



INNOVATION IN ACTION: FROM DESIGN THINKING TO DIGITAL TRANSFORMATION

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Chinese University of Hong Kong

Today's Agenda

- 1. Prepare for disruptions.**
- 2. Tech competency: answer to disruption?**
- 3. What is design thinking? Where does it fit?**
- 4. Embracing platform in your strategy.**
- 5. Redefining the core business for digital transformation.**



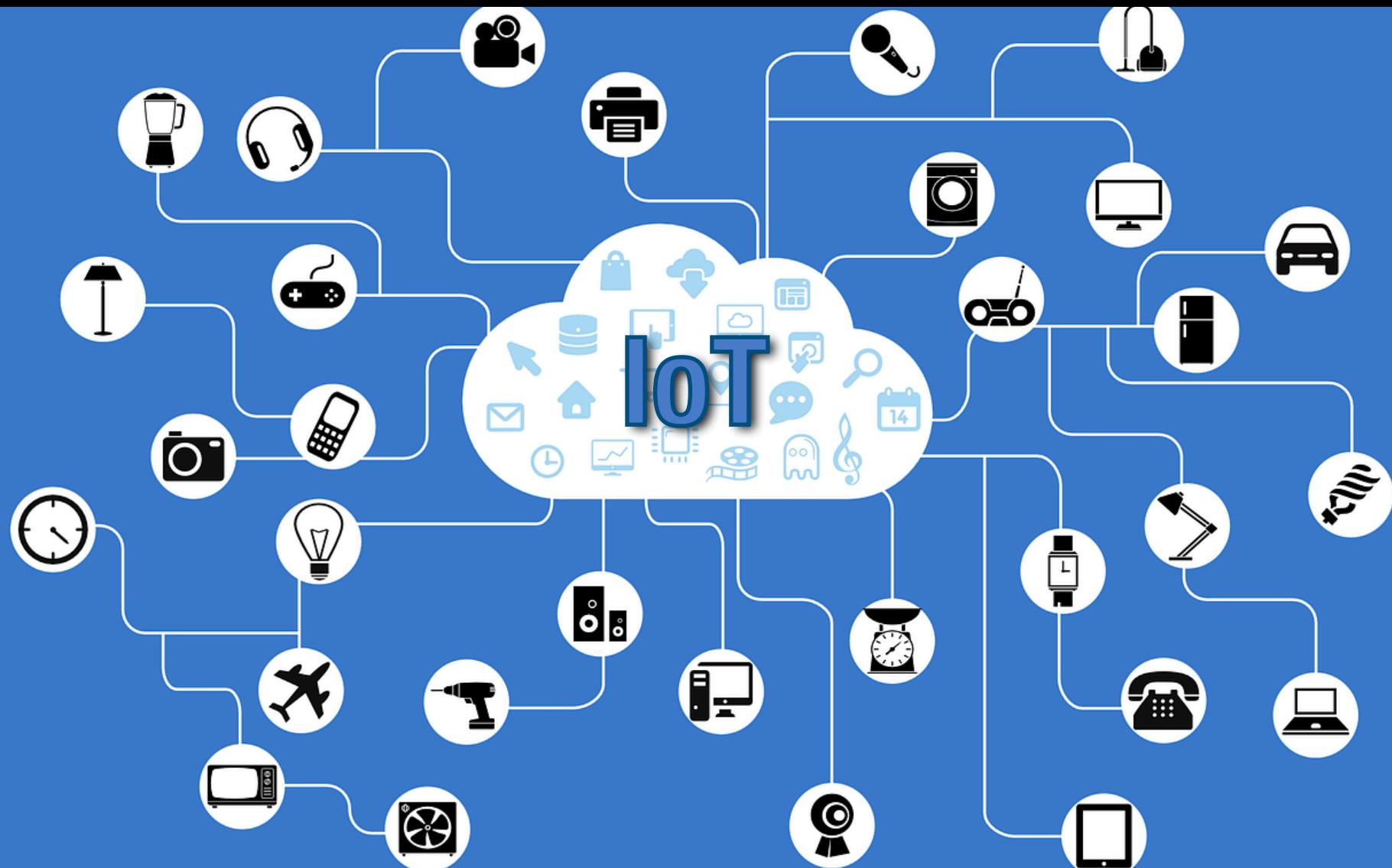
CORONAVIRUS



**Our life Disrupted.
But is COVID19 the
only one?**

BLOCKCHAIN





A large, swirling pile of books forms a vortex, with the words "BIG DATA" overlaid in white.

BIG DATA

A large blue-toned photograph showing the assembly of a massive telescope mirror. The mirror is a large hexagonal panel, supported by a complex metal truss structure. Two workers in white protective suits and masks are visible at the base of the mirror, one holding a clipboard. The background features a large glass wall and a ceiling with a grid of lights.

**Is technological competence the only
way to respond to digital disruption?**

Is tech enough for getting ahead ?

The surprising thing Google learned about its employees – and what it means for today's students

By Valerie Strauss December 20, 2017 [Email the author](#)



(Marcio Jose Sanchez/AP)

"In 2013, Google decided to test its hiring hypothesis by crunching every bit and byte of hiring, firing, and promotion data accumulated since the company's incorporation in 1998. Project Oxygen shocked everyone by concluding that, among the eight most important qualities of Google's top employees, STEM expertise comes in dead last. The seven top characteristics of success at Google are all soft skills: being a good coach; communicating and listening well; possessing insights into others (including others' different values and points of view); having empathy toward and being supportive of one's colleagues; being a good critical thinker and problem solver; and being able to make connections across complex ideas."

1. Good coach
2. Communicating and listening well
3. Possessing insights into others
4. Having empathy and being supportive of colleagues
5. Critical thinker
6. Problem solver
7. Make connection across complex ideas
8. **STEM expertise**

NATHAN HURST DESIGN 05.15.13 6:30 AM

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BIG CORPORATIONS ARE BUYING DESIGN FIRMS IN DROVES

McKinsey --> Lunar

Accenture --> Fjord

Google --> Mike & Maaike

Facebook --> Hot Studio

CapitalOne --> AdaptivePath



Parson School of Design Wins Rotman Design Challenge.

[Home](#) > [Media Centre](#) > [News Releases](#) > Parson School of Design Wins Rotman Design Challenge.

February 14, 2019

Toronto – A team of students from the Parson business and design schools. The Rotman Design of Management is a unique event that allows

The teams tackled a question on disruption in performance insulation and building envelope performance and contribute to a more sustainable

The team from the Parsons School, consisting of Subramanian, placed first.

A team of MBA students, Vanessa Lynskey, D Michigan's Ross School of Business placed se

The teams tackled a question on disruption in the construction industry posted by conference sponsor Kingspan, the global leader in high performance insulation and building envelope solutions for the construction market.

The STEAM Journal

Volume 3

Issue 1 Sediment

Article 11

November 2017

Creating STEAM with Design Thinking: Beyond STEM and Arts Integration

Danah Henriksen

Arizona State University



A place for explorers & experimenters at Stanford University.

[What We Do](#)[How We Do It](#)[Our Impact](#)[The Home Team](#)[How to start a d.school](#)

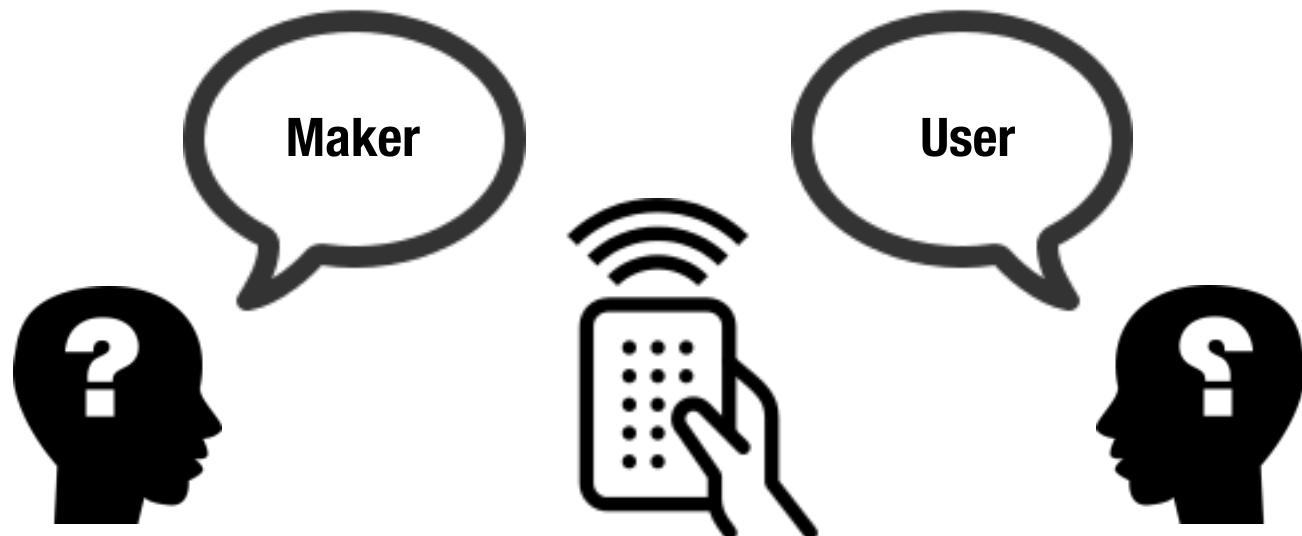
**Design thinking looks interesting
but what is it really?**





Have you used more than *50%* of its features?

Gap exists between their mental models



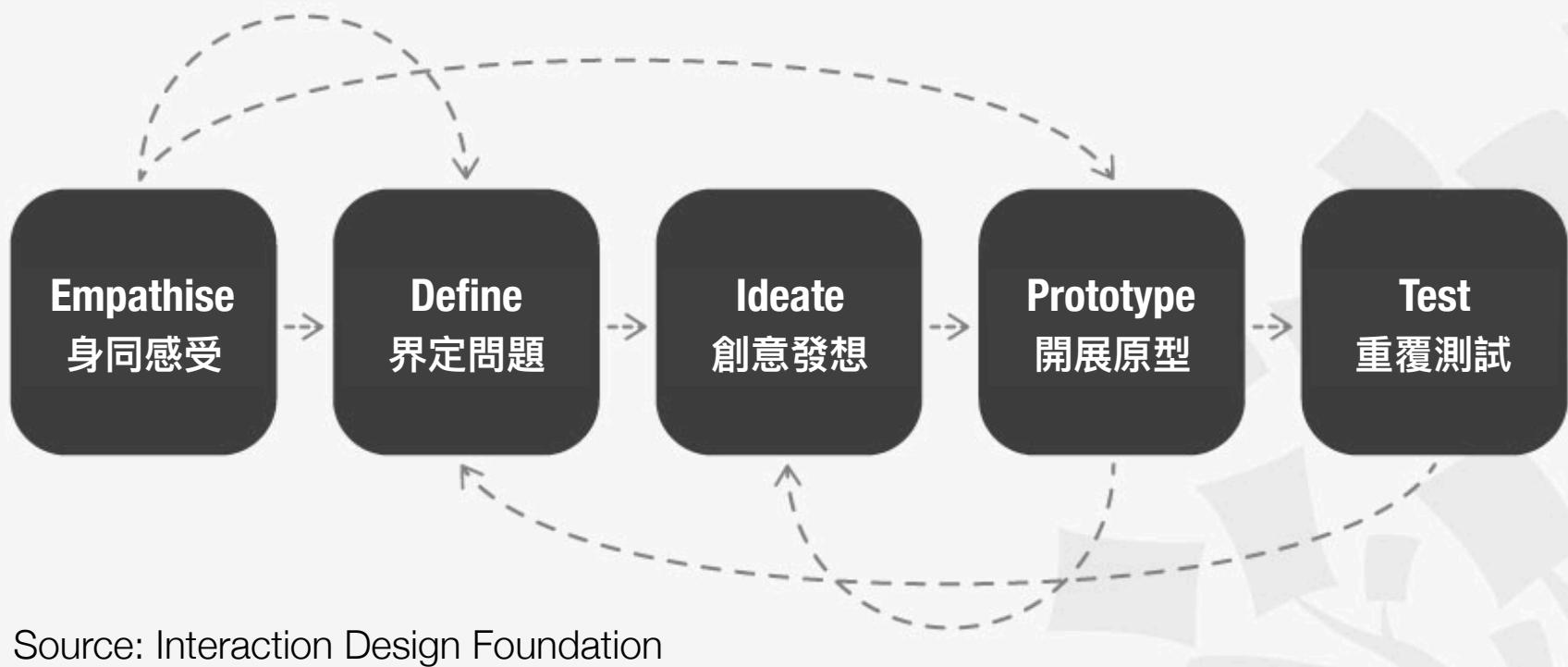
Adapted from Donald Norman, "The Design of Everyday Thing"

**The gap affects how we view the things
and people around us and how we
interact with them.**

**How might we effectively address needs
if we cannot see things as others do due
to our different mental models?**

**Design thinking is a problem discovery
and solving process that help fill the
gaps and address the needs.**

The Design Thinking Process

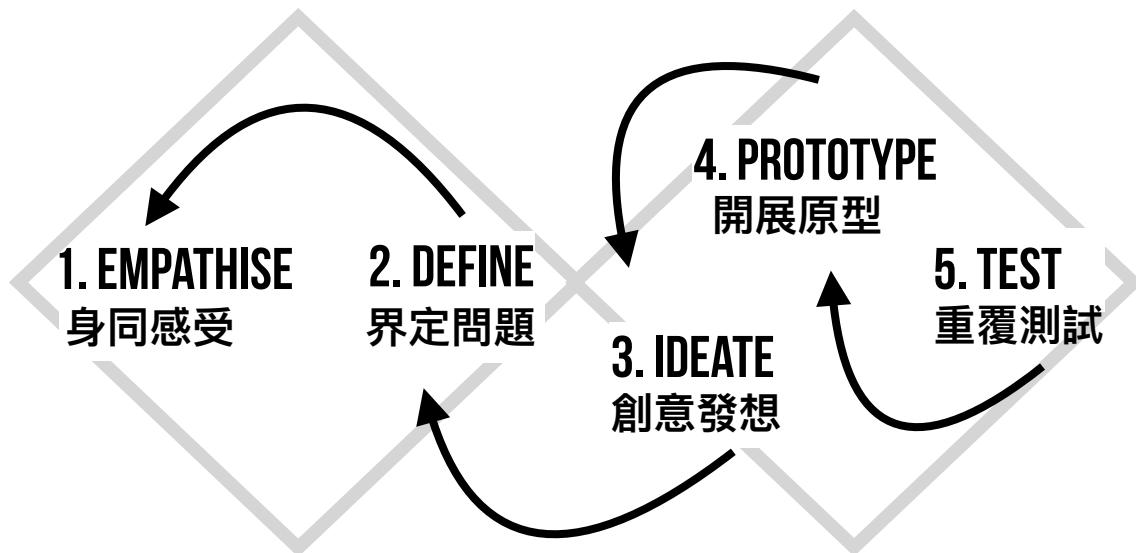


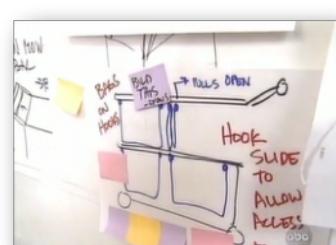
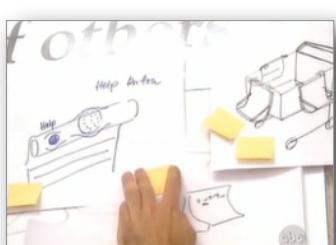
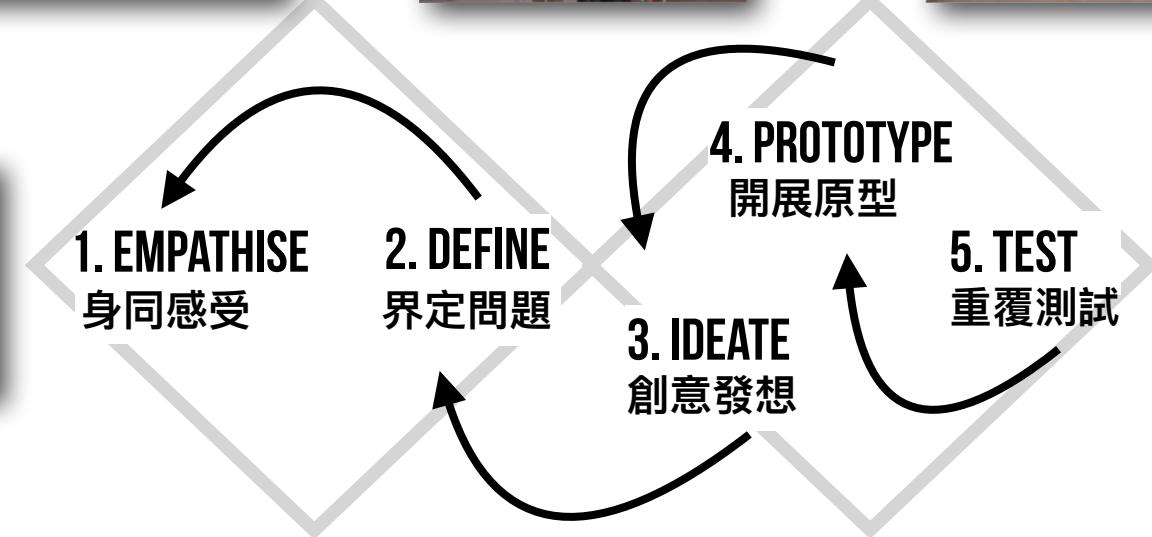
Source: Interaction Design Foundation

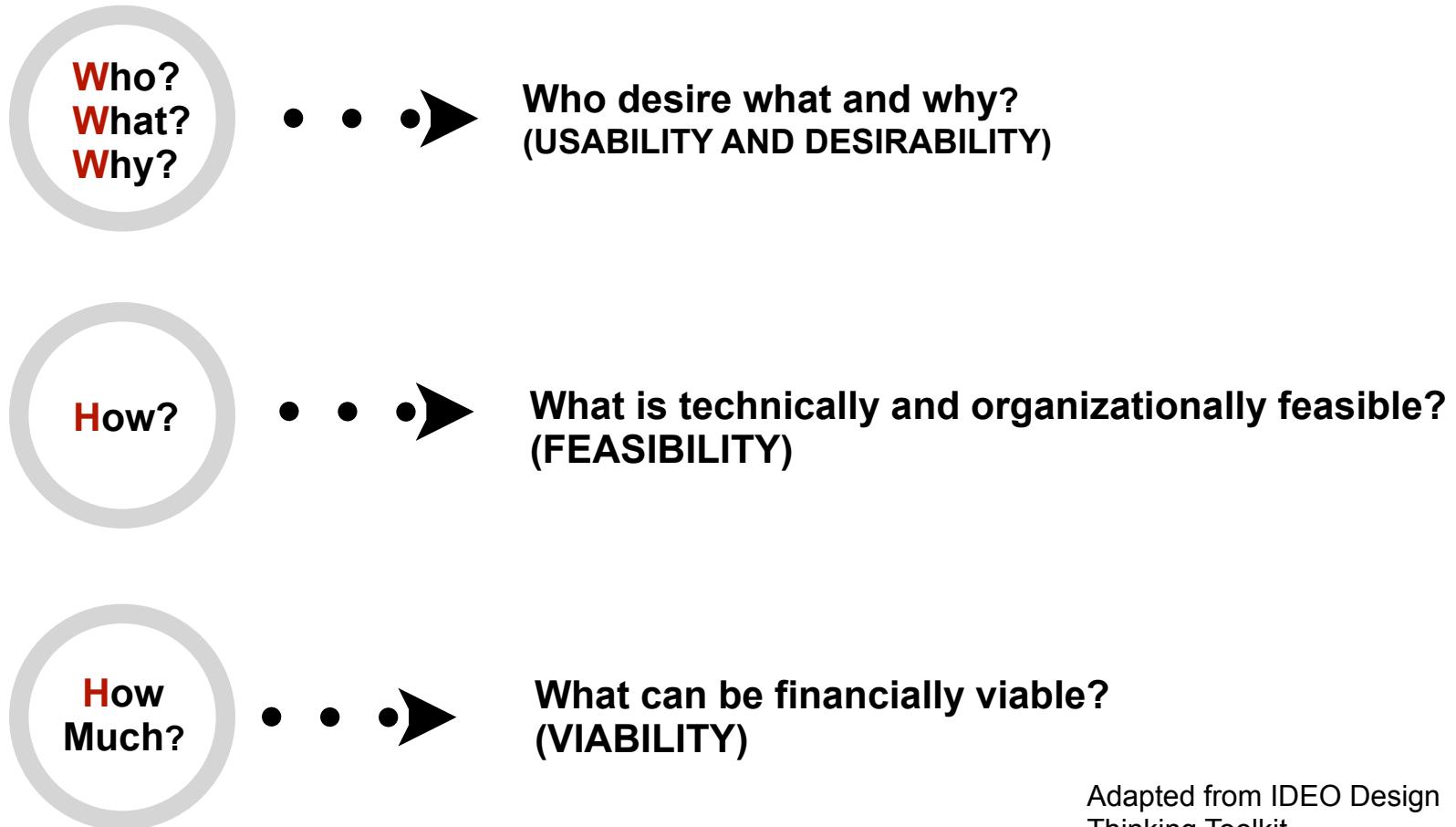


CASE STUDY: REDESIGNING THE SHOPPING CART

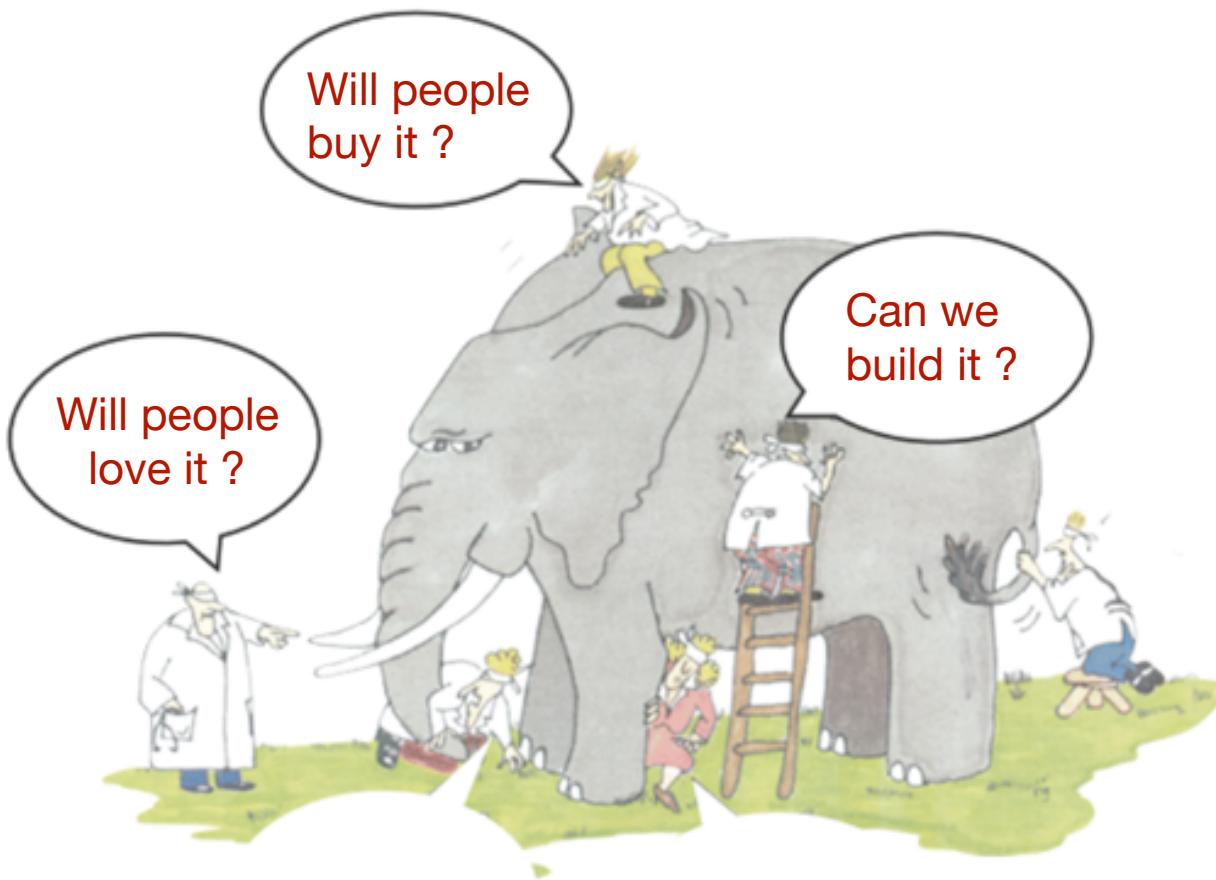
Double Diamond Model (雙鑽模式)

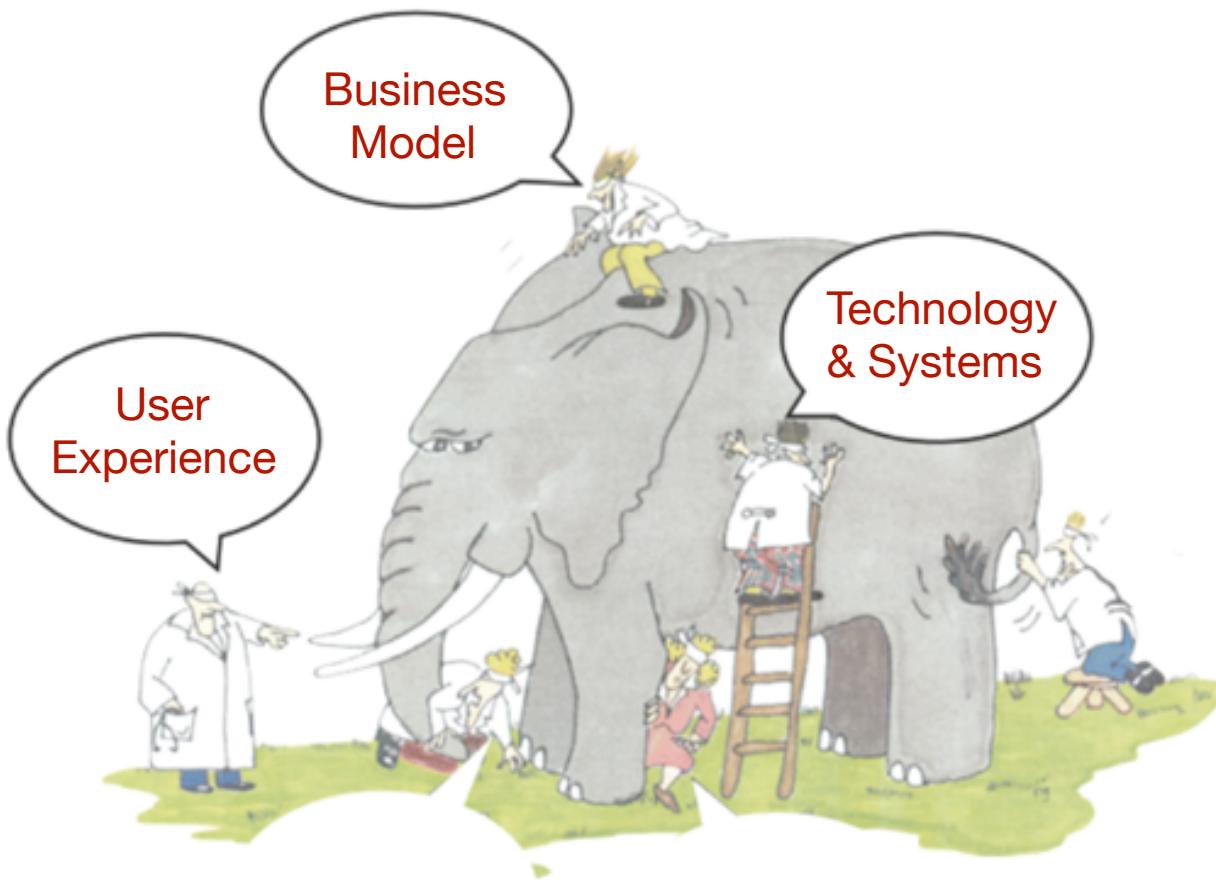




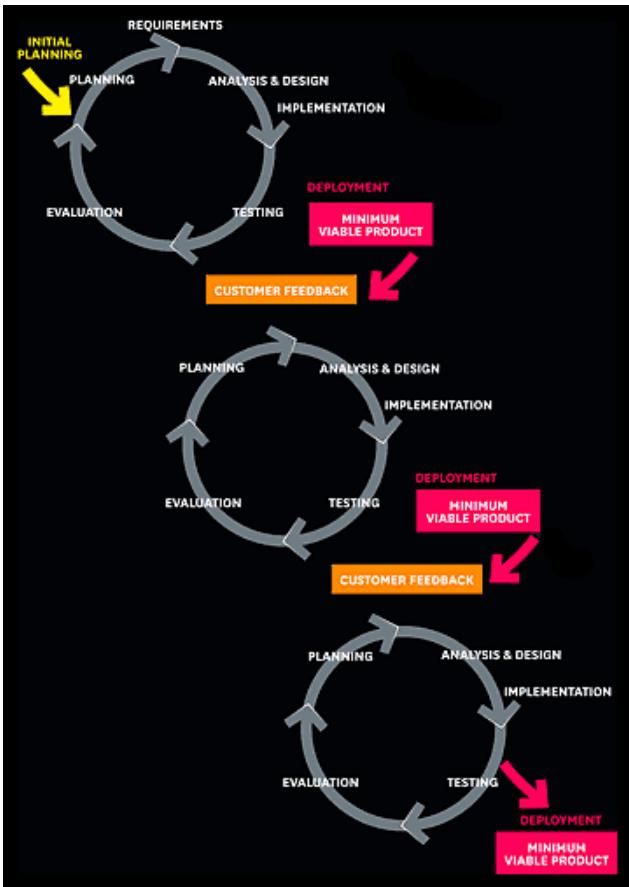


Adapted from IDEO Design Thinking Toolkit





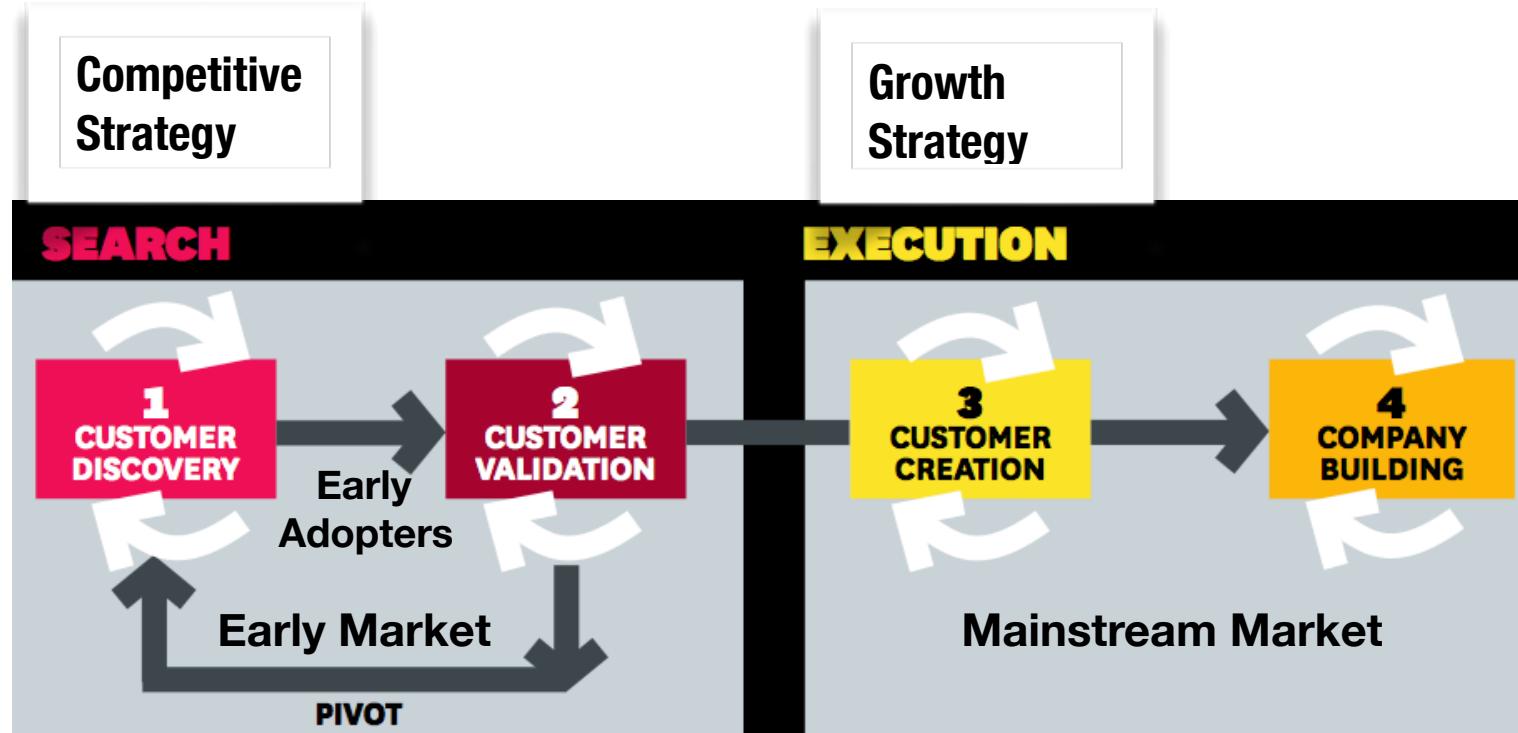
Design thinking vs. Lean Startup



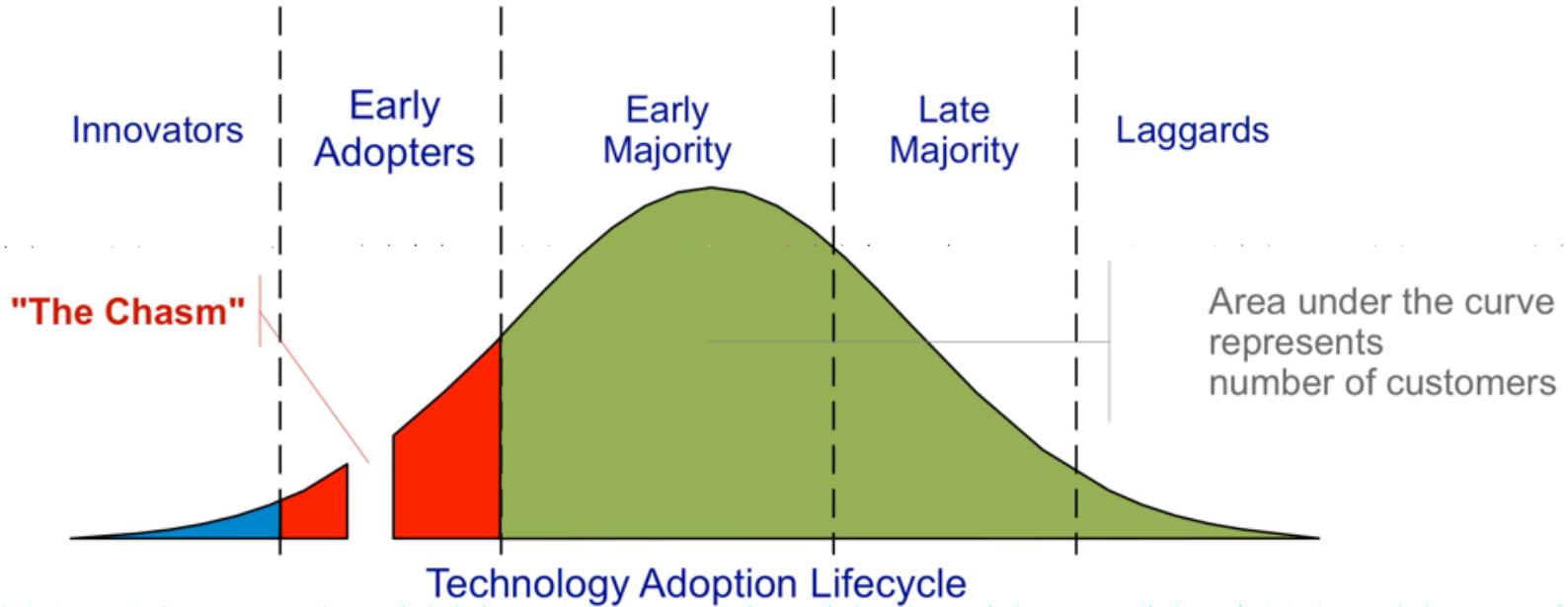
The Lean StartUp Approach



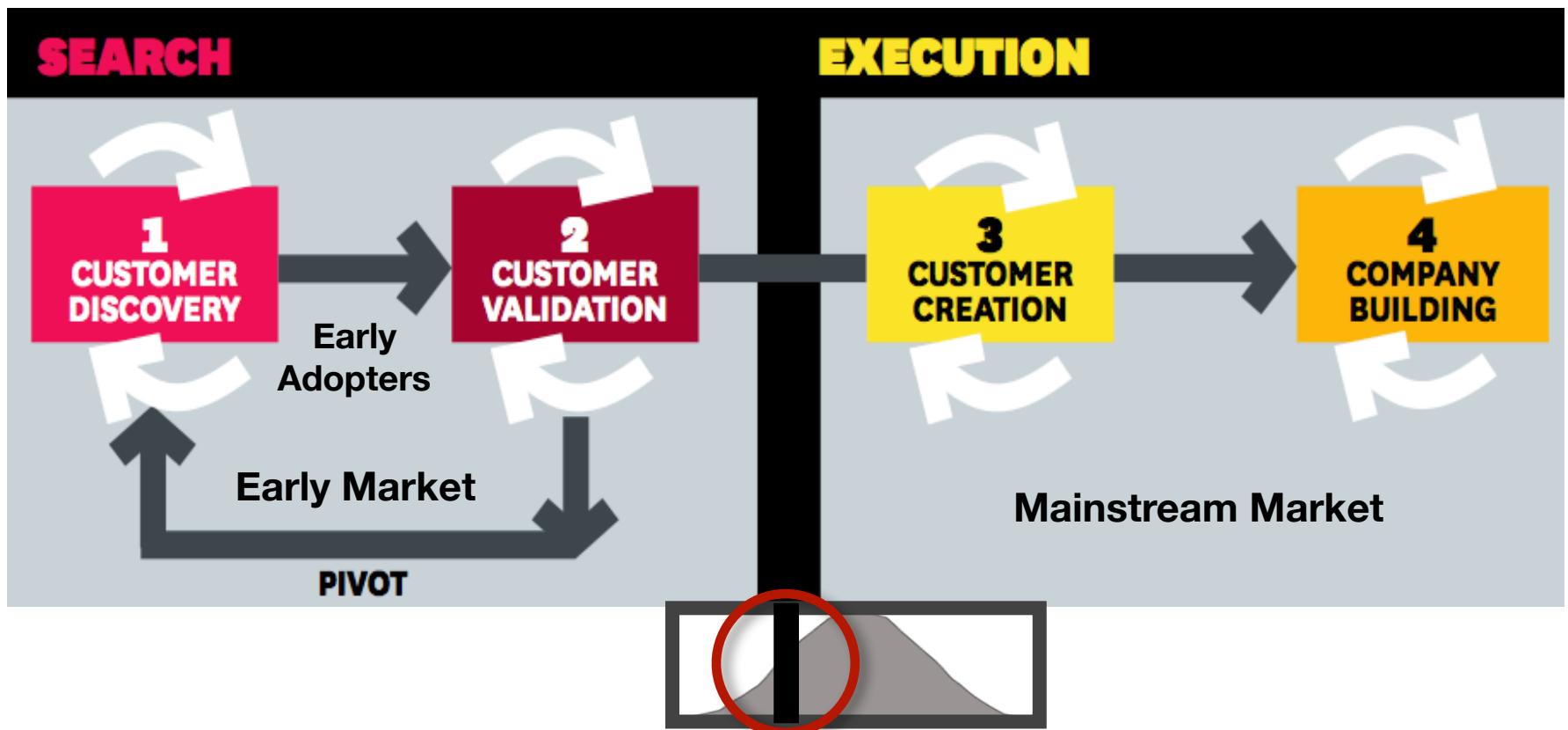
Source: "Why Lean Start-up Changes Everything"
by Steve Blank



Source: "Why Lean Start-up Changes Everything" by Steve Blank, Harvard Business Review May 2013



Source: From Wikimedia Commons, the free media repository
“Crossing the Chasm” is the book title by the author **Geoffrey Moore**



**Empathy of the user experience as
the starting point.**



CASE STUDY: REDESIGNING THE Source: IDEO TRAIN INTERIOR

Acela for Amtrak

Interiors for high-speed train

- 
1. Learning (about routes, times etc.)
 2. Planning
 3. Starting
 4. Entering
 5. Ticketing
 6. Waiting
 7. Boarding
 8. Riding
 9. Arriving
 10. Continuing (on their journey).

Source: IDEO



EXPERIENCE OF USING

EXPERIENCE = JOURNEY = STORY

THE JOURNEY AS A STORY

Elements

- 1. Persona
- 2. Context
- 3. Artifacts
- 4. Jobs to be done

Structure

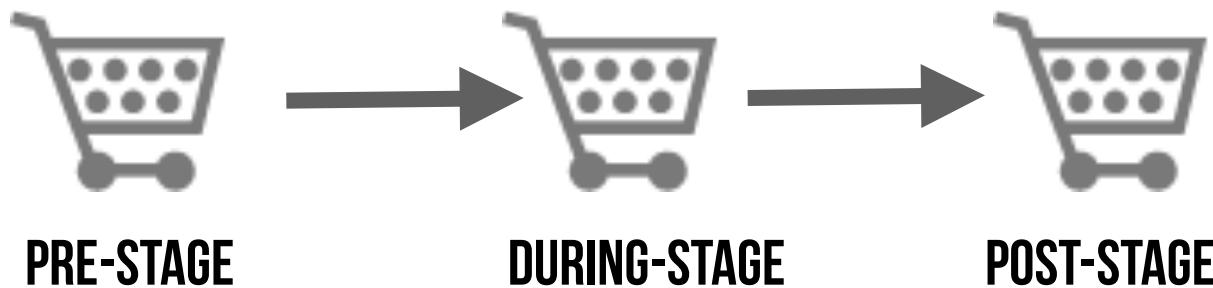
- 1. Onboarding
- 2. Alternatives
- 3. Gain/Pain
- 4. Conversion

Exercise time



Source: Flickr ([mliu92](#))

”The experience is the journey.”



Persona Segmentation Table (人物分類表)

Persona Segmentation Table (人物分類表)

	Age	Sex	Domestic Helper	# of household	Marital Status	Edu Level	Industry	Shopping Preference	# of times per wk
1	18-24	M	Yes	1	Single	Primary	Agriculture	Shop off-line using cash only	Once a Week
2	25-35	F	No	2	Married	Secondary	Manufacturing	Shop off-line using cash & credit card	Twice a Week
3	36-45			3-4		Adv. Study	Distribution/ Wholesale	Shop off-line using cash, cc & payment system	Three times a Week
4	46-55			5-6		University	Retail	Shop online via payment system	Four times a week
5	56-65			>7		Grad. School	Service	Both online & off-line with payment system	Five times a week
6	66-						GoT/NGO Homemaker	Online & off-line with cash, cc, and payment system	Six times a week
									Seven times a week

Persona (人物輪廓)

Source:Interaction Design Foundation



Name: **Mina**

Age: **36**

Sex: **Female**

Education: **Secondary**

Marital Status: **Married with**

Industry: **House wife**

Lifestyle:	Love to cook, home decoration, activity planning for kids and family.
Shopping preference:	Shop off-line using cash and credit card.
Media usage preference:	Soap opera fan, online videos, local news.
Life/Career goal:	Help kid get into good school. Keep family happy.
Tech product adoption pref.:	Not an early adopter of trendy tech products.
Daily routine:	Taking kid to school, shopping for food and family necessities, cook meals and help kid do homework

Here are the **pain points** throughout current customer journey of Mina, our persona:

Hard to find shopping items.

Take a long time to checkout.

Take care of kids while shopping.

Shopping carts get stolen.

Don't really know what is lacking.

Take time to check inventory.

Too many things to carry.

Forget to buy some of the items.

Problem Statement

How might we make _____ (**who**) address
the problem of _____
_____ (**what**) to achieve the goal of
_____ (**why-5 times**)?

Problem Statement

How might we make a full time mom (who) address the problem of caring for her kid's safety and efficiently finishing up her shopping at the supermarket (what) to achieve the goal of making good use of her time to keep the family and herself happy (why)?

Assumptions to be tested

- ✓
- ✓
- ✓
- ✓
- ✓
- ✓
- ✓

Introducing Google Jamboard

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NGOLP2020



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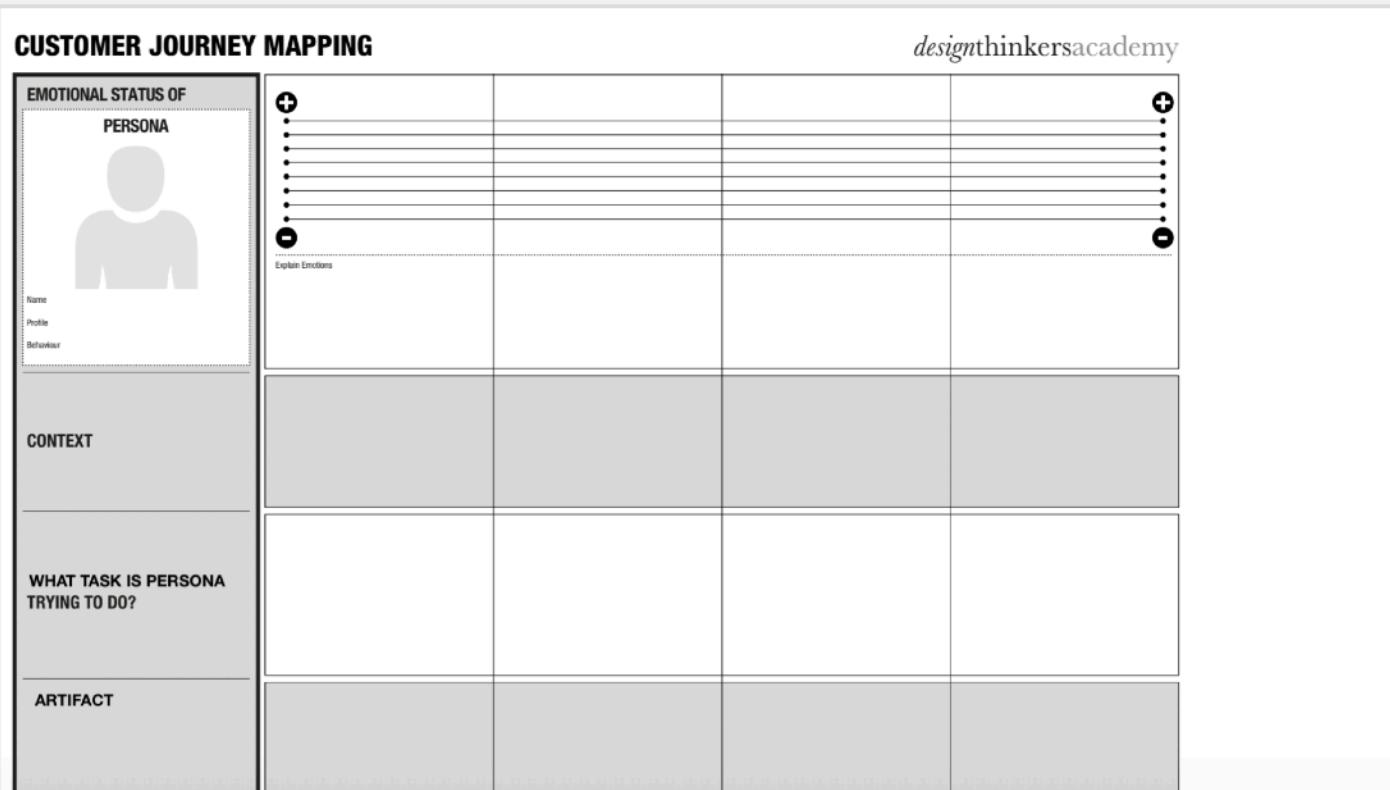


Background

Clear frame



Open on a Jamboard





NGOLP2020

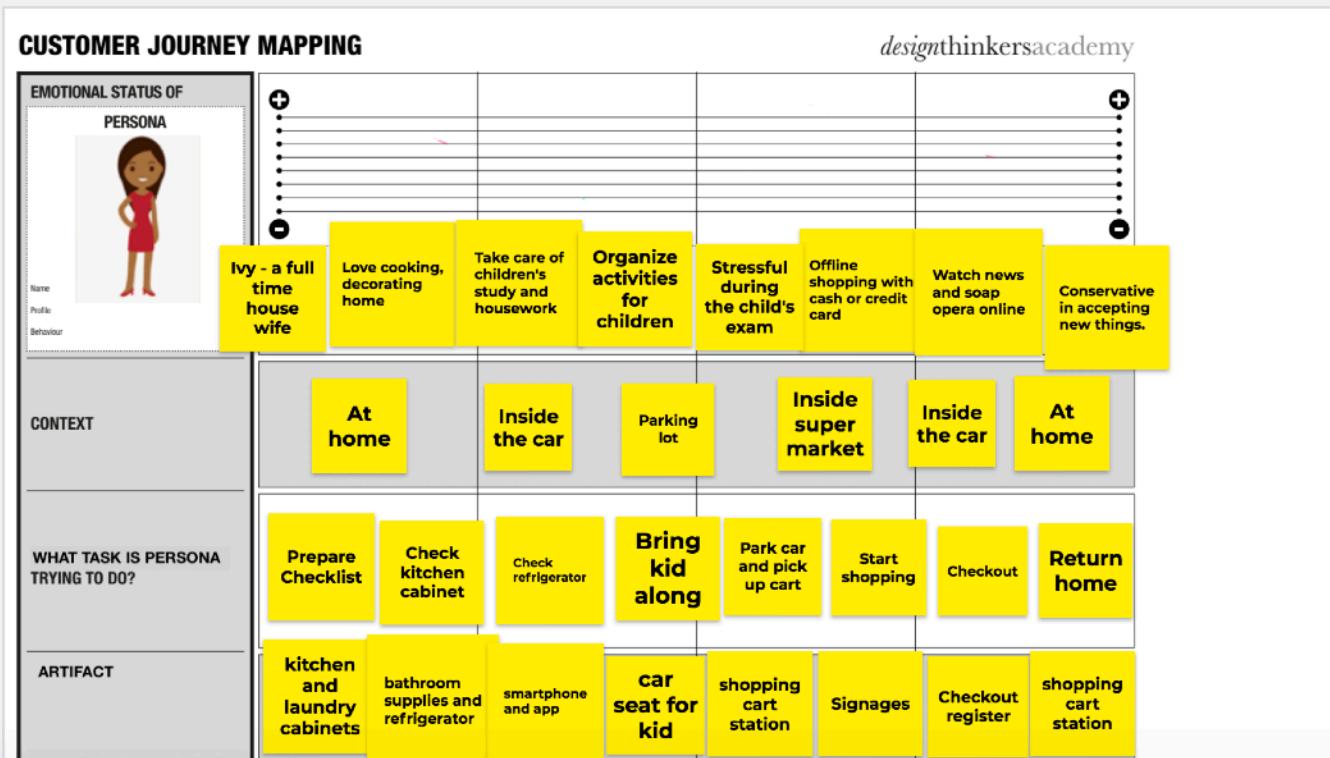


Background

Clear frame



Open on a Jamboard

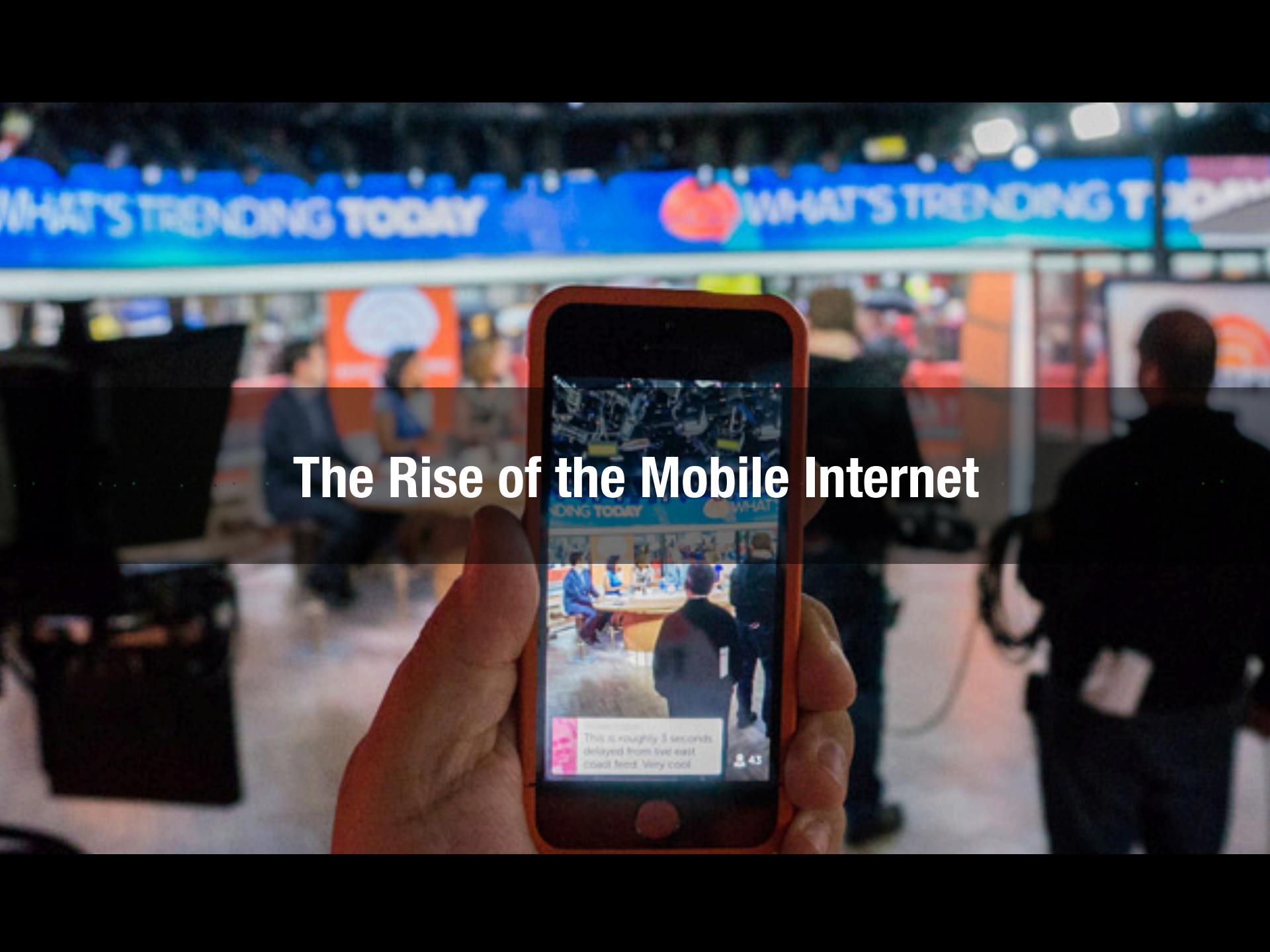


**Redefine the problem statement and
redesign future customer journey.**

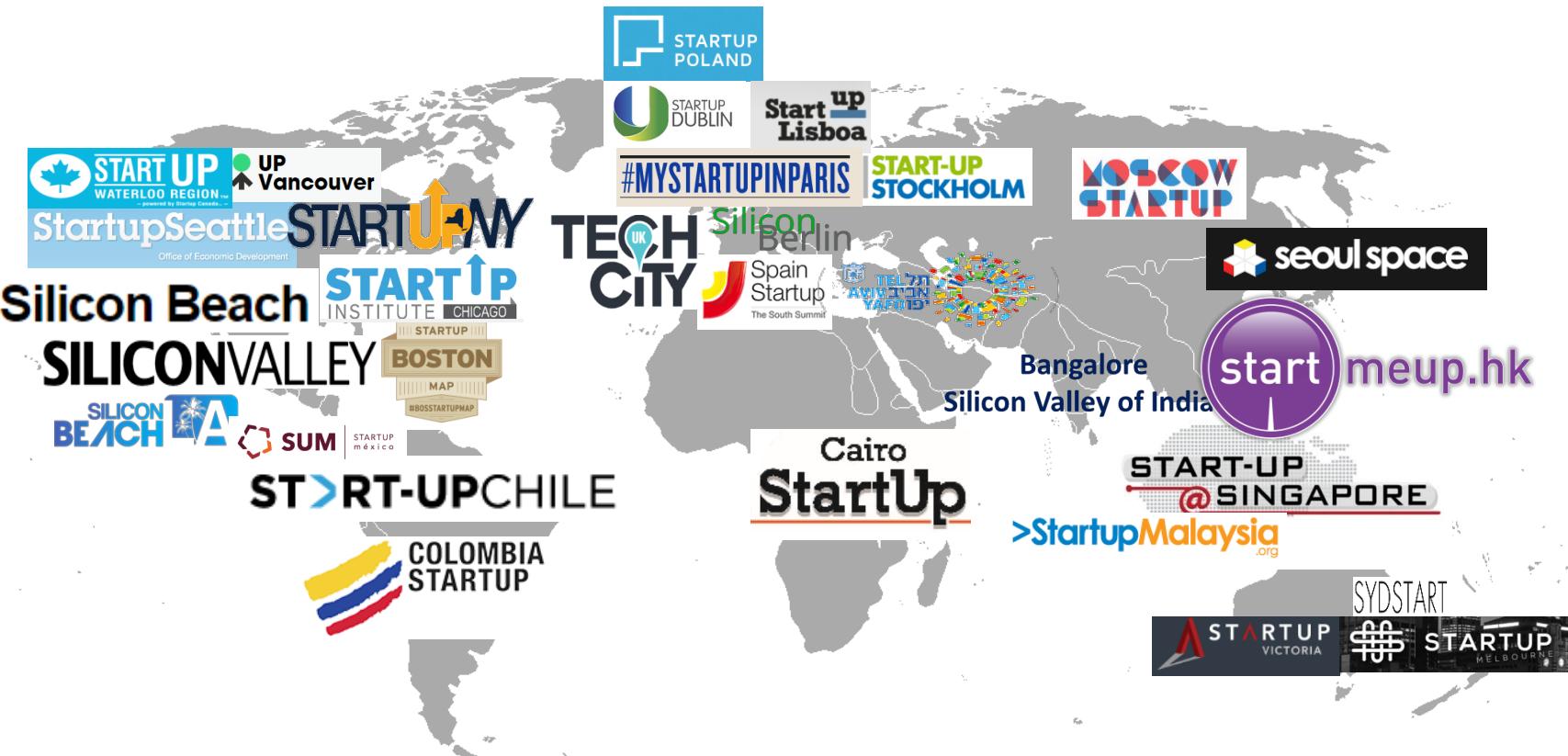
Break

Digital Transformation at the Work Place

The Rise of the Mobile Internet



Fuelled by the rise of the global startup movement.





Hong Kong, Co-Working Spaces • February 15, 2018

4 Cats Co-Business Community



Hong Kong, Co-Working Spaces • February 14, 2018

Andotherspace



Hong Kong, Co-Working Spaces • February 13, 2018

Arco City



Hong Kong, Co-Working Spaces • February 12, 2018

BLOOM



Hong Kong, Co-Working Spaces • February 11, 2018

blueprint



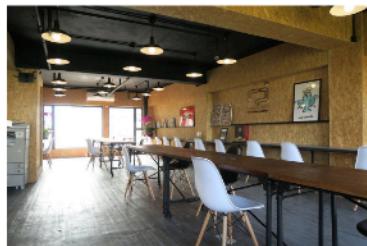
Hong Kong, Co-Working Spaces • February 10, 2018

CO:WORK SOLO



Hong Kong, Co-Working Spaces • February 9, 2018

Campfire



Hong Kong, Co-Working Spaces • February 8, 2018

Central Park



Hong Kong, Co-Working Spaces • February 7, 2018

CoCoon



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Coffee



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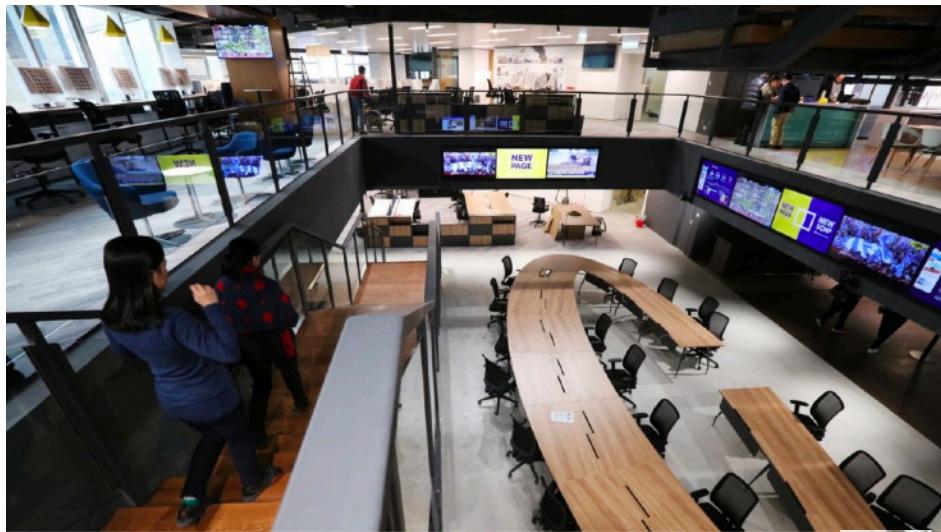
Cowork CHM

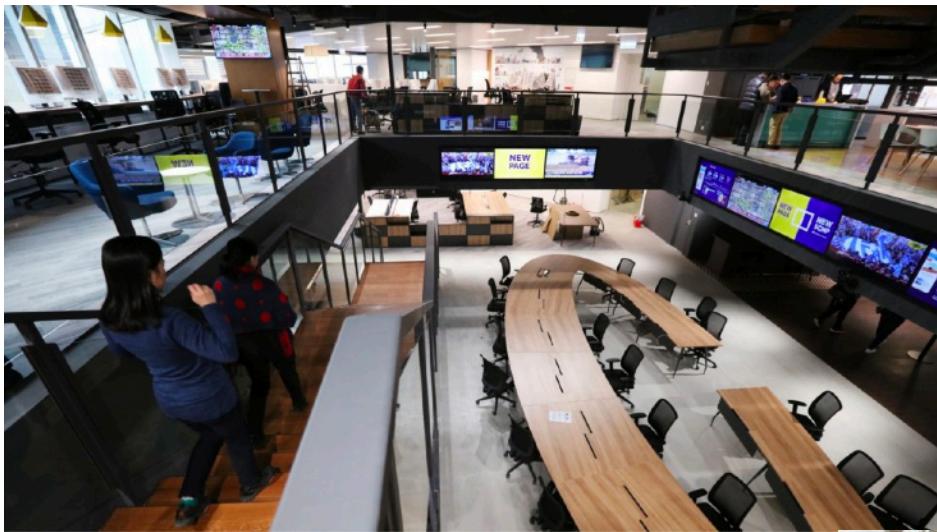


Hong Kong, Co-Working Spaces • February 4, 2018

Cyberport Smart Spaces

Source: Jumstart Magazine





South China Morning Post



**South China
Morning Post**





THE REAL LIFE
COMPANY

HOME

ACCELERATOR

FAQ

BLOG

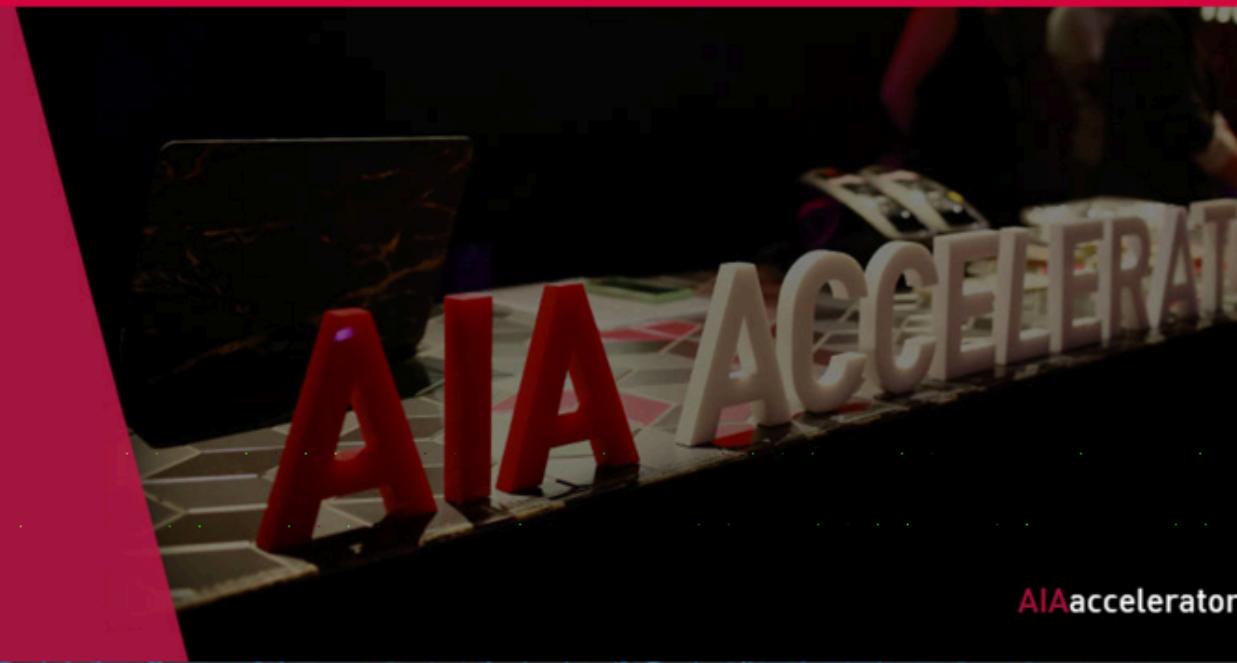
CONTACT

BLOCKCHAIN
CHALLENGE

#AIAaccelerator

AIA Accelerator 4.0

an innovation partnership with
KPMG Digital Village



AIAaccelerator

#AIABLOCKCHAIN

AIA BLOCKCHAIN CHALLENGE



The 2016 DBS Accelerator

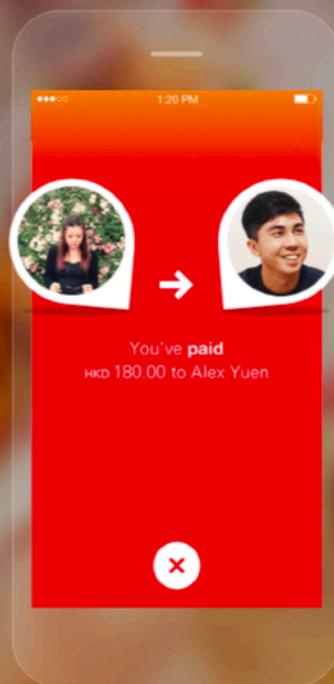
Driving change and sparking
innovation in financial services

SHARE THIS WITH A FOUNDER

POWERED BY  nest

**Remaking of HSBC through
design thinking.**

Pay anyone with any bank

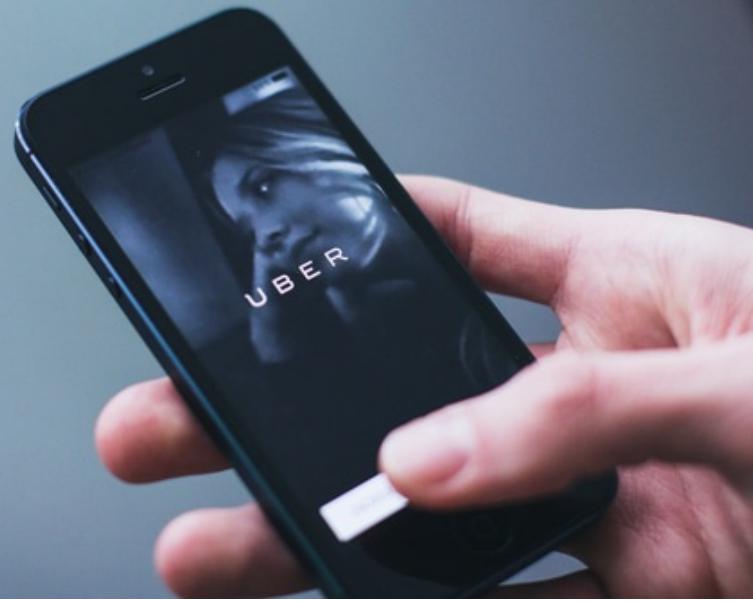


Discover more

Pay your friends with just a few taps,
regardless of which Hong Kong local
bank they use and without ever asking
for an account number.

How it works

Why HSBC joined the payment system race?



Industry innovation and disruption comes from digital and technology platforms



Who Rules the Platform Will Rule the World



Windows



Source: wikipedia.org

Huawei signals global 5G network leadership intentions



TOM BALL REPORTER

23RD FEBRUARY 2018

+ INCREASE / DECREASE TEXT SIZE -



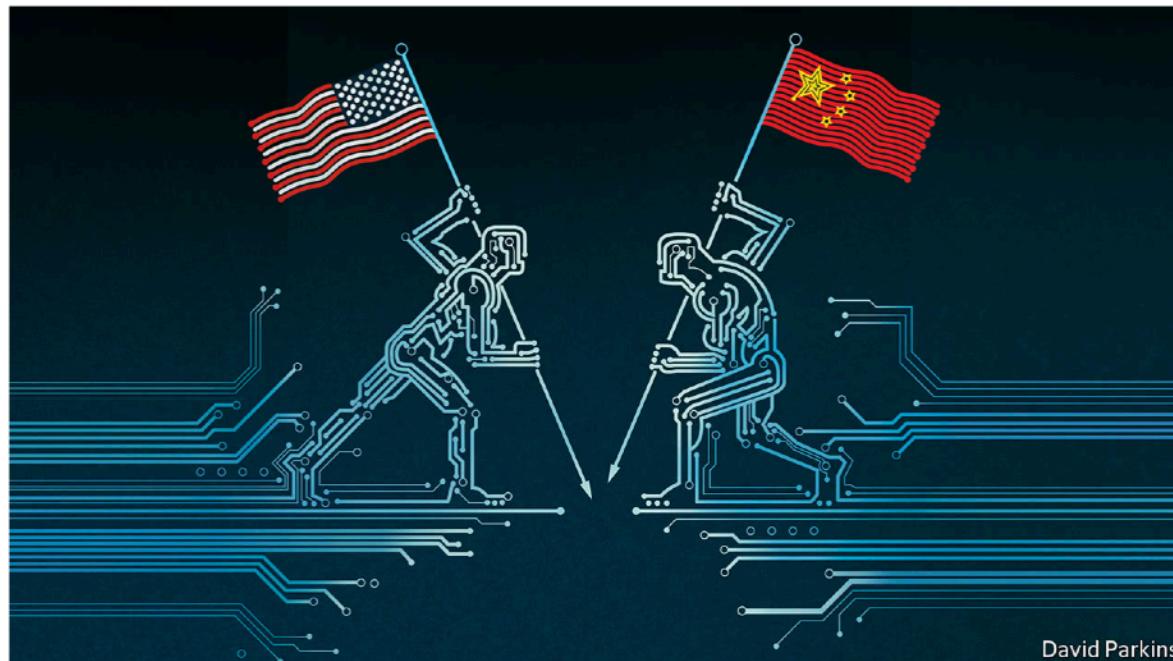
**HUAWEI AIMING TO
BECOME THE
PLATFORM CHOICE
FOR SETTING
5G STANDARDS**

Source: Computer Business Review Feb 2018

America v China

The battle for digital supremacy

America's technological hegemony is under threat from China



Digital platforms are crossing industry boundaries to disrupt incumbents.



Synced

AI TECHNOLOGY & INDUSTRY REVIEW

FEATURE ▾

INDUSTRY ▾

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AI CHINA INDUSTRY UNITED STATES

Amazon Go vs Alibaba Tao Cafe: Staffless Shop Showdown

Amazon and Alibaba's brick-and-mortar-but-no-staff shops offer very different user experiences. To bring you first-hand feedback, Synced visited them.

Source: The Synced, Jan 22, 2018



Chinese Internet Giant Tencent Invests \$70 Million In Healthcare Group DXY

Catherine Shu @catherineshu / Sep 2, 2014

Comment



Source: Tech Crunch, Sep 2, 2014

The New York Times

Amazon Wants to Disrupt Health Care in America. In China, Tech Giants Already Have.

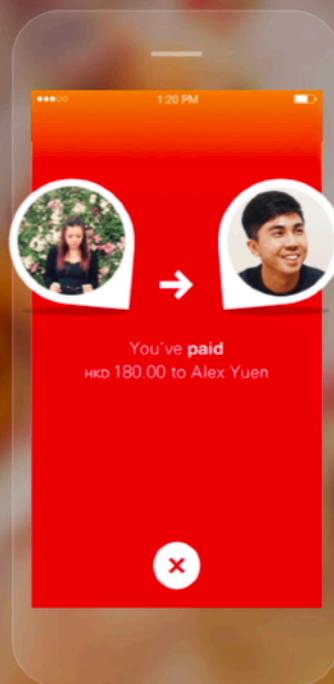
[查看简体中文版](#) | [查看繁體中文版](#)

By SUI-LEE WEE and PAUL MOZUR JAN. 31, 2018



Source: The New York Times, Jan 31, 2018

Pay anyone with any bank



Discover more

Pay your friends with just a few taps,
regardless of which Hong Kong local
bank they use and without ever asking
for an account number.

How it works

HSBC has no choice but to join the platform race.



The Airbnb Story

3C Strategy for Transforming into a Platform

- Location/city search
- Date/number of guests
- host info/amenities
- Guest info (Very little under new policy)
- Pics/price
- Digital marketing (email, social media, video, etc)

Content

- Evaluation/comment system
- Experience provider (photographer)
- Detailed info to complete booking
- Referral service

Community

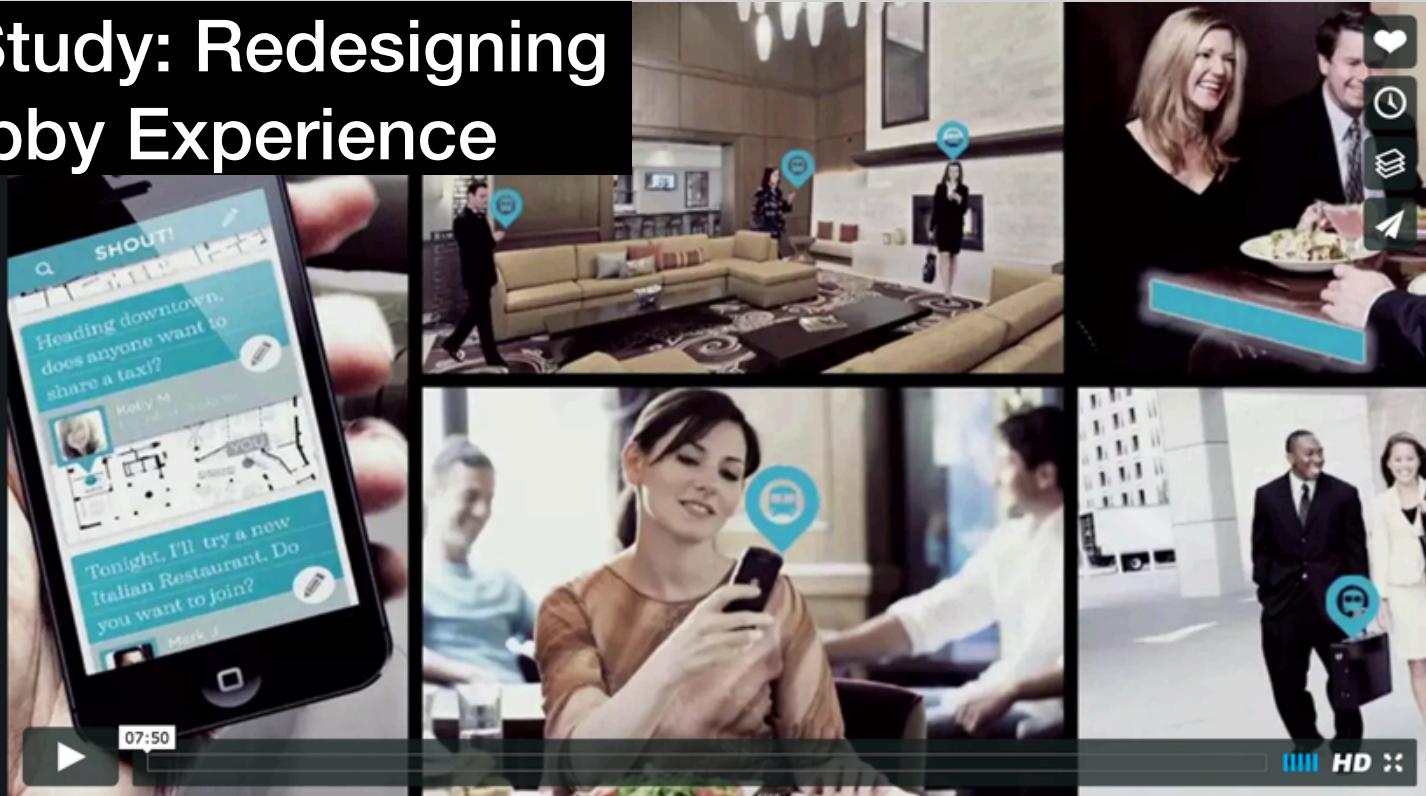
- Host insurance
- Photo-shooting expenses
- Content production/promotion costs
- Receipt of an average of 10% service commission from guests
- Receipt of 3% transaction fee from the host

Conversion/Commerce

Key Problem and Solution

- Trust issues between hosts and guests
- Retaining guests, long-term growth problems

Case Study: Redesigning the Lobby Experience



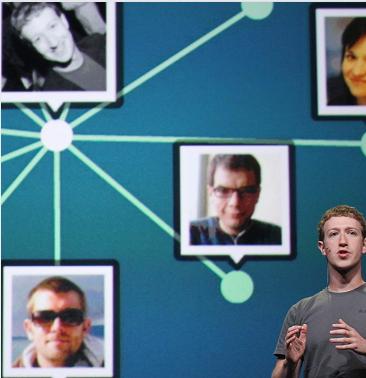
Exploring the Hotel Experience of the Future with Marriott Hotels

Source: MIT Mobile Experience Lab

<https://design.mit.edu/projects/the-future-hotel-experience>

FIELD STUDY OBSERVATION AT THE HOTEL

We noticed a desire for customer autonomy, contextualized experiences, and public privacy.



Source: MIT Mobile Experience Lab



Source: MIT Mobile Experience Lab

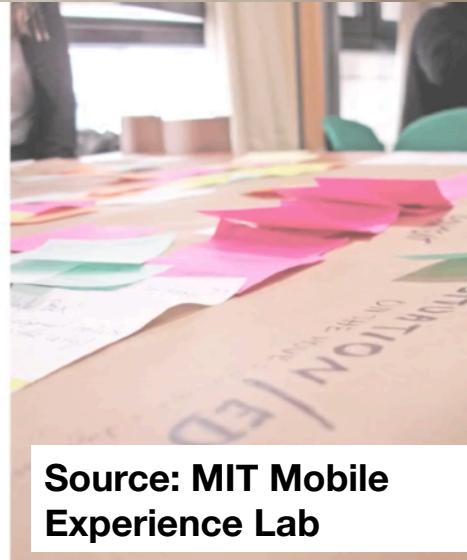
avid social explorer

Gen Y travelers seeking personalized yet serendipitous experiences, good company to share them with, and the ability to capture and celebrate them.



bored lobbygoer in transition

Anyone using the lobby as a meeting place or gathering point, looking to pass the time and avoid awkwardness.



Source: MIT Mobile Experience Lab

How can Marriott regain the market from Airbnb?



Who Rules the Platform Will Rule the World

PROBLEM STATEMENT:

How might we make marriott guests
feel like **nodes within a network**
while encouraging
interactions in the lobby space?

**Source: MIT Mobile
Experience Lab**

Future Journey Mapping

HOME

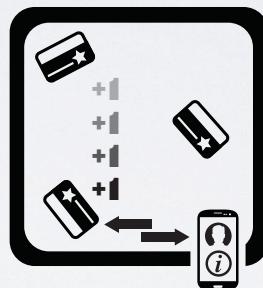


Joins loyalty program, creates a profile & installs phone app.

LOBBY



Given physical loyalty card on check-in — stores profile info, points & doubles as room key.



(Can be done in lobby or room)
Set availability via orientation of card. (Lobby only) Loyalty points awarded to cards at the same table. Table lights up to show activity, interests shown on table & lobby display map. Profiles added to app network.

ROOM

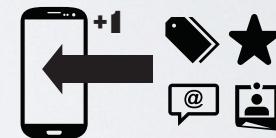
BOOKING

CHECK-IN

MEETUP

RETURN

INTERACTIONS OUTSIDE HOTEL



Prompted by app to tag places visited, ratings & social media for points — added to in-app database of recommendations.

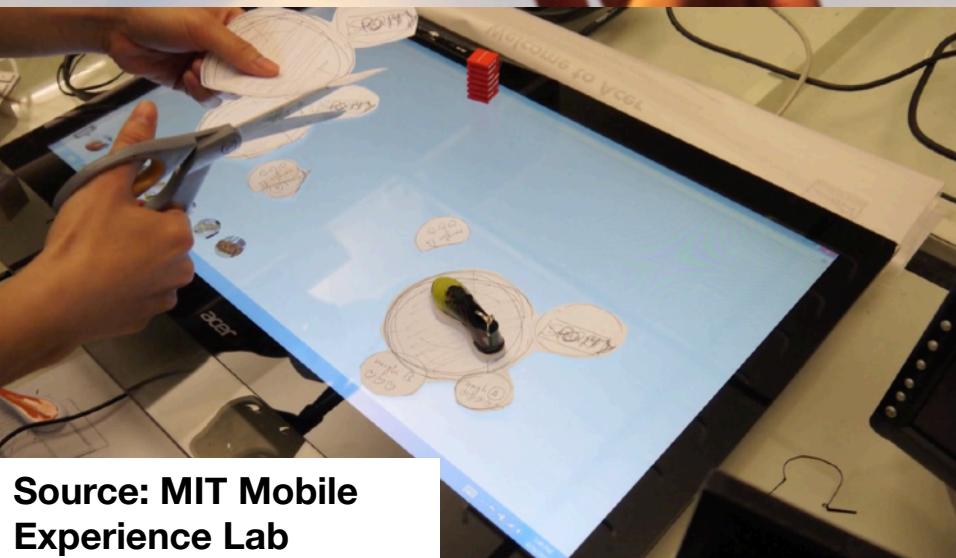
Source: MIT Mobile Experience Lab

How would the team find out if the new installation will be adopted?

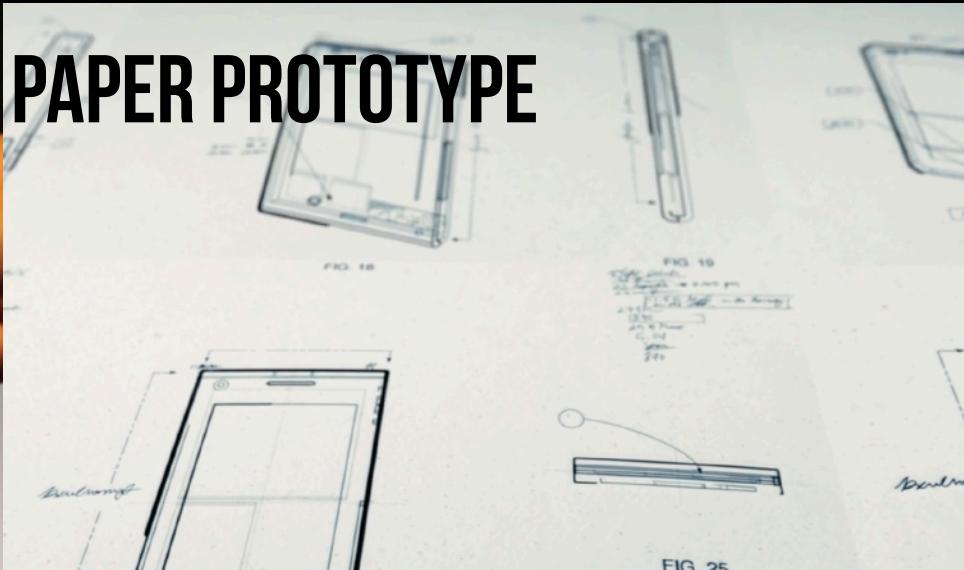
Develop Prototypes

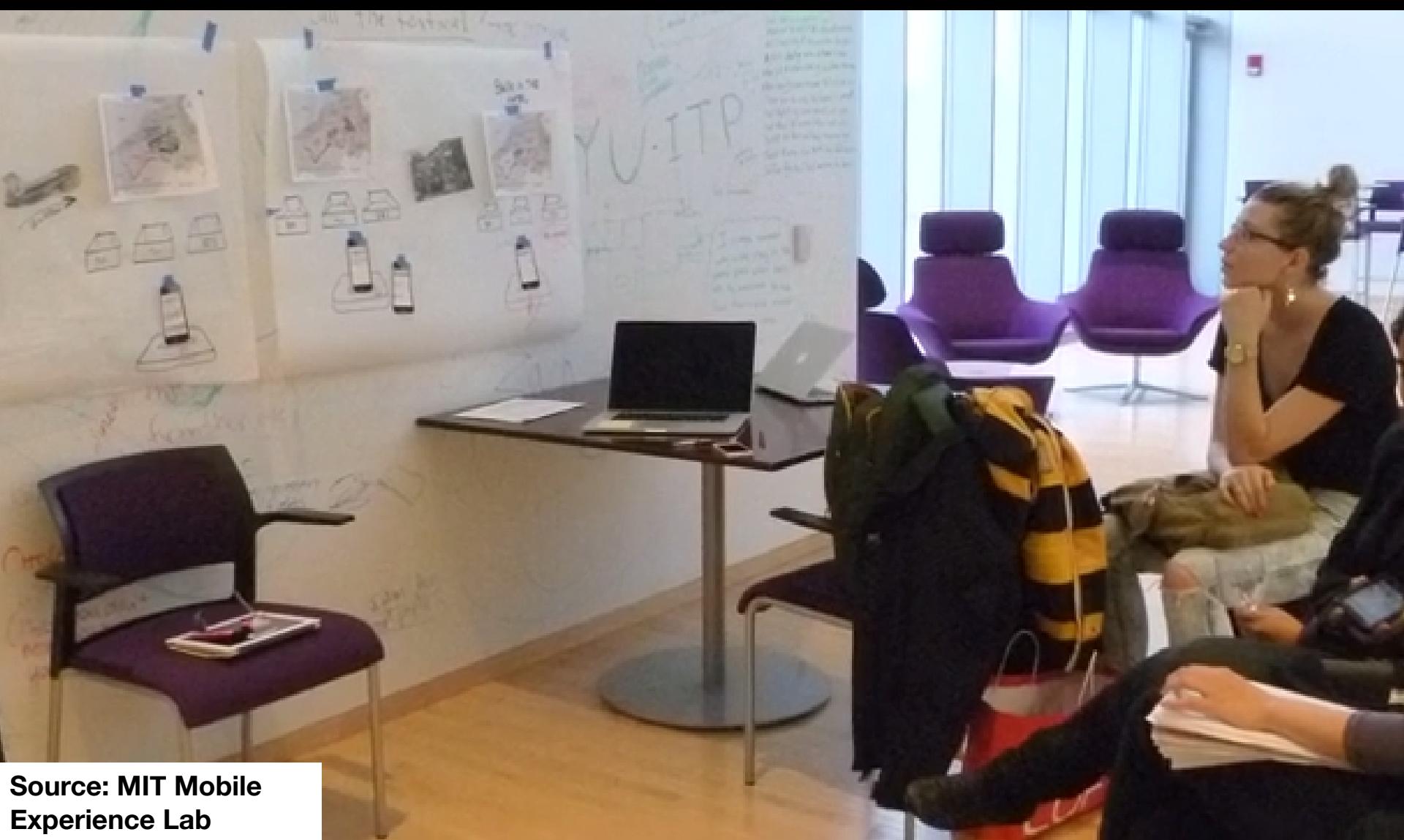
SKETCH AND PAPER PROTOTYPE

The coaster.



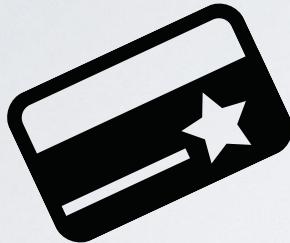
Source: MIT Mobile Experience Lab





Source: MIT Mobile
Experience Lab

THE CARD



THE TABLE



THE APP



room key
point counter
status symbol

the social hub

shared memory
social networks
recommendations

LOYALTY

INTERACTION

DATA

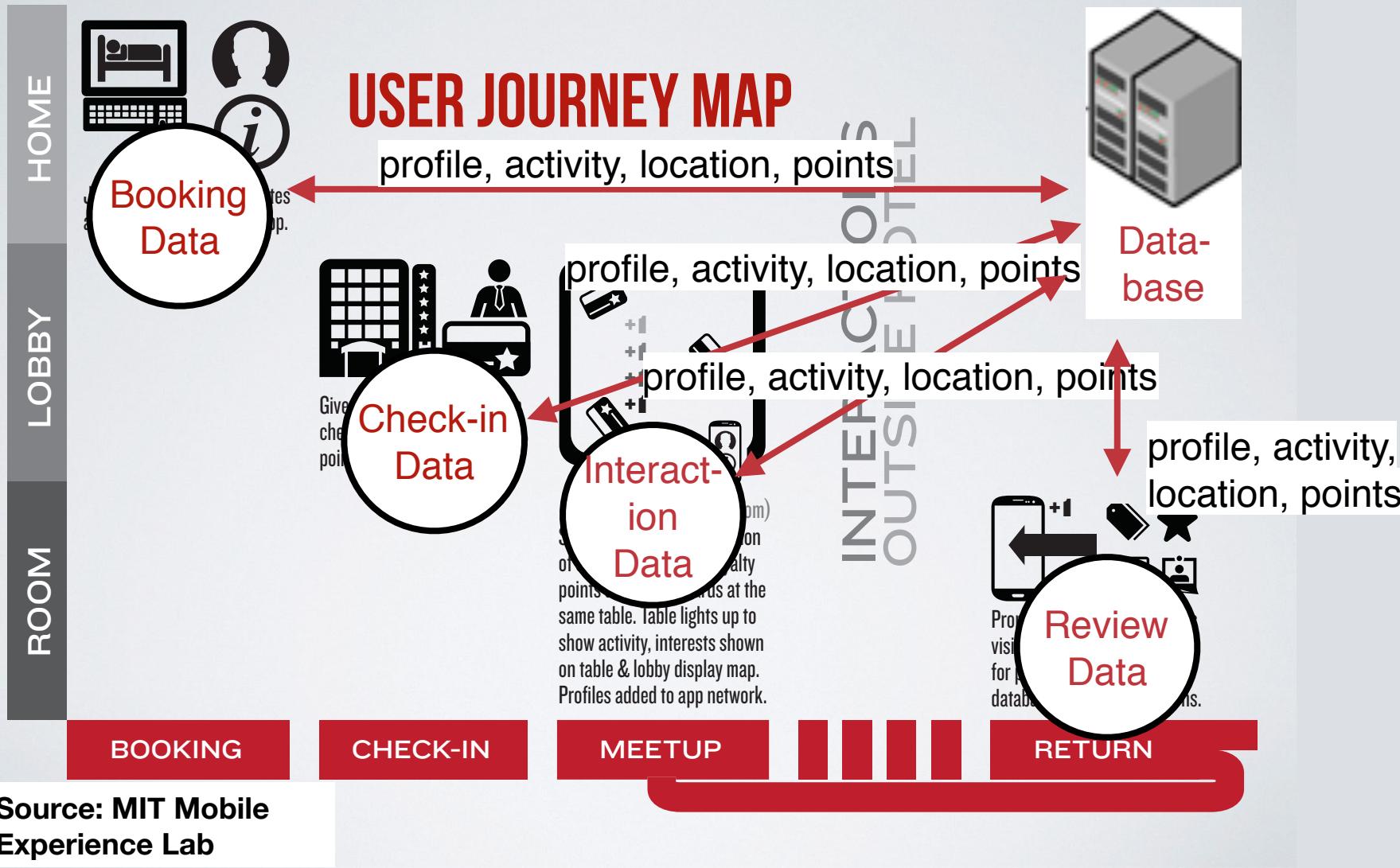
Source: MIT Mobile
Experience Lab



ROLE PLAY PHYSICAL EXPERIENCE

Source: MIT Mobile Experience Lab

From Journey Mapping to Data Mapping



Throughout the journey, what data points did the MIT team have to plan for?

Which hotel to book?

Places to explore in the city.

Services to enjoy in the hotel.

People to meet to share experience.

Gathering the places, people, and services.

Will people adopt the platform?

Review and sharing of the experience.

Rating system works or not?

Data Entities to be Tracked



- e.g.
 - 1st time guests
 - Returning guests
- e.g.
 - Starbuck
 - Bar inside hotel
 - Boston Metropolitan Museum
- e.g.
 - Add friends
 - Take pictures
 - Share rides
 - Split bills
- e.g.
 - Museum tour
 - Bar hopping
 - Scenic picture taking
 - Business meeting
- e.g.
 - Revisit
 - Dine in hotel
 - Shop in hotel
 - Initiate contact
 - Give reviews

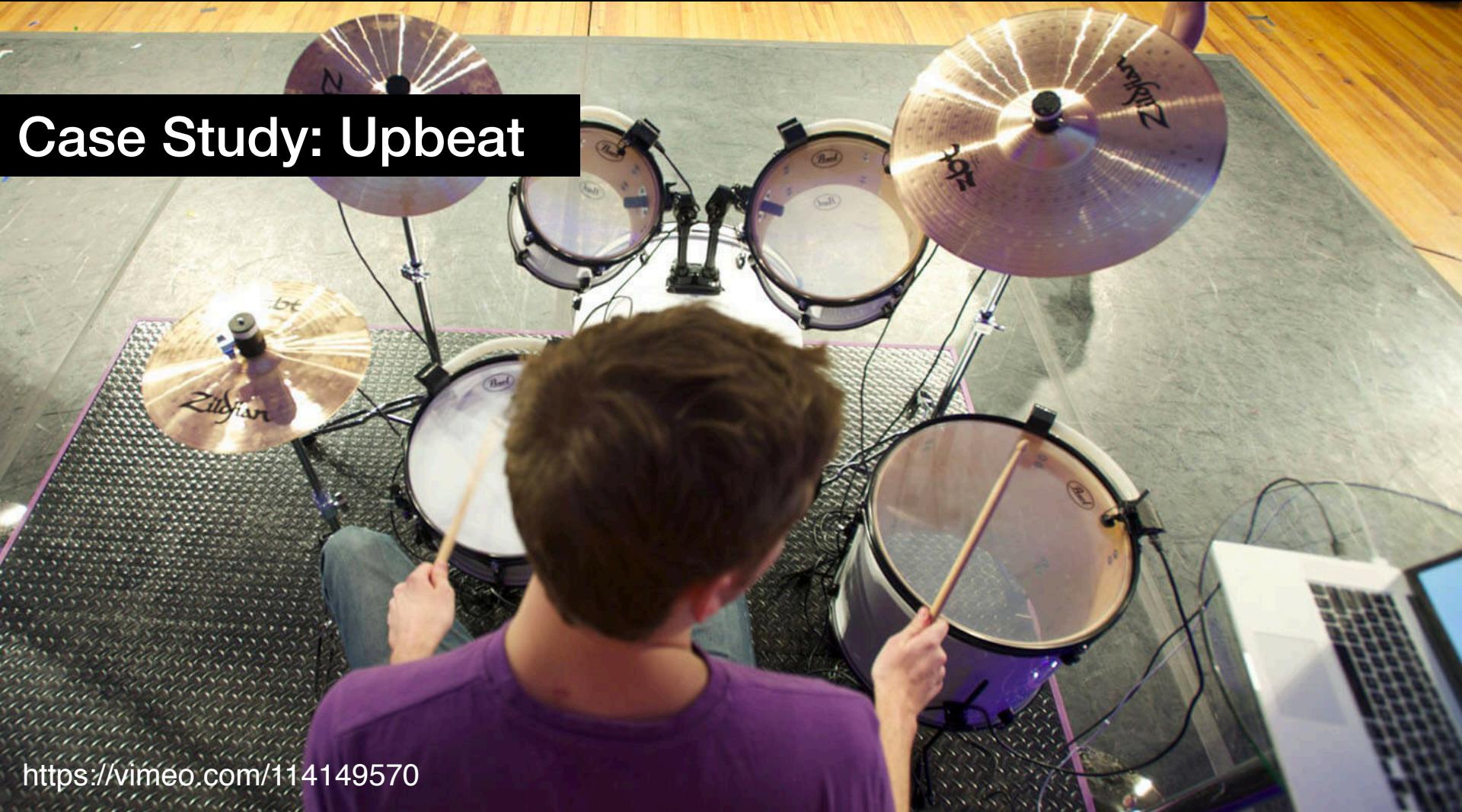
Content, Community, Conversion/Commerce

- Generate **contents** through **user profile** and **interests, destinations tracking, rating and reviews**
- Build **community stickiness** by **matching profiles** and **interests, rewarding ratings and reviews**
- Foster **conversion** by implementing a **point system** to build loyalty and reinforce recurring guest visits and spending

Assumptions to be tested

- ✓ Incentive for downloading the Marriott Social App**
- ✓ Incentive for activating the app and providing personal profile**
- ✓ Hidden switching costs**
- ✓ Information reliability and privacy risk**
- ✓ Incentive for accepting invitation and matching**
- ✓ Risk in accepting invitation and matching**
- ✓ Incentives and risk in sharing and commenting**

Case Study: Upbeat



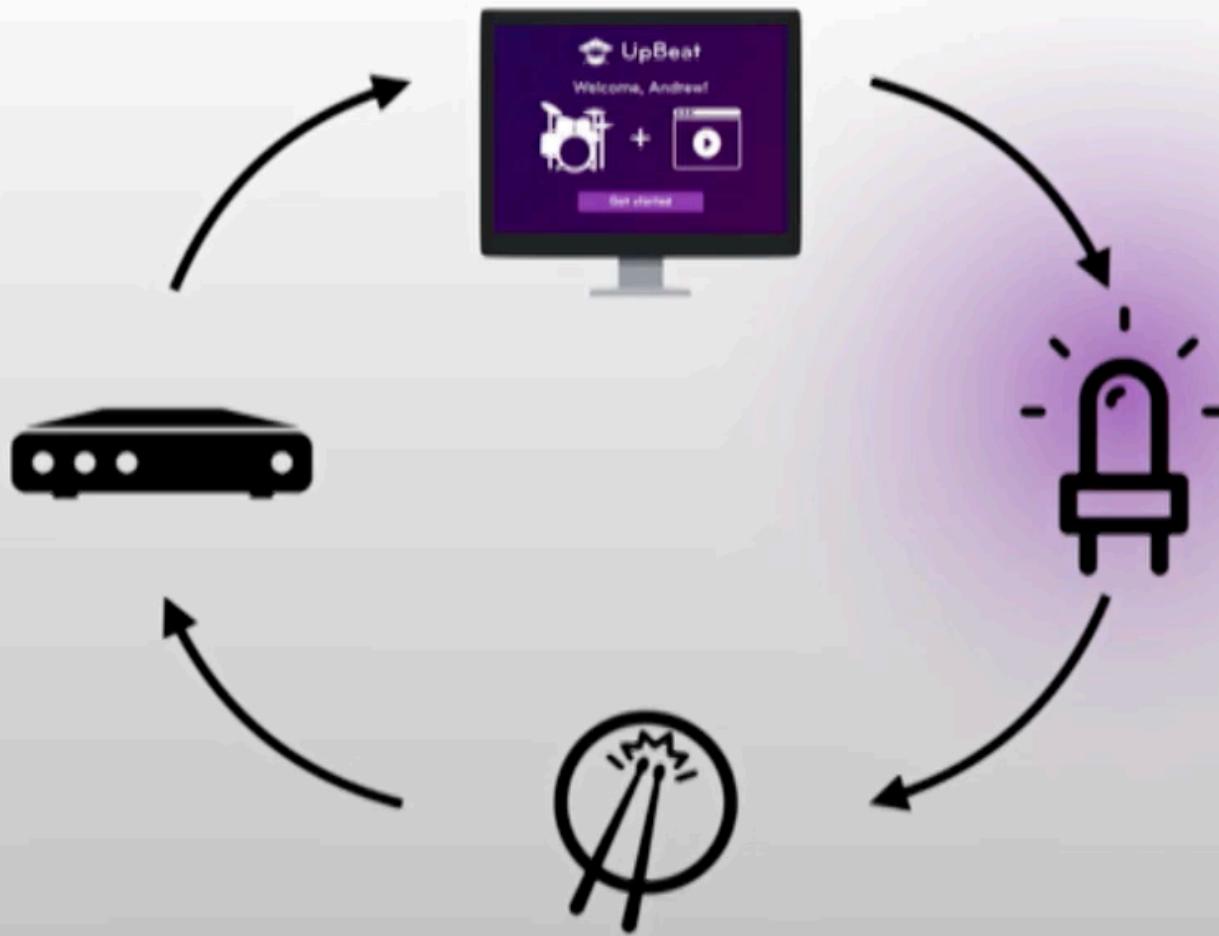
<https://vimeo.com/114149570>

Source: 2.009 @ MIT



Case Study: UpBeat - the Smart Drum Kit

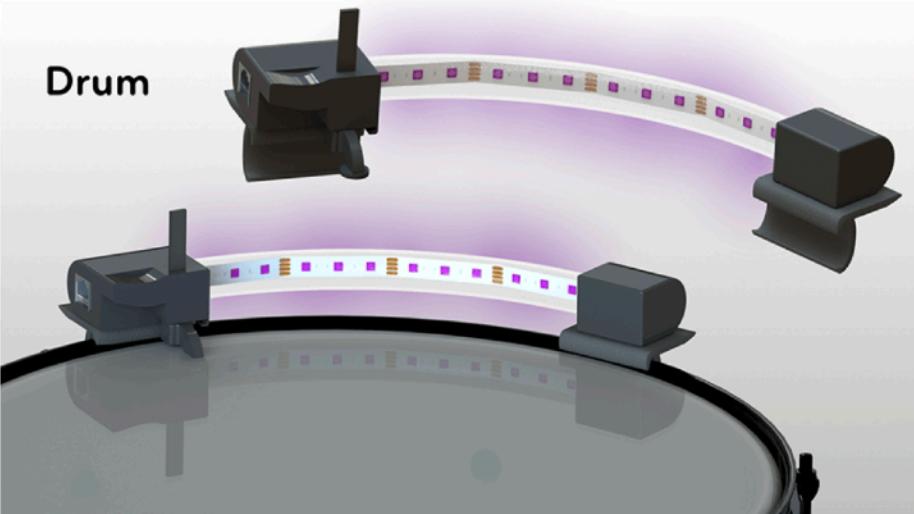
Source: 2.009 @ MIT



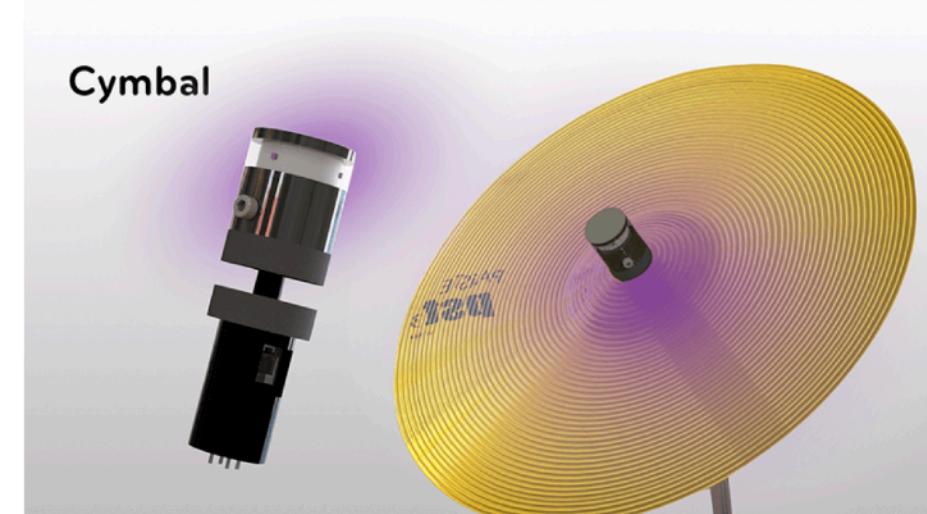
Source: 2.009 @ MIT

<https://vimeo.com/114149506>

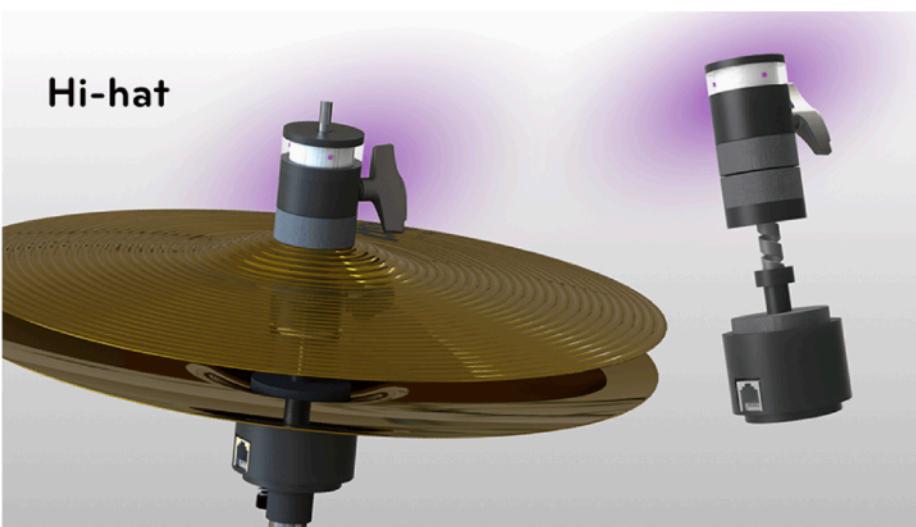
Drum



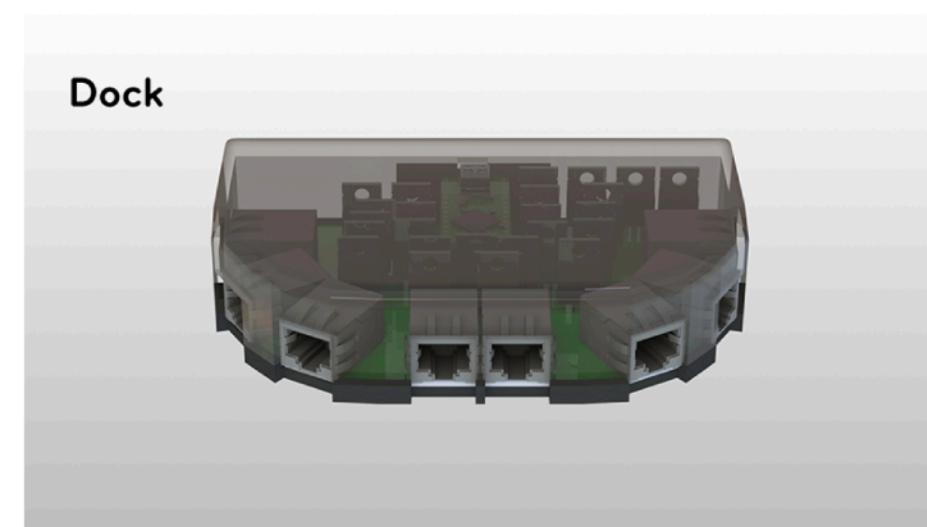
Cymbal

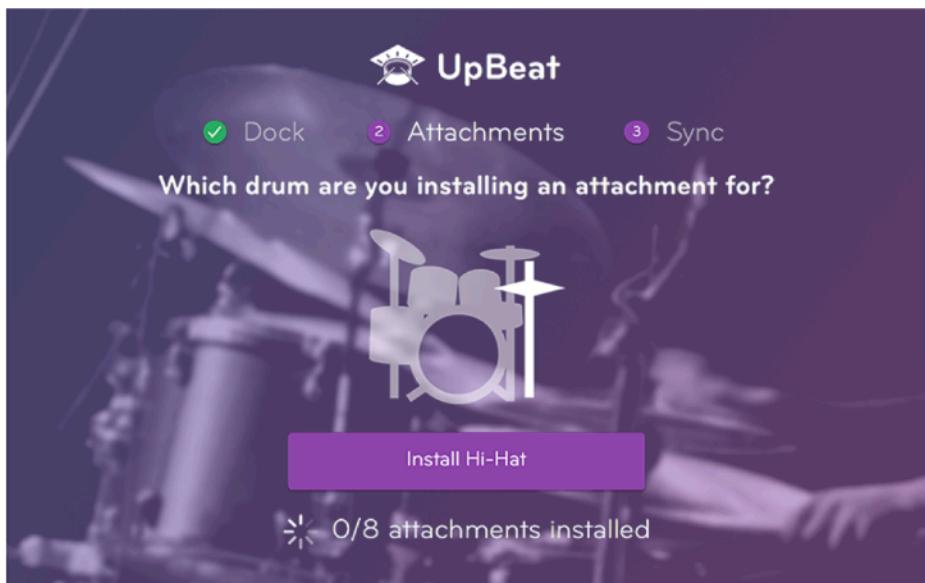


Hi-hat



Dock





Installing a new UpBeat attachment

Source: 2.009 @ MIT

The UpBeat practice mode interface features a purple header bar with the word "Practice" on the right. Below the header, the title "Eighth Note Rock Beat 1" and the author "Jim Chapin" are shown. On the far right, the word "GOOD!" is displayed next to a small circular progress bar. The main area contains two staves of musical notation. The top staff is highlighted with a purple glow. Both staves show eighth notes and sixteenth notes, with some notes marked with an "X" to indicate they need to be played. The time signature "4/4" is indicated at the beginning of both staves.

UpBeat's practice mode, similar to Guitar Hero or Rock Band

Library

SORT BY DATE ADDED ▾

Drum Rudiments
Terence Fletcher

Amen, Brother 2:32 135 BPM 87% RECORD

The Winstons

Seven Nation Army

The White Stripes

Brianstorm

The Arctic Monkeys

+ ⌂

Learn
Amen, Brother

Closed Hi-Hat + Snare

II

Practice
Amen, Brother

PERFECT!

II

23 HITS

Record

BAR 0005 BEAT 3

II

Settings

SENSORS

Snare Drum
Connected, 54% battery

Bass Drum
Connected, 48% battery

Hi-Hat
Not connected

Tom-Tom

☰

Settings
Sync New Drum

Drum Type Snare Drum ▾

Drum Name optional

Calibrating...

Done

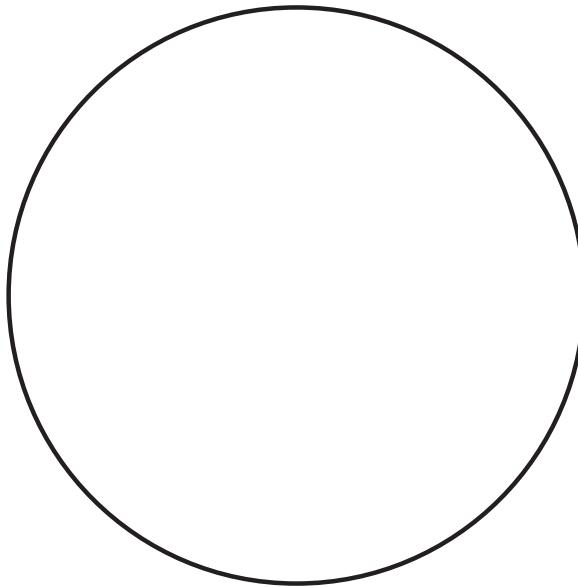
☰

Hit your drum now.

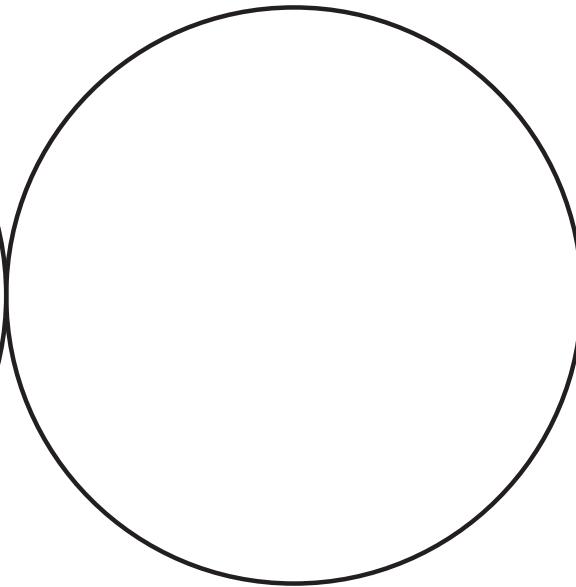
User flows and early wireframes for the three modes of the UpBeat app

Source: 2.009 @ MIT

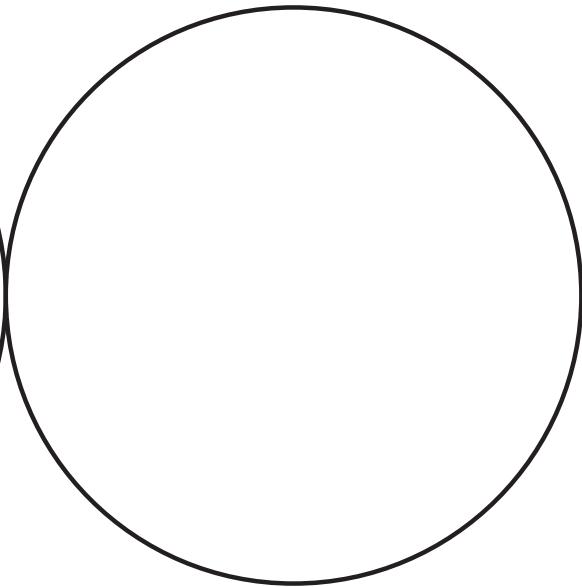
Exercise Time



Content



Community



Conversion/Commerce



Assumptions to be tested

- ✓
- ✓
- ✓
- ✓
- ✓
- ✓
- ✓

Thanks for joining me toay!