# MRD: PICCSA

List all students who actively worked on this Assignment:

1. Name: Jingyi Li
2. Name: Aaradhy Sharma
3. Name: Sandeep Wishwala
4. Name: Khajan Joshi

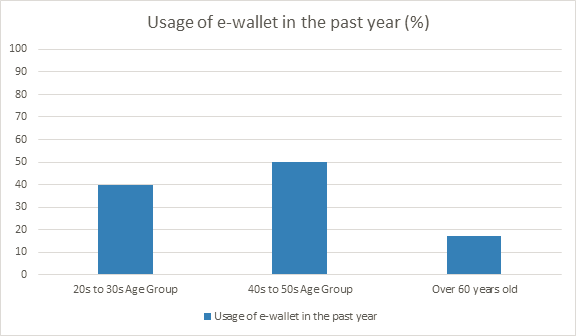
## Vision

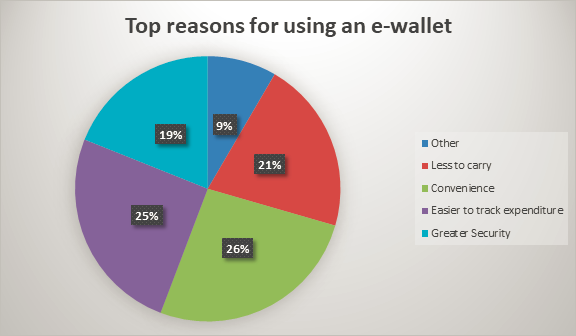
For credit card users in the US who must protect themselves from various credit card frauds, our product is a new e-wallet app that not only can connect with several credit cards, but also propose 2FA enforcement when payment is done to provide more security. Unlike Apple pay and Samsung pay, we offer a more multi-device, multi-OS friendly and more secured approach that would satisfy daily users.

## Motivation

### Customer Segments

A survey found that about 110 million people in the USA have used a digital wallet at some point in their lives. This shows an increase in e-wallet popularity. That figure is 3.5 million more people than in a couple of years back, people who used an e-wallet. Over 80 million people in the USA say they use digital wallets because it is a more convenient method than carrying cash or credit cards. 50% of people in their 40s and 50s use digital wallets regularly. 40% of people in their 20s and 30s say they’ve used a digital wallet in the past year, and also 17% of people over 60.





Presently speaking, we have three customer segments as below.

* International students that come to US
* H1B and OPT holders
* Average Americans

International students that come to US would be our primary target segment. When arriving in US, they usually get a new credit card for shopping and paying tuition. Cultural difference and being unfamiliar with paying process of the new card would not only slow down the payment but also make the international students become easy targets of credit card frauds. So, at first we are aiming to make the international students who just came to US our early adopters, then the adapted international students would eventually push the use of our product to all H1B and OPT holders. After that, the adapted users would possibly recommend PISSCA to friends and coworkers, and eventually the use of our product would be pushed to average Americans.

Personas:

Sanjay is a forgetful person and always loses his things. He was at a shop buying some goods, when he forgot his wallet, keys and phone at the counter. He realized it only after few hours. When he went back to the store, he was unable to retrieve his items. He lost a lot of cash and also was a victim of credit card fraud. His phone could not be hacked into. Plus, he had PICCSA on his phone, which had its own layer of security. After few weeks, his phone was located with the help of the authorities. He realized that day how dangerous it is, to keep cash and a credit card. Using only a mobile phone, the PICCSA app seemed to be the easiest and safest way for him to transact.

Rajeev is a small business owner he get his transaction in cards and cash recently he included the option of accepting PICCSA in his shop with more people using e wallet the time taken for transaction is greatly reduced plus que of line of people is reduced too, furthermore the amount of fraud he get on monthly basis is also reduced as PICCSA app is comparatively safer. Furthermore, having less cash in store also means the chance of store being robbed is reduced as well

Patti is an office lady that lives in downtown, she has several credit cards from different banks for credit cards have great rewards and point programs. As a result, she always has a difficult time managing her cards and there are one or two cards she never used after registering. But the situation changed after she started using PICCSA. She is able to manage all her cards on her phone in a single app. Furthermore, she is facing less fraud than ever for the 2FA enforcement of PICCSA provide a more trustworthy security protection.

### Unmet Needs

**Platform Independence: -** Current players in the market like Samsung Pay and Apple Pay are two major competitors and they don’t have platform independence as they won’t work on opposite platforms that is iOS only for Apple Pay and Samsung devices only for Samsung Pay.

**US Availability: -** Many popular e-wallets such as Paytm, Phone Pay, are platform independent and have 2FA but are not available in USA. Though Paytm has started its app in Canada where it has also found success, but currently they have not captured the US market, compared to Apple Pay and Samsung Pay.

**Use of push notification feature: -** Many existing solutions and implementing online transactions using feature such as OTP and TOTP but don’t use push notification feature which is used by Google and Duo.

### Existing Solutions

**Use of apps like Samsung Pay and Apple Pay:** US customers can currently use Apple Pay or Samsung Pay to make mobile payments. But it is inefficient since they only work for iOS or android plus Apple Pay requires its own card.

**Use of Cash:-** This can be argued to be worse than using card, but in recent years digital fraud and card has increased much more than cash fraud, as a person must physically steal you cash whereas in digital person can steal your money without being present furthermore cash carried in hand is generally lower than amount person can use via stolen card. Using cash ha other drawbacks such as there are no credit points returns as compare to credit card and wallet

**Apply for refund after fraud:** customer can apply for refund whenever a fraud occurred though most of the time money is refunded but the process takes a long time. And is a hassle for customer.

### Differentiation

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| --- | --- | --- |
| **Competition** | **Limitations** | **PICCSA Solution** |
| Apple Pay | Can be used only on Apple Devices | No device limitation. Our product will be available across all platforms and all major operating systems |
| Android Pay | Can be used only on NFC enabled Android devices | No device limitation. Our product will be available across all platforms and all major operating systems |
| Samsung Pay | Can be used only on compatible Samsung devices | No device limitation. Our product will be available across all platforms and all major operating systems |
| Paytm | Only Available in India | Will be available in the USA |
| Venmo | Can only be used for mobile payments transfers between peers | Our product will not only have payment transfers, but also retail payments |
| Zelle | Can only be used for mobile payments transfers between peers | Our product will not only have payment transfers, but also retail payments |

Our proposed product has an initial market segment of a small group that only includes international student and H1B holders. We can have integration with University so managing reward points is comparatively easy as compared to other products. We can have reward for university online books or university canteen.

Unlike other products mention here PICCSA tries to manage both security and comfort, user can have capping system on amount for example user can only have 2FA security on card if it is used for transaction above a certain threshold like say 100$.

Another strategy that can be used is number of transactions that the user did, user can add cap on card that if number of transactions say above 5 then he will get a prompt.

### Why Now?

**E-Commerce growth**: People prefer to shop online, and they choose using mobile wallets, which for them is an easier option than cash, and card transactions. Many online merchants have also started providing incentives to customers who use e-wallets as their payment method.

**Increasing need for convenience**: In many industries, such as food, consumers are looking for convenient options and e-wallets provide that. Easy to use, especially with money transfers and bill payment services are an attraction for younger people.

**Increase in crime rate:** Due to current Pandemic there is a risk of increase of potential fraud furthermore if we consider given data the amount of credit card fraud is increasing every year. This require a system which is potentially safer.

**Contact less payment: -** In the current pandemic world, using of e wallet and cards prevents infections as it has less contact between consumer and vendor as compared to cash payment.

## Use Cases

Use Case 1: Careless person

Chang is a 23-year-old hardworking busy student who can only shop online due to time constraints. He has very little time to withdraw cash and then purchase goods. He never preferred carrying a credit card as he fears he will be a victim of identity theft. He prefers using just his phone for all his tasks. He has been using e-wallets but always found some or the other limitation due to his device type. He was introduced to PICCSA and he now thinks it is the best solution. He downloaded the app and input his name, contact details and login credentials. He then integrated his credit card with PICCSA and setup 2FA in no time. Now, he only uses PICCSA as he knows it is highly secure, quick and very convenient to use.

Use Case 2: Card theft

Aditi Sharma is a FIU student who had her purse stolen which contains her forex card and the culprit did a fraud of around 200$. Although her money was insured but to get her money back, she has to go through a hassle by contacting her loan providing company back at her hometown and other hectic processes such as sending transaction history in the which fraud had occurred. The refund happened in around 6 months. If she would be rather using PICCSA app, the fraud would not have occurred as our app require 2FA.

Use Case 3: Working lady

Courtney is a 45-year-old working class lady and has recently resigned from her job. So, she decided to travel around the country to fresh up. During several paying process, she found that finding her purse from her backpack then grab her needed card from her purse is quite annoying for her having a rather short temper. Knowing her problem, Courtney’s daughter suggested her to try PISSCA. With her daughter’s help, Courtney connected all her credit cards with PISSCA and setup 2FA to protect her account. After that, she can use her credit cards with her phone and don’t have to slow down the payment and struggle finding her cards anymore.

## Market Size

There is an increase in time spent on smartphones by US consumers and that has led to an increase in mobile payments. Credit card is still the most commonly used payment method in the USA but the mobile payments usage has been steadily growing since the last two years. Mobile payments are increasingly being used by U.S. consumers as they are getting more familiar with the technology. Players in this industry have been collaborating with various end markets and offer incentives to customers when they use an e-wallet.

This market is deemed to grow due to a collection of reasons such as, consumer acceptance, technology infrastructure and the inherent quality of users in the 20s to 40s age group, who have grown with the exposure to technology (called digital natives).

It is estimated that by 2026, digital natives will be 60% of the consumers in the American market, constituting the largest buying power. In 2013, less than 50% of all teenagers had a smartphone. In 2020, that figure has jumped to over 80%. As this age group is becoming the largest generational group, their buying power alone will be in the hundreds of billions of Dollars range, and as digital natives, they are the perfect group to use e-wallets than previous generations.

Mobile payments are estimated to be over $1 trillion in volume in 2023.

US e-wallet use is expected to rise from an estimated $662.3 billion in 2019 to an estimated $1.33 trillion in 2023. The growth is significant as the market size was only $12.8 billion in 2012.

## Caveats / Risks / Key Dependencies

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| --- | --- | --- |
| **Risks** | **Description** | **Risk Mitigation** |
| Regulatory Risk | -Non-compliance to Federal Reserve Bank’s regulations /directions  - Foreign Exchange non-compliances | Making sure all regulations are followed with full compliance |
| Fraud Risk | - Unauthorized transactions  - Siphoning of funds  - Cyber frauds  - Accounting Frauds | Developing a highly secure infrastructure for our products backend systems |
| Third Party Risk | - Selection of inappropriate vendors  - Non-compliances / control gaps in vendor managed processes  - IT failures at Vendors | Preparing foolproof contract documents when agreeing with vendors |
| Revenue Leakage | - Unbilled / under billing of Fees, Commission, Delivery charges, etc.  - Unreconciled balances with third parties | Preparing foolproof contract documents when agreeing with vendors |
| Information Technology Risk | - Platform / Application Design & Operations  - Network & Infrastructure Security  - Data Governance, Integrity and Security  - Data Privacy | Developing a highly secure infrastructure for our products backend systems  With server redundancy |
| Strategic Risk | - Flawed Business Planning  - Failure of tie-ups / alliances | Prioritizing the focus on planning process |

**Customer Risk Management**

In case of identity theft, PICCSA will have an email ID where a user can mail with registered email ID to get their app blocked. They can also call an automated number. When after entering a pin via phone, the app can be blocked the user can directly get their card block too.

## Strategic Considerations

Our current approach of the e-wallet perfectly aligns with our future goal where the user can pay directly from either phone, card or fingerprint, and has 2FA. We consider our product will get centralized in future for all US citizens so that having rewards on their credit points on their transaction becomes easy.

Furthermore, merchants can add QR code scanner in their shop, and ultrasound machine that takes payment through audio from phone. Our plan is to create a Unified Payment Interference like system which includes cards and provide security to credit and debit cards.

## Team Members

**Team Member 1:**

**Name -** Jingyi Li

**Contact details -** li.jingyi2@northeastern.edu

**Responsibilities -** PM and UX Designer

**Team Member 2:**

**Name -** Sandeep Wishwala

**Contact details -** wishwala.s@northeastern.edu

**Responsibilities -** Sales and Marketing

**Team Member 3:**

**Name -** Aaradhy Sharma

**Contact details -** sharma.aara@northeastern.edu

**Responsibilities -** Engineering

**Team Member 4:**

**Name -** Khajan Joshi

**Contact details -** joshi.kh@northeastern.edu

**Responsibilities -** Business Development

## Go/No Go Recommendation

Based on current Market trends with increase in ecommerce and online shopping and potential increase in credit card frauds due to current scenario and in general increase in credit card fraud over the years our team would recommend this product.

# \* Note: We have addressed the comments from the Professor in Office Hour (dated 5th August 2020), that a 2FA infrastructure implementation requires large corporations and banks, not start-ups. We have modified our product vision towards an e-wallet startup, like Paytm in India which started as a small startup. We are proposing 2FA enforcement when payment is done using our app (providing more security) \*