Portfolio by Shengjie Zhang
June, 2016 Version

The work presented in this portfolio only
contains selected projects

A website version is being built out right now
and will come alive soon

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Hi, I am Shengjie Zhang,

a User Experience Researcher obssessed
with reasons behind phenomena, and building beauty upon them

| Little Facts about Shengjie

Work
Design Researcher at Samsung Research American Mobile Innovation Lab, since June 2015
UX Research Intern at Samsung in 2014, and at the UM Cancer Center in 2013

Education
Master in Human-Computer Interaction, University of Michigan, Ann Arbor
Bachelor in Literature and Digital Art Design, Tsinghua University, China

Methodology
Proficient in qualitative methods, such as in-lab & field interview, usability testing, focus group
Working uderstanding in survey, competitive analysis, desk research
Familiarity in quantitative methods and tools, such as statistical analysis, R, Python

Areas I have worked on
Consumer Health App (S-Health), Clinical Health System, Gear S Safety Service, Connected Car & IOT Ideation, Mobile Video Streaming App (Milk Video)

Work Characteristics
Closely working with the product team, agile and flexible, good presentation skills (experience of presentation to Samsung's C-level managers), a researcher who can design and code

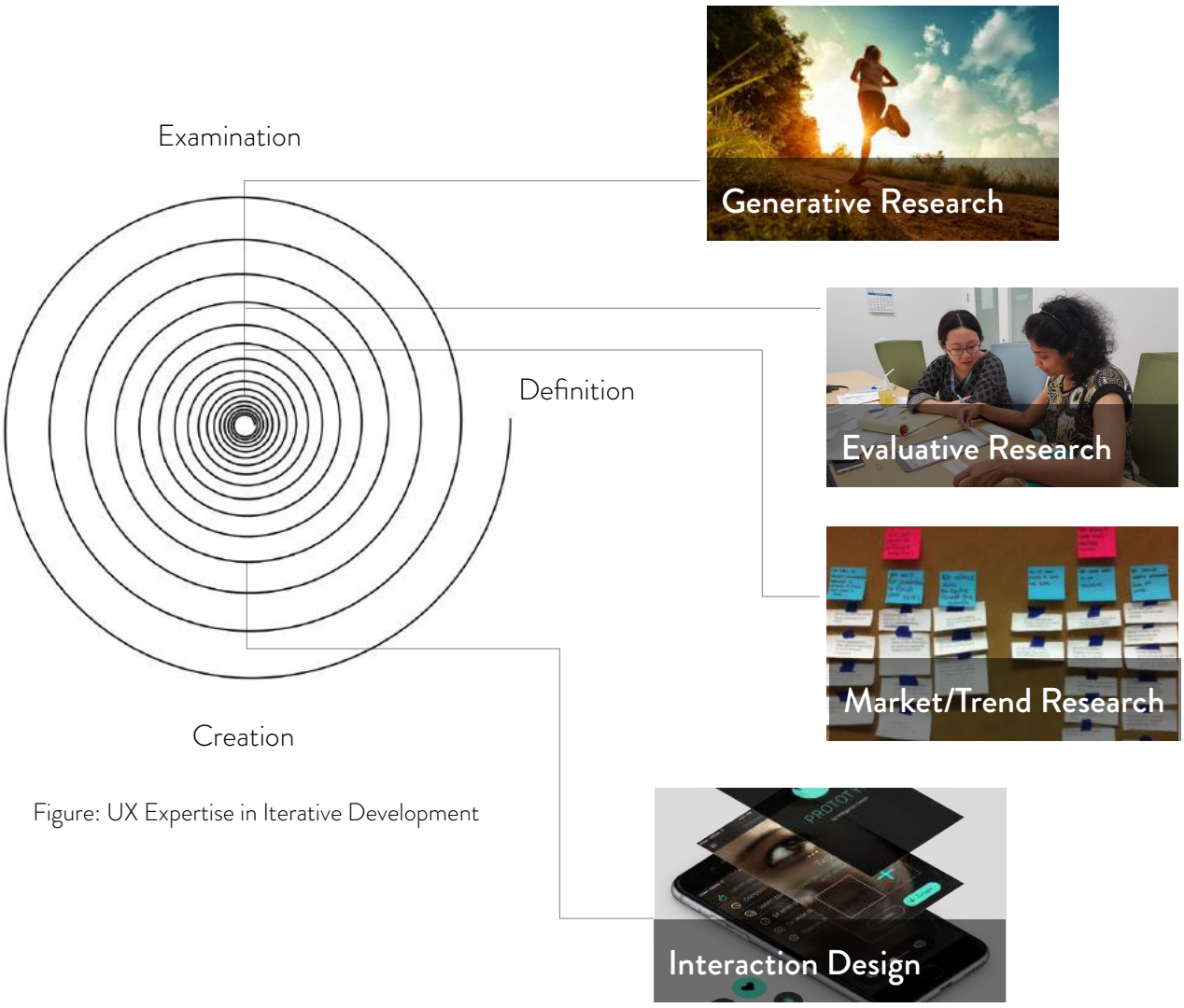


Figure: UX Expertise in Iterative Development

Core UX Expertise

Generative Research

I have performed generative research to understand people's behaviors and needs in the early stages of projects. Methodologies I used include field study, contextual inquiry, in-depth interview, focus group, survey, and comparative analysis.

Evaluative Research

When the team starts to develop concepts and features, I do iterative evaluative studies like concept testing interview, usability testing, card sorting, low-/mid-fi prototyping, and participatory design to inform further design directions.

Market/Trend Research

Doing quick literature/secondary research to understand the market and the trend is part of my job to help the team understand the big picture of a certain area.

Interaction Design

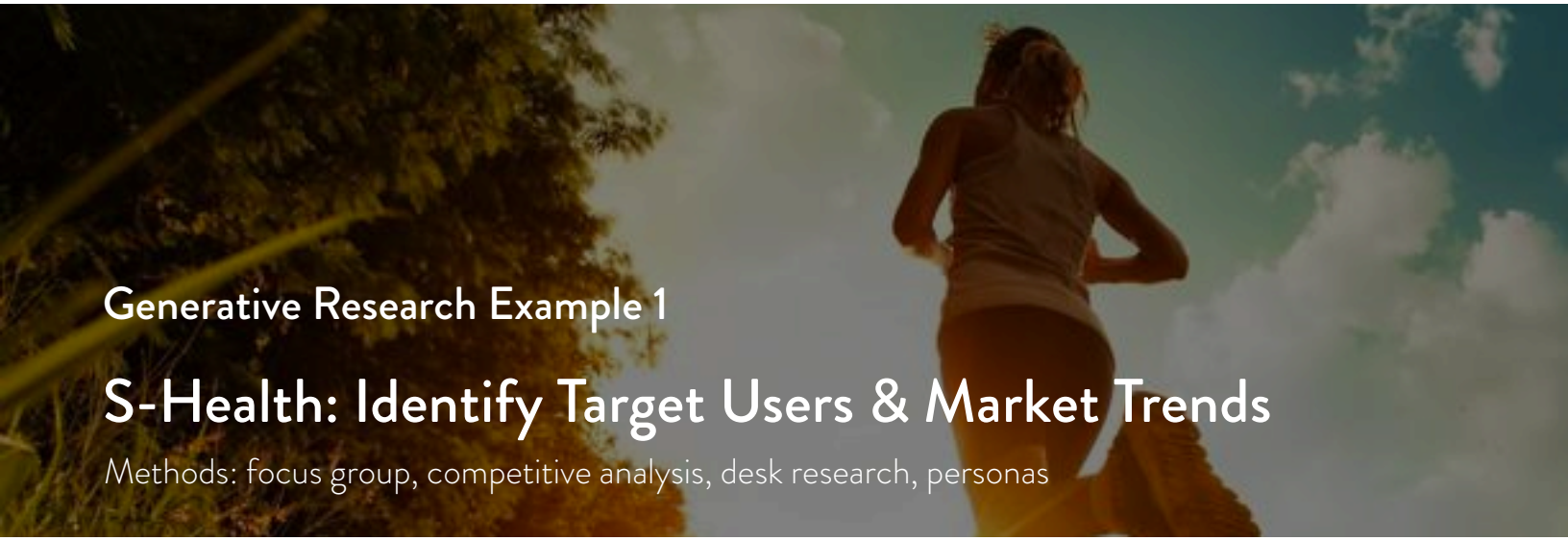
I am a researcher who can design. I co-design with the team in the product definition and iteration phases. I am proficient with Illustrator, sketch, and InVision.

Generative Research

Example 1
S-Health: Identify Target Users & Market Trends

Example 2
Connected Car: Understand Behaviors & Pain Points

Example 3
Clinical Trial System: Pinpoint Needs & Breakdowns



Generative Research Example 1

S-Health: Identify Target Users & Market Trends

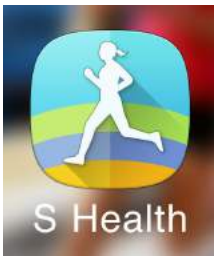
Methods: focus group, competitive analysis, desk research, personas

Project	Role	Research	Time
S-Health Redesign	Lead Researcher	5 rounds in total	March - Present 2016

Identify Target Users & Market Trend: 1st Round Research of Project S-Health Redesign

The Objective

To identify the user architypes of the S-Health app, their behaviors and needs, and the consumer health market trends, so as to help the product team scope down



WHO & WHAT to design for?

1.5 Weeks to identify users

Large User Base: Google Play Installs ~ 500,000,000

The Challenge

1) Limited timeframe: only 1.5 weeks allowed for this stage of generative research
2) Lack of data of the current S-Health users
3) Broad user base of consumer health apps

| Identify Target Users: 1st Round Research of Project S-Health Redesign

The Work

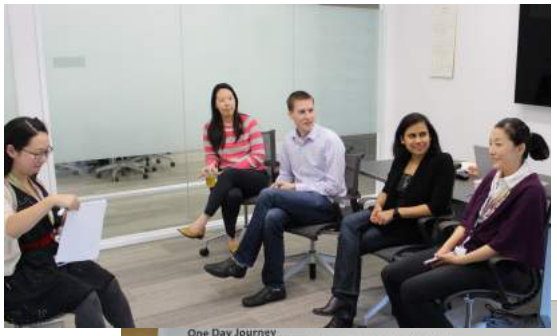
1) 2 focus groups, 1.5 hours each, 8 participants in total

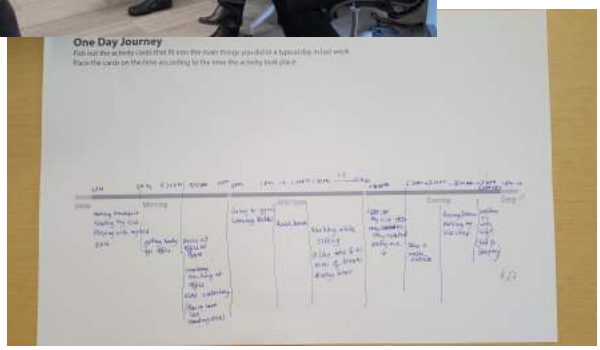
- Participants: mix of gender, age, professionals (2 home maker and 2 students included), levels of fitness activity

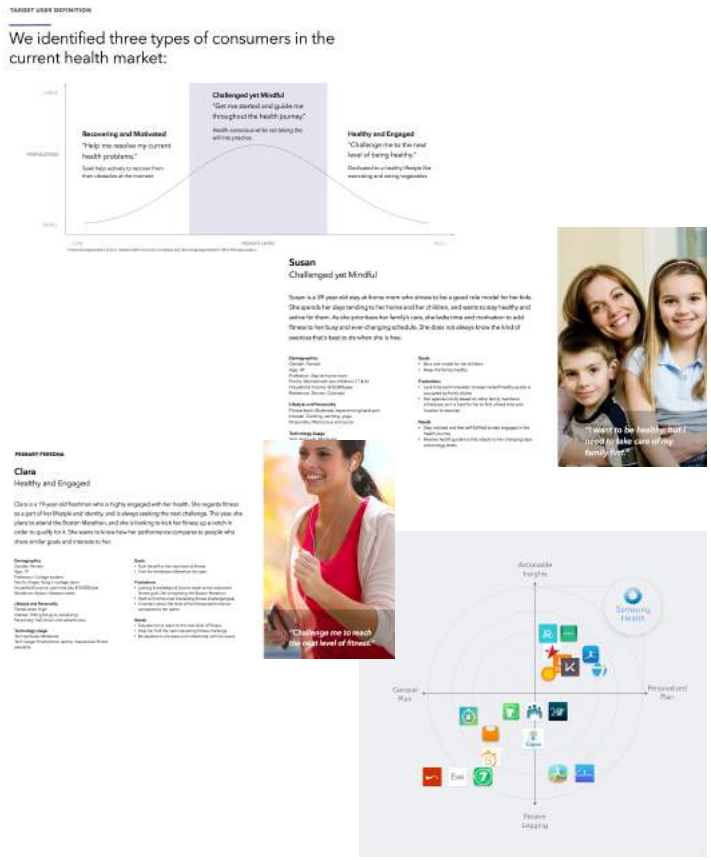
- Each participant mapped out a typical weekday, as well as their physical/fitness activities, the tool they used, and pain points they experienced during that day

2) Desk research of market segmentations and behavioral theories

3) Comparative analysis of the current consumer health apps







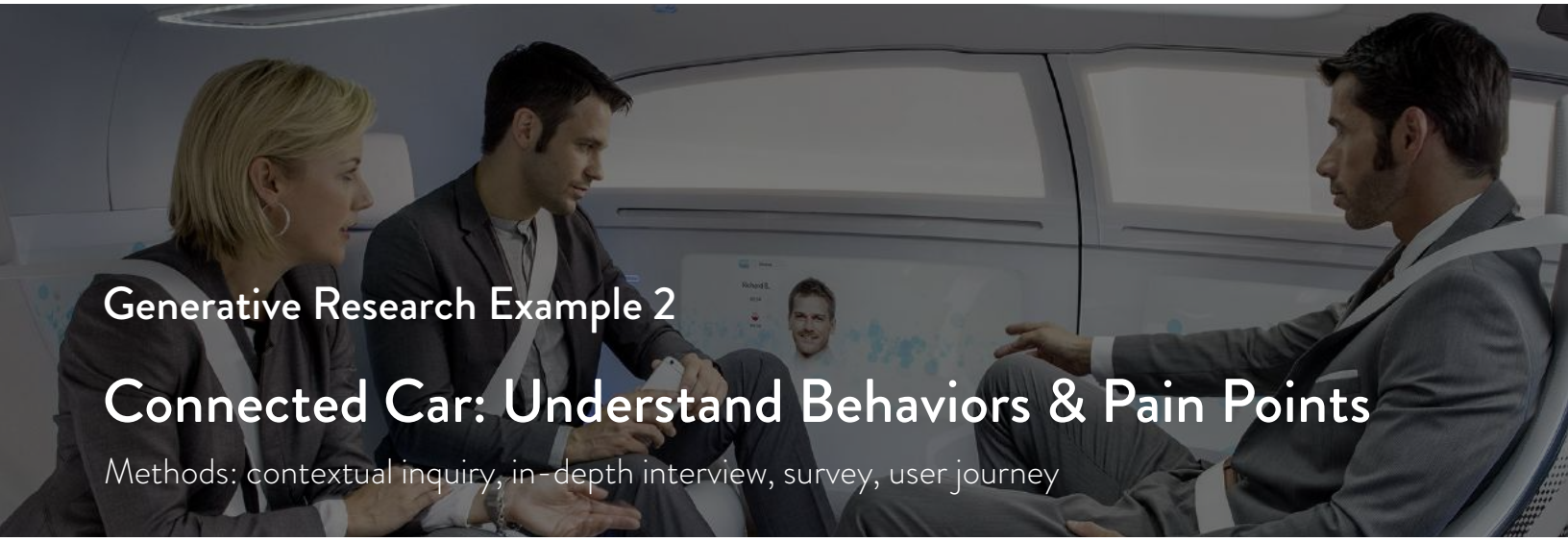
The Outcome

1) 3 consumer health personas, and the user needs statements of each, including 1 main target persona and 2 for the niche market

Impact: *the personas and needs statements became the foundation of the later design concepts*

2) Comparative analysis report of 10 comparative products, including their strength, limitations; identified out two of the current consumer health app trends: personalization & insight driven

Impact*: these two trends later became the two aspects of the product's unique selling propositions*



Generative Research Example 2

Connected Car: Understand Behaviors & Pain Points

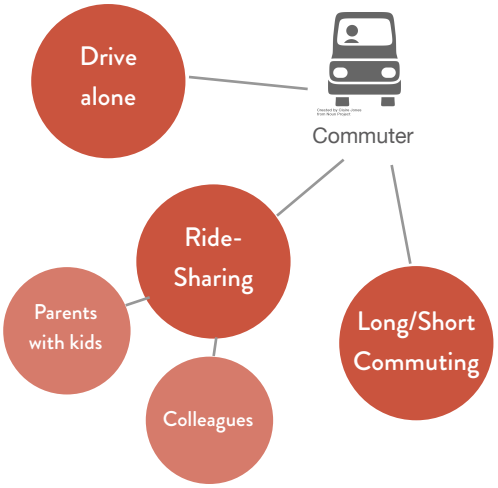
Methods: contextual inquiry, in-depth interview, survey, user journey

Project	Role	Research	Time
Connected Car	Researcher (2 Researcher in total)	2 rounds in total	September - November 2015

Understand Behaviors & Pain Points: 2nd Round Research of Project Connected Car

The Objective

To understand the potential users (commuters) of connected car technology, including their routines and pain points that will be best addressed by connected car technology



The Challenge

1) Limited timeframe: only 2 weeks allowed for this stage of generative research
2) Various car-riding scenarios: commuters' driving scenarios are full of possibilities (single, car sharing, with kids, etc.). So how to make sure the research would cover and distinguish pain points in different scenarios became important.

| Understand Behaviors & Pain Points: 2nd Round Research of Project Connected Car

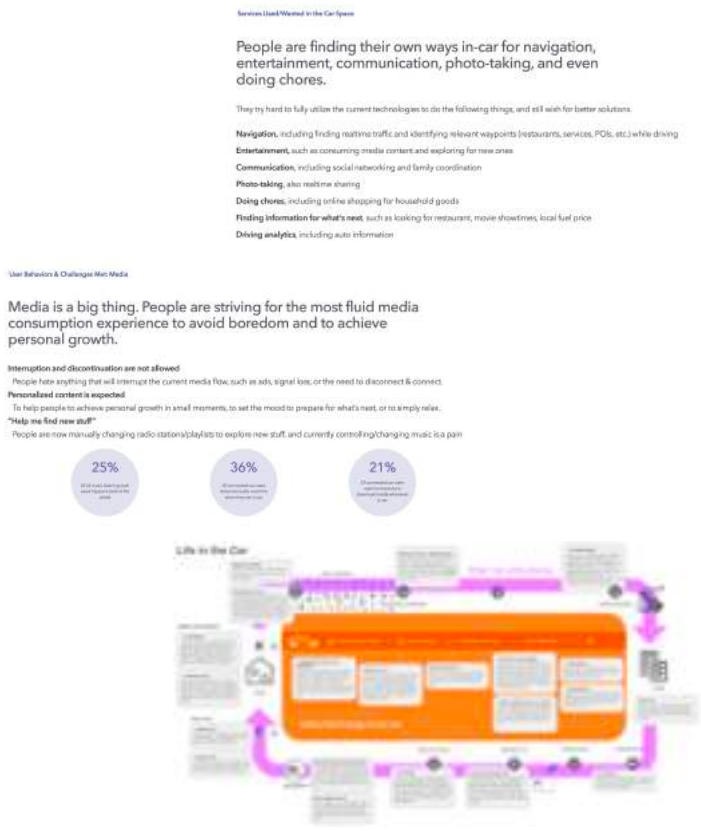
The Work

1) 3 sessions of contextual inquiry with 3 participants, 1.5 hours each, (6 participants in total for the study)

- Participants: all commuters; mix of gender, age, commuting time, usual mode of driving (ride-sharing, with kids, etc.)

- Visited participants' home and observed in-car artifacts, and then conducted 1-1 interview about their daily driving routine, in-car behaviors & pain points with/without technologies on weekdays/weekends

2) Survey with 121 respondents supplementing the contextual inquiries to understand the target users' usage of in-car technologies, needs and preferences

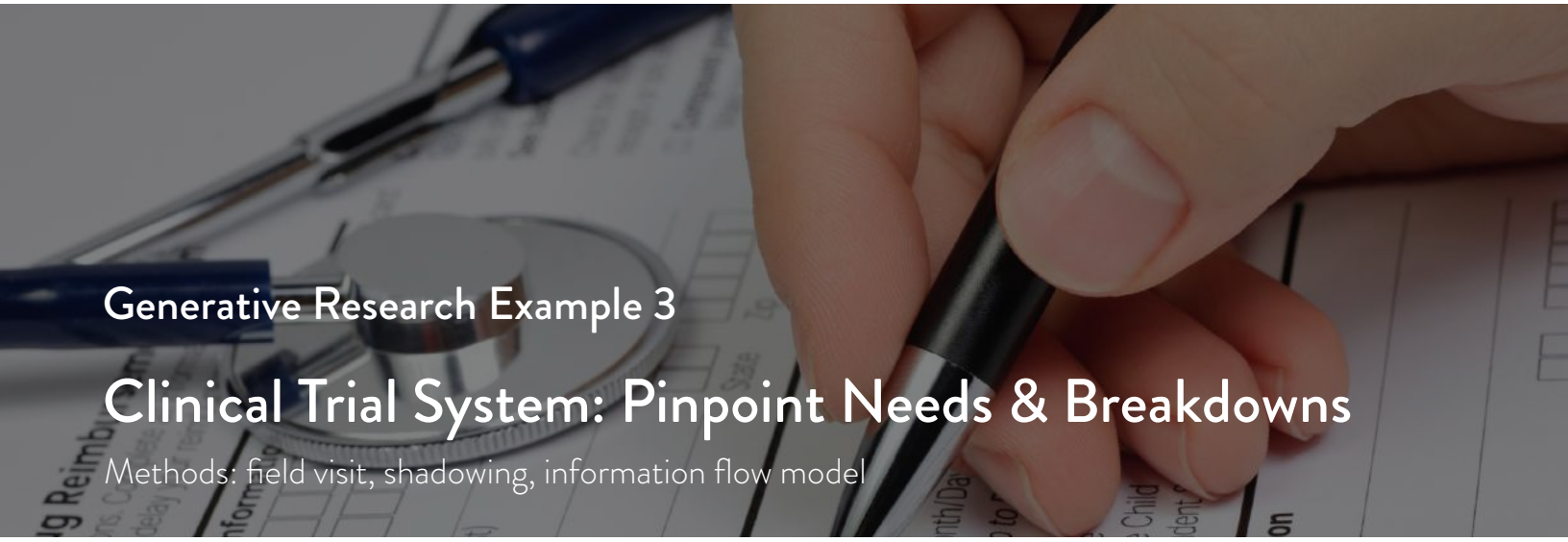


The Outcome

1) Connected Car Research Report with 11 insights statements and detailed explanations about the target consumers' in-car behaviors and needs backed by both the interviews and the survey data

2) Commuter journey inforgraphic illustrarting commuters' driving experience in a typical weekend

***Impact**: The research insights and commuter journey inforgraphic served as a foundation for Samsung MIL's ideation workshops with a big automanufacture to generalize innitial design concepts of Samsung's connected car products*



Generative Research Example 3

Clinical Trial System: Pinpoint Needs & Breakdowns

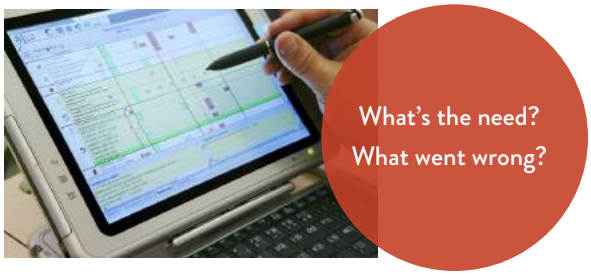
Methods: field visit, shadowing, information flow model

Project	Role	Research	Time
Clinical Trial System Redesign	Lead Researcher	2 rounds in total	Octobor - November 2013

Pinpoint Needs & Breakdowns: 1st Round Research of Clinical Trial System Redesign

The Objective

To uncover the breakdowns the end users (nurses, the research/financial departments, etc.) experienced with the UM Cancer Center's Clinical Trial Management Systems so as to inform the systems' redesign



The Challenge

1) Unfamiliar & complex field: the clinical research field is complicated with countless terminologies and intricate relationships between different professional roles

2) To shadow and gather relevant information from hectic health professionals without much intrusion

3) To guage and synthesize research insights from tons of irrelevant information got from shadowing

| Pinpoint Needs & Breakdowns: 1st Round Research of Clinical Trial System Redesign

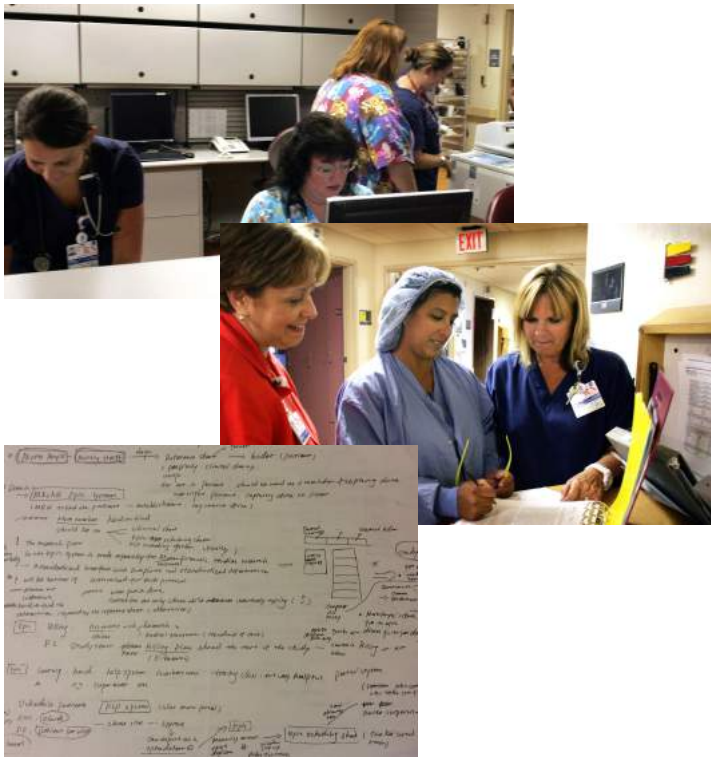
The Work

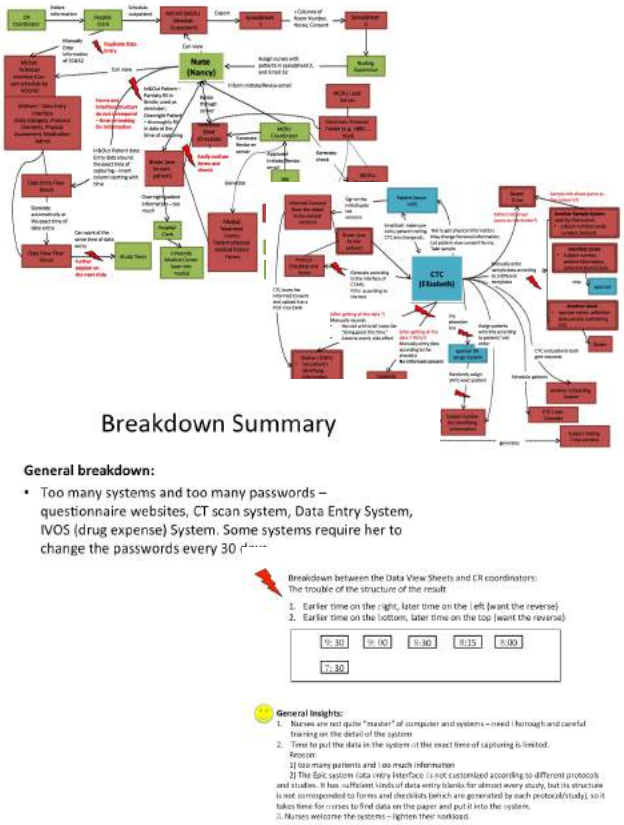
7 field visits & shadowing sessions, 4 hours each, 10 participants of 5 different roles in the UM Health System

- Participants: Clinical Research Coordinator, Research Nurse, Regulatory Coordinator, Data Manager, Specimen Lab Coordinator

- Each participant was shadowed for 4 hours in the morning/afternoon when they were at work. I observed their work environment, how they interacted with co-workers, and how they used the clinical trial systems

- Questions relevant to my observation were asked during or after the shadowing session





Breakdown Summary

General breakdown:

- Too many systems and too many passwords – questionnaire websites, CT scan system, Data Entry System, IVOS (drug expense) System. Some systems require her to change the passwords every 30 d...

Breakdown between the Data View Sheets and CR coordinators:
The trouble of the structure of the result

1. Earlier time on the right, later time on the left (want the reverse)
2. Earlier time on the bottom, later time on the top (want the reverse)

9:30 | 9:00 | 8:30 | 8:15 | 8:00 | 7:30

General Insights:

1. Nurses are not quite "master" of computer and systems – need thorough and careful training on the detail of the system
2. Time to put the data in the system at the exact time of capturing is limited.
   Reason:
   1) too many patients and too much information
   2) The Epic system data entry interface is not customized according to different protocols and studies. It has sufficient kinds of data entry blanks for almost every study, but its structure is not corresponded to forms and checklists (which are generated by each protocol/study), so it takes time for nurses to find data on the paper and put it into the system.
3. Nurses welcome the systems – lighten their workload.

The Outcome

1) 6 flow models that revealed the information flow among the end users and between the end users and the systems, the breakdowns within the flow, and the user needs

Impact: *helped the product team and the business level understand the general working environment, the needs, and the pain points of the end users*

2) Research finding report that summarized the insights of over 30 breakdowns between the end users and the system

Impact*: Directed the product team to the 30 breakdowns of the system that the team needed to improve on*

Evaluative Research

Example 1
S-Health: Concept Testing & Requirements Gathering

Example 2
Gear S Women Safety: Usability Testing

Example 3
Samsung Milk Video: Design Versions Comparison

Evaluative Research Example 1

S-Health: Concept Testing & Requirements Gathering

Methods: in-depth interview, Microsoft Emotional Reaction Words, card sorting, paper prototyping

Project	Role	Research	Time
S-Health Redesign	Lead Researcher	5 rounds in total	March - Present 2016

Concept Testing & Requirements Gathering : 3rd Round Research of Project S-Health Redesign

The Objective

To gather users' feedback on the app's design concepts, including their mental models, desirability, and preference of contents, tones, and visual elements of different viarations to inform design directions

What users desire?
Why?
What's the mental model?

No Working Prototype

Only 1 Researcher

Tone Testing

The Challenge

1) App concept testing without an actual working prototype could easily fall into the pitfall where users' attitudes such as "I like this/ that…" were gathered rather than objective findings such as their real feelings & behaviors

2) The tone of the content language is essential to the design, while tone testing is a novel ux research area to me and the team

3) Lack of research resources: I was the only researcher assigned to the project

| Concept Testing & Requirements Gathering : 3rd Round Research of Project S-Health Redesign

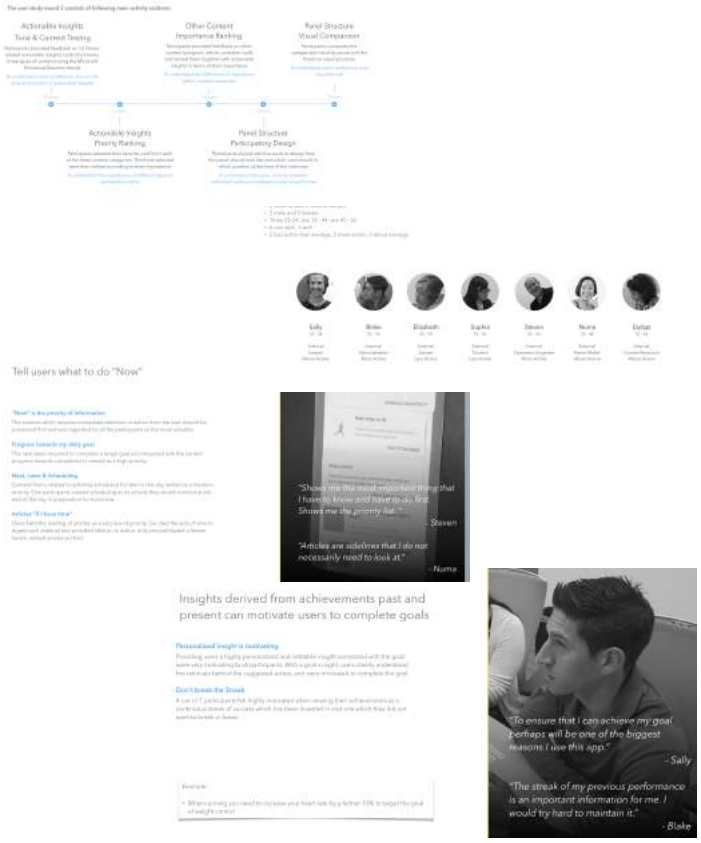
The Work

1) 7 in-depth concept testing interviews, 1 hour each, 7 participants in total

- Participants: mix of gender, age, professionals, levels of fitness activity

- Activities included: participants provided feedback on the tone of the language using the Microsoft Emotional Reaction Words, indicated their preferences of the content and visual formats and their real life needs (the why underneath the preferences) by card sorting and participatory design

2) Engaged the product team into the research process from paper prototyping to interview and then to research synthesis



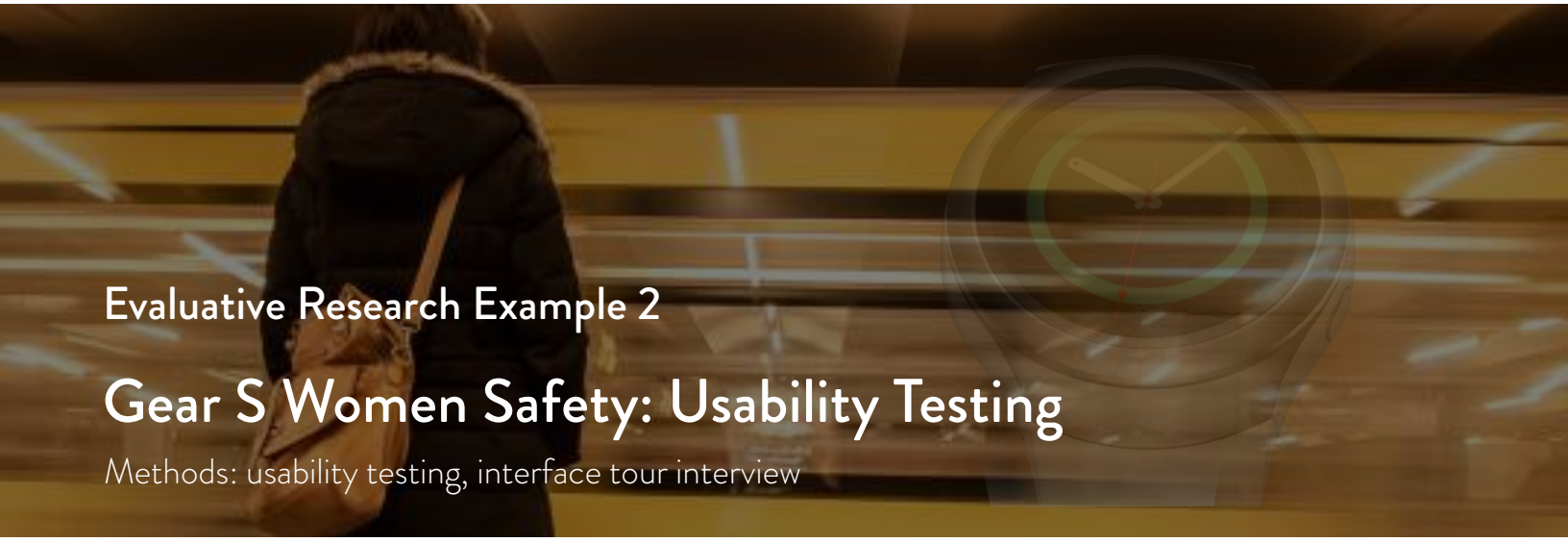
The Outcome

1) Concept testing report/deck of 26 pages that was quickly synthesized and compiled (2.5 days) in the way deep but glanceable. The report answered the product team's questions regarding users' preferences over the tone/ content/visuals and the underlyiing reasons

Impact: *guided the product team to decide on what tone of the language to use with which words, the contents and their priority levels, and the visual format*

2) Formal presentation to the Korean Headquater to introduce users' prespectives and what they valued

Impact*: persuaded the headquater to maintain the feature that catered to users' needs instead of the company's immediate monetary gain*



Evaluative Research Example 2

Gear S Women Safety: Usability Testing

Methods: usability testing, interface tour interview

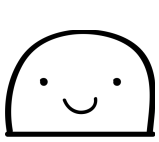
Project	Role	Research	Time
Gear S Safety Service	Lead Researcher	2 rounds in total	November - December 2015

Usability Testing: 2nd Round Research of Women Safety Service on Gear S

The Objective

To test out 2 prototypes of the women safety service on Gear S, to evaluate the usability of the interfaces, the flow, and the physical interactions, so as to inform the next iteration of the design

What worked?
What did not work?



Common Product Usage Context

Gear S Safety Service Usage Context

The Challenge

Context simulation: the safety service on Gear S (Samsung wearable) is designed for special situations when users already face or sense the danger and may be in unusual postures (standing, running, fighting, etc.). So to test out the prototypes required the simulation of the situation while avoiding unnaturalness

| Usability Testing: 2nd Round Research of Women Safety Service on Gear S

The Work

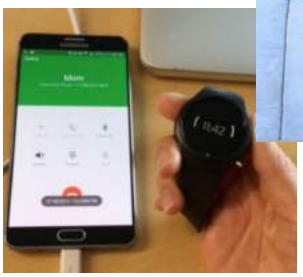
1) 6 usability testings, 1 hour each, 6 participants in total

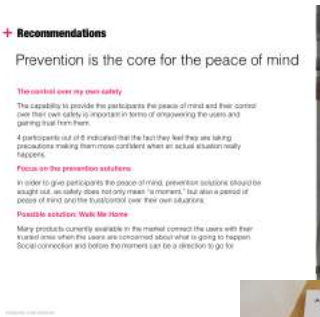
- Participants: female, mix of age from 18 - 34 (the age with highest safety risk statistically), mix of professionals

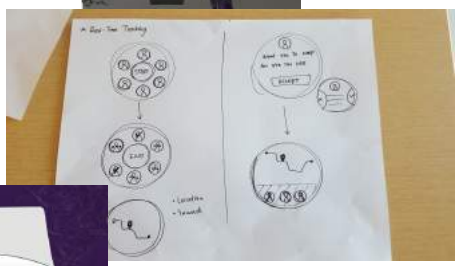
- The first half session of each testing was conducted on streets. Participants were presented with 2 prototypes one by one and asked to complete 3 tasks. The completion rate, error rate, and time were recorded.

- The participants then went through an interface tour in-lab and explained their expectations and feedback of the interfaces

- Finally the participants were asked to recall the gestures to trigger the safety services







The Outcome

1) Usability testing report that was quickly synthesized and complied in 2 days with actionable bullet points. The report presented the general user feedback of the concepts and the interfaces/flows that required revision because of usability errors and unmatched user expectations

2) Revised the interfaces/flows together with designers and provided my own wifeframes

***Impact**: informed the design team what worked and did not work in terms of features, interfaces, and flows; incorporated the research findings into design by revising the interfaces together with designers*

Evaluative Research Example 3

Samsung Milk Video: Design Versions Comparison

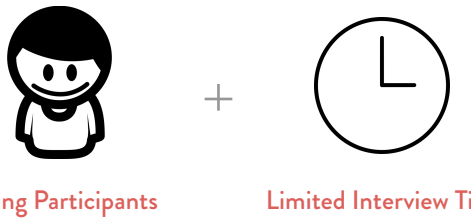
Methods: in-lab interface tour interview, post-interview questionnaire

Project	Role	Research	Time
Samsung Milk Video (Shipped in 2014)	Researcher (2 Researchers in total)	2 rounds in total	July - August 2014

Design Versions Comparison: 1st Round Research of Samsung Milk Video

The Objective

To test out 3 design versions of Milk Video and identify likes, dislikes, wants, needs, and concerns so as to inform the next iteraction of Samsung Milk Video



The Challenge

1) Young study participants: the innitial target users' age was from 10 - 25, a young market segmentation that I was not familiar with, so how to communicate effectively with the young participants was challenging

2) Limited interview time: within 1 hour, we needed to test out 3 versions of design which was rich with visual elements, so it was critical to utilize the time efficiently

| Design Versions Comparison: 1st Round Research of Samsung Milk Video

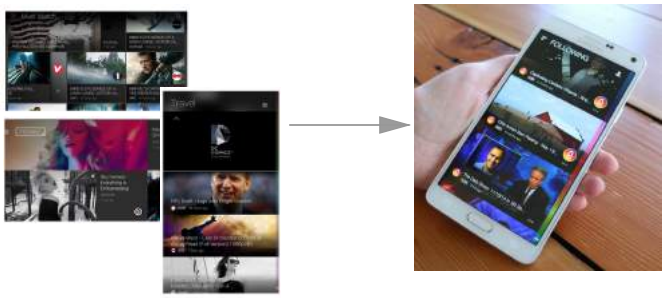
The Work

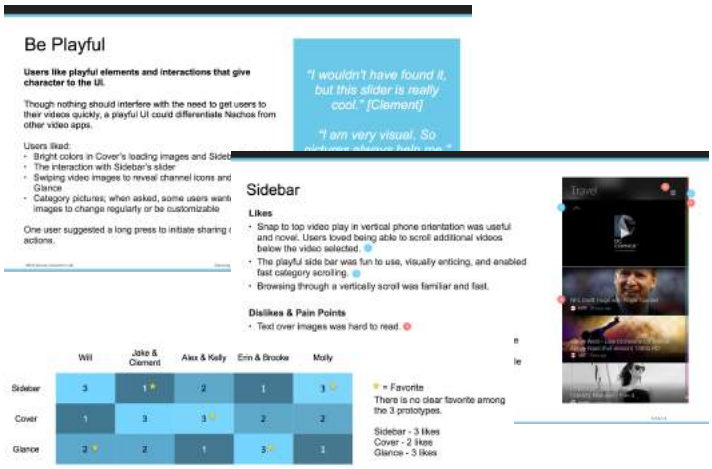
1) 5 interface tour interview, 1 hour each, 8 participants in total

- Participants: mix of age from 10 - 25 (the innitial target users' age range), mix of gender, all watched videos on mobile phones at least once per day

- Each participant played with all the 3 prototypes in different orders in a half-guided-half-self-exploratory manner. Along the way they were asked to think aloud and provide their expectations and feedback of the interfaces and the features

- Finally the participants completed brief questionnaires regarding their preference on versions and features





The Outcome

User research report that synthesized user needs and concerns in six aspects with six concise and glanceable statements like "be personal; be private"; Likes and dislikes/pain points about each design version were also explained in the report in detail

***Impact**: directed the product team to decide on which design version of Milk Video to go for and what user pain points to solve; four out of the six user needs statements became a part of the design principles*

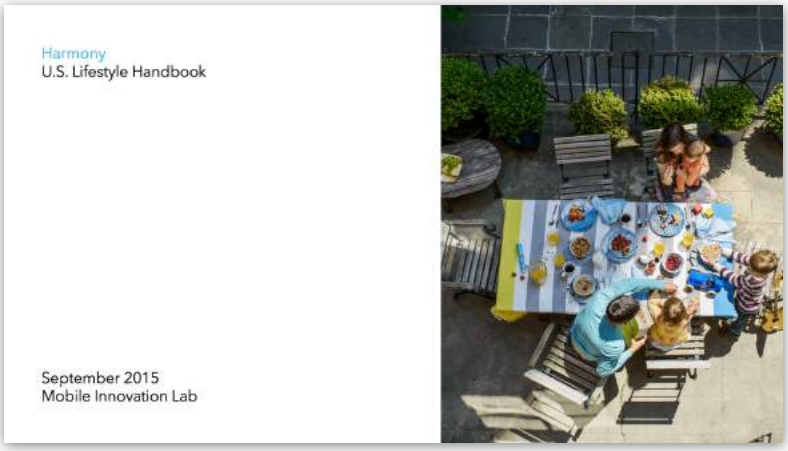
Market/Trend Research

Example 1
Trend Study: U.S. Lifestyle Handbook

Example 2
Market Study: Connected Car Report

Example 3
Agile Market Testing: 7inch Smartphone Study

Trend Study: U.S. Lifestyle Handbook



Project Connected Life

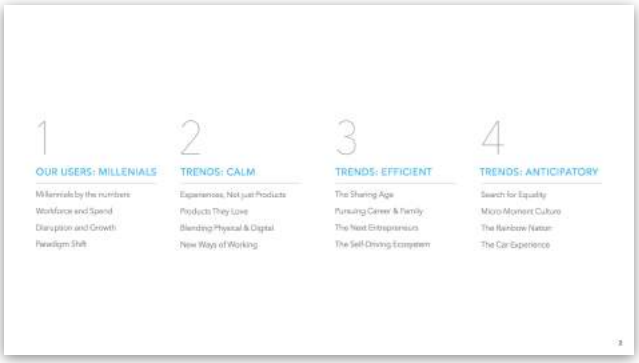
Role Researcher (2 researchers in total)

Time July - August 2015

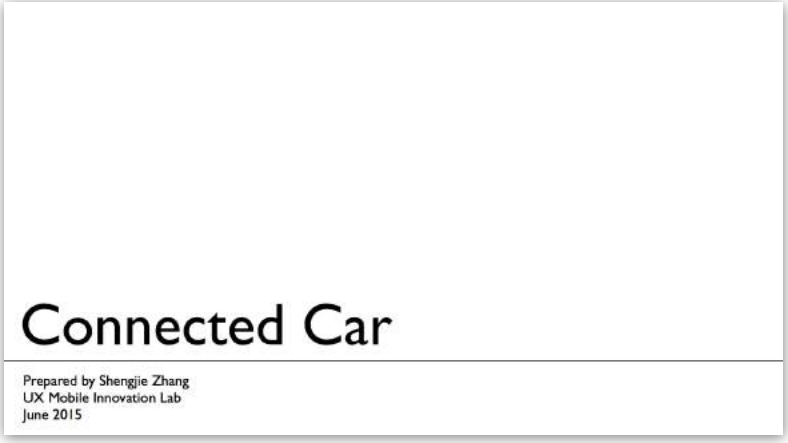
Methodology Desk Research, Affinity Wall

Length 46 pages

Topic The lifestyle trend of Millennials; 12 key trends were identified and summarized into 3 UX principles



Market Study: Connected Car Report



Project Connected Car

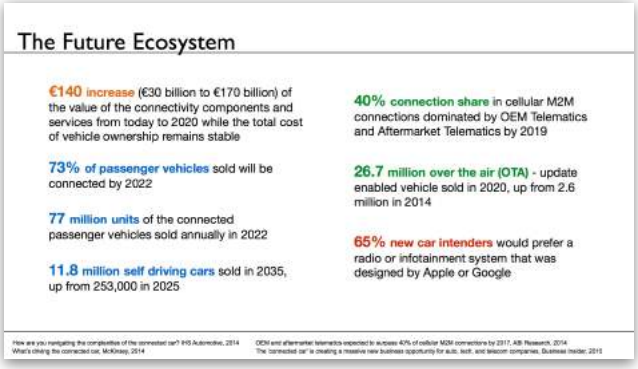
Role Sole researcher for market study

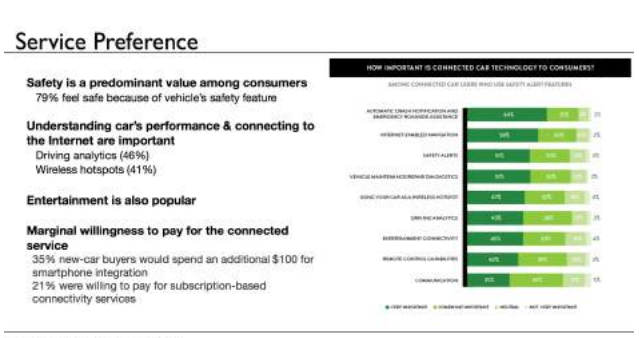
Time September 2015

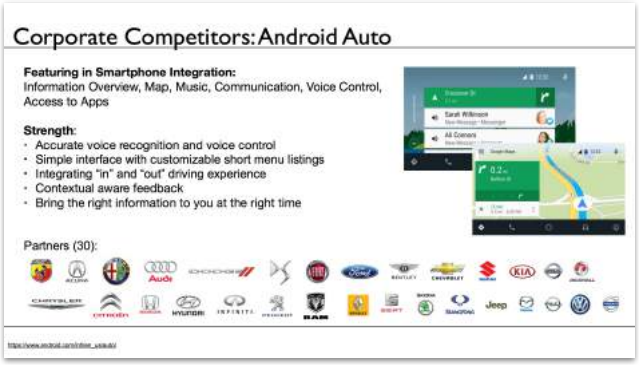
Methodology Desk Research

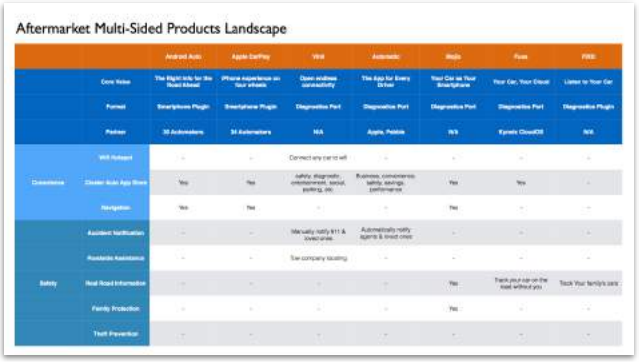
Length 48 pages

Topic Connected car landscape, including market potential, technology trends, aftermarket products review, and automaker products review









Agile Market Testing: 7inch Smartphone Study

Project 7inch Smartphone

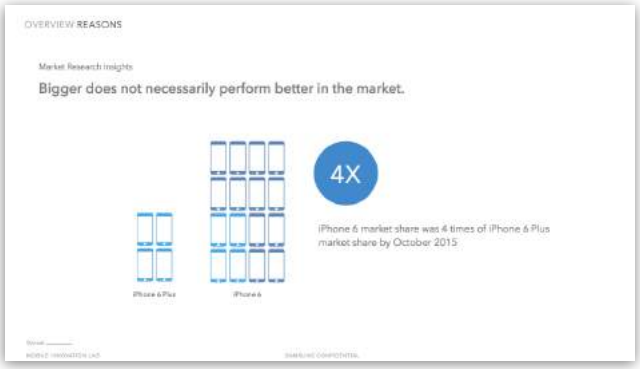
Role Lead researcher

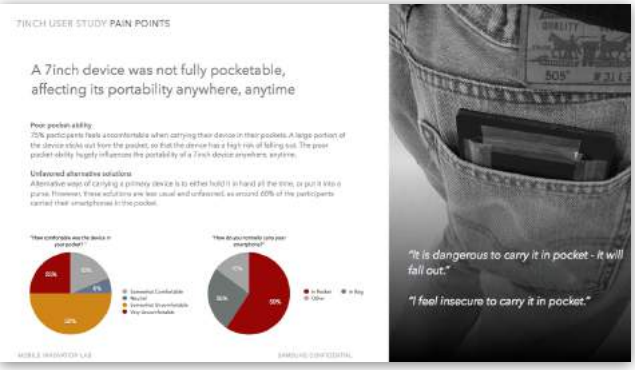
Time January 2016, 1 week

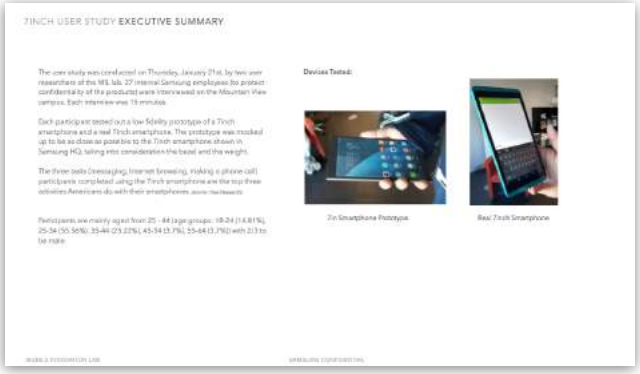
Methodology Agile Concept Testing, Survey

Length 23 pages

Topic To understand the opportunity area of a 7inch smartphone in the U.S. market





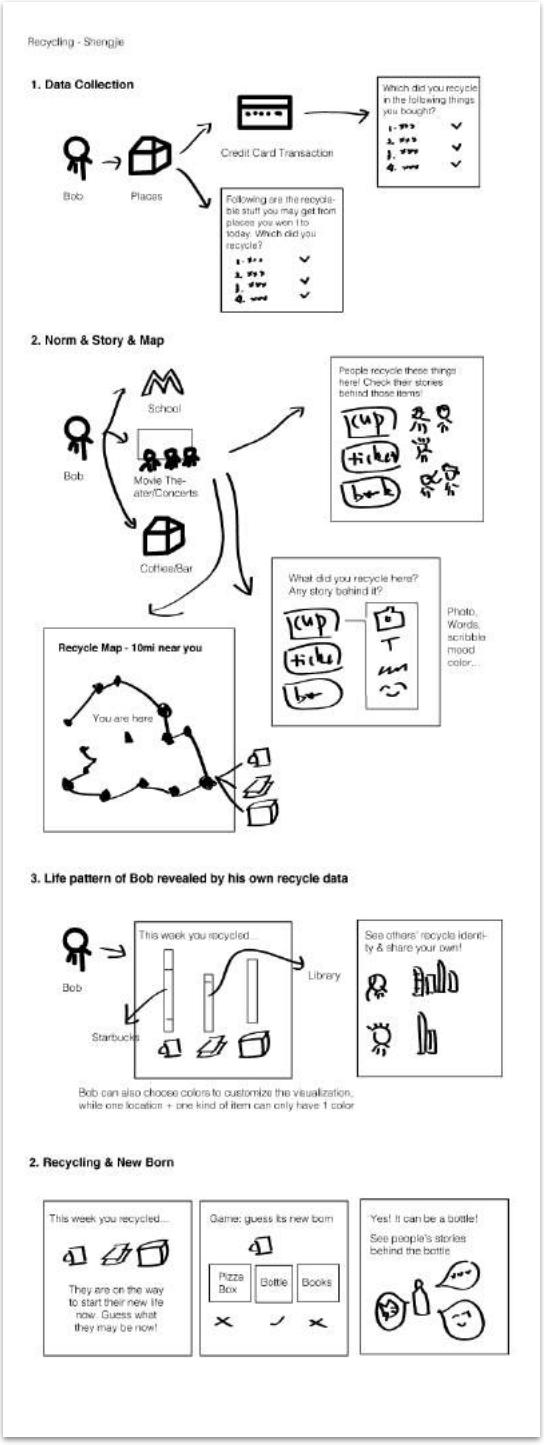


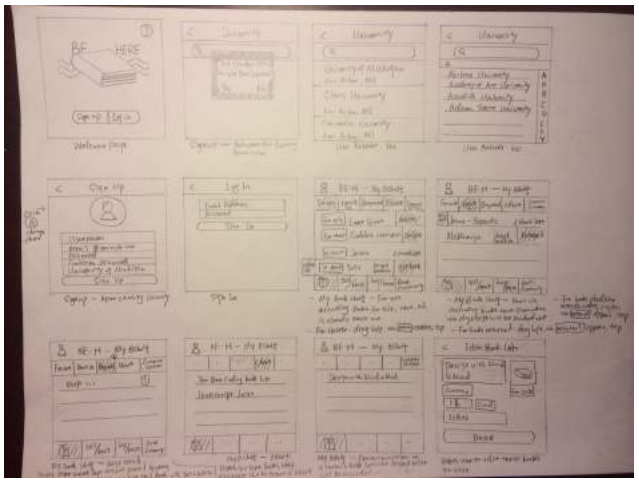
Interaction Design

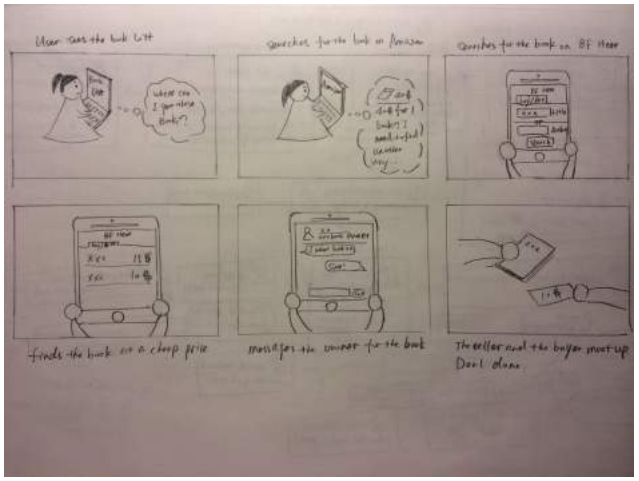
Example 1
Wireframes & Storyboards

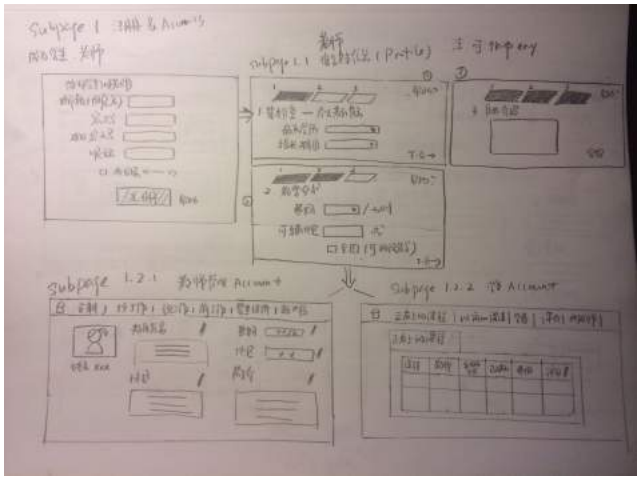
Example 2
Mid-fi Screens & Information Visualizaiton

Wireframes & Storyboards

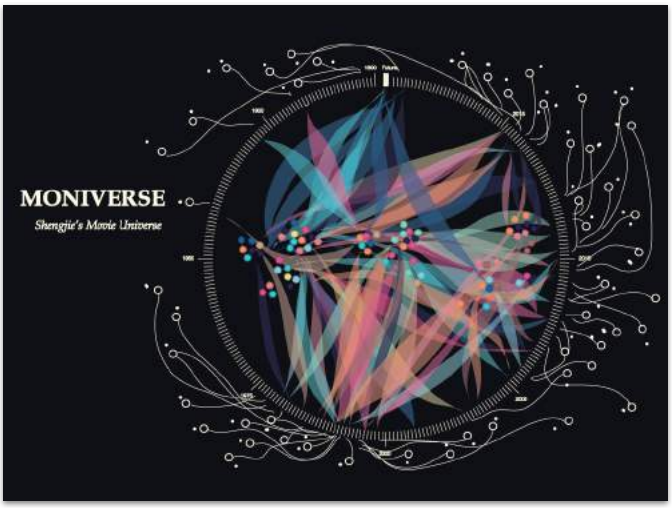


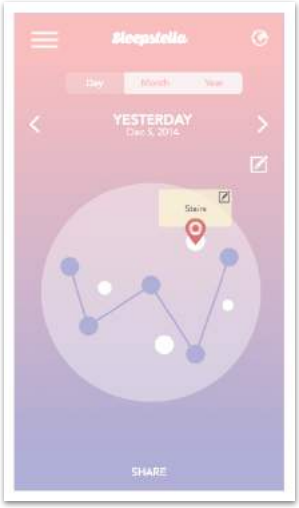


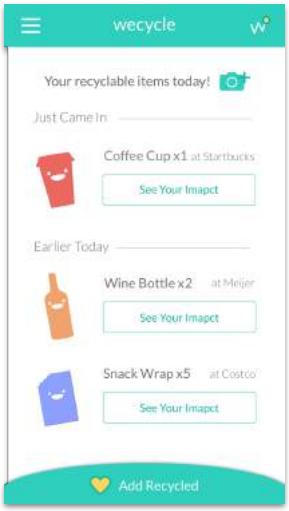


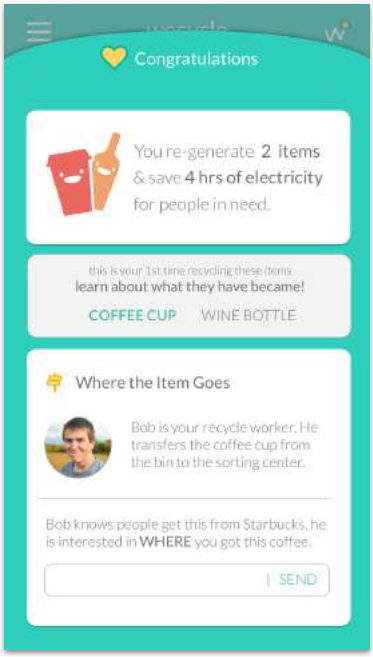


Mid-fi Screens & Information Visualization









Thank you.

Would like to see more examples of Shengjie's work? Sure! Please email me at:
zhangsj1990@gmail.com

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