is a direct and smooth flow of information between employees with a clear line of communication to ensure decisions are clear as much as possible. This eventually prevents any form of inefficiency or discrepancies.

4.3.4 Reliable System & Application Software(s): In the quest to improve efficiency through the solution plan designed, software's that tackle certain aspects of running of the business must be employed. Example, an enterprise resource planning (ERP) system to help forecast demand very

well to ensure that employees are able to make the right reporting. The will help facilitate the efficient use and flow of information. Additionally, an app called clubMutti be designed to provide customers with information on-the-go. This will be a hub for customers to follow their points earned, monies earned and access progress with mPharma.

4.3.5 Dedicated Employees (Human Resource): People are the most important asset in an organization. Effort should be put into hiring the right talent. This ensures that the right people willing to learn and work with an open and teachable spirit are employed and implement the solution. They must work with efficiency and accuracy.

4.3.6 Defined Operations & Service Delivery Life Cycle: To fully implement the solution, the life cycle of the operation of mPharma G.P.O. must be clearly defined to outlined how the cycle starts till it flows downstream. This helps outlines the system of information and product flow from client sign up, to execution and delivery of orders. This helps to identify the right key stakeholders to communicate with. Additionally, a well-defined points system should be developed for customers to access earnings.

4.3.7 Integrated Feasibility System for other Departments: There is the need to outline an interdepartmental system, a thought-out plan/roadmap that explains how other departments support each other to ensure that processes run smoothly. There is the need for seamless communication between departments for the flow of information along the product and service delivery cycle.

#### 4.4 The Solution – Mutti Value Fulfillment Blueprint

The value fulfillment blueprint is an adaptation of the service blueprint which allows individuals to focus on the essential value delivery opportunities for firms to maximize their capabilities. The value fulfillment blueprint (VFB) focuses on certain key aspects including the requirements definition – functional and non-functional requirements, and the back end and front-end aspects of a business (Adomdza, 2018). It highlights the customer journey throughout the delivery process and expatiates on certain aspects that need more attention. Below is a designed VFB for Mutti in mPharma with a focus on how they can deliver value in this aspect of the business. In summary, I am recommending mPharma to follow every step in this VFB after the pre-implementation framework is adhered to.

#### 4.5 Importance

The value fulfillment blueprint culminates all the efforts of the departments that work together to ensure that the product is delivered. It defines the requirements that teams need to follow to provide value. It quintessentially links the efforts of HR, finance, marketing, logistics and operations team into a blueprint that ensures that the delivery is done very well. With a strategy to amass a large number of clients and to provide affordable drugs to them, the value fulfillment blueprint is a sure way to help make mPharma achieve this goal and strategy.

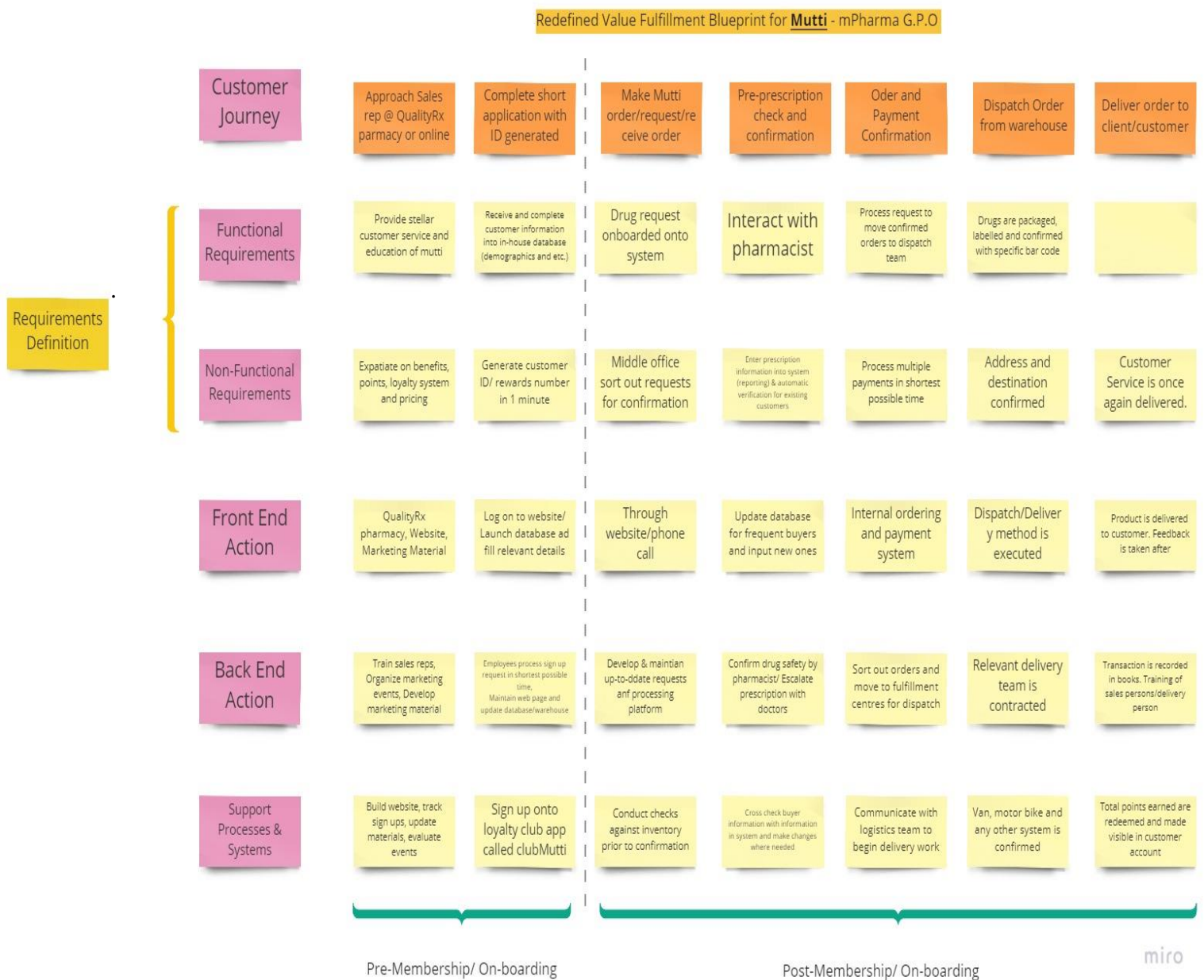


Figure 9 : Above is the value fulfillment blueprint designed for mPharma.



#### 4.6 Use of tool – Mutti VFB

The VFB is read horizontally and outlines the steps the needs to be taken in each section of the customer journey. It highlights the different teams that comes into contact in the course of the product delivery. An example is highlighted below. In this example, a client is signed up onto the system and gets a drug delivered within the shortest possible time.

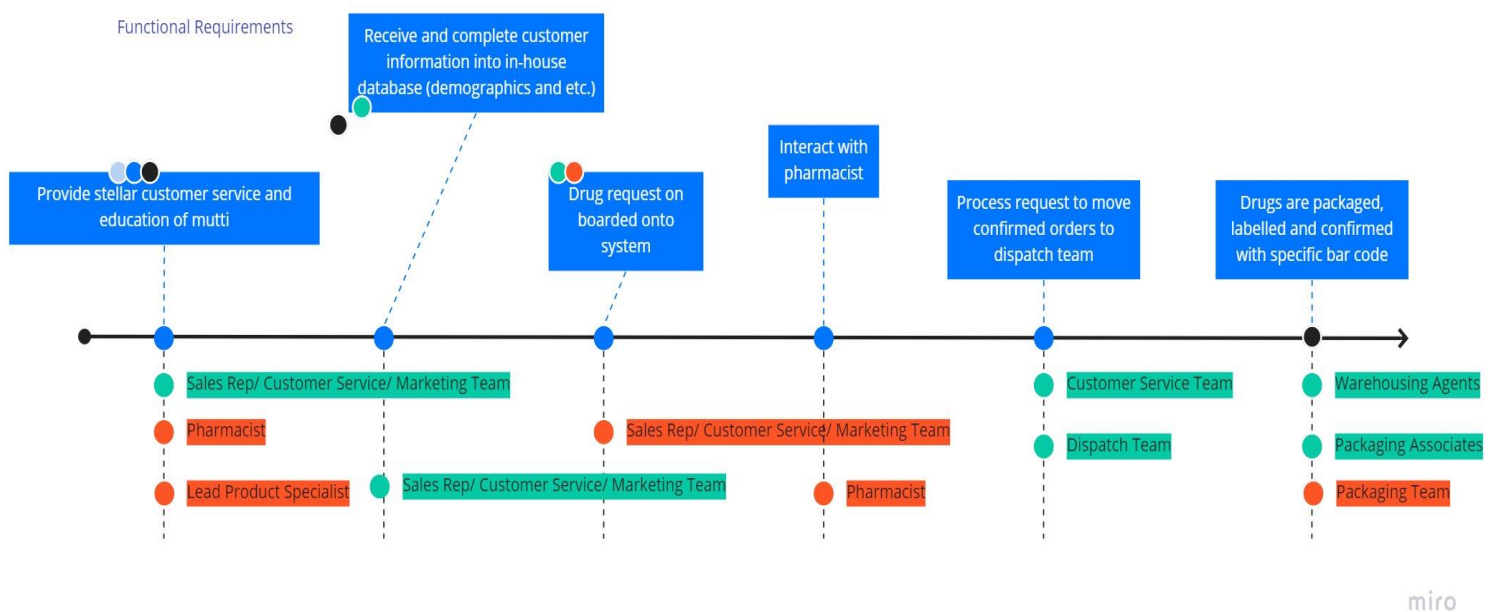


Figure10: A process view highlighting the level of interaction within section of the value fulfillment blueprint.

Above, the process explores the different teams that mPharma Mutti will interact with when delivering the value. This gives the team the chance to train and put in more effort in what they are doing at a point in time. It also forces the team to think about what they need to do to acquire more customers.

## CHAPTER 5 – CONCLUSION & RECOMMENDATION

### 5.1 Putting it all together & limitations

Throughout the project report, it has become evident that value fulfillment is an essential factor in a business that stakeholders look out for. This project was highly important because it addresses the importance of identifying an opportunity to create value in the products or services being offered. With Mutti, a business unit of mPharma being the major focus of study, research was conducted to help identify a value fulfillment need. With a promising business model but an ominous customer base, there needed to be something done in this highly specialized industry of healthcare.

Research findings gave an insight into what areas to look out for. Including service delivery and how processes were outlined from on-boarding and pre-ordering and to delivery to an individual client. It was very essential that a literature review was conducted. Existing literature obtained were those that supported the claims observed and those that debunk them as well. Analyses made from both spectrums gave a clear and better understanding of this field of study and influenced the solution framework that was designed. These were; literature on value fulfillment in organizations, client provision and access to products and other operations fulfillment models. In analyzing the operations fulfillment models, a service blueprint and an AIDA model were accessed. They set the tone for how the solution would be modelled. The writer also designed a foundational framework that with its implementation, make the processes in the solution much more efficient.

The solution is a value fulfillment blueprint (VFB) which is inspired from the service blueprint and outlines the set of processes and activities the Mutti team must adhere to, with other resources to deliver value to its clients.

With the implementation of the framework, well-advertised and distributed marketing material, and an implementation of the value fulfillment blueprint, value will be invariably achieved in running Mutti. Failure to do this could affect the implementation process.

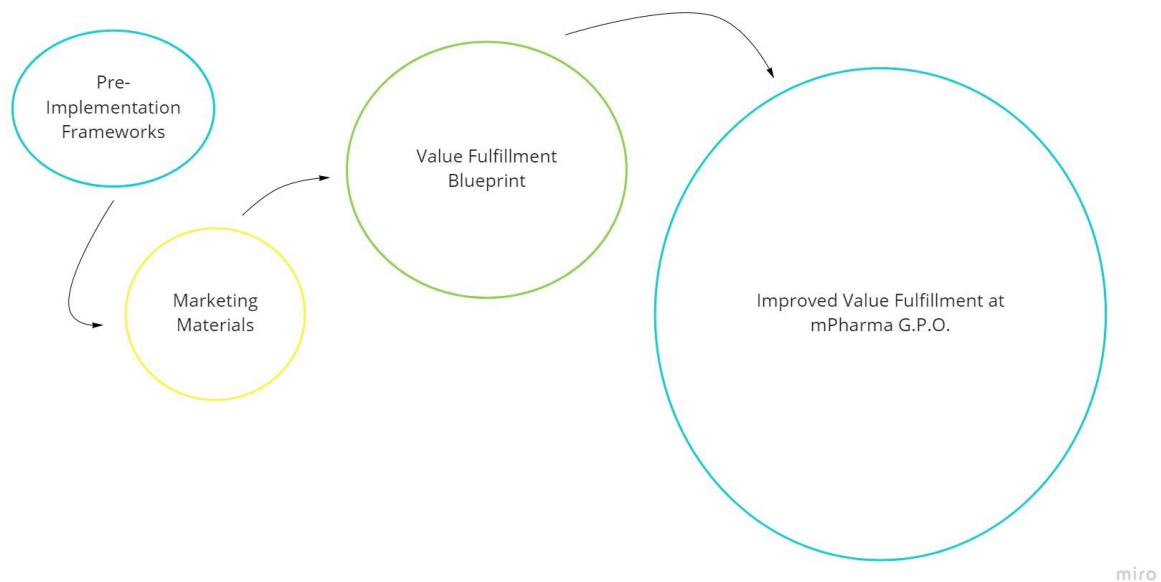


Figure 11: A total view of mPharma's value delivery journey

When running Mutti, customer focus is number one. Periodic analysis and measurement of results and the rate at which work is done and clients are signed up should be accessed. Once this is tackled, mPharma Mutti promises to grow with more engagement in QualityRx pharmacies.

## REFERENCES

- Abuhilal, L., Rabadi, G., & Sousa-Poza, A. (2006). Supply Chain Inventory Control: A Comparison Among JIT, MRP, and MRP With Information Sharing Using Simulation. *Engineering Management Journal*, 18(2), 51-57. doi: 10.1080/10429247.2006.11431694
- Abuhilal, Laith & Rabadi, Ghaith & Sousa-Poza, Andres. (2006). Supply Chain Inventory Control: A Comparison Among JIT, MRP, and MRP With Information Sharing Using Simulation. *Engineering Management Journal*. 18. 10.1080/10429247.2006.11431694.
- Amoah, G. (2017). Retrieved from [https://air.ashesi.edu.gh/bitstream/handle/20.500.11988/347/Amoah\\_Genevieve\\_2017\\_BA\\_AppliedProject.pdf?sequence=1&isAllowed=y](https://air.ashesi.edu.gh/bitstream/handle/20.500.11988/347/Amoah_Genevieve_2017_BA_AppliedProject.pdf?sequence=1&isAllowed=y)
- Amoah, G. (2019). Retrieved from [https://air.ashesi.edu.gh/bitstream/handle/20.500.11988/347/Amoah\\_Genevieve\\_2017\\_BA\\_AppliedProject.pdf?sequence=1&isAllowed=y](https://air.ashesi.edu.gh/bitstream/handle/20.500.11988/347/Amoah_Genevieve_2017_BA_AppliedProject.pdf?sequence=1&isAllowed=y)
- Bitner, M. J., Ostrom, A., & Morgan, F. N. (2008). Service blueprinting: A practical technique for service innovation. *California Management Review*, 50(3), 66-94.
- Dälken, F. (2018). Are Porter's Five Competitive Forces still Applicable? A Critical Examination concerning the Relevance for Today's Business. Retrieved from <https://pdfs.semanticscholar.org/063f/be50003c29c81150bae86d4229ce38602a8f.pdf>
- Feorene, B. (2017). Five Key Factors for Successful Health Care & CBO Partnerships - Aging and Disability Business Institute. Retrieved from <https://www.aginganddisabilitybusinessinstitute.org/five-key-factors-for-successful-health-care-cbo-partnerships/>
- Golub, H., Henry, J., Forbis, J., Mehta, N., Lanning, M., Michaels, E., & Ohmae, K. (2019). Delivering value to customers. Retrieved from <https://www.mckinsey.com/business-functions/strategy-and-corporate-finance/our-insights/delivering-value-to-customers>
- Hanlon, A. (2019). The AIDA Model | Smart Insights. Retrieved from <https://www.smartinsights.com/traffic-building-strategy/offer-and-message-development/aida-model/>
- Heizer, J. & Render, B. (2011). Operations management (10th Ed.). Upper Saddle River, N.J.: Prentice Hall. Retrieved from <https://docs.google.com/file/d/0B8pig2KdTtaOBbmlKdlRoeDJyZGM/edit>
- Jonsson, P., & Mattsson, S. (2008). Inventory management practices and their implications on perceived planning performance. *International Journal Of Production Research*, 46(7), 1787-1812. doi: 10.1080/00207540600988071

- Jonsson, P., & Mattsson, S. (2019). Inventory management practices and their implications on perceived planning performance. Retrieved from <https://www.tandfonline.com/doi/full/10.1080/00207540600988071?scroll=top&needAccess=true>
- Kauffman, V. (2018). New entrants are disrupting the healthcare industry - CEO insights. Retrieved from <https://pwc.blogs.com/ceoinsights/2015/02/new-entrants-are-disrupting-the-healthcare-industry.html>
- Kaufman, J. (2019). Value Delivery - The Personal MBA. Retrieved from <https://personalmba.com/chapter/value-delivery/>
- Pruitt, J. (2019). How to Create A Blueprint For Operational Success. Retrieved from <https://www.inc.com/jeff-pruitt/how-a-service-blueprint-can-turn-your-business-aro.html>
- Rockson, G. (2018). From warehouse to patient: mPharma' s approach to increasing the accessibility of medicines in Africa. Retrieved from <https://ghanatalksbusiness.com/warehouse-patient- mpharmas-approach-increasing-accessibility-medicines-africa/>
- Spenner, P., & Freeman, K. (2019). To Keep Your Customers, Keep It Simple. Retrieved from <https://hbr.org/2012/05/to-keep-your-customers-keep-it-simple>
- Speziale, G. (2015). Strategic management of a healthcare organization: engagement, behavioral indicators, and clinical performance. *European Heart Journal Supplements*, 17(suppl A), A3-A7. doi: 10.1093/eurheartj/suv003
- Speziale, G. (2015). Strategic management of a healthcare organization: engagement, behavioural indicators, and clinical performance. *European Heart Journal Supplements*, 17(suppl A), A3-A7. doi: 10.1093/eurheartj/suv003
- Value Delivery Systems. (2019). Retrieved from <http://syque.com/improvement/VDS.htm>
- Versteegh, M., Weistra, K., Ortwijn, W., Grot, S., Redekop, K., Rutten, F., & Daviv, P. (2014). Literature-based approach to defining the concept of healthcare which requires “highly specialized and cost intensive medical infrastructure or medical equipment”. Retrieved from [https://ec.europa.eu/health/sites/health/files/cross\\_border\\_care/docs/ecorys\\_frep\\_en.pdf](https://ec.europa.eu/health/sites/health/files/cross_border_care/docs/ecorys_frep_en.pdf)
- Wendling, B., & Wilson, N. (2014). The Importance of Substitution in Assessing Health Care Provider Mergers. *The Antitrust Bulletin*, 59(3), 515-525. doi: 10.1177/0003603x1405900305

## APPENDIX

### Interview Guide

Samuel Kwame Agyeman Prempeh - Applied Project



- Pharmaceutical products are obtained from key suppliers all over. The suppliers have some sort of agreement/relationship to provide mPharma with products based on mPharma's demand. Quality is something mPharma strictly looks out for.
- The products obtained are pooled and stored in a facility and then distributed to the several mPharma registered pharmacies and hospitals for sale.
- If all pharmaceutical products aren't used up, they return to the storage facility for the next distribution.

With such a value fulfillment process with humans interacting throughout of it, it is imperative that a study be done.

The purpose of this research is to have an in-depth conversation with key stakeholders at mPharma.

Managers of the supply chain and products. Based on this research,

- I will understand the various value streams they have at mPharma
- How the relationships with their partners influence this
- If there is any kind of external audit system in place
- How their supply chain and product team contribute towards attaining their value
- Any potential risk issues facing how they might deliver value?
- How are internal checks done and how effective are they?

Consent Form



Applied Senior Project Consent Form for Interview  
Samuel Kwame Agyeman Prempeh

Thank you for reading this information sheet about the interview. If you are happy to participate then please complete and sign the form below. Please tick the boxes below to confirm that you agree with each statement.

I confirm that Samuel K. A. Prempeh has been given permission to be part of this research study. ☐

I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason and without there being any negative consequences. In addition, should I not wish to answer any question or questions, I am free to decline. ☐

I understand that my responses will be kept strictly confidential and that there are no risks involved in taking part of this research. ☐

Partaking in this research will help Samuel K. A. Prempeh in his final applied project design for your firm. ☐

For further information kindly contact my supervisor, Dr. Gordon Adomdza  
[gadomdza@ashesi.edu.gh](mailto:gadomdza@ashesi.edu.gh).

This study and consent form has been reviewed by the Ashesi IRB for Human Subjects Research. For further information, contact the committee through [irb@ashesi.edu.gh](mailto:irb@ashesi.edu.gh)

I agree to take part in this interview. ☐

\_\_\_\_\_  
Name of participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

### Questions Asked (Structured)

1. What are the value streams at mPharma?
2. How does mPharma attain value?
3. What are the processes involved in every line of work?
4. Who are you key partners?



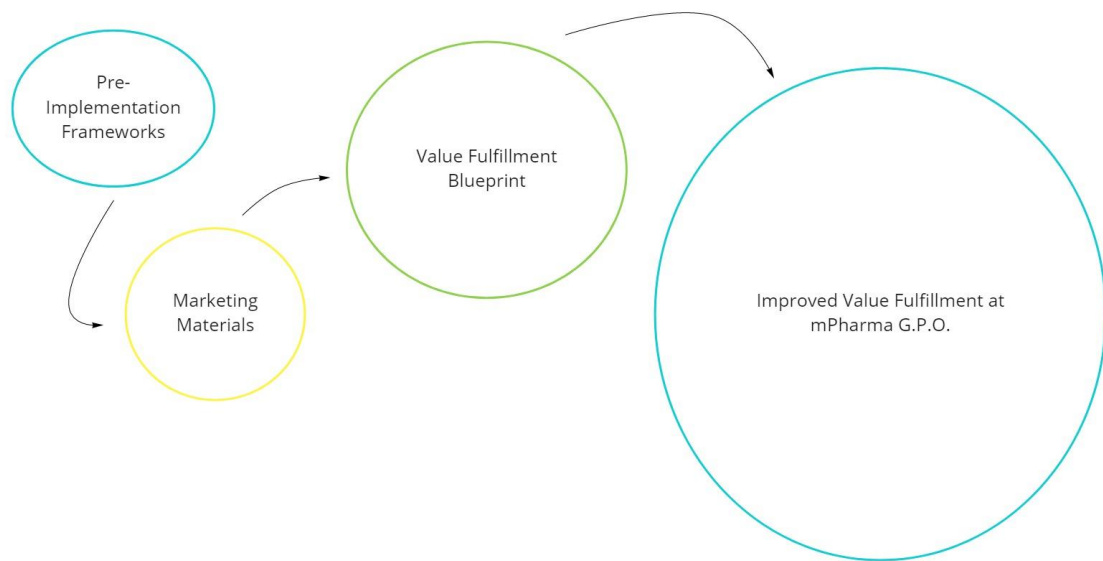
5. What are certain internal and external weaknesses mPharma faces
6. How many customers does Mutti have?
7. What is the business flow in Mutti?
8. How does human resource/capital work to help Mutti?

**Samuel Kwame Agyeman Prempeh – Brief Summary of Applied Senior Project**

9. **Applied Project Topic:** Value Fulfillment in the Healthcare Industry. The case of mPharma G.P.O.
10. Research findings gave an insight into what areas to look out for. Including service delivery and how processes were outlined from on-boarding and pre-ordering and to delivery to an individual client. It was very essential that a literature review was conducted. Existing literature obtained were those that supported the claims observed and those that debunked them as well. Analyses made from both spectrums gave a clear and better understanding of this field of study and influenced the solution framework that was designed. These were; literature on value fulfillment in organizations, client provision and access to products and other operations fulfillment models. In analyzing the operations fulfillment models, a service blueprint and an AIDA model were accessed. They set the tone for how the solution would be modelled. The writer also designed a foundational framework that with its implementation, make the processes in the solution much more efficient.
11. The solution is a value fulfillment blueprint (VFB) which is inspired from the service blueprint and outlines the set of processes and activities the Mutti team must adhere to, with other resources to deliver value to its clients.

12. With the implementation of the framework, well-advertised and distributed marketing material, and an implementation of the value fulfillment blueprint, value will be invariably achieved in running Mutti. Failure to do this could affect the implementation process. Below is a graphical representation of the stream of processes including the solution that will help mPharma.

13.



miro