

WhatsApp Pay



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1) Introduction

- i) WhatsApp is a messaging and Voice over IP (VoIP) service owned by Facebook. WhatsApp runs on mobile devices but is also accessible from desktop computers. It allows users to

send text and voice messages, make voice and video calls, and share images, documents, and other media. WhatsApp has spread globally across diverse markets with diverse histories of online engagement. Therefore, its appeal cannot be attributed to any one factor. The popularity of WhatsApp as a preferred social media platform in the so-called global South, and in rural areas, has often been related to economic constraints and poor broadband infrastructure which limit everyday online communication to the use of smartphones and messaging, with the additional factor that some mobile phone plans allow people to use these apps for free. WhatsApp has over 2 Bn users worldwide as of today. It has become the primary means of electronic communication in multiple countries across multiple continents, including Latin America, the Indian subcontinent, and large parts of Europe and Africa. Today across the globe people are moving to digital payment services such as Google Pay, PayPal, and others. Mobile wallets are in massive demand. The transaction value of the global mobile payments market was US\$ 3714.5 Bn in 2019 and is expected to reach US\$ 12,407.5 Bn by 2025, registering a CAGR of 23.8%. WhatsApp being one of the leading mobile messaging apps wants to get a slice of this growing digital payment market.

- ii) WhatsApp has decided to take the plunge into this digital payment market. They have launched a new feature namely, WhatsApp Payments to be known as WhatsApp Pay in Brazil in June 2020. WhatsApp promises to disrupt the global digital payments ecosystem with WhatsApp Pay. WhatsApp will integrate the customer's debit card or credit card into their app. That is, while chatting with your peers, you can transfer the money to them. There will be no separate app that the customers need to download to access this payment feature. This feature would be provided to users as an update in the existing WhatsApp messaging app. The user can use WhatsApp pay feature by updating the WhatsApp messaging app. They are banking on the fact that the popularity of WhatsApp and the sheer number of WhatsApp users (2 Bn) will be an added advantage over other payment apps. Now, they have launched the feature in Brazil, and it will be followed by a launch in India and then the rest of the world.

2) Advantages of WhatsApp Pay

- a) Easy peer to peer payments. You can send money to your family, friends, or relatives all through WhatsApp.
- b) Users need not go to the bank or use wallets, bank apps, or NEFT to transfer money.
- c) It will be a one-click payment.
- d) Easy and user-friendly interface of WhatsApp would make digital payments seamless and there will be no need to enter details at multiple page loads.

3) Business Objective

- a) WhatsApp has decided to take the plunge into this digital payment market. They have launched a new feature namely, WhatsApp Payments to be known as WhatsApp Pay in Brazil in June 2020. WhatsApp promises to disrupt the global digital payments ecosystem with WhatsApp Pay.
- b) WhatsApp will integrate the customer's debit card or credit card into their app. That is,
- c) while chatting with your peers, you can transfer the money to them. There will be no separate app that the customers need to download to access this payment feature. This feature would be

provided to users as an update in the existing WhatsApp messaging app. The user can use WhatsApp pay feature by updating the WhatsApp messaging app.

4) Expected Benefits

- a) Easy peer to peer payments. You can send money to your family, friends, or relatives all through WhatsApp.
- b) Users need not go to the bank or use wallets, bank apps, or NEFT to transfer money.
- c) It will be a one-click payment.
- d) Easy and user-friendly interface of WhatsApp would make digital payments seamless and there will be no need to enter details at multiple page loading

5) Business Objective by senior management

- a) Have at least 1 Mn users use WhatsApp pay feature within the first 3 months of launch.
- b) Over 1 year of its launch have 30% of user base using WhatsApp pay.
- c) Facebook invited Business Analysts trained at Simplilearn to capture the requirements for the creating this WhatsApp Pay feature.

6) Project Task

1. Identifying stakeholders – Create a list of stakeholders (as taught in Business Analysis Planning and Monitoring Knowledge Area)
2. Identify risks in this new feature (Identify them using the Strategy Analysis Knowledge Area)
3. Do a SWOT analysis for WhatsApp Pay feature (SWOT – Strengths, Weaknesses, Opportunities and Threats). This is the SWOT Technique taught in class
4. Identify the Transition State of WhatsApp Pay (Identify them using the Strategy Analysis Knowledge Area)
5. Create as-is and future process map (using flowcharts). You can use any of the popular tools in the market like Microsoft Visio, Lucid Chart, Creately, Pidoco, or Balsamiq
6. As a Business Analyst working on this project, find out the scope of this system. To find the scope you can use Use Case diagram (UML) or Context diagram
7. Write down the main features that need to be developed
8. Write the in-scope and out-of-scope items for this software
9. Write out the Business Requirements, both Functional and Nonfunctional Requirements.
10. Draw wireframes or mock screens for any 2 of the features namely book record creation and any other feature as deemed fit by the student. (Use the technique prototyping or wireframing that is taught in the training). You can use any of the wireframing tools like Microsoft PowerPoint, Microsoft Word, Balsamiq, Sketch, Adobe XD, Adobe Illustrator, Figma, UXPin, InVision Studio, InVision Freehand, or Moqups.

7) Requirement Classification Schema

a) Requirements are described by following classification schema

1	Business Requirements:
	These are statements of goals, objectives, and outcomes that describe why a change has been initiated. They can apply to the whole of an enterprise, a business area, or a specific initiative.
2	Stakeholder Requirements:
	It describes the needs of stakeholders that must be met to achieve the business requirements. They may serve as a bridge between business and solution requirements.
3	Solution Requirements:
	It describes the capabilities and qualities of a solution that meets the stakeholder requirements. They provide the appropriate level of detail to allow for the development and implementation of the solution. Solution requirements can be divided into two sub-categories: Functional requirements & Non-functional requirements or quality of service requirements
4	Transition Requirements:
	It describes the capabilities that the solution must have and the conditions the solution must meet to facilitate transition from the current state to the future state, but which are not needed once the change is complete.

b) There can be two approaches for making digital payments using WhatsApp Pay

i) Method 1:

- (1) To use the WhatsApp Pay feature the user needs to have a bank account with its debit card or a credit card
- (2) Users shall select the person they want to send money to from their WhatsApp contact list
- (3) Users shall click on payments option in their chat settings
- (4) Users shall enter the amount they wish to transfer
- (5) Users will then enter a security Pin
- (6) Users will click on the transfer button
- (7) Money is transferred
- (8) The sender and the receiver will both receive a payment notification on their chat window.
- (9) once the fund transfer has been made.

- (12) In cases where the user is requesting money, tap on request and wait for the person to accept your request.
- (13) The feature should be available in multiple languages.

8) Business Analysis Core Concept Model (BACCM)

Which defines a conceptual framework for the business analysis profession

Business Analysis Core Concept Model (BACCM)

WhatsApp Pay

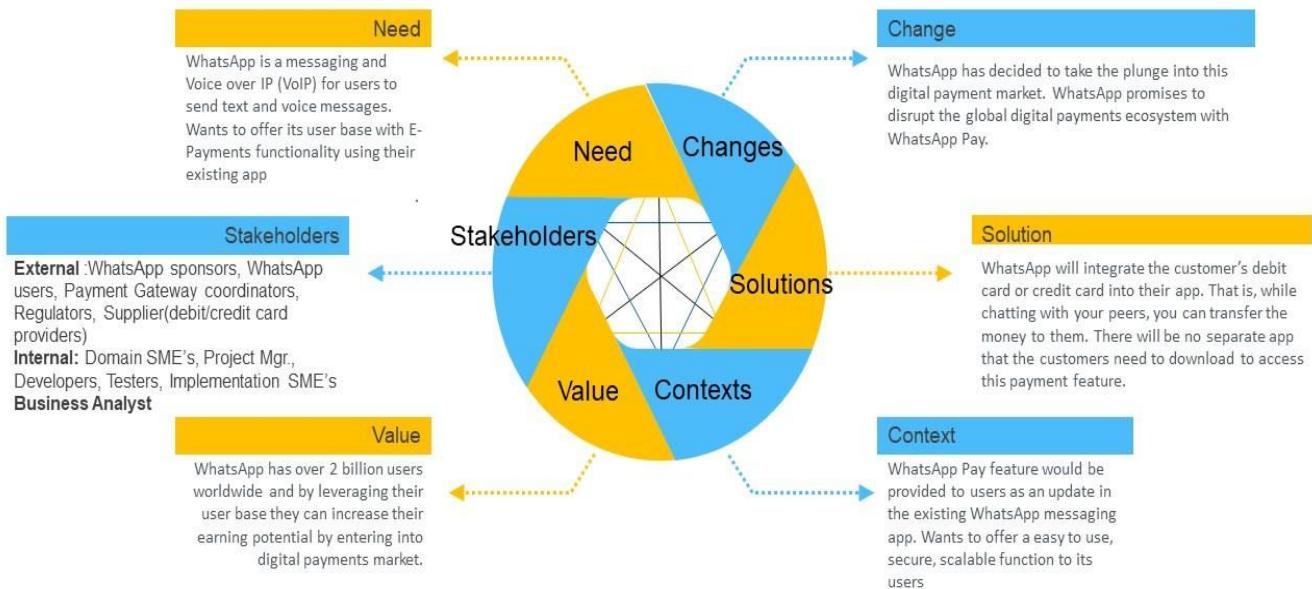


Fig1 Business Analysis Core Concept Model for WhatsApp Pay

a) Requirement Classification Schema

i) Requirements are described by following classification schema

(1) Method 1:

- To use the WhatsApp, pay feature the user needs to have a bank account with its debit card or a credit card
- Users shall select the person they want to send money to from their WhatsApp contact list
- Users shall click on payments option in their chat settings
- Users shall enter the amount they wish to transfer
- Users will then enter a security Pin
- Users will click on the transfer button
- Money is transferred
- The sender and the receiver will both receive a payment notification on their chat window
- once the fund transfer has been made.
- In cases where the user is requesting money, tap on request and wait for the person to accept your request.
- The feature should be available in multiple languages.

(2) Method 2:

- (a) User goes on the main page of WhatsApp and opens the payments option.
- (b) User then taps on the QR code showing next to their name to show their QR code using which people can send them money.
- (c) User taps on the new payment option located on the bottom right of the display.
- (d) User selects a contact or the scan QR code option.
- (e) The rest of the process remains the same as above.

Requirement Classification Schema



Fig2 Requirement Classification Schema for WhatsApp Pay

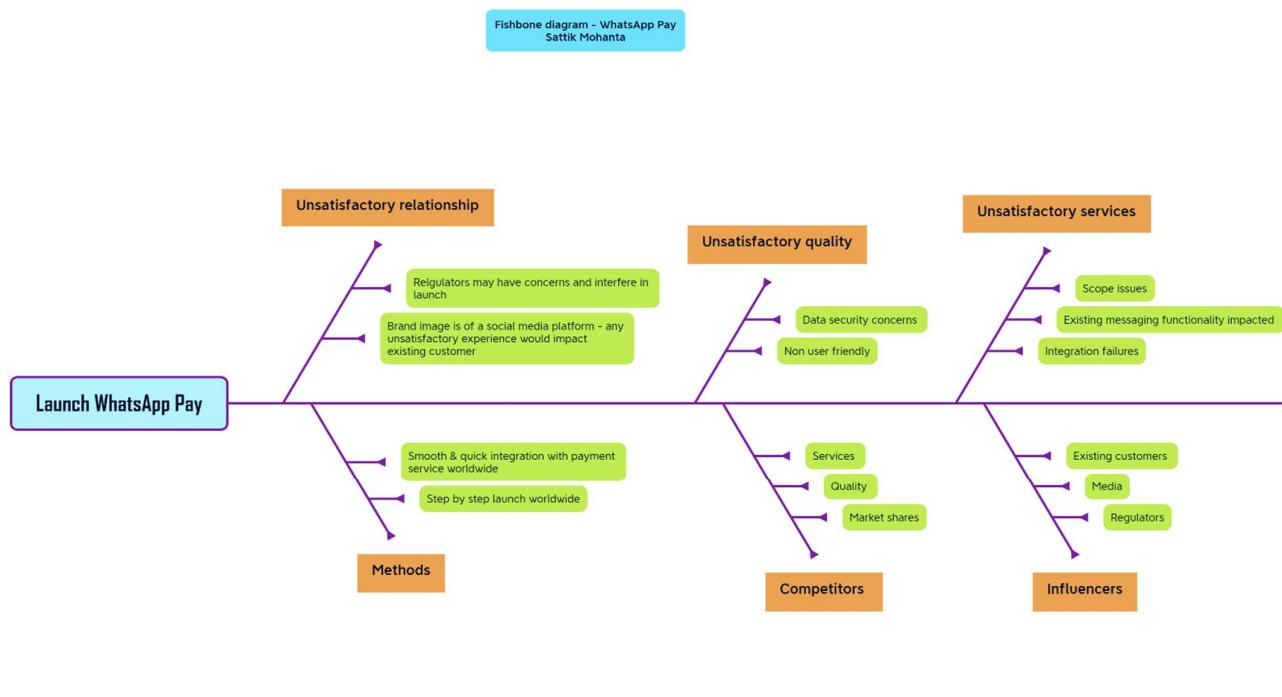
9) Stakeholders

Stakeholders	Actors	Actions
External Stakeholders		
Supplier	UPI/Payment Service Provider/Banks	<ul style="list-style-type: none"> The Unified Payments Interface is a set of common APIs (i.e., a software middleman) that provides two services – pay -- (push), and collect (pull). It enables these two operations using something called the Virtual Payment Address of each transacting party. The PSP and the Bank themselves interact with the UPI APIs which are hosted and maintained by the National Payment Corporation of India (NPCI). Authorize the linkage between WhatsApp payment and user's bank account during the initial setup of WhatsApp pay. Approves adding/deleting beneficiaries. Approves requested transactions through WhatsApp pay application. Allow to enter the PIN number for transition. Transfer the funds to the beneficiary. Shows transactions on the monthly statement. Send the notification after transition.
Customers	Banks, Debit/Credit card providers	<ul style="list-style-type: none"> The bank and the credit and debit card provider will have to work with WhatsApp Pay so that the money is moved between payee account to beneficiary account. Also, the payee and payer payment service provider will have to process Authorization and mapping requests. Authorize the linkage between WhatsApp payment and Allow user to add credit card number on the screen. user's credit card during the initial setup of WhatsApp pay. Approves requested transactions through WhatsApp pay application. Allow to enter the PIN number for transition. Transfer the funds to the approved/selected user. Allow user to add Debit card number on the screen. Allow to use debit card for money transfer in WhatsApp pay application Payment system receive request to approve transfer Analyze user reputation and analyses the term of money transaction Sends an authorization code that approves the payment system to

		<ul style="list-style-type: none"> • complete the payment • Receive authorization code from bank or rejection of transaction • Send money to the seller's bank account or reject transfer • Send notification with payment confirmation.
Sponsor	WhatsApp and Facebook	WhatsApp Owned by Facebook will provide the finance for the new WhatsApp Pay feature.
End Users	WhatsApp Pay users	<ul style="list-style-type: none"> • WhatsApp users are already using existing features for messaging, voice and Video calls. • The proposed WhatsApp Pay they will be able to use peer to peer digital payments via WhatsApp. • Transfer fund to pre-defined/eligible people in their contacts. • Request fund to pre-defined/eligible people in their contacts. • Define beneficiaries and their accounts details to transfer/request fund to and or from. • They will use this app to provide business advertisement and business update to their customer.
Regulators	National Payments Corporation of India (NPCI), RBI, Indian Government and Police	NPCI is the payments-processor regulatory body who regulates online transaction routing, processing and settlement services. RBI, Indian Government and Police will regulate the data localization and fraud protection regulations
Internal Stakeholders		
Domain SME's		Payments Domain SME's will help understand the Payments Domain in India
Project Manager		Project Manager will ensure timely and effective delivery of project within the budget.
Operational Support		Operational support will handle queries and support post implementation or go live.
Tester		Tester will ensure quality of the build by raising bugs before implementation.
Implementation Support		Implementation team will ensure the new feature is developed according to requirements captured and that the current functionality is not impacted.
Business Analyst		Business Analyst will ensure that stakeholders requirements are captured correctly to build the new feature. He/she will ensure they communicate correctly and will co-ordinate between all stakeholders

10) Risk Identification for WhatsApp Pay

- a) Data Localization requirements, store Indian users' data on local servers.
- b) Banks might show resistance as they must implement changes in their core banking, reconciliation and authentication systems, plus develop interfaces with risk management systems, customer grievance and mobile application functions.
- c) Given the mass global use of WhatsApp, Indian regulators may cap the number of UPI transactions to protect and regulate the UPI ecosystem also to avoid big players taking over the whole ecosystem.
- d) Facebook has had issues with customer data protection in the past and this image could hamper their presence in the Indian market.
- e) WhatsApp has a brand image of a social networking app; they will have to change their perception with correct marketing and messaging for the customers.
- f) WhatsApp current functionality should not get impacted with the new peer to peer payment functionality. If the newly proposed functionality does not work as proposed there will be customer frustration and they may lose loyal customers.
- g) WhatsApp must keep up with the emerging trends and on top of both payments and social media market as competitors will take over the market share if they fail to keep up with the trends.
- h) If UPI/NCPI clearing transaction errors are too many they might withdraw support.



Presented with xmind

11) SWOT Analysis

i) STRENGTHS
(1) Larger customer base (2) Use of superior technology (3) Increased brand image (4) One application with multiple usage (5) Already set global user base using the popular messaging app, accessible from multiple platforms. (6) WhatsApp has had no severe issues in the past with functionality (7) WhatsApp is backed by Mark (8) Zuckerberg, also owner of Facebook and has a good financial supporting to develop the best peer to peer payment platform. (9) Good Brand image (10) Being offered in multiple languages
ii) WEAKNESSES
(1) Data Privacy (2) No offline usage (3) Internet data dependency (4) Need to adhere the financial regulations policies according to the country (5) Two tier level of security is key as there has already been data security issues (6) Needs local storage servers to meet country regulations (7) Completely dependent on Internet. (8) Will have to change perception of already popular messaging app.
iii) OPPORTUNITIES
(1) Continuous Technology Development (2) Attracting more active customers (3) Larger customers base will helpful for other revenue (4) Increased brand image (5) There are not a lot of players in the market yet offering similar services (6) Potential to expand into new areas as internet is available even in under developed countries regions (7) Since the functionality is being offered in multiple languages WhatsApp will be able to cater to a larger audience in India (8) Additional revenue stream opening
iv) THREATS
(1) Data security concerns (2) Data compliance issues with governing bodies (3) Regular & constant innovation (4) Any leakage of customer information can tarnish the brand image completely (5) Existing functionality could get affected, will lose customers if that is the case

- (6) Regulators could pose as a hinderance if security, data privacy concerns are not addressed properly.
- (7) The Players in the market already offering the service like PhonePe, Google Pay, Paytm
- (8) Regulators could cap the number of payments to regulate the market and avoid monopoly

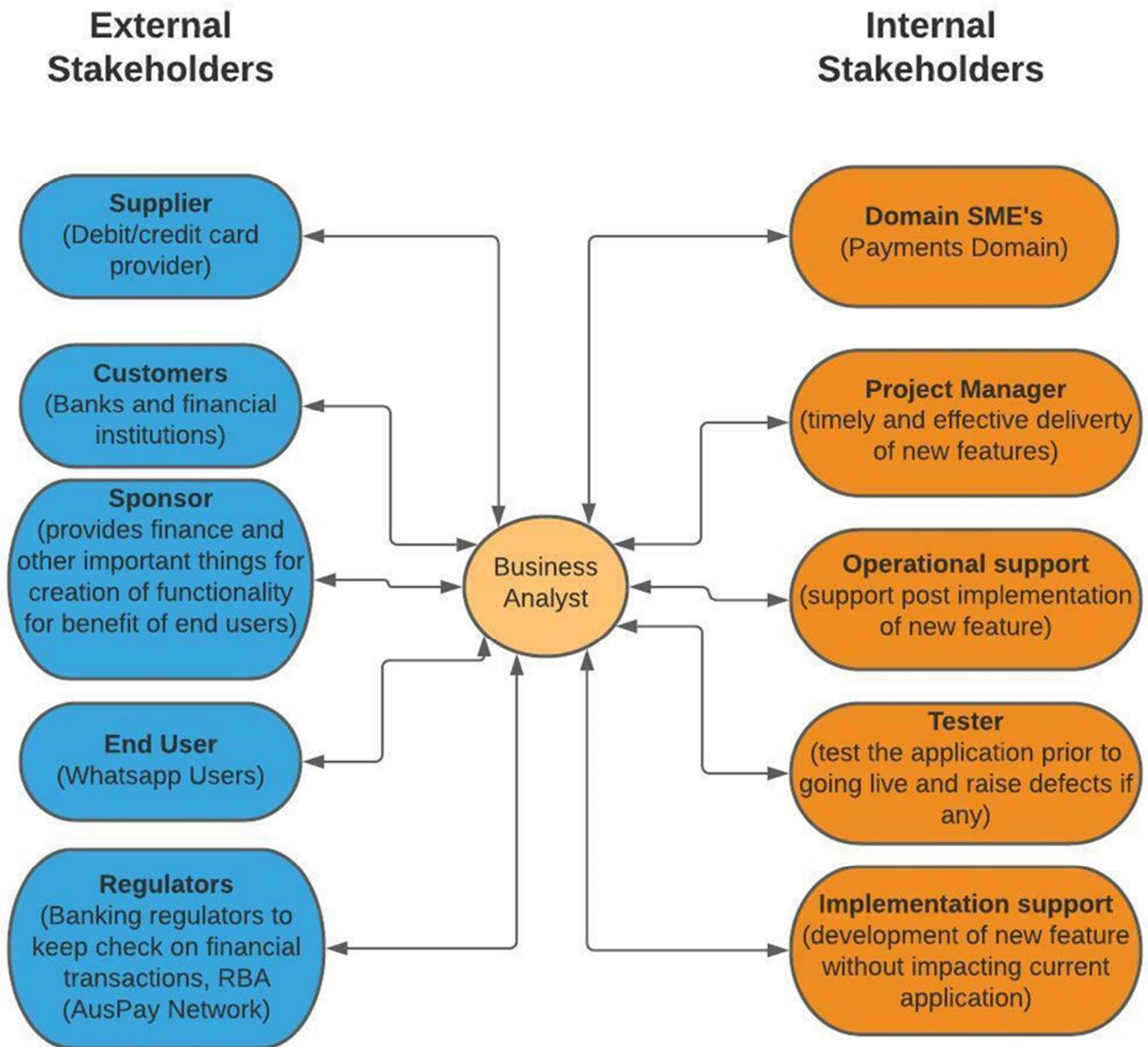


Fig3 Internal and External Stakeholders

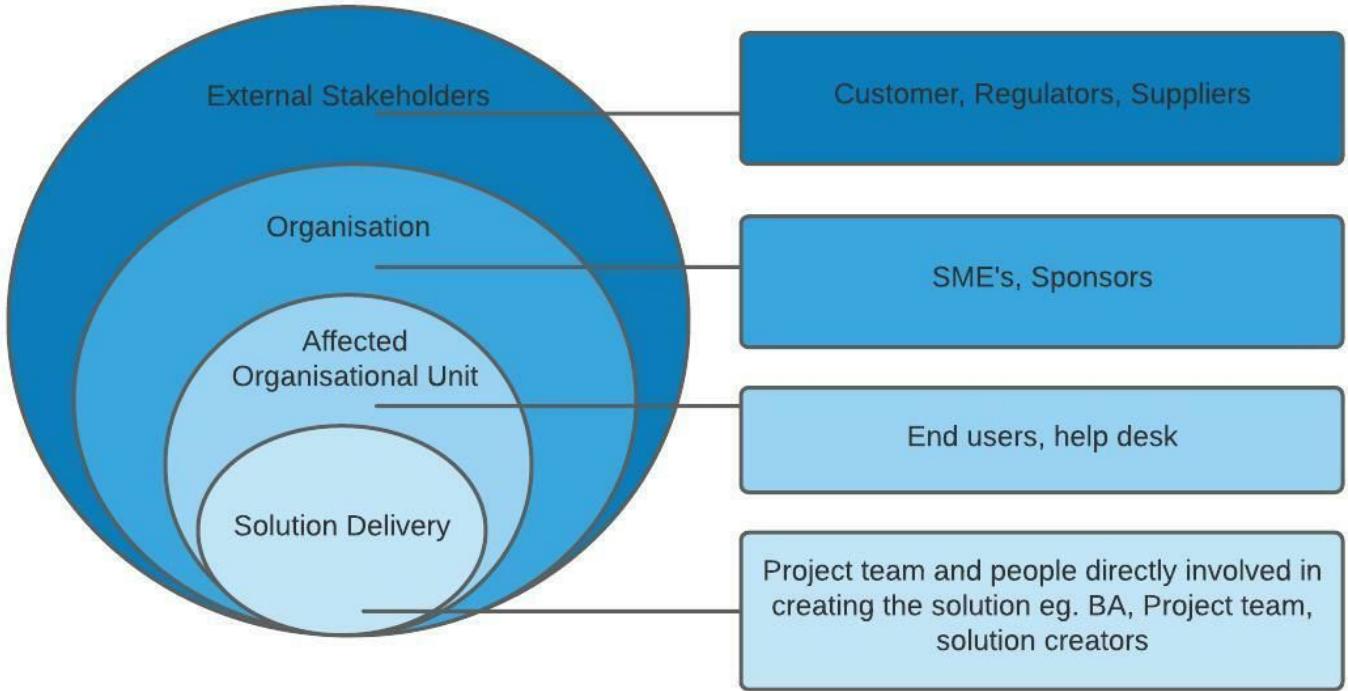


Fig4 Stakeholder Onion Diagram

12) Strategy Analysis

	Input	Task	Output
Analyze Current State	<ul style="list-style-type: none"> • Need • Confirmed Elicitation Results 	<u>Examine Current State</u> <ul style="list-style-type: none"> • WhatsApp wants to offer e-payments functionality to users. • Understand the current functionality as-is and processes and structure • 	<ul style="list-style-type: none"> • Current state description • Business requirements
Define Future State	Business requirements	<u>Define Future State</u> <ul style="list-style-type: none"> • Provide context within which work needs to be completed in-scope & out-of-scope 	<ul style="list-style-type: none"> • Business Objective • Future state description • Potential value

		<ul style="list-style-type: none"> • Define Benchmarks and metrics that defines if Future State has been achieved. • Organizational goals, stakeholders' roles and responsibilities. 	
Assess Risk	<ul style="list-style-type: none"> • Business Objectives • Confirmed Elicitation Results • Influence (internal & External) • Potential Value • Prioritized requirements 	<u>Assess Risk</u> <ul style="list-style-type: none"> • Secure Payments • Data Localization – protect customer data • Existing functionality runs smoothly and not impacted banks, payment gateways & UPI (NCPI) support as well as secure and flawless integration 	<ul style="list-style-type: none"> • Risk Analysis results
Define Change strategy	<ul style="list-style-type: none"> • Current state description • Future state decryption • Risk Analysis results • Stakeholder engagement approach 	<u>Define Change strategy</u> <ul style="list-style-type: none"> • Assess and develop alternative approaches and select most recommended approach • Gap Analysis based on historical data • Financial analysis & calculate value realization cost benefit analysis 	<ul style="list-style-type: none"> • Change strategy • Solution scope

13) Transition state of WhatsApp Pay

A state model describes the following:

- i) A set of potential states for an entity.
- ii) The order of states that the entity can be in.
- iii) How an entity changes from one state to another.
- iv) The events and conditions that cause the entity to change states.
- v) The actions that can or must be taken by the entity in each state as it goes through its life cycle.

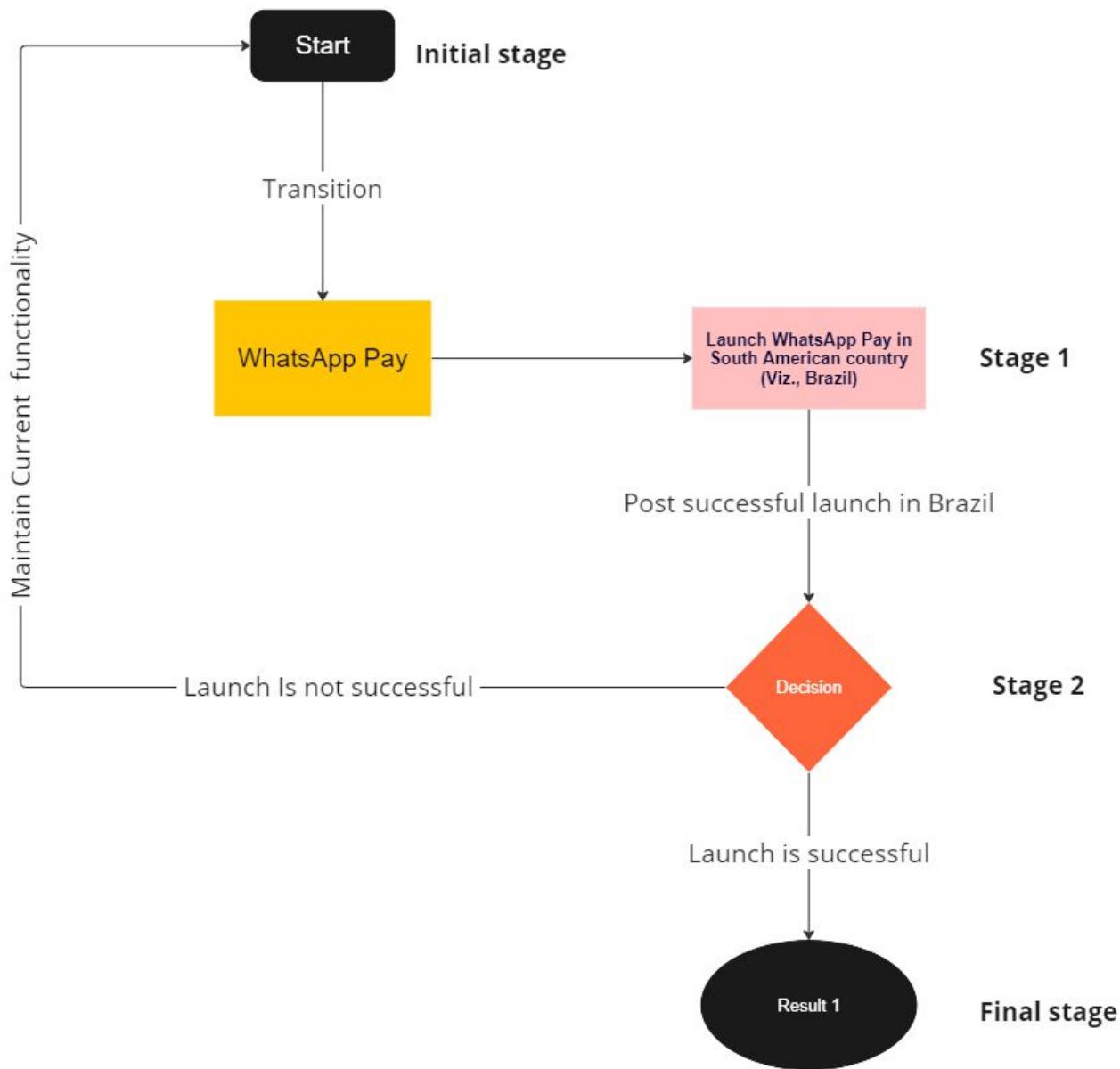


Fig5 Transition State for WhatsApp Pay

14) As -Is Process Map for WhatsApp Pay

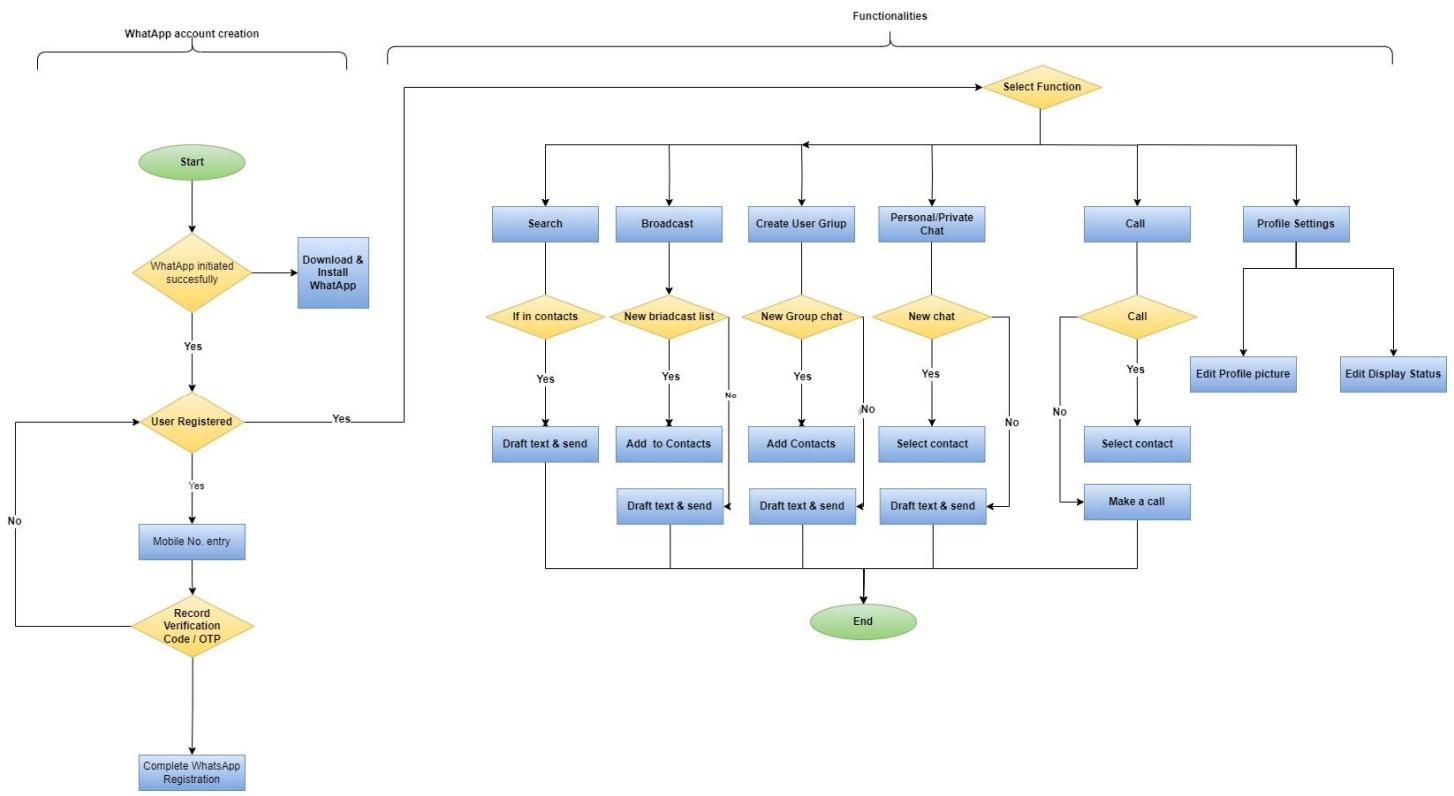


Fig7 As - is Process Map for WhatsApp Pay

15) Future Process Map for WhatsApp Pay

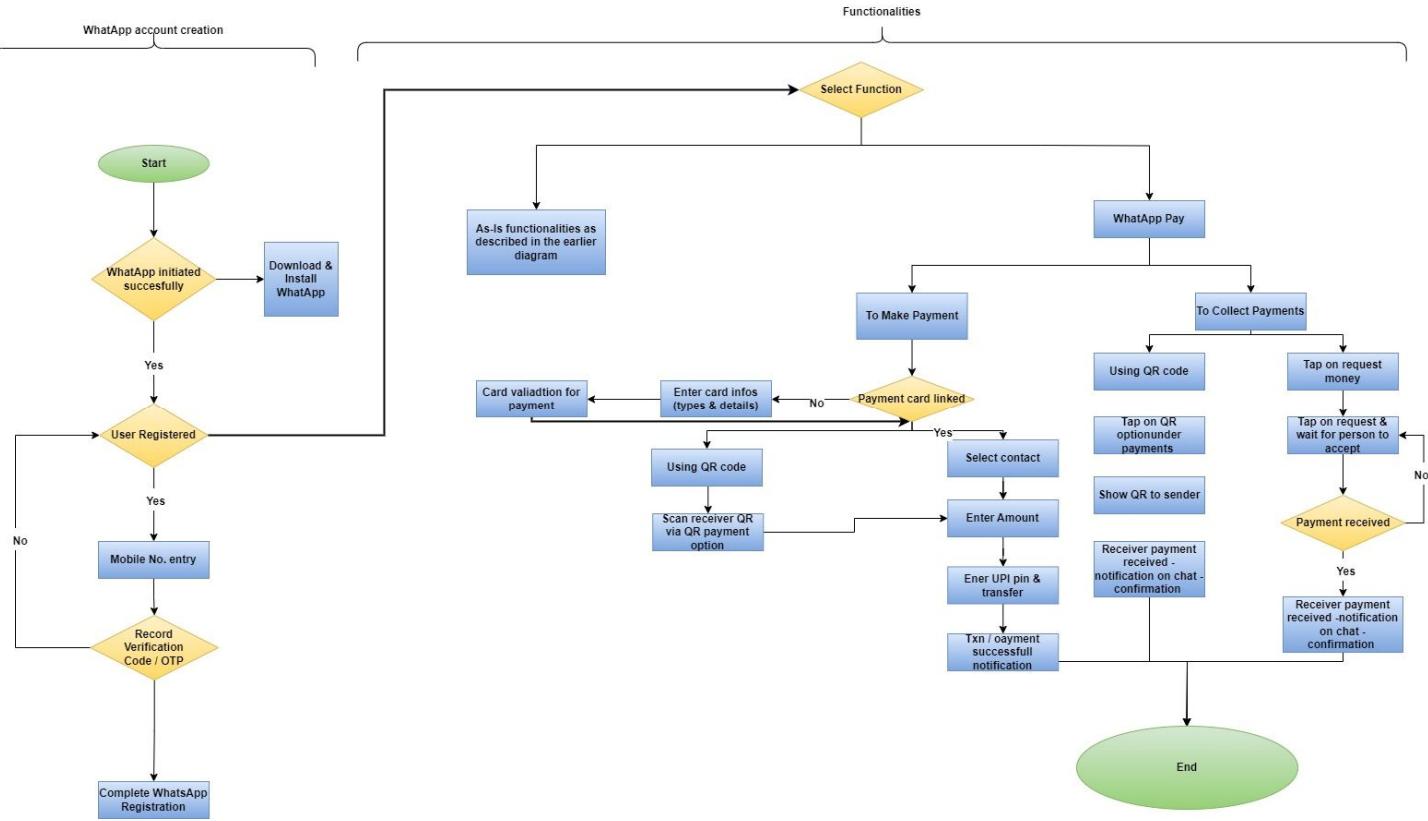


Fig8 Future Process Map for WhatsApp Pay

16) SCOPE using Use Case Diagram (UML) / Context diagram

WhatsApp Pay Context Diagram

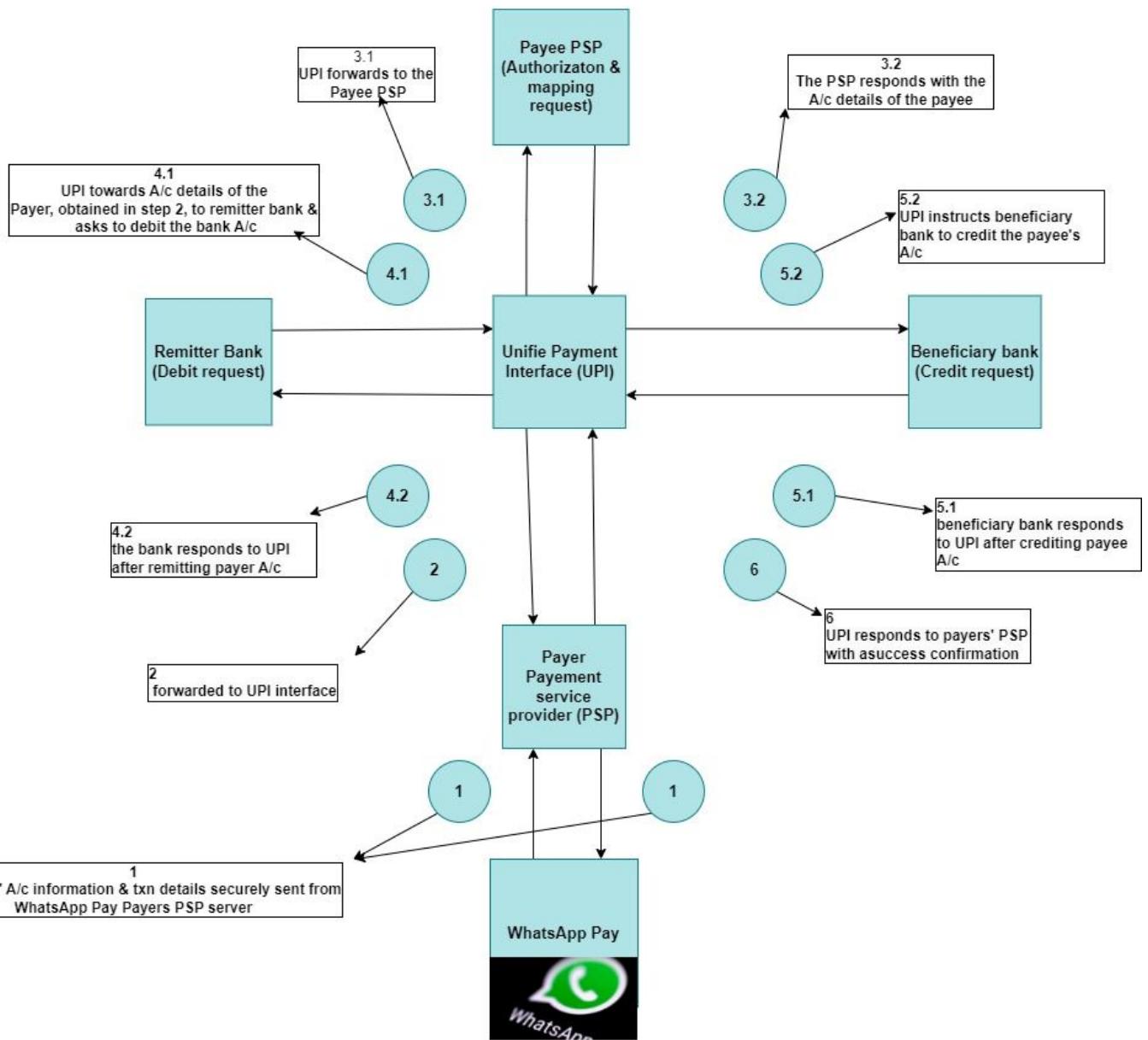


Fig9 Context Diagram for WhatsApp Pay

17) Main Features that need to be developed

- a) Easy peer to peer payments. User to be able to send money to their family, friends, or relatives all through WhatsApp.
- b) Users need not go to the bank or use wallets, bank apps, or NEFT to transfer money.
- c) It will be a one-click payment.
- d) QR code scan functionality also available to send and receive money via WhatsApp Pay.
- e) Easy and user-friendly interface of WhatsApp would make digital payments seamless and there will be no need to enter details at multiple page loads.

18) In- Scope and out-of-scope Requirements

In- Scope Requirements for WhatsApp Pay

1. Setting up

- 1.1. Adding bank account to WhatsApp Pay account
- 1.2. Link debit and Credit card

2. Authentication

- 2.1 Credential management for payments
- 2.2 Smooth and secure integration with banks, payment service providers, payment gateways.
- 2.3 Payments process should be in line with local regulators

3. Functionality

- 3.1 Payment send and receive using WhatsApp Pay to and from contacts.
- 3.2 Notification after payment sent/received
- 3.3 QR code option to send/receive money
- 3.4 Transaction history should be visible and stored

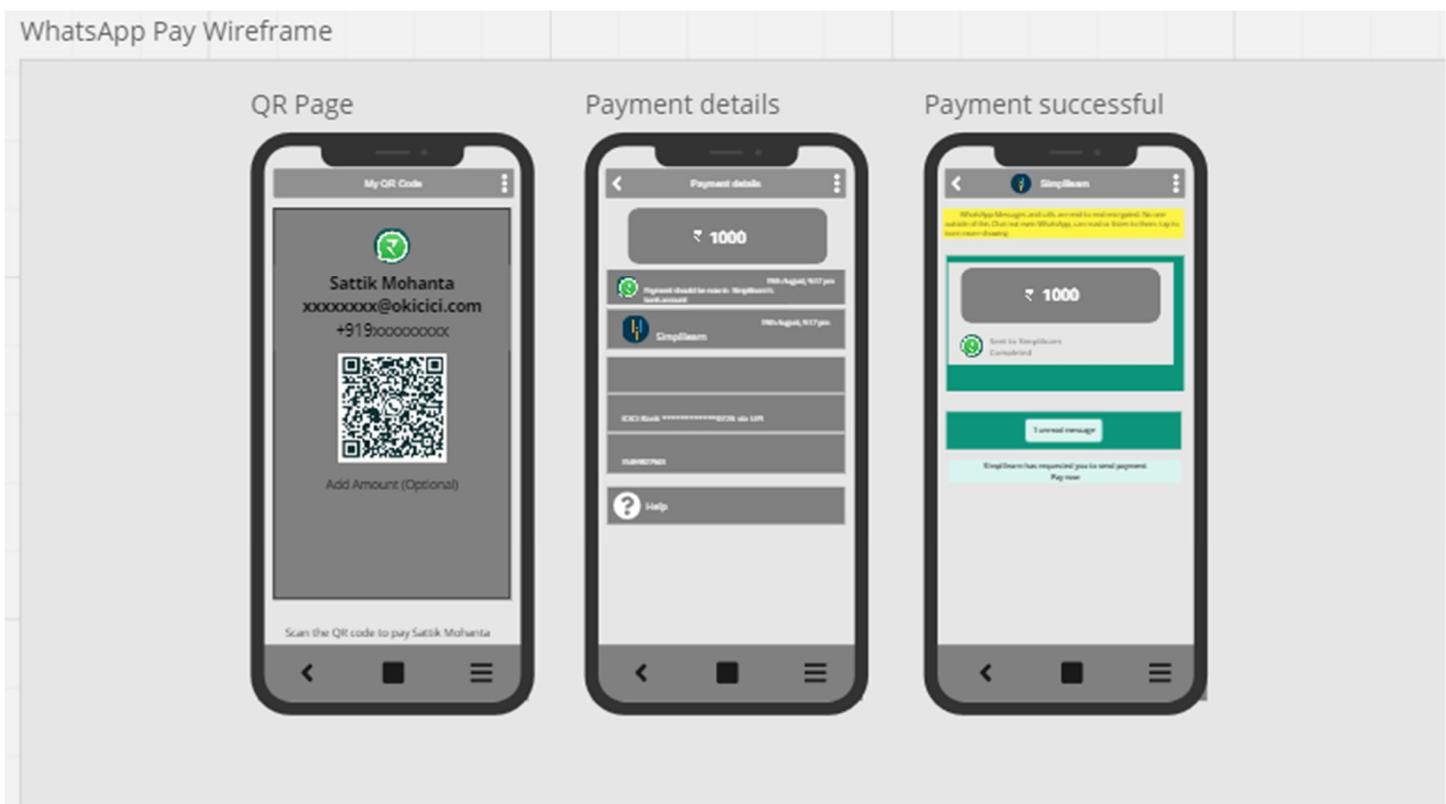
4. Usability and Scalability

- 4.1 System should be scalable to rest of the world after testing in one geographical area
- 4.2 Available in multiple languages
- 4.3 Should be easy to use

Out-of-scope Requirements for WhatsApp Pay

- 1. Users who do not have WhatsApp account will not be able to use the App.
- 2. Users need to setup bank accounts, else will not be able to use the feature
- 3. No e-commerce feature available
- 4. Any future interface is out of scope.

19) Screen Wireframes



20) Business Requirements (Functional & Non-Functional)

a) Functional Requirements:

- i) Under the Settings menu, the user may access the Payment Account Details submenu.
- ii) The user can examine their debit or credit card data in Payment Account Details if they have already been uploaded to the system.
- iii) If a user wishes, they can erase their credit card information.
- iv) To add new card information, click add and fill out the form with the account holder's name, account number, IFSC code, and card validity term.
- v) The user's information would then be transferred to the bank's system, confirming and authenticating the user's card information.
- vi) After obtaining authentication, the user card will be then linked to the user's WhatsApp account.
- vii) Only users with at least one legitimate card connected to their WhatsApp account can make digital payments. Furthermore, the transfer is limited to the WhatsApp user's contacts.

b) Non-Functional Requirements:

- i) When introduced in an integrated fashion, the system should be expandable to accommodate more users.
- ii) The system must be safe - to maintain data security in transit and at rest, all transaction information should be end to end encrypted.
- iii) Regardless of the number of users, the system's performance should be within acceptable bounds.