



*Advanced Power Machine*

## APM CASE STUDY

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04504932

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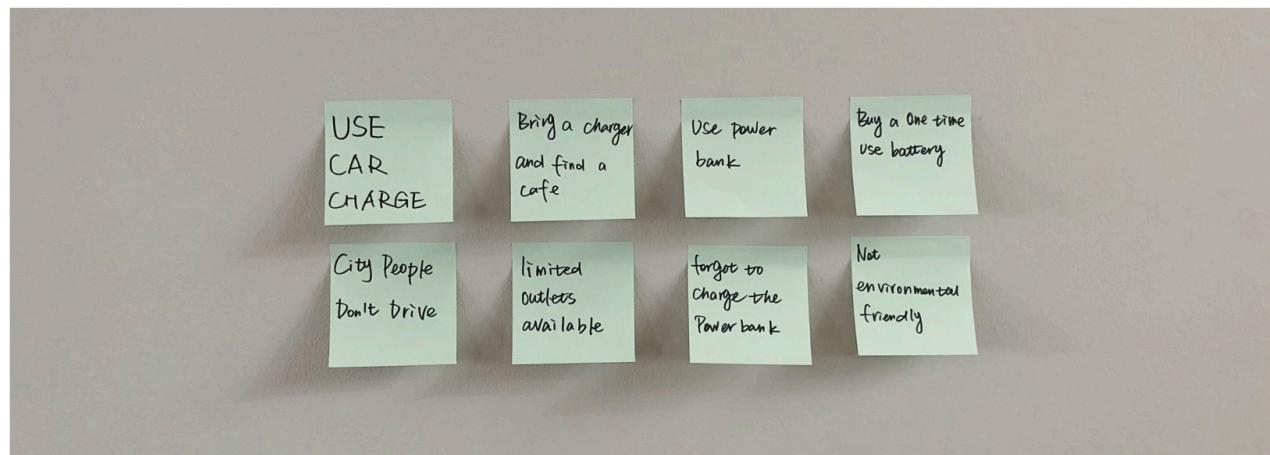
# INTRODUCTION

# INTRODUCTION

Screens, cameras, and connectivity on our smartphones are getting better and better, but battery tech is lagging behind. The most common solution to the problem is to carry a charger or a power bank (portable charger), but both have downsides: You've got to remember to charge the power bank, and power plugs are often few and far between. In other words, power banks are like umbrellas – you always forget to bring it along when you need one.

# INTRODUCTION

## PRIMARY IDEAS



# INTRODUCTION

## SOLUTIONS

Our solution is to offer a service just like a shareable power bank that you can rent and return on our machines. Inspired by ATM, we are APM, an advanced power machine. We want to keep your electrical devices get powered no matter am or pm, and you can find our machines as easy as the ATMs.

**RESEARCH**

# RESEARCH

## INSPIRATION

In 2013, people around the globe bought more than 1.8 billion mobile phones. But now, nearly half of them are most likely in landfills or at homes, sitting there without any use, as their owners upgrade to newer versions. Imagine, however, if these devices went back to the manufacturers once their lifespan came to an end in order to be turned into new mobile phones.

This is what could be called a “Circular Economy” approach, a new model of production and consumption that thinks of our impact on the environment and our society as a whole. It’s an invitation to change from product design, manufacturing processes and supply chains, to consumer perceptions and our lifestyles.

## RESEARCH

Nearly 9 out of 10 people “felt panic” when their phone battery drops to 20 percent or lower;  
32% of them will “drop everything” to head home and charge phones;  
33% have delayed a date or meeting because of a low battery;  
22% of them ordering something at a bar or restaurant just to use their power outlet.

## RESEARCH



Some Starbucks removed its public electrical outlets, making it a less attractive gathering place for the screen writers and freelance publicists who have gathered there.

“ It’s a safety program that Starbucks is rolling out. We are part of the testing program, so they took out outlets.”

# RESEARCH

## INTERVIEW QUESTIONS

1. How much time do you spend on your mobile phone, laptop and other electrical devices everyday?
2. Are you satisfied with their battery life?
3. The frequency that you charge your phone/laptop per day?
4. Do you have “low battery anxiety”?
5. Have you used powerbank before?
6. Do you like to use powerbank? Why/why not?
7. How many powerbanks do you have?
8. Do you use car charger? How do you like it?
9. What features you are looking for when select a powerbank?
10. Do you usually fully charged your phone before going out?

# RESEARCH

## COMPETITORS

### Razer Power Bank

The Razer Power Bank uses Qualcomm Quick Charge technology to quickly and intelligently charge nearly all your mobile devices.



Pros:

Also works for charging and powering the laptops;

Cons:

Too heavy to carry all the time;  
Easy to forget to recharge;  
Limited power.

# RESEARCH

## COMPETITORS

### Powermat

Stores in the San Francisco Bay area are now equipped with 'Powermat Spots' - designated areas on tables and counters where customers can place their compatible device and charge wirelessly.



#### Pros:

- For merchant:  
Makes the customers feel more welcome, improving customer satisfaction and loyalty;
- For customers:
  - Free;
  - Easy to use;

#### Cons:

Hard to use the phone when it is charging.

# RESEARCH

## COMPETITORS

### FuelRod

The FuelRod Station, portable cell phone charger vending machines, supplies portable charging units that can be used to recharge Android or iOS cell phones or tablets.



Pros:

Free to swap depleted products to a fully charged one;

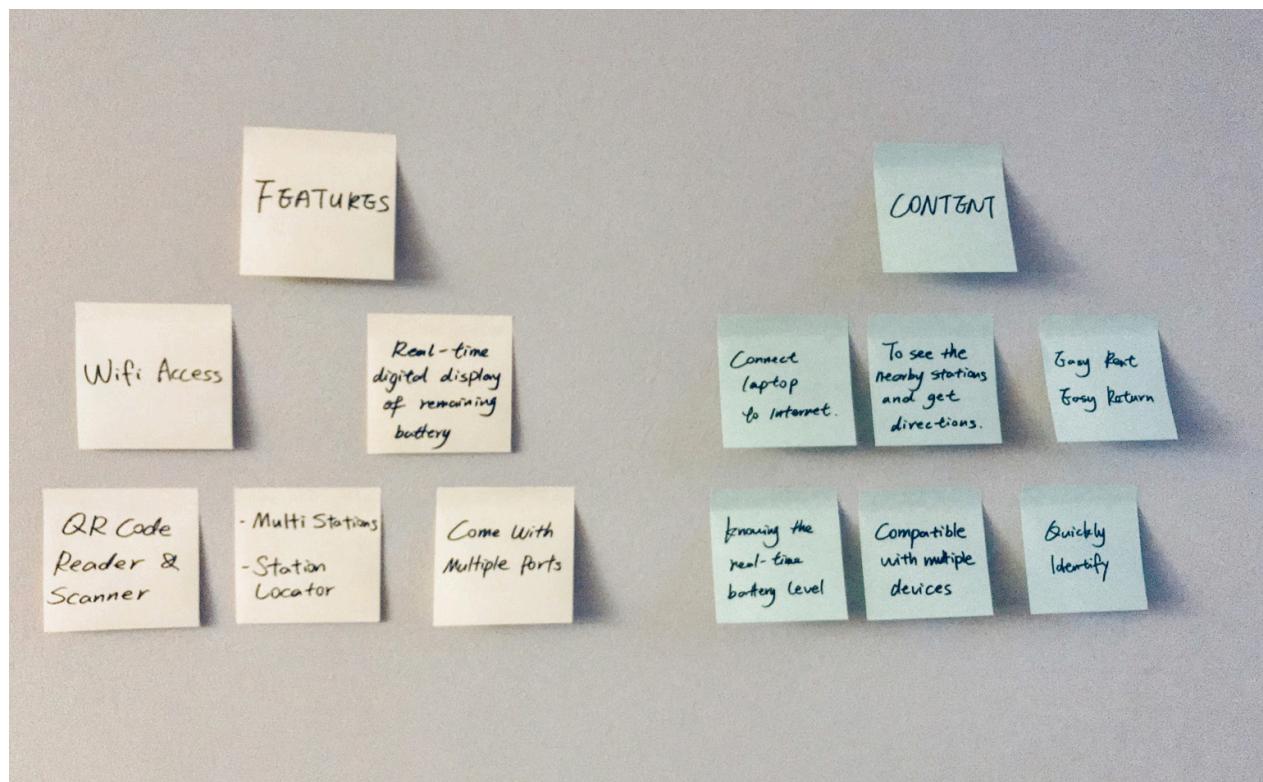
Cons:

Easy to forget to bring the depleted products.

# TARGET MARKET

# TARGET MARKET

## FEATURES & CONTENTS



# TARGET MARKET

## USER PERSONA



### **Kevin Steylon**

Business Analysis

36

San Francisco, CA

#### Goals:

Easy to find a charger or powerbank.

#### Frustrations:

- Forgot bring his charger or powerbank when he go out;
- Emergency meeting happened outside office but phone or laptop get low battery;
- Hate to find outlet in the airport.(too many people used it, and cannot set down or moving).

Kevin Steylon works for a financial company. He needs to work on his phone and laptop over 8 hours a day. He always wants to keep his devices fully charged so that he won't miss any important calls and emails.

# TARGET MARKET

## USER PERSONA



**Thomas Thompson**  
Software engineer  
33  
San Francisco, CA

Goals:

Able to work on the go.

Frustrations:

- Laptop died when he was working on the Uber and the car chargers only work for mobile phones;
- Emergency task to do when he is outside the office but phone or laptop get low battery.

Thomas Thompson is a software engineer. He doesn't like to drive in the city so he takes Caltrain and Uber to commute. It always takes him over 30 minutes to commute, so he likes to work during the ride. And sometimes he is "on call" and he has emergency bugs to fix when he is on the way.

# TARGET MARKET

## USER PERSONA



### Goals:

- Increase social media followers;
- Able to use her camera and phone to post photo and videos online.

### Frustrations:

Smartphone, camera and other equipments easy to get low batteries during outside photo shooting.

### **Teresa Springer**

Online Celebrity

22

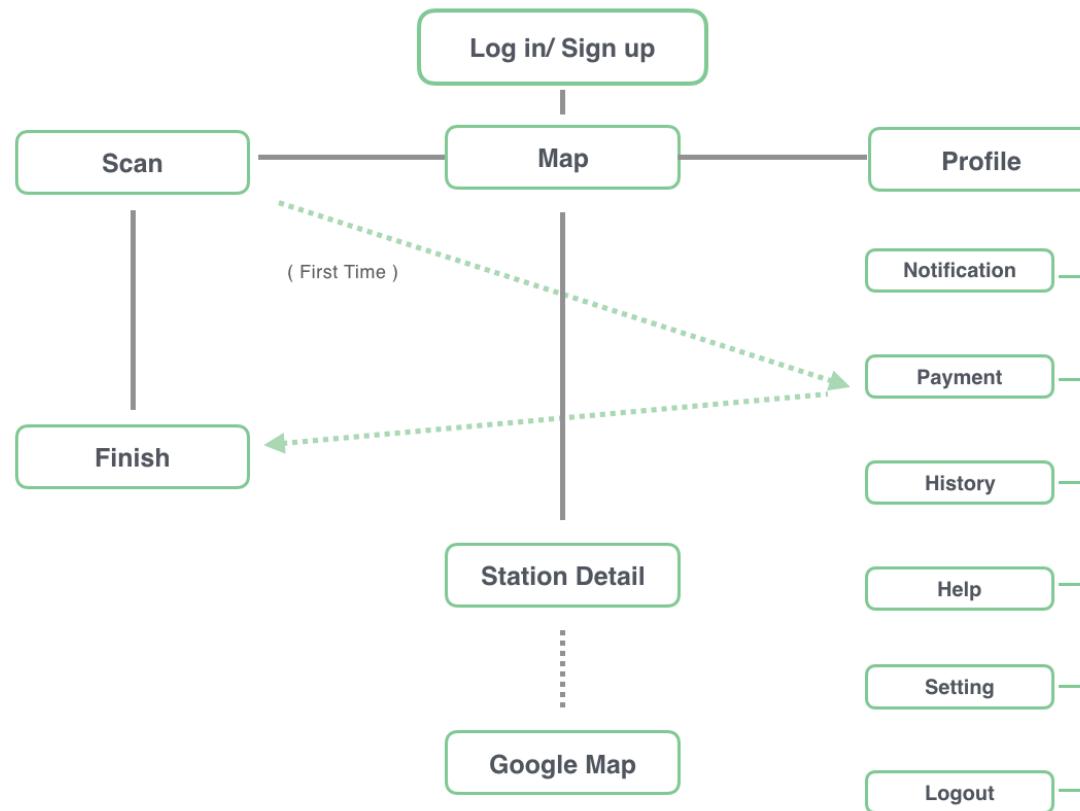
San Francisco, CA

Teresa Springer is an instant online celebrity who has thousands of followers. She likes to share her daily life with her fans. Everyday, she uses her camera to takes hundreds of photos, then transfer them to her phone and post them on Facebook ,Youtube and Instagram.

**UI / UX**

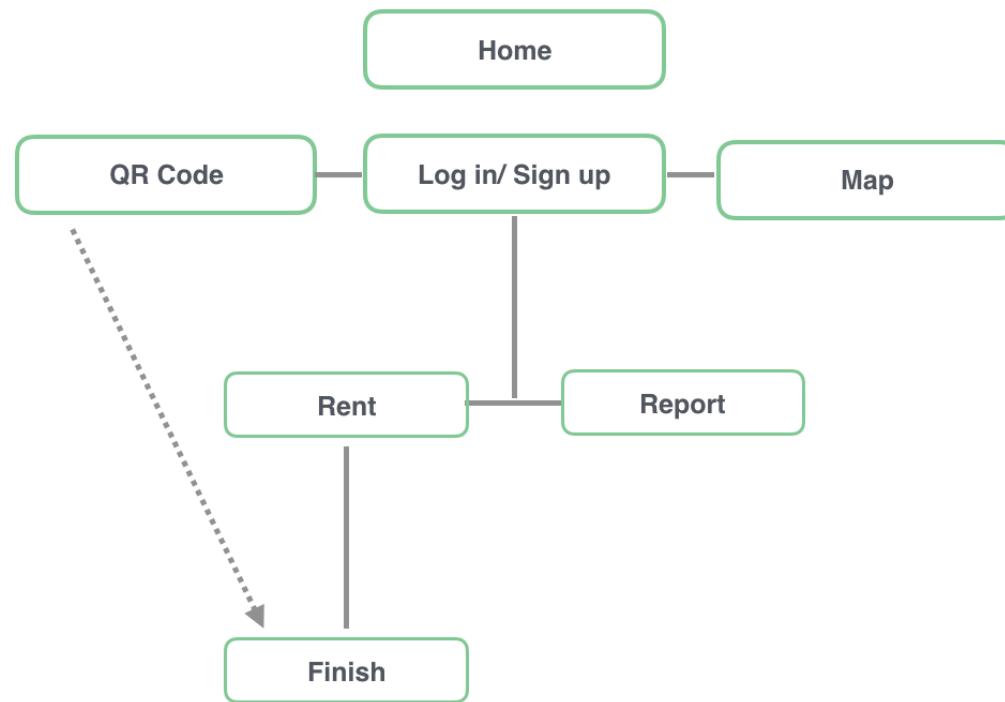
# SITEMAP

## APP SITE MAP



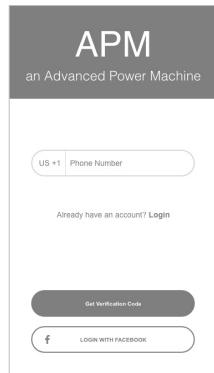
# SITEMAP

## MACHINE SITEMAP

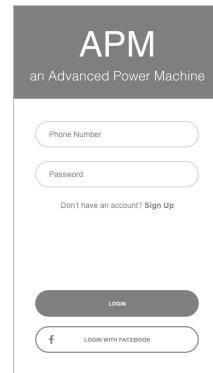


# WIREFRAMES

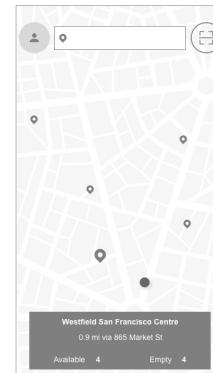
## APP WIREFRAMES



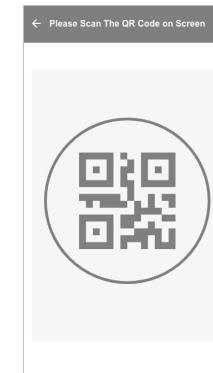
Sign up



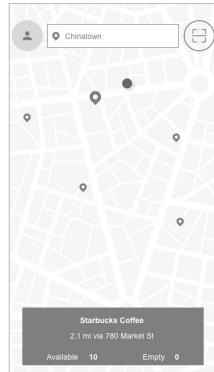
Login



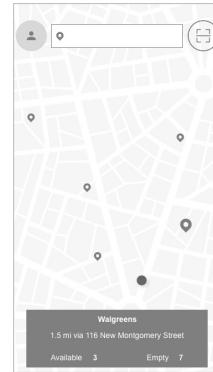
Home



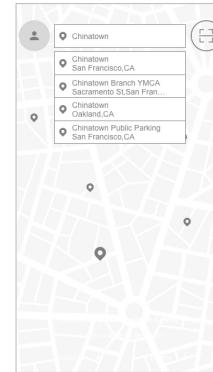
Scan



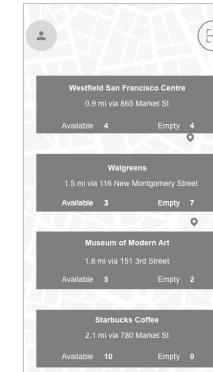
Home-1



Home-2



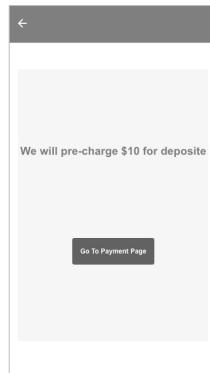
Home Search



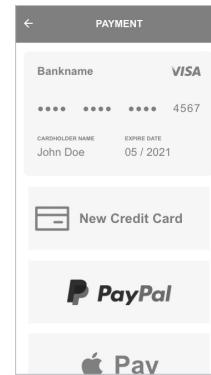
Search Result

# WIREFRAMES

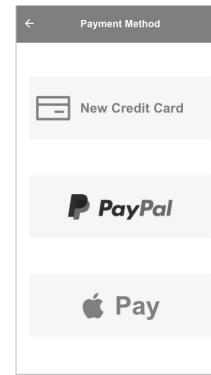
## APP WIREFRAMES



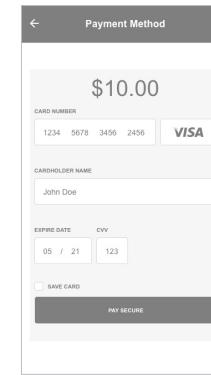
Payment



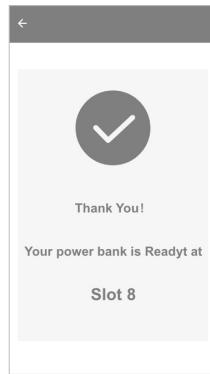
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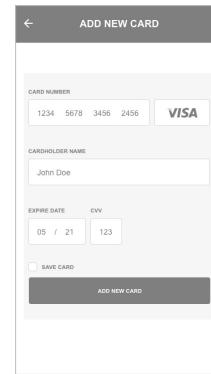
Payment-2



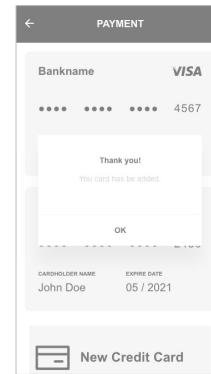
Payment-3



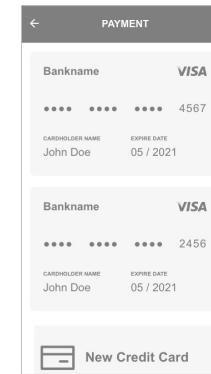
Payment-4



Payment-5



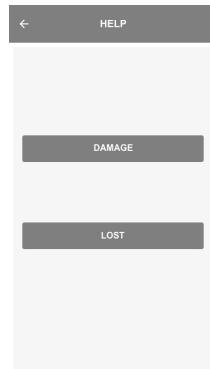
Payment-6



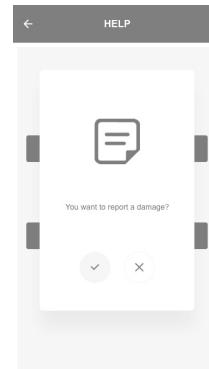
Payment-7

# WIREFRAMES

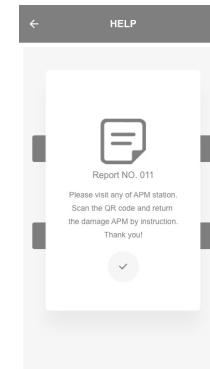
## APP WIREFRAMES



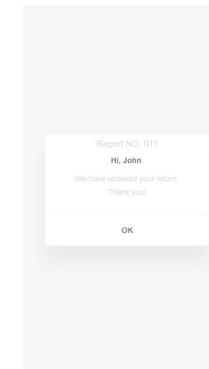
Help



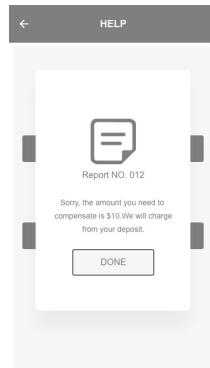
Damage



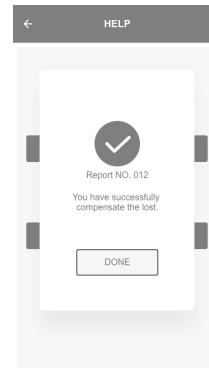
Damage-1



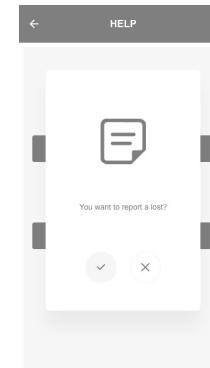
Damage-2



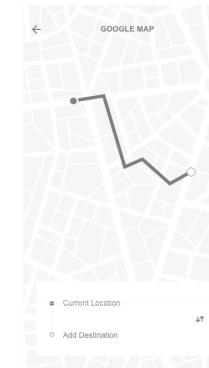
Lost



Lost-1



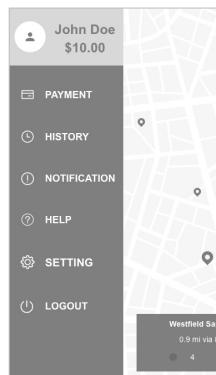
Lost-2



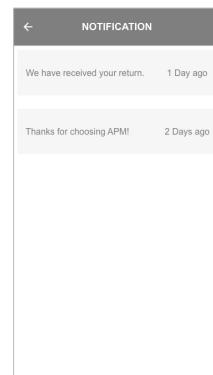
Google Map

# WIREFRAMES

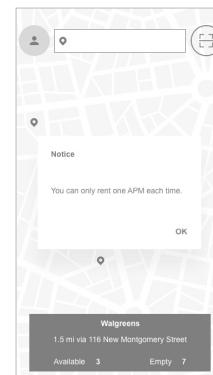
## APP WIREFRAMES



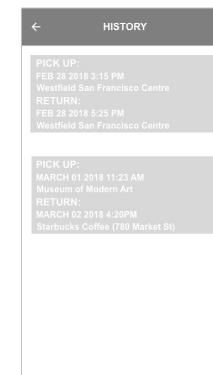
Menu



Notification



Notification-1



History

# WIREFRAMES

## MACHINE WIREFRAMES

APM



+1 Phone Number...

Password...

Login

G Continue with Google

F Continue with Facebook

No power bank is available?  
Click [here](#) to find a station nearby.

**Home**

APM



+1 (123)456-7891

• • • • •

Login

G Continue with Google

F Continue with Facebook

No power bank is available?  
Click [here](#) to find a station nearby.

**Login**

APM

Click [here](#) to rent your APM Powerbank

If you damage power bank, please click [here](#).

**Map**

APM

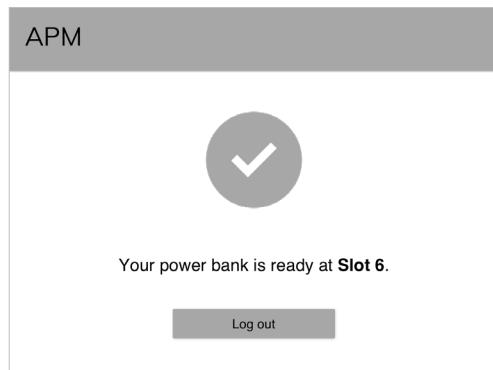
Click [here](#) to rent your APM Powerbank

If you damage power bank, please click [here](#).

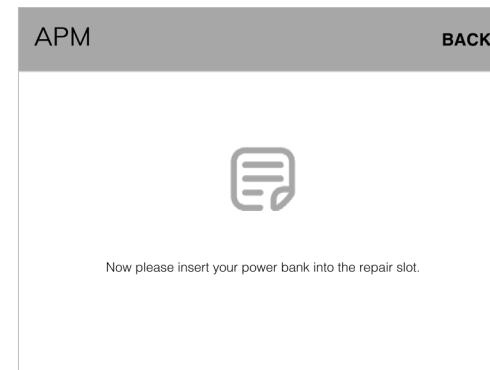
**Rent**

# WIREFRAMES

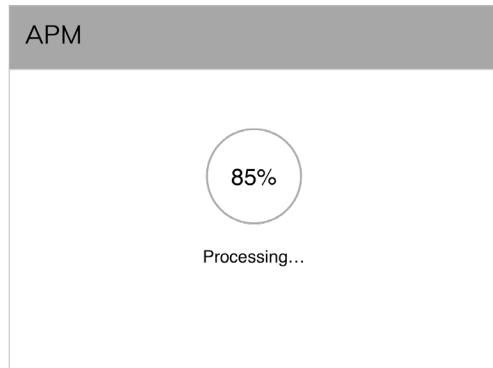
## MACHINE WIREFRAMES



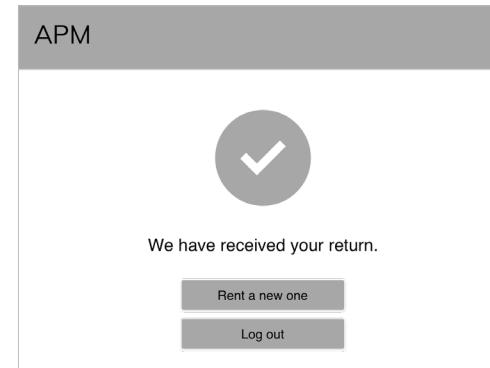
Rent-1



Damage



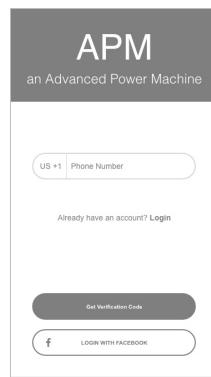
Damage-1



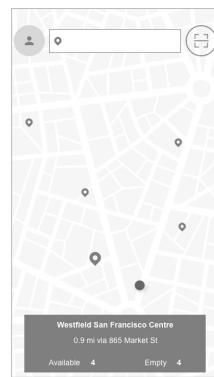
Damage-2

# TASK FLOW 1

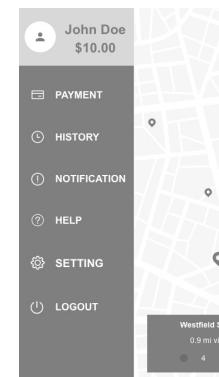
When a new user first time download the APM app, user open the app, sign up, login, fill out the basic information, then add a payment.



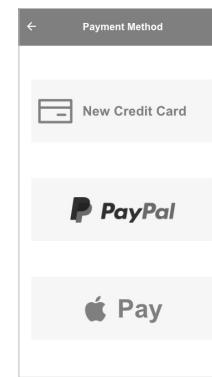
Sign up



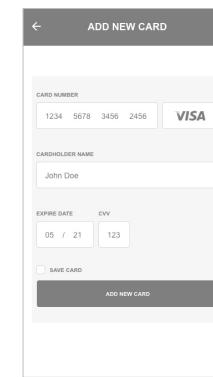
Home Page



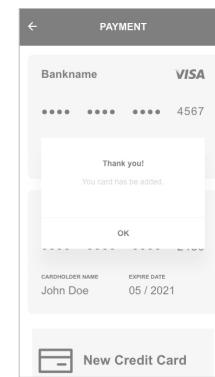
Menu Page



Add a payment



Add a new card



Add card Info

# TASK FLOW 2

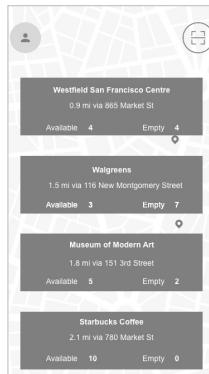
When a existed user's mobile phone gets low battery, user use mobile app to find a near by APM station and rent a powerbank.



Home Page

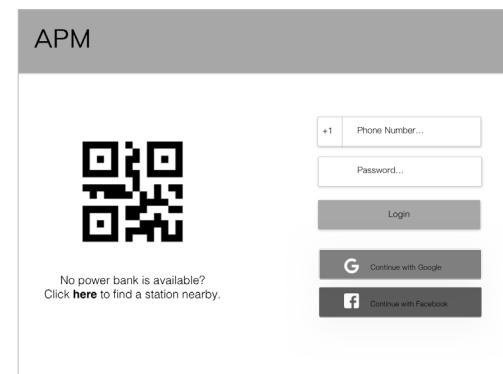


Search

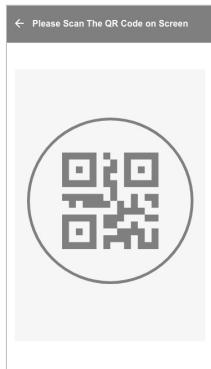


Result

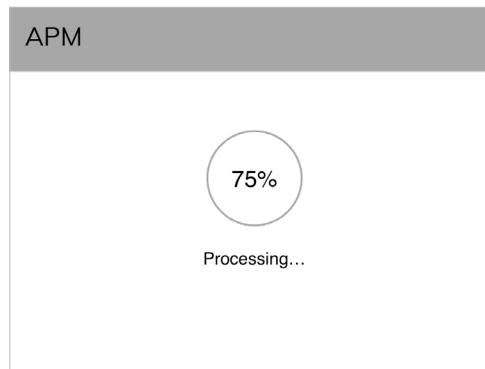
Walk to  
APM Station



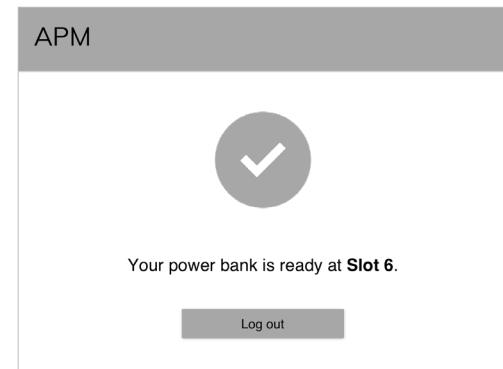
Home Page



Scan QRcode



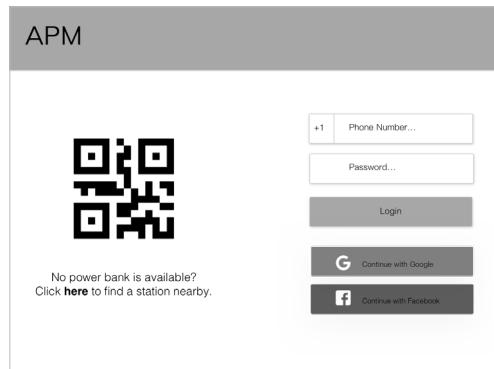
Processing



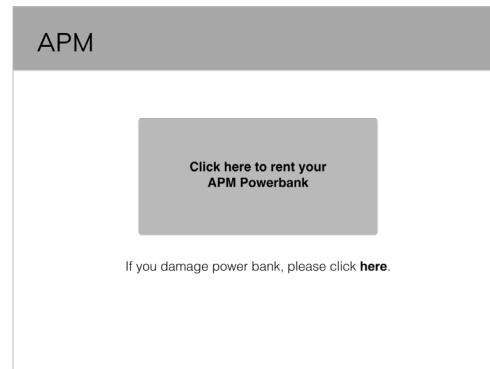
Success

# TASK FLOW 3

When a existed user's mobile phone already died in front of an APM machine, and the current machine is out of powerbanks, user use machine to find a near by APM station and rent a powerbank.

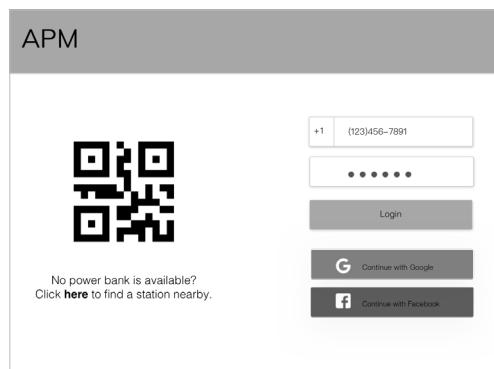


Home Page

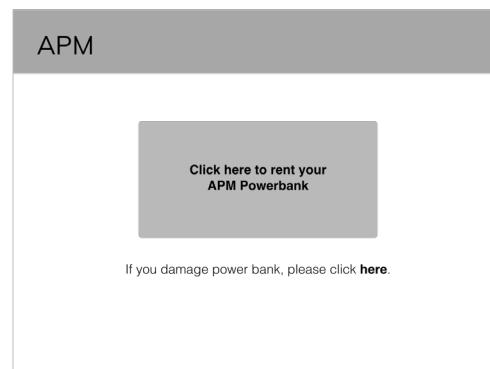


Find nearby APM Station

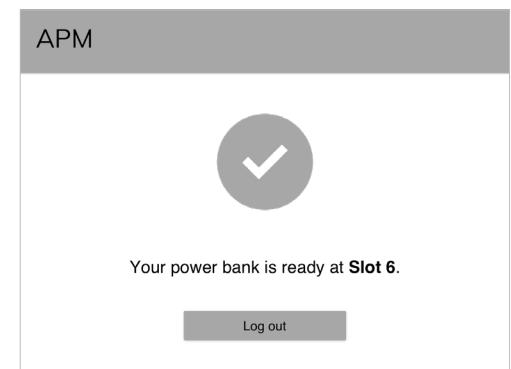
Walk to APM Station



Login

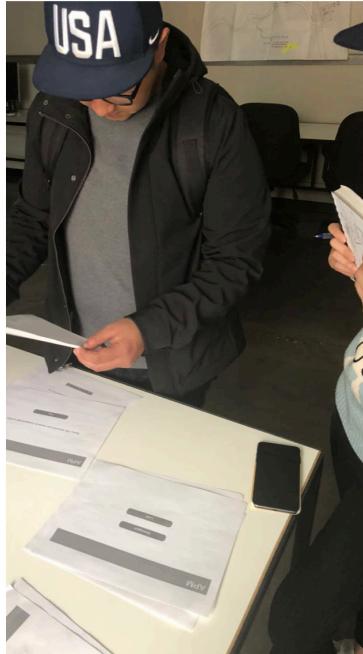


Rent

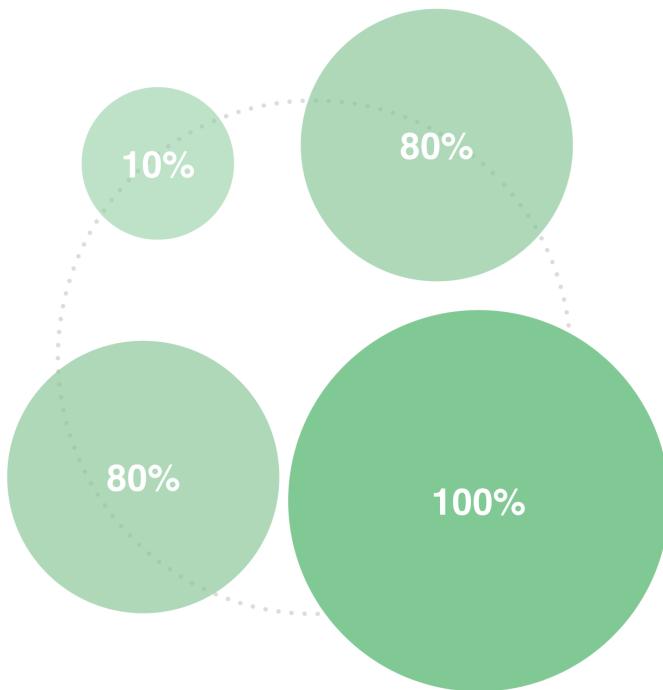


Success

# USER TEST



# TEST RESULT



**100%**  
Rent a power bank.

**80%**  
Return a damaged power bank.

**80%**  
Report a lost.

**10%**  
Find a station nearby.

## TESTING FEEDBACK

“What is the ‘report’ button?”

“Can I cancel it if I don’t want to do the payment right now?”

“Why there is a ‘map’ button?”

“How can I see the product before payment?”

“What is the location information?”

“How can I search somewhere’s near bys?”

“Can I pay it by cash?”

## PAYMENT & PRICE FEEDBACKS.

“Can I just pay by hour?”

“I think I might only just need to charge 20 minutes for emergency.”

“It can not be more expensive than Netflix.”

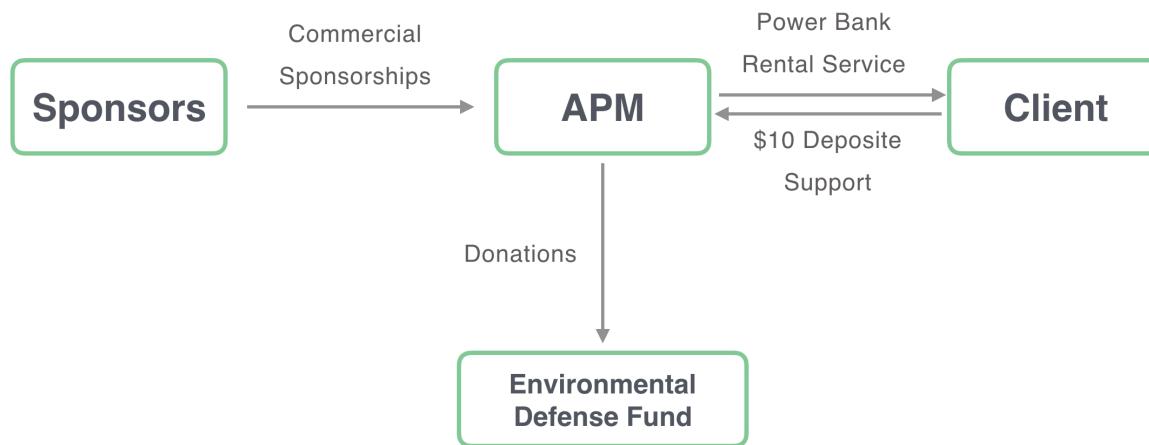
“Can it be free?”

“If I bought the 1 day plan I'll feel like I wasted my money since I don't need to use it a whole day.”

“I like the way how the parking garage and meter charging by every 15 minute.”

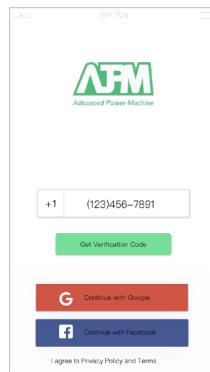
# BUSINESS STRATEGY

We struggled with the prices because people have different value standard. After carefully listened to our users, we decided to make our products free to use.

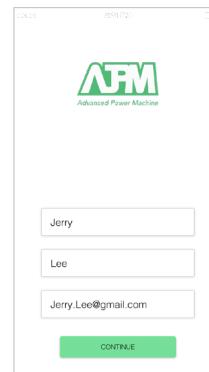


# VISUAL DESIGN / MOCKUP

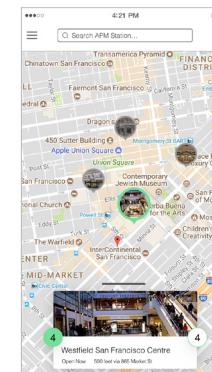
## APP WIREFRAMES



Sign up



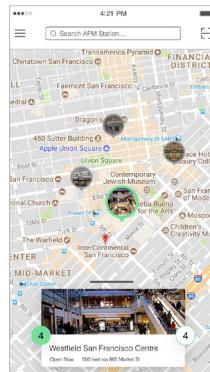
Login



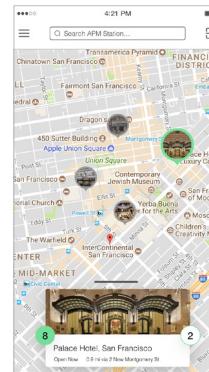
Home



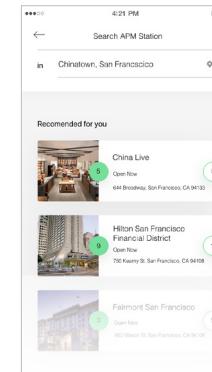
Scan



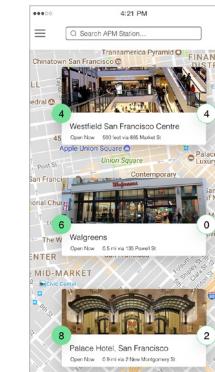
Home-1



Home-2



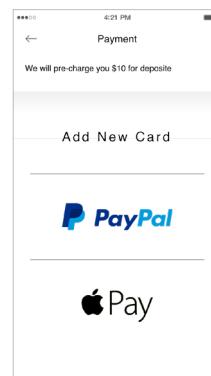
Home Search



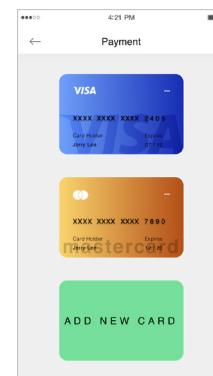
Search Result

# VISUAL DESIGN / MOCKUP

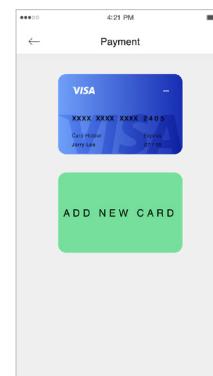
## APP WIREFRAMES



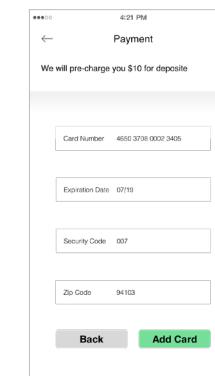
Payment



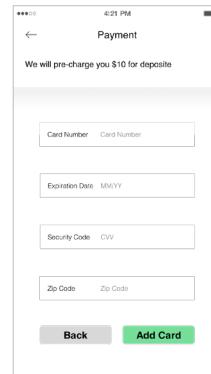
Payment-1



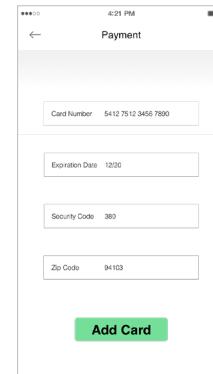
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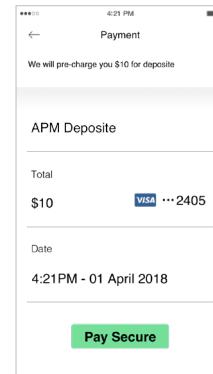
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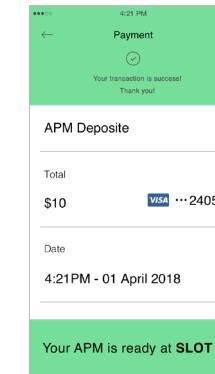
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Payment-5



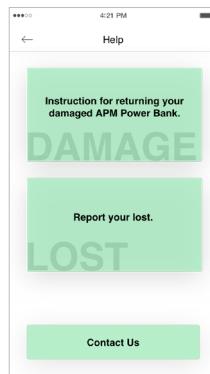
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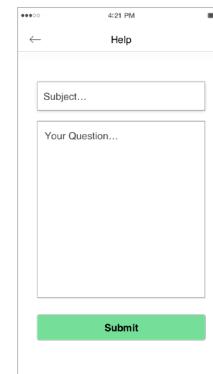
Payment-7

# VISUAL DESIGN / MOCKUP

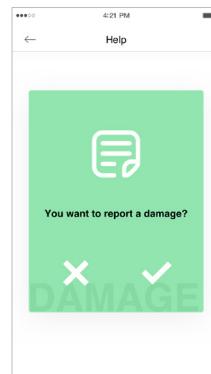
## APP WIREFRAMES



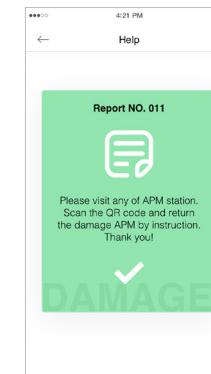
Help



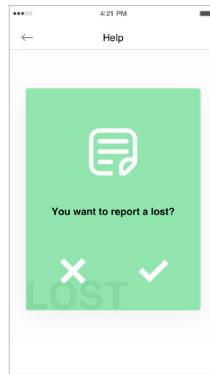
Contact



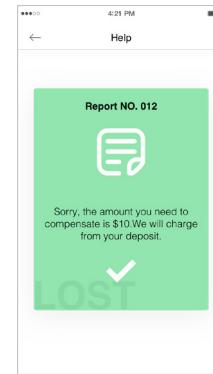
Damage-1



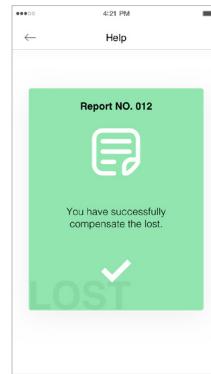
Damage-2



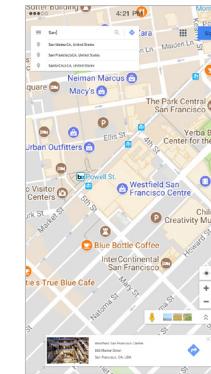
Lost



Lost-1



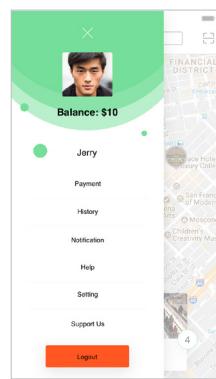
Lost-2



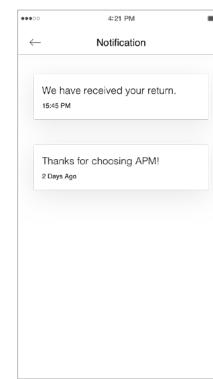
Google Map

# VISUAL DESIGN / MOCKUP

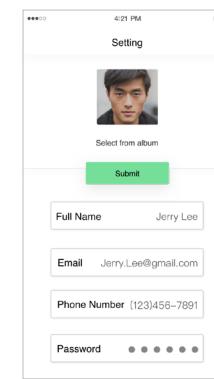
## APP WIREFRAMES



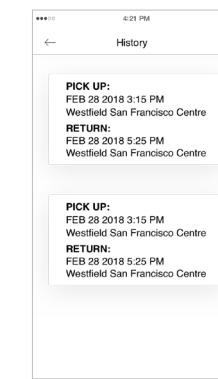
Menu



Notification



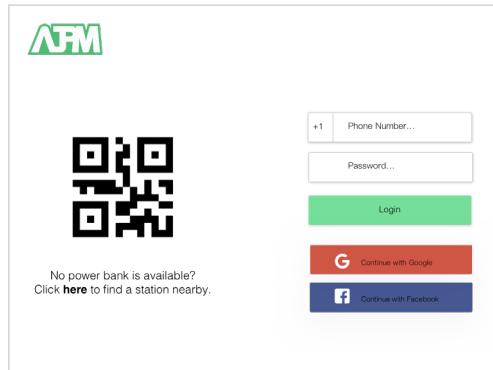
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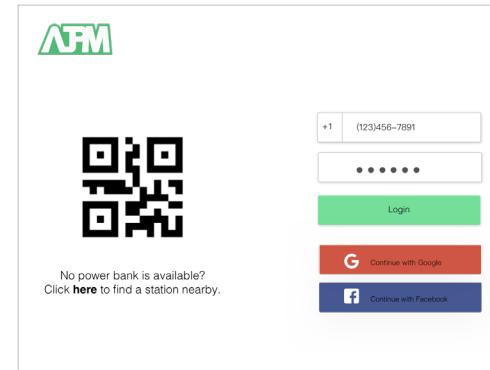
History

# VISUAL DESIGN / MOCKUP

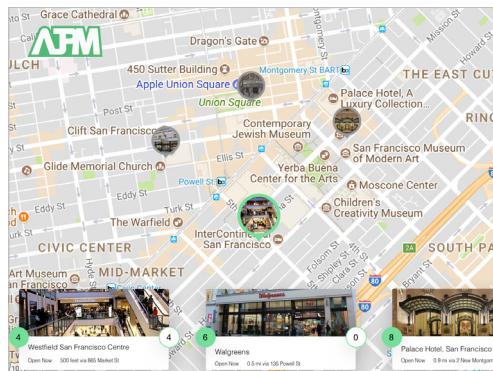
## MACHINE WIREFRAMES



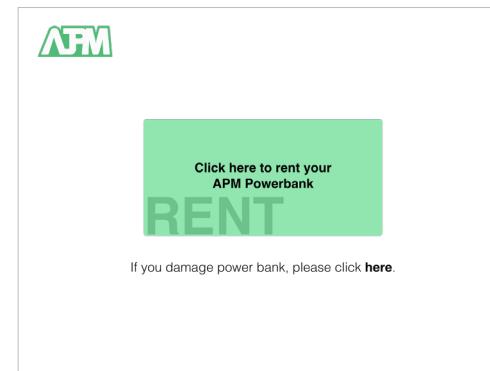
Home



Login



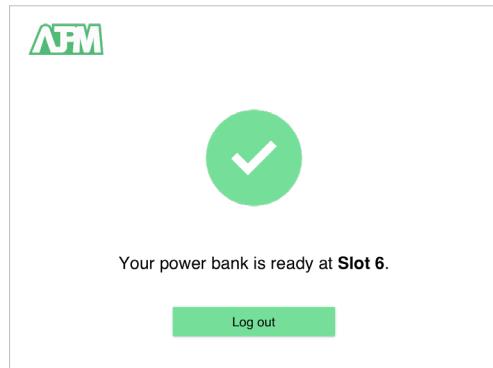
Map



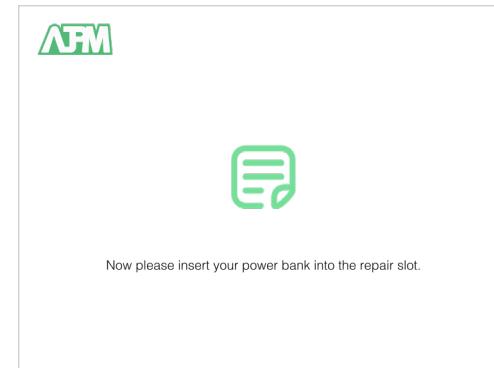
Rent

# VISUAL DESIGN / MOCKUP

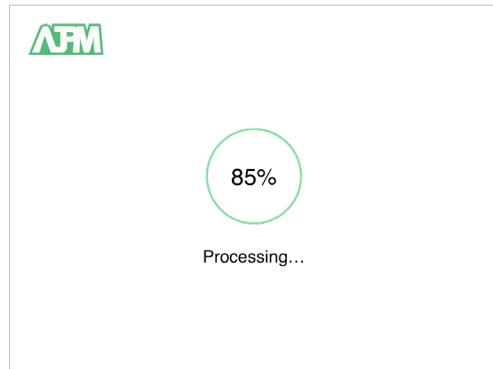
## MACHINE WIREFRAMES



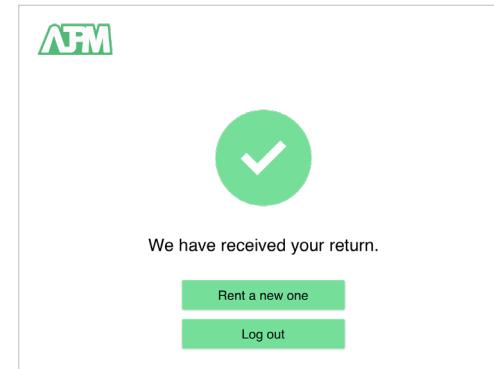
Rent-1



Damage



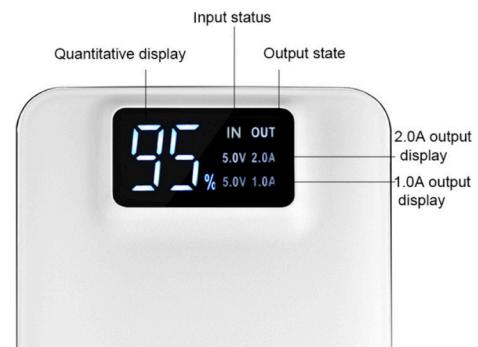
Damage-1



Damage-2

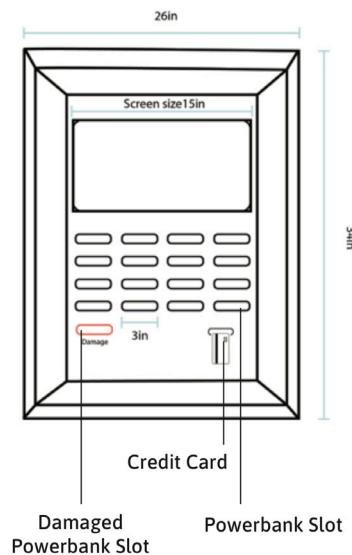
# VISUAL DESIGN / MOCKUP

## POWERBANK



# VISUAL DESIGN / MOCKUP

## MACHINE



# **BRANDING GUIDELINES**

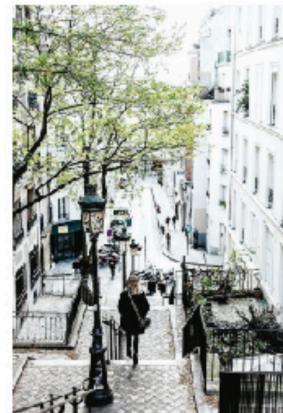
# BRANDING

## LOGO



# BRANDING

## MOODBOARD



# BRANDING

## COLOR PALETTE



C20 M16 Y16 K0  
R202 G202 B202  
#cacaca



C3 M6 Y76 K0  
R252 G228 B92  
#fce45c



C25 M0 Y24 K0  
R191 G226 B205  
#bfe2cd



C61 M15 Y55 K0  
R108 G170 B138  
#6caa8a



C68 M1 Y72 K0  
R81 C186 B119  
#51ba77

# BRANDING

## TYPOGRAPHY

Aa

### Helvetica Neue

Light      ABCDEFGHIJKLMNOPQRSTUVWXYZ  
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Regular     ABCDEFGHIJKLMNOPQRSTUVWXYZ  
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**Bold**     ABCDEFGHIJKLMNOPQRSTUVWXYZ  
             abcdefghijklmnopqrstuvwxyz  
             0123456789!@#\$%^&\*()

# BRANDING

LOGO B&W



# BRANDING

## APPLICATION ICON



**MARKETING**

# MARKETING

## ADVERTISING



## LIST RESOURCES

1. KwikBoost. (2018). Low Battery Anxiety | Do You Suffer Low Battery Anxiety?. [online]
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6. Us, A. and Maehlum, M. (2018). Top 10 Benefits of Going Solar - Energy Informative. [online]
7. TechCrunch. (2018). AnkerBox launches charging-as-a-service. [online]

# CONCLUSION

APM is my first teamwork project. Through this project, I realized the importance of teamwork. We did our jobs well, and we made up for the weaknesses of others.

As for this project, we are inspired by the sharing economy. We also combine social phenomena and propose our own business strategy.

**mingyanglidesign.com**