Credit Card Defaults
DESIGN THINKING

Group 6 - Rose & Thorns

TEAM
MEMBERS

ROSE & THORNS

ESTD · 2023

SIX

Julian
DATA ANALYST

"Be yourself everyone is taken" - Oscar Wilde

Edwin
DATA ANALYST

"Do one thing every day that scares you" - Eleanor Roosevelt

Swee Kun
DATA SCIENTIST

"So many books, so little time" - Frank Zappa

Gordon
DATA ANALYST

"Time you enjoy wasting is not wasted time." - Marthe Troly-Curtin

Junia
DATA ANALYST

"Sometimes the questions are complicated and the answers are simple." - Dr.Seuss

Eugene
DATA ANALYST

"Life is like riding a bicycle. To keep your balance you must keep moving." - Albert Einstein

Yu Quan
DATA ANALYST

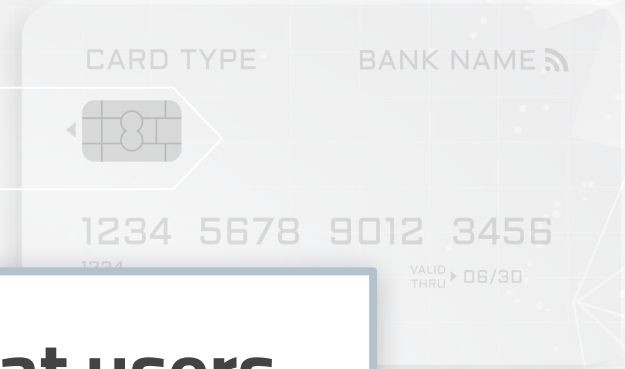"Everything you can imagine is real."

- Pablo Picasso

Soo Hian
DATA SCIENTIST

"Someday you will be old enough to start reading fairy tales again." - C.S. Lewis

PROBLEM STATEMENT

How might we **ensure that users pay their credit card bills on time** while **providing a positive customer experience?**

APPROACH

1. Data Analytics

Data Collection, interviews,

Data Exploration,

Modelling, Pattern identification

2. Design Thinking

Persona creation, Impact vs difficulty matrix,

Journey maps, Prototype

3. Stakeholders Management

Stakeholder management plan, RACI map

EXECUTIVE SUMMARY

Our solution

Targeted approach to manage **potential defaulters** earlier in our customer lifecycle with:
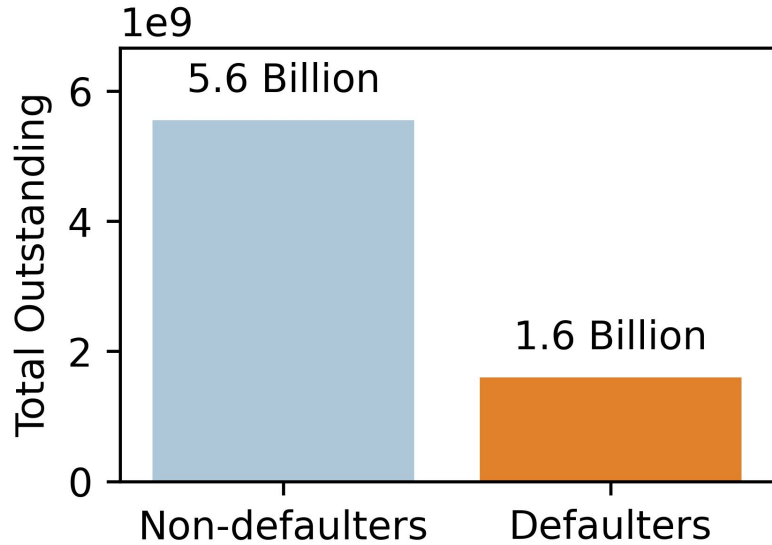
Click'N'Clear

an effective bill payment system
that helps users pay bills easily
and avoid late fees

CLICK'N'CLEAR
Simplify, Pay, and Relax!

Estimated: **2.2% reduction** in default outstanding balance

$156 Million per Year

DATA ANALYSIS

5.6 Billion
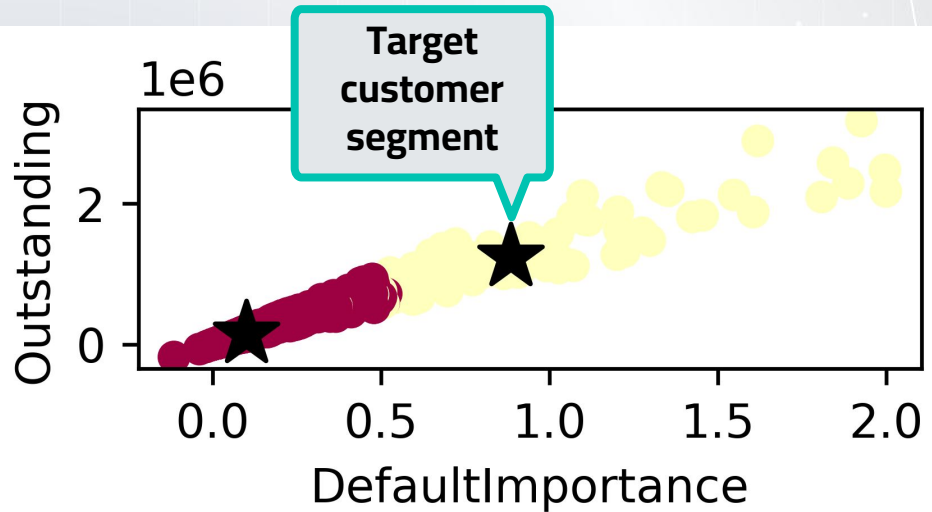
1.6 Billion

Non-defaulters   Defaulters

Total Outstanding

> 20% of outstanding balance is lost through defaulting
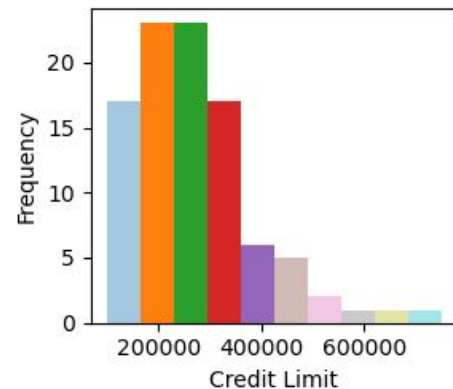
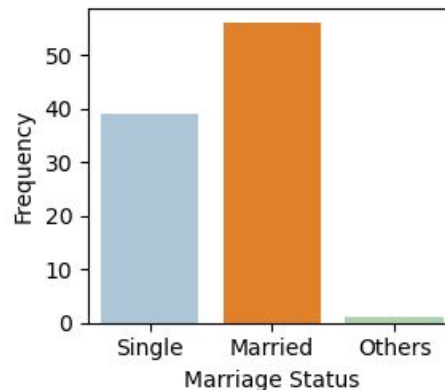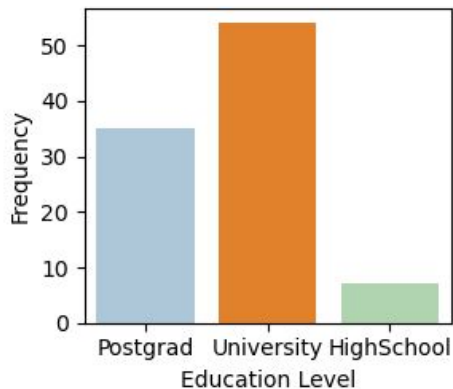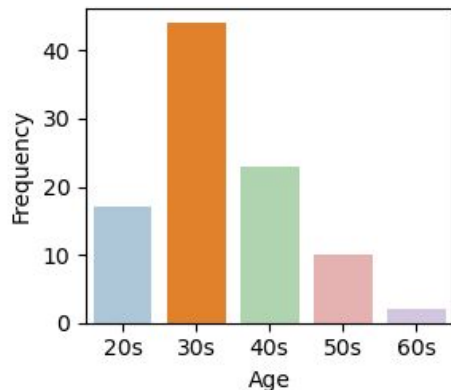**Model 1**: Default prediction of individual customers → default prevention

Model 2: Segmentation of defaulters

Target customer segment

Outstanding

DefaultImportance

*Default importance = probability of default * Outstanding Balance*

Model Results: Defaulters Demographics

- 30s
- University graduates
- Married
- **Good Credit Limit** (i.e. able to pay bills)

Customers with High Default Importance
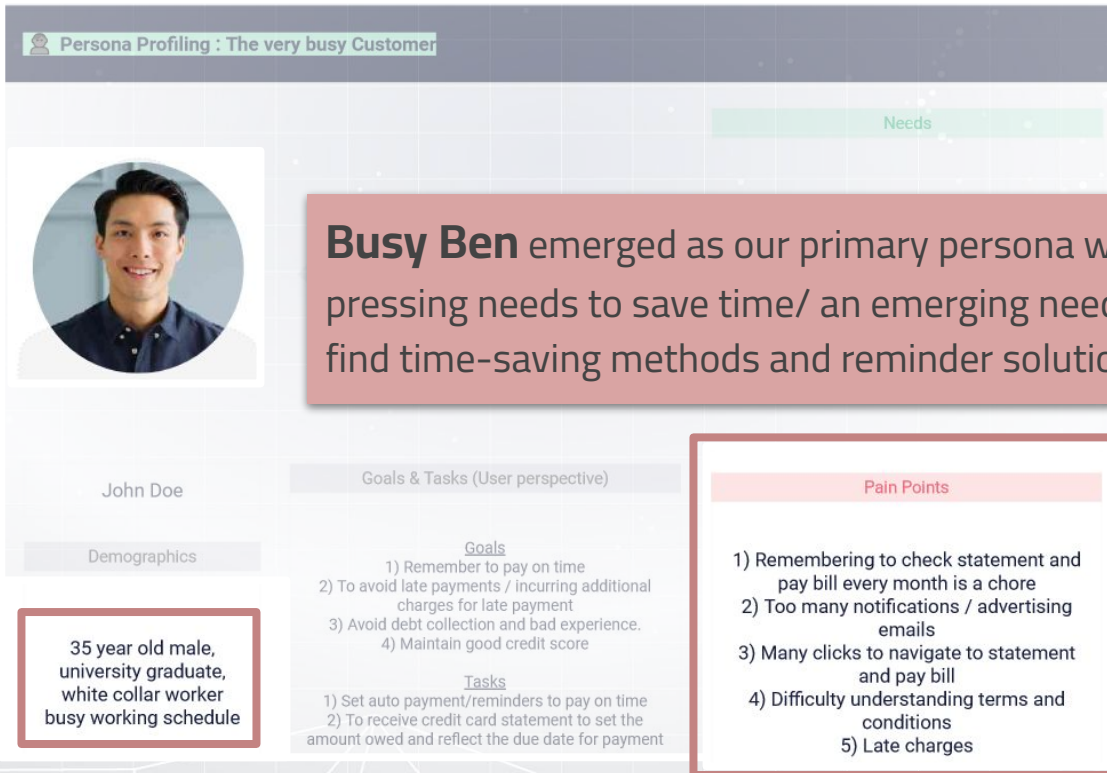
Key Insight: **Forgetting to pay bills**

Customers are able to pay for their credit card bills but simply forgot about it.

OUR **PERSONA**: BUSY BEN

Persona Profiling : The very busy Customer

Needs

Busy Ben emerged as our primary persona with pressing needs to save time/ an emerging need to find time-saving methods and reminder solutions

John Doe

Demographics

35 year old male, university graduate, white collar worker busy working schedule

Goals & Tasks (User perspective)

Goals
1) Remember to pay on time
2) To avoid late payments / incurring additional charges for late payment
3) Avoid debt collection and bad experience.
4) Maintain good credit score

Tasks
1) Set auto payment/reminders to pay on time
2) To receive credit card statement to set the amount owed and reflect the due date for payment

Pain Points

1) Remembering to check statement and pay bill every month is a chore
2) Too many notifications / advertising emails
3) Many clicks to navigate to statement and pay bill
4) Difficulty understanding terms and conditions
5) Late charges

BUSY BEN'S JOURNEY MAP

As-is Journey Map

Scenario: John is too busy with his schedule and had forgotten to pay for his credit card bill despite being financially able to pay it.

John Doe

Scenario

Forgot to make the payments due to busy schedules

Journey Phases	Phase 1: Expenditure	Phase 2: Billing, first notification of payment	Phase 3: Delinquency (First Missed Payment), Late Notice	Phase 4: Payment
Actions	John spends money using his credit card and can see the transaction on his mobile app and online banking portal	Receives notification about his credit card statement, he can open up the password-protected statement pdf or log into banking portal/app to view it. Unfortunately, he was busy and missed this or he viewed it and forgot to make a	Misses paying his previous credit card bill and receives notification of delinquency/late notice from the bank	login to online portal for bill payment. pays the bill

Seamless credit card usage during expenditure

Time to pay bills again

Missed bill payment from lack of (repeated) notification.
Too many advertising emails and notifications from bank, hard to track which is the notification for bill payment.
Charged interest for late payment

Missed bill payment from lack of (repeated) notification.
Too many advertising emails and notifications from bank, hard to track which is the notification for bill payment.
Charged interest for late payment
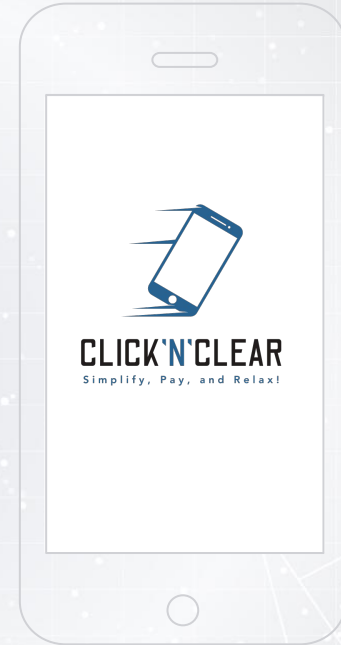
Evaluation of Potential Solutions

Recommendations

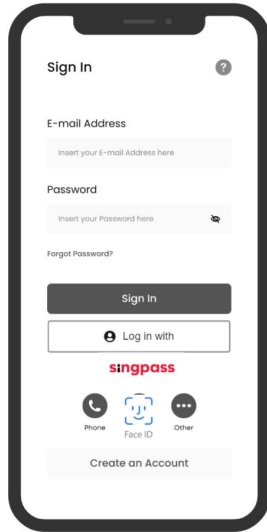## Automated Payment Reminders

- **Clear & concise message** at the **start of the notification**
- Automatically sent **14 days** and **7 days** before bill is due
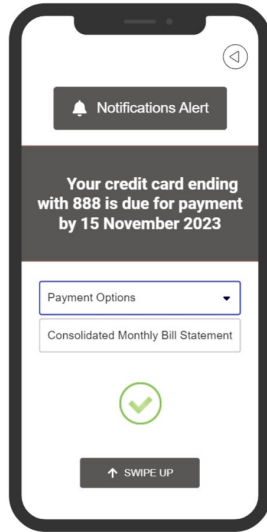
Easy Payment Options (3 in 1)

- One-click payment options
- Automated payment rescheduling
- Helps in mitigating forgetfulness

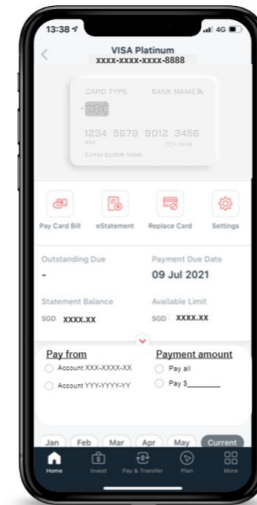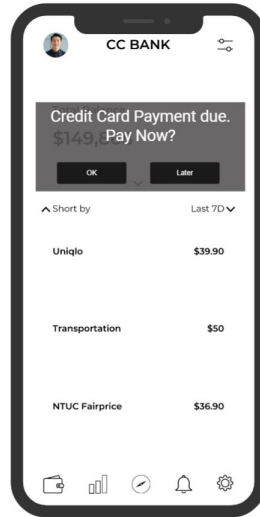**CLICK'N'CLEAR**
Simplify, Pay, and Relax!
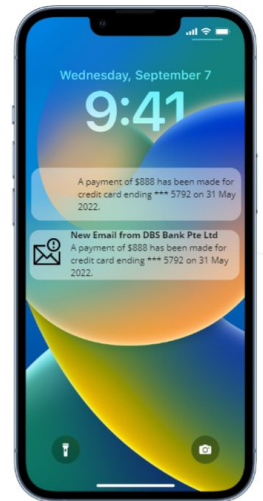
Prototype: New features (User's POV)

Notification of credit card payments on mobile bank app and multiple secured quick access/sign in options.
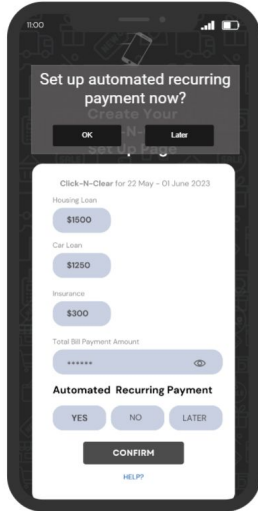
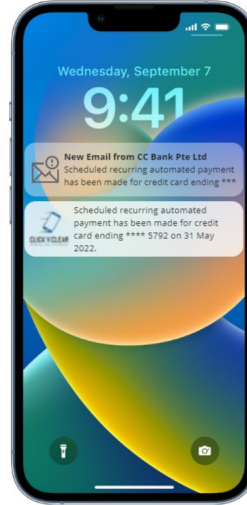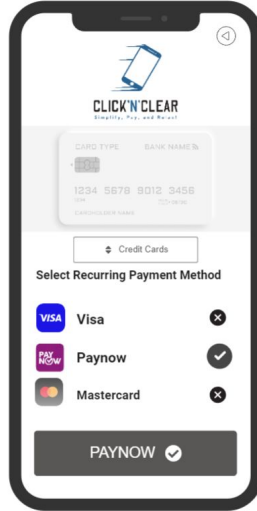Monthly bill summary with different payment options

Payment of credit card bill with preferred (default) selected option

New features (User's POV) Cont'd...

Option for recurring payments for selected payment option

Notification by bank of successful set up of recurring payment
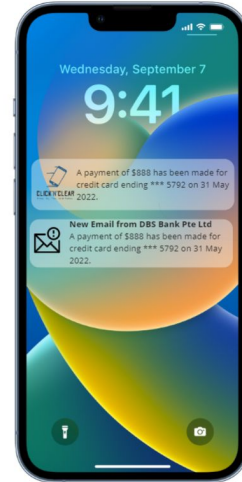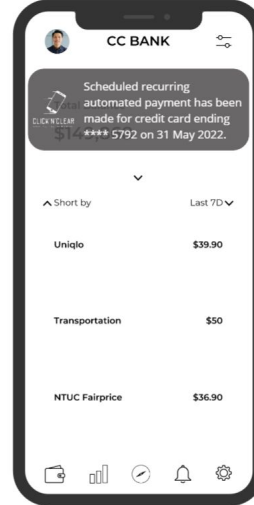
Confirmation of successful credit card bill payment every month

Success Criteria for Proposed Solution

Success Criteria	How to Measure
Convenient	**User feedback, take-up rate**
Efficient	**Clicks/time taken to pay bill in app**
Increased customer satisfaction	**User surveys, NPS**
Improved payment timeliness	**Average # of days customer takes to repay, % defaulters**

CLICK'N'CLEAR
Simplify, Pay, and Relax!

Major cost savings of $13 Million per Month

% reduction in likelihood of default for prioritised segment

×

Total outstanding debt of prioritised segment

⌄

$Xx

Total balances collected

Estimated % reduction in default:

2.2 %

x

$595 mil (segment outstanding)

=

Improvement in Collection

$ 13 million per Month

1. Daniel Campbell, Andrew Grant, Susan Thorp; Reducing credit card delinquency using repayment reminders; Journal of Banking & Finance, Volume 142, 2022,
2. Nina Mazar, Daniel Mochon, Dan Ariely; If You Are Going to Pay Within the Next 24 Hours, Press 1: Automatic Planning Prompt Reduces Credit Card Delinquency; Journal of Consumer Psychology; 19 January 2018

Stakeholders Involvement

OUR TEAM

HARSHA

PAUL
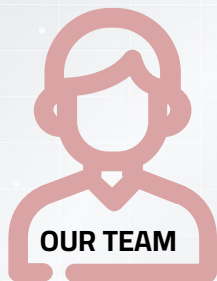
Who are our Stakeholders	How best to manage (Action for current to goal)	Next Meeting	Method of Contact
Claire (Product Manager)	Regular updates on progress and impact on product profitability; involve in decision-making	Every Monday	Email/In-person meetings/Zoom
Harsha (Customer Satisfaction Manager)	Share customer feedback, involve in decision-making on customer journey	Every Monday, Wednesday	Email/In-person meetings/Zoom
Faris (Credit Risk Manager)	Regular updates on risk factors and mitigation plans	Every Monday	Email/In-person meetings/Zoom
Paul (Compliance Manager)	Ensure all actions comply with rules, involve in decision-making for compliance-related matters	Every Monday	Email/In-person meetings/Zoom
Elaine (Collections Manager)	Regular updates on collections performance, involve in decision-making for collections strategies	Every Monday	Email/In-person meetings/Zoom
Vincent (Call Centre Manager)	Early communication of potential workload changes, involve in decision-making for call centre-related matters	Every Monday	Email/In-person meetings/Zoom
Mark (App Developer)	Discuss timelines and deliverables for the updates to the app / portal	Every Monday, Wednesday	Email/In-person meetings/Zoom
Jolene (UX/UI Designer)	Coordinate work together with app developer, discuss timelines and deliverables.	Every Monday, Wednesday	Email/In-person meetings/Zoom

NEXT STEPS

Gather more data (app usage) from operations teams

Conduct Usability Tests
to validate our prototype before full scale implementation

Key Takeaways

Storytelling is the key for data analysis
- Yu Quan

Relevant Industry examples help with learning
-Sweekun

A good plan without support from stakeholders won't fly
- Gordon

Design thinking will reveal unknown problems
- Junia

Data analytics are more than just numbers.
- Eugene

A data analyst needs to have more than data analysis.
- Soohian

Visualisation simplifies complex information and they provide effective decision making
- Julian

Team dynamics is very important
- Edwin

19

ROSE & THORNS

ESTD 2023

SIX

THE END

Group 6 - Rose & Thorns