

## Bank App Transformation

**GROUP 2** 

Megan Chu

Marcus Chan

**Arvind Subramanian** 

### Scope

- Problem Statement
- Personas
- Sketch and Decide
  - Expense Tracking
  - NFC Payment
  - Kids' Wallet
- More Features

# Enhancing PayLah! to make POSB an Everyday Bank

**Problem Statement** 

### Personas

Stude	nt (in)	Fresh Grad	





Mid Career



Gen Y & Above Age

Age Group

Spending

**Power** 

**Platforms** 

Key

Concerns

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Age Group **Spending** 

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Age Group

Group **Spending** 

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**Power Family** 

Spending **Power Family** 

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**Power Family** 

**Family** 

Debit Card)

-Instant Cash Transfer

-Conversion to Cash

-Speed

-Acceptance

-Transport Use

**Expenses** 

**Platforms** 

Key

Concerns

-Speed

-Acceptance

-Transport Use

**Platforms** 

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**Concerns** 

Google/Apple Pay

-Instant Cash Transfer

-Rewards on Spending

-Expense Monitoring

-Transport & Bills Use

-Speed

-Acceptance

**Expenses** 

**Platforms** 

Key

**Concerns** 

Groceries, Utilities, Entertainment, Food

Card)

-Conversion to Cash

-Rewards on Spending

-Expense Monitoring

-Transport & Bills Use

-Speed

-Security

-Acceptance

Food, Transport, Food, Transport, Mortgage, Kids, **Expenses Expenses** Travel, Shopping Groceries, Car, Utilities Shopping Limited Extensive Extensive Limited **Cashless Cashless Cashless** Cashless (PayNow/Lah, Cred C, (PayNow/Lah, Cred C, (NETS, Credit/Debit (PayNow/Lah, NETS,

Google/Apple Pay

-Instant Cash Transfer

-Rewards on Spending

### Sketch and Decide

Expense Monitoring and Control	Multi-Currency Wallet for Global Usage	NFC Payment Functionality	Wallet-to-Cash Conversion at Convenient Locations  ★★★
Common Rewards System with GrabPay/Favepay	Link Wallet to Credit Card instead of Bank Account	Access & Pay for Govt Services / Utilities using SingPass	Auto-Billing Feature
Vehicle IU Top-Up  ★★★	<b>Kids' Wallet</b> ★★★	Customizable PayLah Dashboard ★★★	

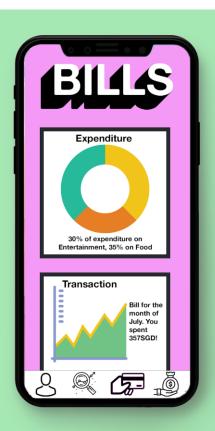
# Expense Tracking

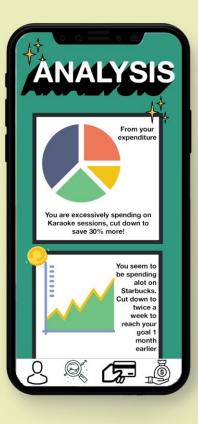
### Customer Journey 1 – Expense Tracking

Activity Phase	Curious about spending	Manual calculation	Manual categorisation	Analyse spending habits	Find ways to reduce spending
Customer Actions	Log into PayLah Click on the history tab of PayLah!	User has to manually calculate how much they have spent this month	User has to manually categorise (e.g. shopping, transport etc.) their spending per month.	User has to analyse their spending habits on their own.	Based on their own analysis, user looks up on how to reduce their spending on their top spending last month.
Touchpoints	PayLah app login.	PayLah app transaction history.	PayLah app transaction history.	PayLah app transaction history.	PayLah app transaction history.
Thoughts	How do I find the breakdown of my spending?	This is difficult AND tedious	I'm so tired. Isn't there an easier way to do this??	I'm getting confused (from the tasks I've done). Did I get the right result??	Wow I'm poor. How can I reduce my spending?
Emotions	+				Provide tips for the user
Backend Processes	Create a feature that allows the user to see their spending habits	Allow user to see the breakdown of their spending per month (and provide them some data on their spending behaviours)	Automatic categorisation of spending.	Provide user spending analytics.	on how they can reduce overspending (offer them rebates on their top spending categories - if partnered with Grab/Fave).

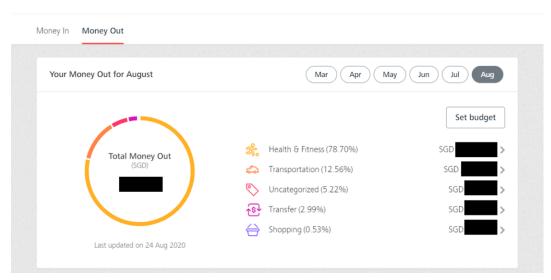
- -Setting monetary goals
- -Break down and categorise spending information
- -In-depth analysis of monthly spending (e.g. spending average on shopping)
- -Suggestions for reaching monetary goals (e.g. recommend shopping venues that provide rebates)







### Expense Tracker



Financial statement breakdown on DBS website

### **Cost-Benefit Analysis**

### Pros

- Automated finance tracking
- Better user experience
  - Highly requested feature
- Potential for future profit
  - Could partner with merchants

### Cons

• Data security concerns

### Feasibility: High

Simple and cheap to implement due to existing tech

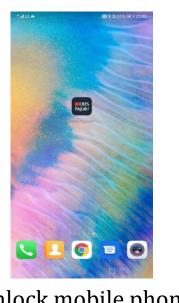
### Return on Investment: Low

Not a prominent feature that would make many users switch over to PayLah!

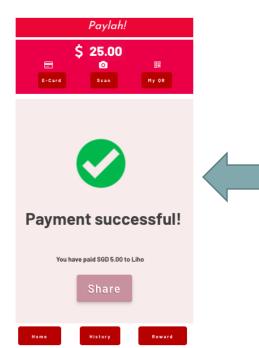
# NFC Payments

### Customer Journey 2 – Buying Bubble Tea @ Liho

Activity Phase	Select Drink at Liho	Choose payment methods	Enter payment details	Confirm Payment	Verify Payment
Customer Actions	Select drink from menu	Ask merchant about what payment options are available	Unlock phone, open Paylah app, login using fingerprint, scan QR code, check and enter amount in Paylah.	Double check the payment and merchant details, confirm payment	Payment is processed, show it to the merchant, Paylah user receive receipt from Paylah
Touchpoints	Discount	Payment methods offered by Merchant	Visibility and accessibility of Paylah App	Payment details show on Paylah	Notification
Thoughts	Can i get discount using Paylah app?	Paywave, Cash or Paylah? Hmm, too lazy to open my wallet, Paylah is more convenient.	I got too many apps in my phone, Where is Paylah? Why so many steps to make a payment? How long	Have I entered the amount correctly? Let's check one more time?	Great, the payment is made. I can enjoy my food now.
Emotions			should I wait, I am so thirsty now.		
Backend Processes	More discount on food	Promote Paylah to all merchants around Singapore	Reduce steps to make payment		



Unlock mobile phone



View payment confirmation



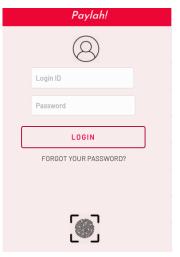
Click PayLah! app

Place mobile phone

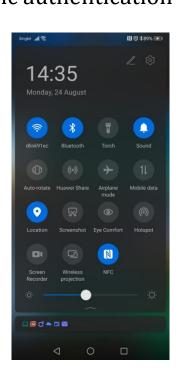
reader for payment

close to the NFC

<u>View Demo</u>



Sign-In using either password or biometric authentication



Activate NFC if required



Go to E-Card to make payment



E-Card displayed on app

### NFC Payments

### **Description**

- Link Paylah E-wallet to a virtual card and enable NFC cashless payment
- Taps into Visa/Mastercard network to achieve widespread merchant adoption
- Tap into Credit/Debit card account opening for instant Paylah Wallet E-card creation

### **Cost-Benefit Analysis**

### **Pros**

- Fast
  - Speed up payment
- Better user experience
  - Increases activity amongst existing users
- Building Block
  - For other use case like expense tracking feature
- Profitable
  - Good source of revenue

### <u>Cons</u>

- Potential Security Risk
  - Temporary switch on NFC function

<u>Feasibility</u>: High (simple and cheap to implement)

Return on Investment: High Offers a use case which is in high demand by users.

## Kids' Wallet

### Customer Journey 3 – Lunchtime at School

#### Ensure cash Check PayLah! Find and walk to Return to school **Operate ATM Activity Phase** availability balance nearest ATM with cash -Search bank's website -Retrieve ATM card and -Check wallet: No \$\$! -Open PayLah! Customer -Insert ATM card. (forgot to take cash from Insufficient \$ in wallet. for the nearest ATM. It is cash from ATM. -Kev in PIN number. parents this morning!) -Call parents to request at the 7/11 near school. -Rush back to school. Actions -Select cash amount. -Buy and consume lunch. -Check cashless options. top-up. No response. -Walk to ATM. Cashless Payment using PayLah! Wallet Top-Up Bank Website on ATM **Touchpoints** Bank ATM Cash Payment PayLah! Methods via App Locations It's OK, I can still pay I can't top-up by myself! Wow, good thing I I have so little time left I only have an hour for using PavLah! at my I wish my allowance was remembered the PIN for to eat! Need to wolf this **Thoughts** lunch. This is going to canteen. Let me check if I automatically credited to this emergency ATM down. Hope I don't get a waste a lot of time! card that I seldom use! my PayLah! wallet! stomachache! have money in that! **Emotions** -Having support hotline Backend -Ensuring sufficient -Ensuring sufficient cash -Displaying of PayLah! in case of trouble with distribution of ATMs in each ATM to support wallet balance. ATM (e.g. forgotten PIN **Processes** around the island. demand for withdrawals. number).

### Kid's Wallet

### **Description**

- 'Kids' Wallet' linked to 'Parent Wallet'
- Automatic transfer from Parent Wallet to Kids' Wallet
  - Customizable cash amount and frequency
- All other top-up methods disabled for Kids' Wallet
- Kids' Wallet spending history/breakdown viewable by Parent Wallet

### **Cost-Benefit Analysis**

### Pros

- Convenience
  - No need for cash withdrawals to distribute allowance
- Security
  - No need for supplementary credit, debit or ATM cards
  - Money is safe even if belongings are lost
- Prudence
  - Monitor and control kids' spending habits

### Cons

- Need for Cash
  - Wallet-to-Cash Feature

<u>Feasibility</u>: High (simple and cheap to implement)

Return on Investment: High (unique use case that benefits a large segment of society)

### More Features

	Wallet-to-Cash Conversion	Customizable Dashboard	IU Top-Up / Payment
Description	Utilize ATMs and convenience stores In-app map available for guidance (like N26 in Europe)	Swap in/out icons and widgets on the PayLah! main page	Insufficient Value: NFC/QR-based top-up for vehicle IUs  Faulty IU/CashCard: Direct payment from phone via NFC
Pros	-Necessity of cash -Greater density -Less reliance on ATMs	-Eliminates the clutter issue -Customisations increase ownership	-Saves top-up time -Quick solution for faulty hardware
Cons	-Convenience stores may charge a fee -Temporary measure (phased out as we move towards a cashless society)		-Hardware compatibility -Relatively small market

## The End

Questions?

### Interview 1 – Student

Name: Kelly Age: 20

**Occupation**: Student **Marital Status**: Single

**Spending Power**: Low. Allowance only. **Top 5 Monthly Expense**: Food, Shopping,

Transportation

Cashless Platform Usage: PayLah, GrabPay,

Favepay, PayNow

### Yes to PayLah:

### How often do you use PayLah?

Everyday, pay for food (like bubble tea, liho, koi) - food courts have. I transfer funds to my friend via PayLah and my friend uses GrabPay to pay for food. I don't use Grab a lot because I can't get my money back after I top up my grab pay wallet.

### Do your friends use PayLah?

Yes, but they use GrabPay more - can redeem vouchers.

### What do you normally use PayLah for?

Food.

### What would you rate the app out of 10?

7/10

### What do you like about the app?

Easy, convenient to use and a lot of places accept PayLah. I wish I could use it at hawker centres. Sometimes it's inconvenient because I don't have cash and I can draw it.

### What do you dislike?

Keep topping up (seems like direct debit is not a well known feature in PayLah because she doesn't know she can enable direct debit). Hawker centres don't use PayLah (the problem is that hawkers find it hard to use tech), some people no bank account.

### What features do you wish the app had?

I'd like to add a point system like GrabPay or Favepay. Incorporate soCash into PayLah. Where I can draw cash from a convenience store like 7/11 or ATM (locations of nearby ATMs/banks/convenience stores to draw money - no apps do this). No need to use PayLah for transport because it seems redundant because I can use my bank card).

### Interview 2 – Student

Name: Marcus

**Age**: 24

**Occupation**: Student **Marital Status**: Single

**Spending Power**: Low. Allowance + part-time

work.

**Top 5 Monthly Expense**: Food, Shopping (Electronics/Video Games), Transportation **Cashless Platform Usage**: PayLah, GrabPay,

Favepay,

### Yes to PayLah:

### How often do you use PayLah?

I used to use it everyday while I was studying but during COVID, I don't use it. But I mainly use it to transfer money to friends/pay for food in uni.

### Do your friends use PayLah?

Yes, but they mainly use PayNow.

### What do you normally use PayLah for?

Food, Money transfer

### What would you rate the app out of 10?

9/10. Easy, convenient to use and fulfils all the requirements I have for a cashless payment app.

### What do you like about the app?

Easy to use and the main functionalities are self explanatory - icons are clear. It's the first cashless payment app I've used and stuck with it since - customer loyalty. I do not feel that the other apps provided any special benefits that would draw me to them. (Grab's point system is redundant to me due to my low spending power)

### What do you dislike?

It's useful until I go to places that don't accept it.

### What features do you wish the app had?

Allow me to use the app to pay/transfer money offline. Collaborate with other payment apps like Grab so I can pay people via PayLah to their Grab accounts.

For me, convenience is the most important thing. The app needs to be responsive at all times because of my reliance on it. So an offline feature would be good.

### Interview 3 – Fresh Grad

Name: Renny Guo

**Age**: 26

**Occupation**: Fresh Grad **Marital Status**: Single

**Spending Power**: 40% of monthly income **Top 5 Monthly Expense**: Foods, Travelling,

Rent, Shopping, Transportation Cashless Platform Usage: Paylah

### Yes to PayLah:

How often do you use PayLah?

Occasionally. Depends on what discounts Paylah offer.

Do your friends use PayLah?

Yes. Only 2 persons around me use Paylah.

What do you normally use PayLah for? Foods (like KFC & Koufu) and Income Tax.

What would you rate the app out of 10?

6.5/10

What do you like about the app?

Discount.

What do you dislike?

Paylah will be cast out from my phone soon. Too many steps to make payment using Paylah. My favorite now is Apple pay.

What features do you wish the app had?

Feature that can link Paylah E-wallet to apple pay, make payment process faster.

### Interview 4 – Fresh Grad

Name: Kathy

**Age**: 25

**Occupation**: Fresh Grad **Marital Status**: Single

**Spending Power**: 50% of monthly income **Top 5 Monthly Expense**: Foods, Travelling,

Rent, Shopping, Transportation

Cashless Platform Usage: PayNow

### No to PayLah:

### What do you not like about PayLah?

I don't have a DBS account, personally prefer Paynow more than Paylah.

### What platforms do your friends use?

Grabpay, Paynow and Paylah.

### What do you normally use the current platforms for?

Foods and split bills with friends. Some restaurants not accept cashless payments other than Paynow.

### What do you like about your current platforms?

Direct connect to my contact list, make my payment process faster.

### What do you dislike about your current platforms?

No negative comments. I love Paynow at the moment.

### What features do you wish the app had?

Expenses tracking feature, able to categorise my monthly expenses and produce a summary.

### What will make you make an immediate switch to PayLah?

If Paylah has more useful feature to help me save money. I wish to have global multicurrency transaction feature as well.

### Interview 5 - Mid Career

Name: Arvind

**Age**: 29

**Occupation**: Mid-Career **Marital Status**: Married

**Spending Power**: 70% of monthly income **Top 5 Monthly Expense**: Mortgage, Groceries,

Travelling, Utilities, Car

Cashless Platform Usage: PayNow, Credit Card,

**GIRO** 

### No to PayLah:

### What do you not like about PayLah?

I only needed the app for peer to peer fund transfers. PayNow was more convenient. There was no need to set-up a wallet, download a new app etc.

### What platforms do your friends use?

Most of my friends use PayNow.

### What do you normally use these platforms for?

PayNow for P2P money transfers & purchases at small stores which do not accept credit cards or charge an additional fee for it. Credit Cards for all other expenses and bills. SIs and GIRO for automating regular payments/transfers.

### What do you like about your current cashless platforms?

Credit Card - (PayWave / NFC functionality, Able to auto-charge for all my various bills which eliminates hassle, Additional layer of security if need to dispute any charges). SIs, GIRO – (Automate routine payments/transfers). PayNow - (Simple and effective, Embedded in mBanking App. No need for extra app.)

#### What do you dislike about your current platforms?

Need to log in and pay bills manually. Sometimes forget. GIRO can take a while to set-up. PayNow has no way to dispute charges.

#### What extra features do you wish your current platforms had?

Charge the PayNow transfers to your credit card so you can dispute them if need be. Able to top-up CashCard/Vehicle IU or pay directly at carpark gantries.

### What would make you switch to PayLah as your preferred banking app?

If all my desired features are combined into one app.

### Interview 6 - Mid Career

Name: Parvathi

**Age**: 30

**Occupation**: Mid-Career **Marital Status**: Married

**Spending Power**: 60% of monthly income **Top 5 Monthly Expense**: Mortgage, Groceries,

Insurance Policies, Food

Cashless Platform Usage: PayNow, Credit Card

### No to PayLah:

### Do you use PayLah or other cashless payment methods?

I don't use PayLah, only PayNow. I also use Credit Cards for general expenses.

### What do you not like about PayLah?

Having to set-up a separate wallet as I only needed the app for P2P transfers to my friends.

### What platforms do your friends use?

Most use PayNow for P2P transfers. A few also use Google Pay and Grab Pay for other payment needs.

### What do you normally use these platforms for?

PayNow for P2P money transfers. Credit Cards for all other expenses and bills. SIs for automating monthly transfers.

#### What do you like about your current platforms?

Credit Card – (PayWave, Rewards points/miles, Additional layer of security if need to dispute any charges). SIs - (Automates routine transfers). PayNow - (Simple and effective. Embedded in mBanking App. No need for extra app.)

### What do you dislike about your current platforms?

Need to log in and pay bills manually. Sometimes forget. PayNow has no way to dispute charges.

#### What extra features do you wish your current platforms had?

A kid's wallet which parents can top up fixed amounts into. Ability to use an electronic EZ-Link card for transport. A multi-currency wallet which would eliminate the need to travel with cash.

### What would make you switch to PayLah as your preferred banking app?

If it can combine all the existing features I use into one app.

### Interview 7 – Gen y & Above

Name: Subra

**Age**: 63

Occupation: Retiree
Marital Status: Married

Spending Power: 40% of 'income'

Top 5 Monthly Expense: Groceries, Medical,

Utilities, Food, Entertainment

Cashless Platform Usage: NETS, Credit Card

### No to PayLah:

Do you use PayLah or other cashless payment methods?

I only use credit card or NETS.

What do you not like about PayLah?

I have no use for P2P transfers or the other features in PayLah. Credit Card and NETS are good enough for my usual expenses. I also go to the market regularly where they only accept cash. 'Wallet' concept with direct link to bank account, can lose track of expenses.

What platforms do your friends use?

Only credit card and NETS as far as I know.

What do you normally use these platforms for?

Most general expenses – groceries, medical and utility bills. Online purchases (Lazada, Qoo10).

What do you like about your current platforms?

Credit Card - (No need to carry much cash around, Ability to dispute charges, Can use on most webpages and shops)

What do you dislike about your current platforms?

Need to log in and pay bills manually. Sometimes forget.

What extra features do you wish your current platforms had?

Methods to track and control spending habits. Integrate with national steps challenge for seniors to accrue rewards.

What would make you switch to PayLah as your preferred banking app?

Grocery stores / supermarkets accept it for payment.

### Interview 8 – Gen y & Above

Name: Lai Pheng

**Age**: 56

**Occupation**: Accountant **Marital Status**: Married

**Spending Power**: 30% of monthly income **Top 5 Monthly Expense**: Food, Groceries,

Shopping, Transportation

Cashless Platform Usage: PayLah, GrabPay,

Favepay

#### Yes to PayLah:

### How often do you use PayLah?

I use it often. But I use Favepay to pay - I get 2% rebate and grab points (because I link my GrabPay to Favepay)

### Do your friends use PayLah?

Everyone uses PayLah in my office.

### What do you normally use PayLah for?

I use to pay people through PayLah/transfer money.

### What would you rate the app out of 10?

7/10

### What do you like about the app?

Convenient, compared to GrabPay, it is better because money can't go back to my account in GrabPay (money is stuck in GrabPay). Not every shop has GrabPay but more shops seem to have PayLah.

### What do you dislike?

I don't dislike it but wish it had more features.

#### What features do you wish the app had?

Link to GrabPay or Favepay. So I can get rebates from Favepay and points from GrabPay. Favepay is better because Grab need to redeem voucher, Favepay allows me to get the rebates IMMEDIATELY for the next purchase. Wish that grocery places can pay via cashless apps BUT will use PayLah ONLY if they offer discounts because SAFRA/Supermarket cards offer discounts.

Card seems more convenient still because you can tap and go. I have to access the app to use PayLah.

To me, GrabPay and PayLah are the same. But I'll use whichever gives me rebates/perks. Discounts/Rebates is the most important.