



QUALITATIVE AND QUANTITATIVE METHODS FOR PROTOTYPING AND USER TESTING

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Center for
Entrepreneurship

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1. Quick recap of previous lesson

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2. Why am I teaching this class?

為何要開這一門課？

3. From 4W1H to 3W2H: Approach to data driven narrative

從4W1H to 3W2H:數據敘事的套路

4. Qualitative UX Research: Usability study as focus

質性研究方法:以使用性研究為焦點

5. Quantitative UX Research: A/B Test as focus

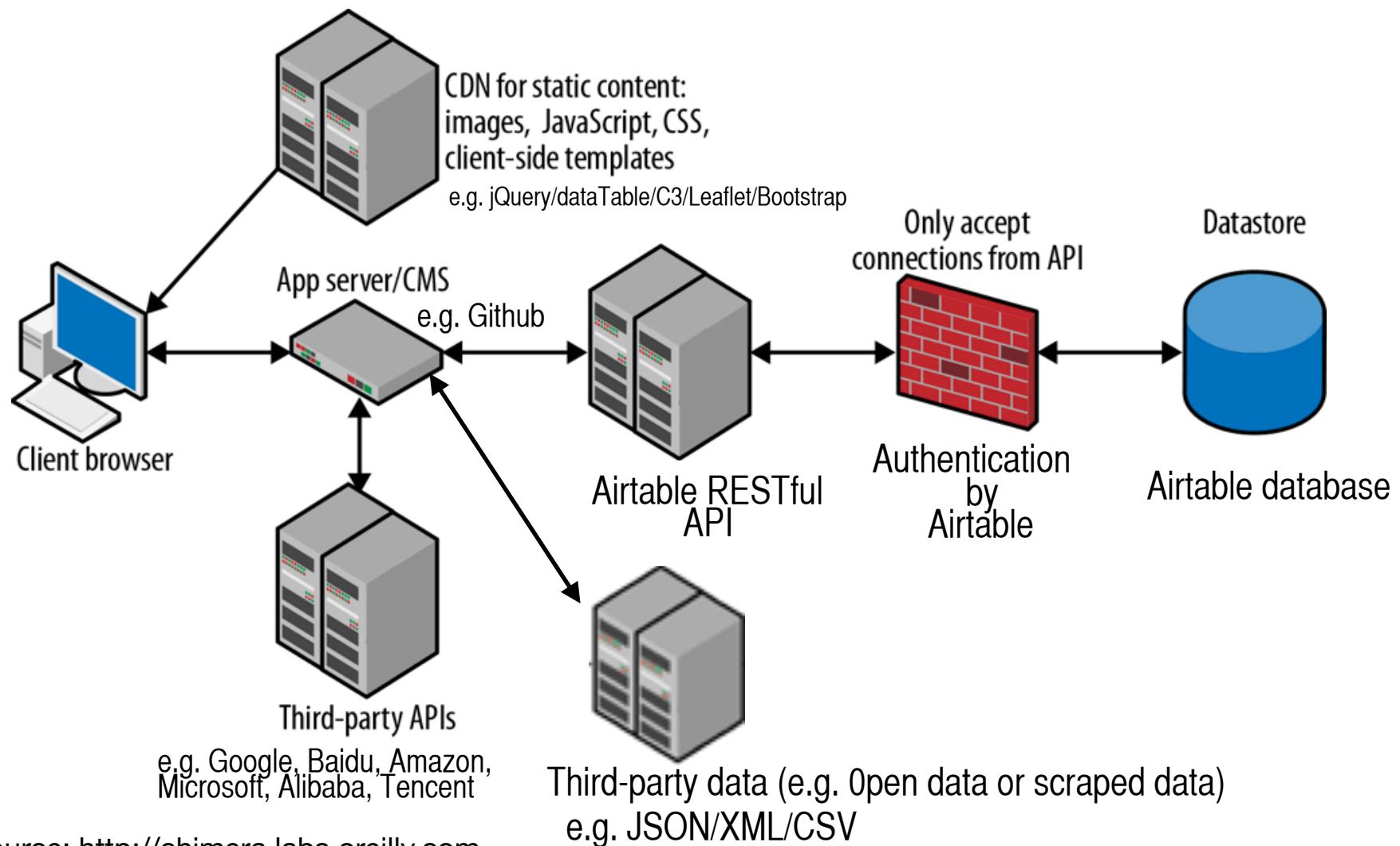
量性研究方法:以A/B Test為焦點

QUICK RECAP

回顧

KNOW YOUR DATA SOURCES

TOOLS AND PACKAGES USED THROUGHOUT THE DATA CYCLE

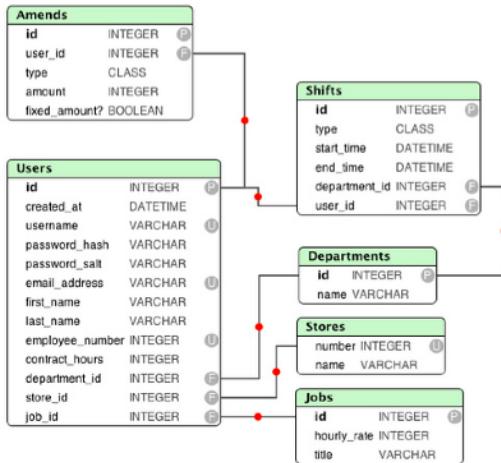


Source: <http://chimera.labs.oreilly.com>

Source: commons.wikimedia.org



Source: [Caius Durling \(Flickr\)](https://flickr.com)



M(odel)
(e.g. table, relations, and formulas)

V(iew)
(e.g. Kanban, Calendar)

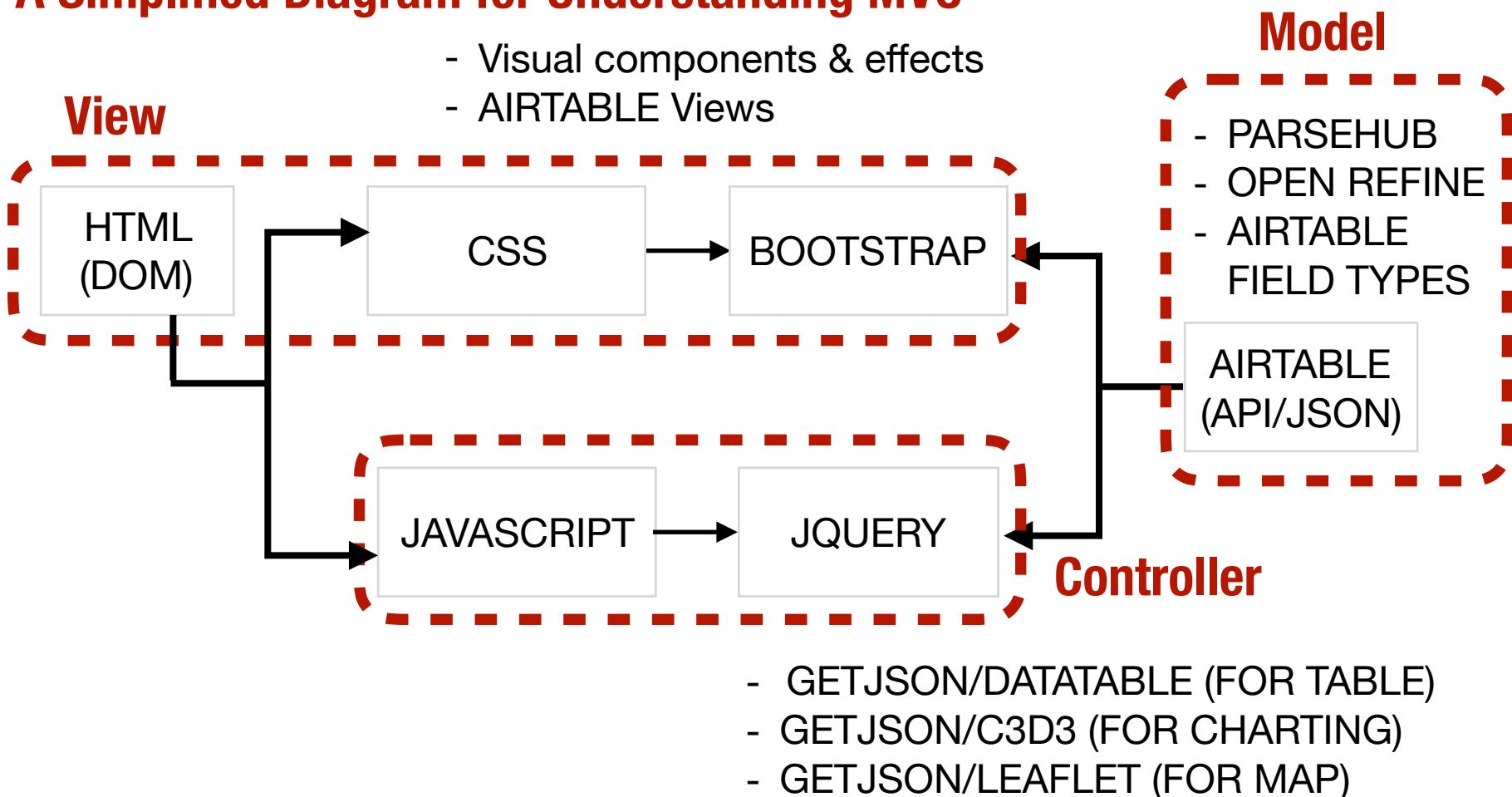
MVC MODEL

Source: pexels.com



C(ontroller)
(e.g. Sitemap, menu, navbar, and dashboard)

A Simplified Diagram for Understanding MVC



Mobile First Design Using jQuery and Bootstrap

以jQuery及Bootstrap實踐移動為先的設計

1. Single page app
單頁應用
2. Change the colour of the Bootstrap navbar
更改Navbar顏色
3. Create a fixed footer
製作固定的HTML footer
4. Perform transition effect in CSS & Bootstrap
以CSS及Bootstrap製作過渡效果
5. Perform transition effect & sidebar in jQuery
以jQuery製作過渡效果和Sidebar
6. iFrame: Embedding web page objects
以iFrame嵌入其他網頁物件

C3D3 and Airtable Integration in GetJSON

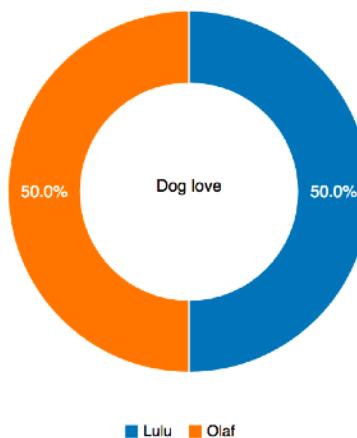
以GetJSON結合C3D3和Airtable來製作圖表

Jocellyn's Blog

Simple charts with C3 - in 5 minutes!

This article aims to explain how to use a cool library called [C3](#) for building simple charts. C3 is a javascript library which builds on top of [famous D3](#). You can find plenty of good sources (online or printed) on how to learn D3 and make complex visualizations with it, but for many people, these would be too advanced. Often you just need to add a [simple graph to a webpage](#) to show some statistics - a scatter plot or a bar chart.

C3 allows you to do just that without knowing all the complexity of D3 because it wraps all you need into a simple API. You do not need to handle the SVG elements manually, nor the hover effects, etc. The final result could look like this:



<http://jocellyn.cz/2014/07/25/simple-charts-with-c3.html>

Show Total

Show 10 entries

Search:

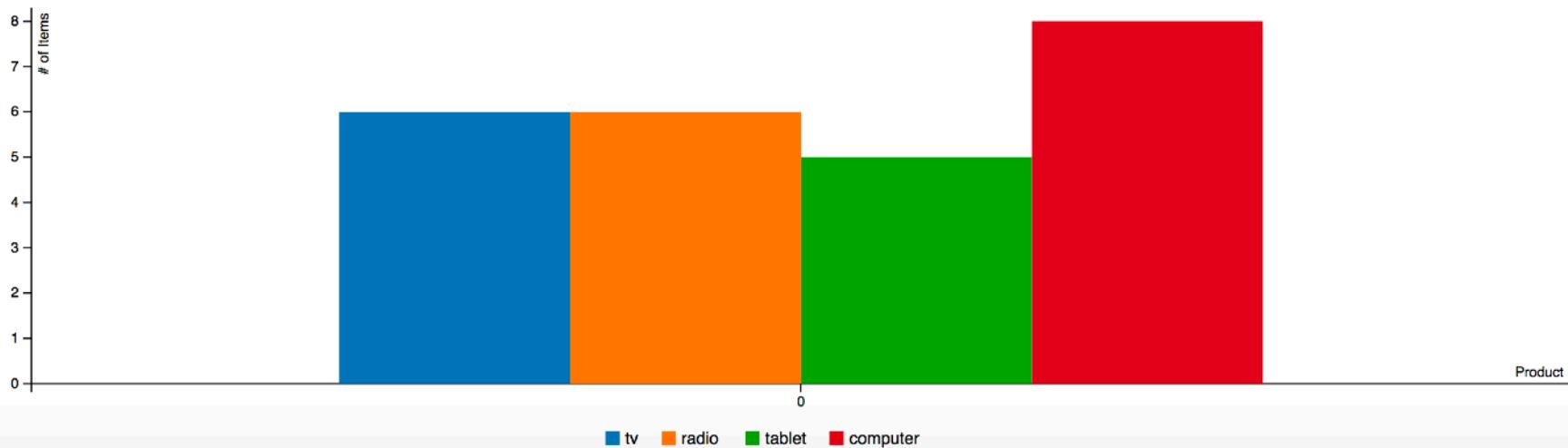
Product	Total Amount
computer	8
radio	6
tablet	5
tv	6

Showing 1 to 4 of 4 entries

Previous

1

Next



Using jQuery getJSON and
Airtable API for fun!

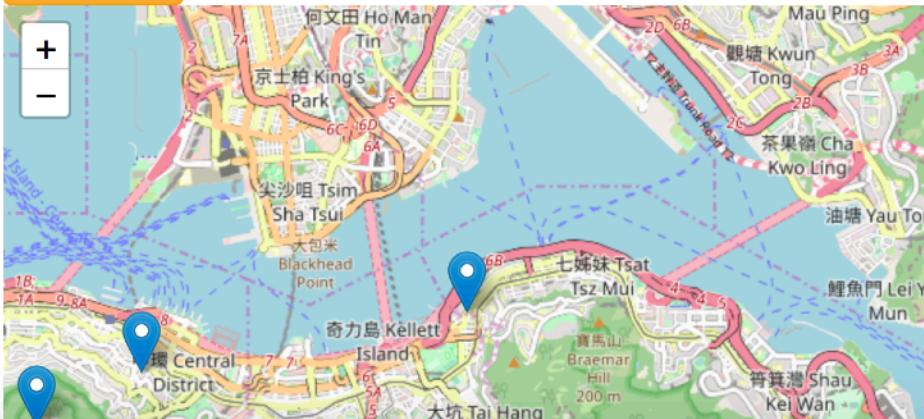
Airtable is a wonderful spreadsheet-like database with many useful features for data modeling and basic analytics. When used with other data visualization libraries, it can be a great tool for rapid prototyping

Show Table

Show Total

Leaflet Example

Show Districts



1. Define the selector
2. Declare the initial map view.
3. Provide the source of the map titles (e.g. Open Street Map).
4. Define Airtable API request
5. Fetch data set into JS array.
6. Add a marker to the map view based of the data set array.

https://ybsuen.github.io/com5961-2019/lesson9/test_getjson.html

WHY AM I TEACHING THIS CLASS?

DATA

Data Scientist: The Sexiest Job of the 21st Century

by Thomas H. Davenport and D.J. Patil

FROM THE OCTOBER 2012 ISSUE

 SUMMARY  SAVE  SHARE  COMMENT  TEXT SIZE  PRINT  \$8.95 BUY COPIES

When Jonathan Goldman arrived for work in June 2006 at LinkedIn, the business networking site, the place still felt like a start-up. The company had just under 8 million accounts, and the number was growing quickly as existing members invited their friends and colleagues to join. But users weren't seeking out connections with the people who were already on the site at the rate executives had expected. Something was apparently missing in the social experience. As one LinkedIn manager put it, "It was like arriving at a conference reception and realizing you don't know anyone. So you just stand in the corner sipping your drink—and you probably leave early."

Goldman, a PhD in physics from Stanford, was intrigued by the linking he did see going on

Harvard
Business
Review

Big Data: The Management Revolution

Source: HBR Oct 2012

VIEW MORE FROM THE
October 2012 Issue



[Projects](#)[Studio](#)[Device Lab](#)[Posts](#)[Community](#)[About](#)

```
13 # Return True if token should be stoplisted.  
14 def stoplist(token, stopwords):  
15     return len(token) <= 1 or re_stoplist.match(token) or token in stopwords  
16  
17  
18 # Return True if any element should be stoplisted.  
19 def stoplist_iter(it, stopwords):
```

Projects

[Storytelling](#)[Beta](#)[Reporting](#)[Learning](#)[Prototypes](#)

The Lab develops prototypes, projects and services that help make information meaningful and promote quality journalism, storytelling and content on the internet.

Source: KnightLab at Northwestern University (<https://knightlab.northwestern.edu/projects/#prototypes>)



JS2310 - Bachelor of Communication & JS2510 - Bachelor of Science

Data and Media Communication Concentration (DMC)

An Interdisciplinary Concentration for HKBU Computer Science and Journalism Students

LEARN MORE

Source: HKBU (<http://bu-dmc.hkbu.edu.hk/>)



Design and Computation: Two Essential 21st Century Literacies

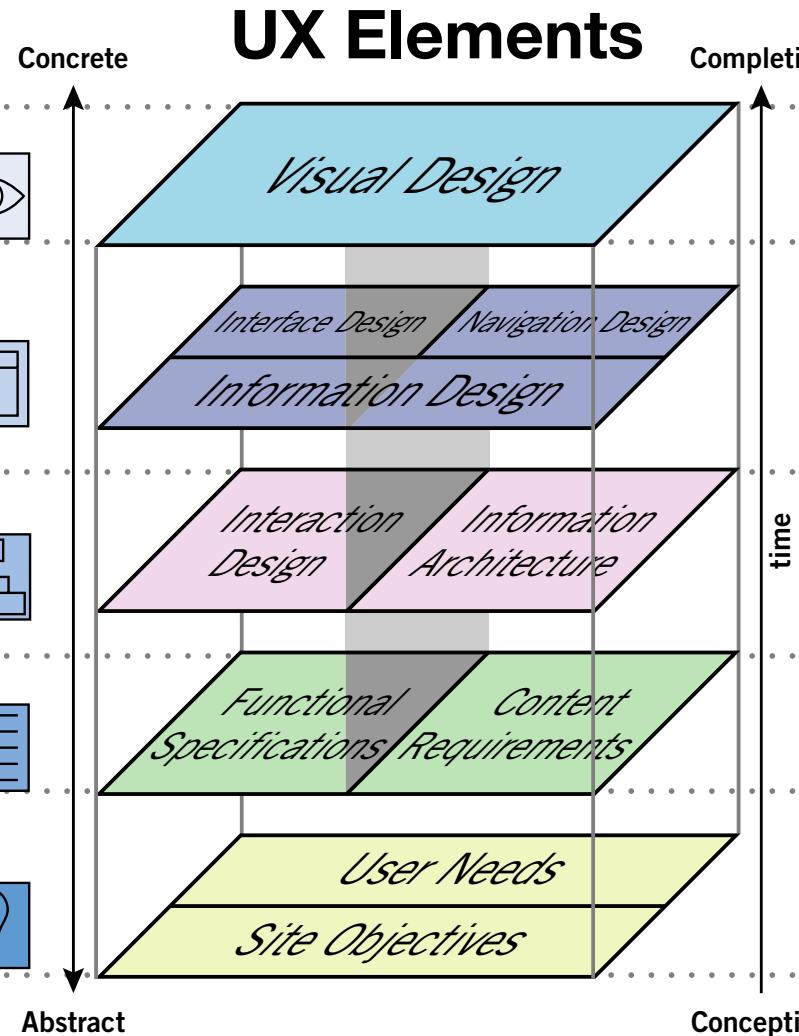
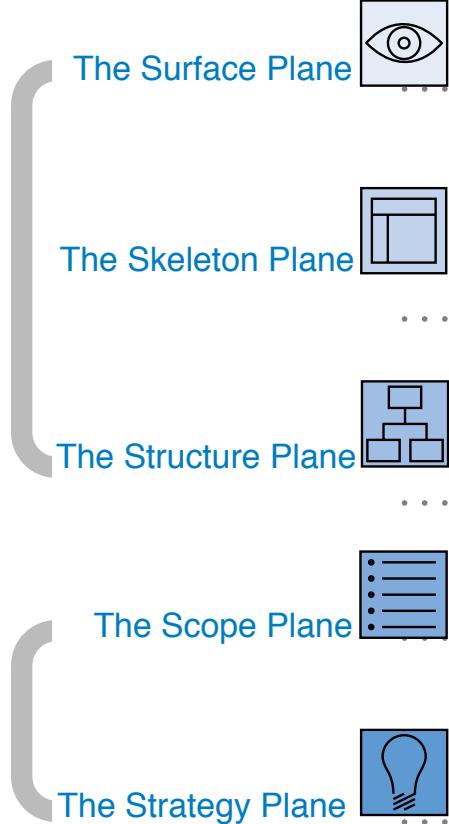
Source: Elements of User Experience
by Jesse James Garrett

Solution Space

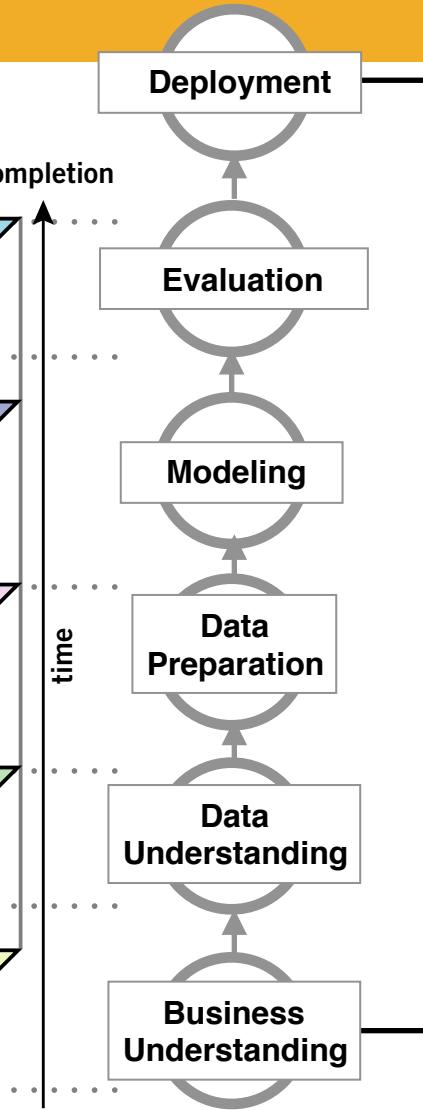
how and
how much

Problem Space

who, what,
and why



UX Elements



THE CROSS-INDUSTRY PROCESS FOR DATA MINING (CRISP-DM)



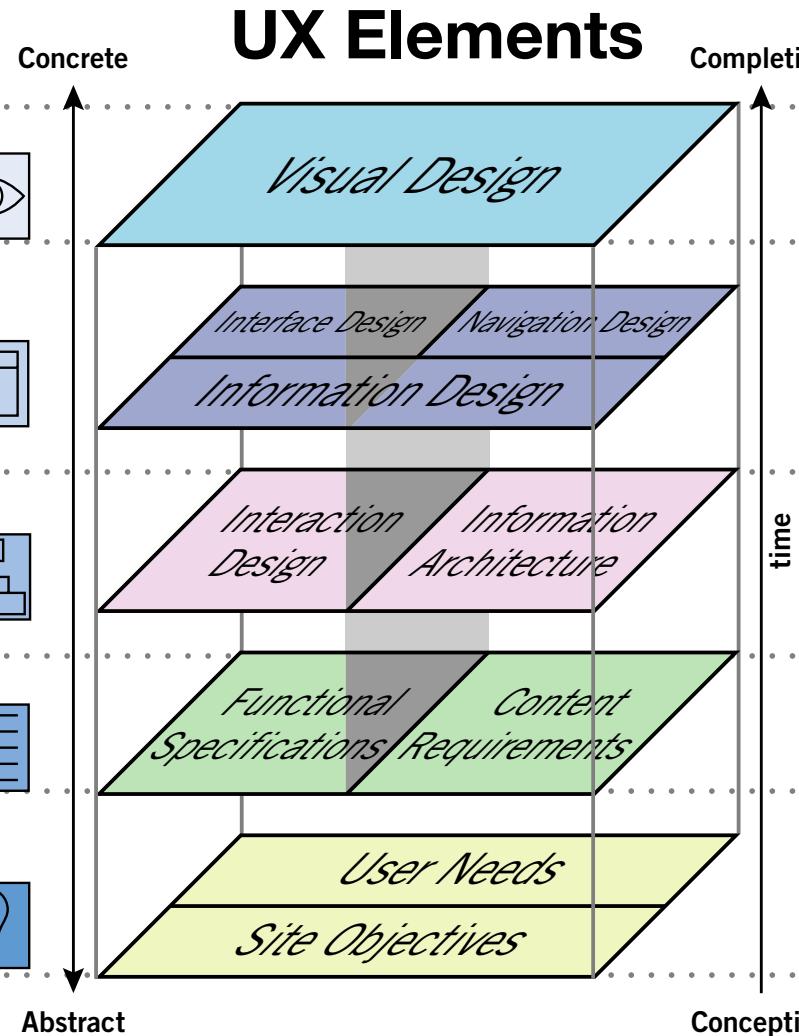
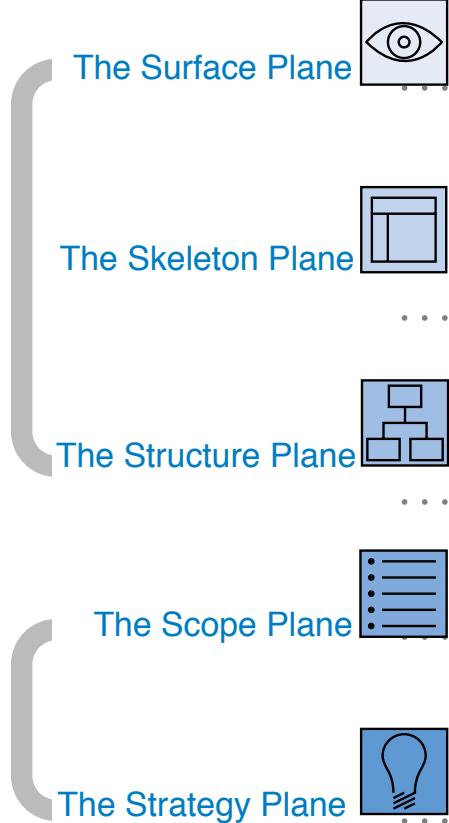
Source: Elements of User Experience
by Jesse James Garrett

Solution Space

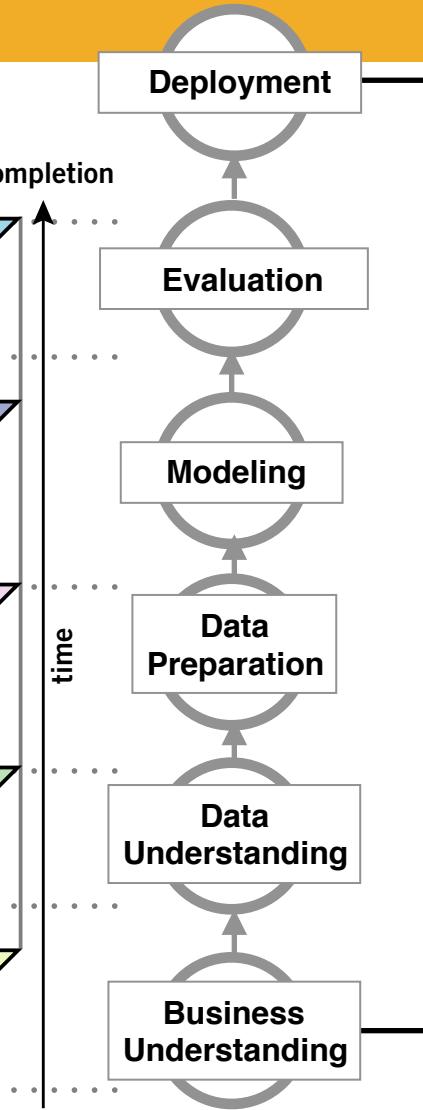
how and
how much

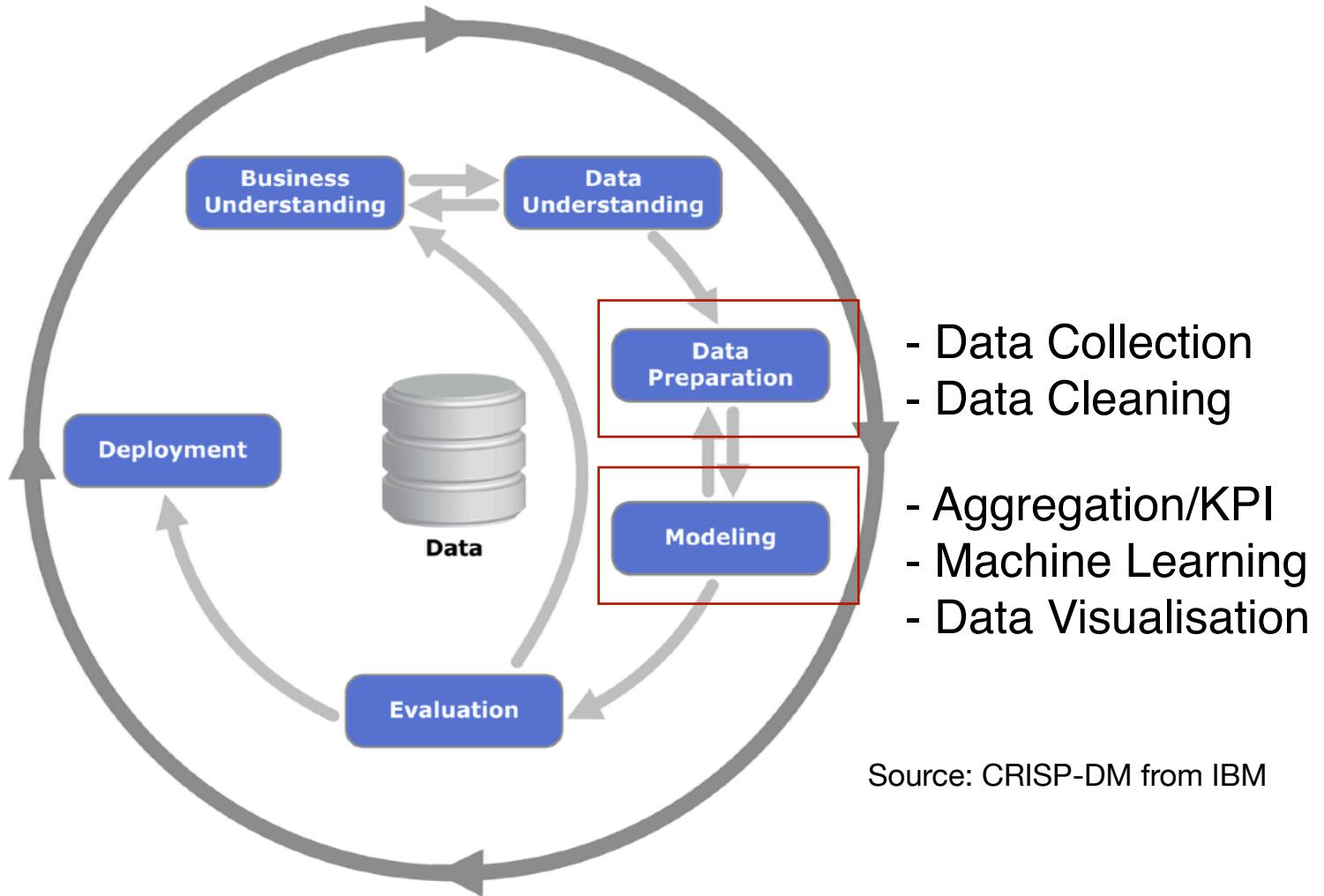
Problem Space

who, what,
and why



UX Elements





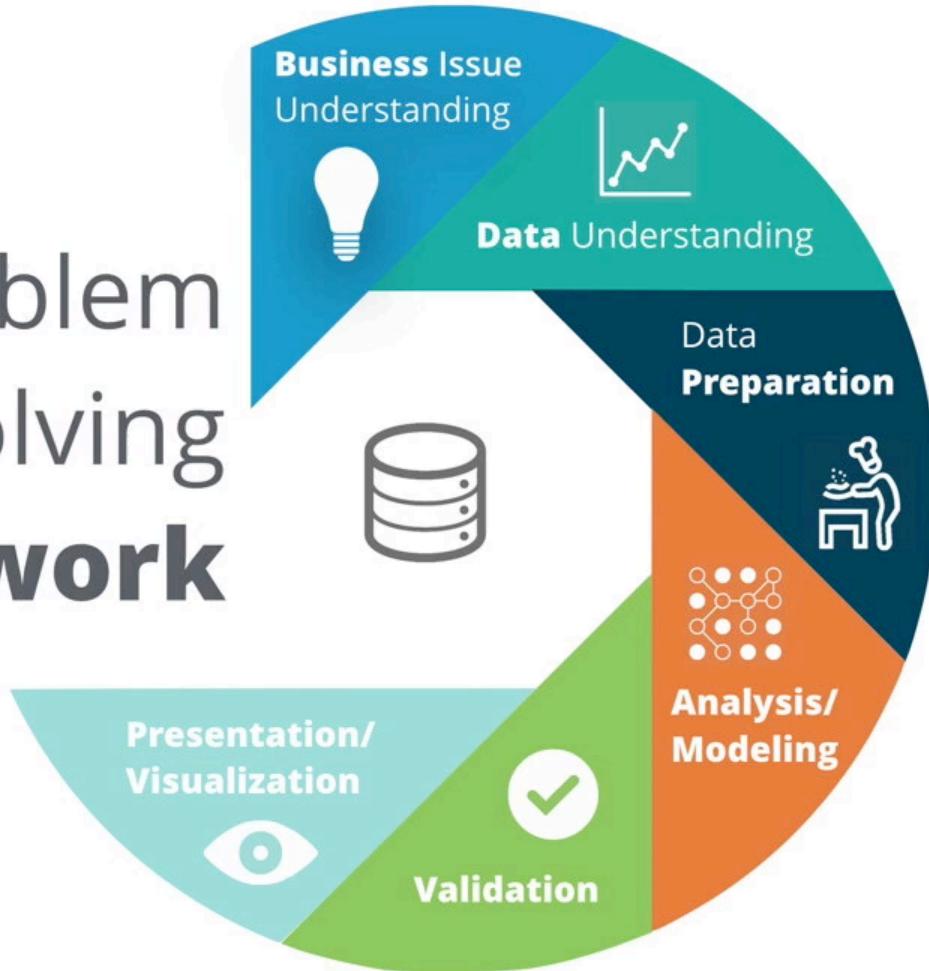
Predictive Analytics/Machine Learning/ Deep Learning

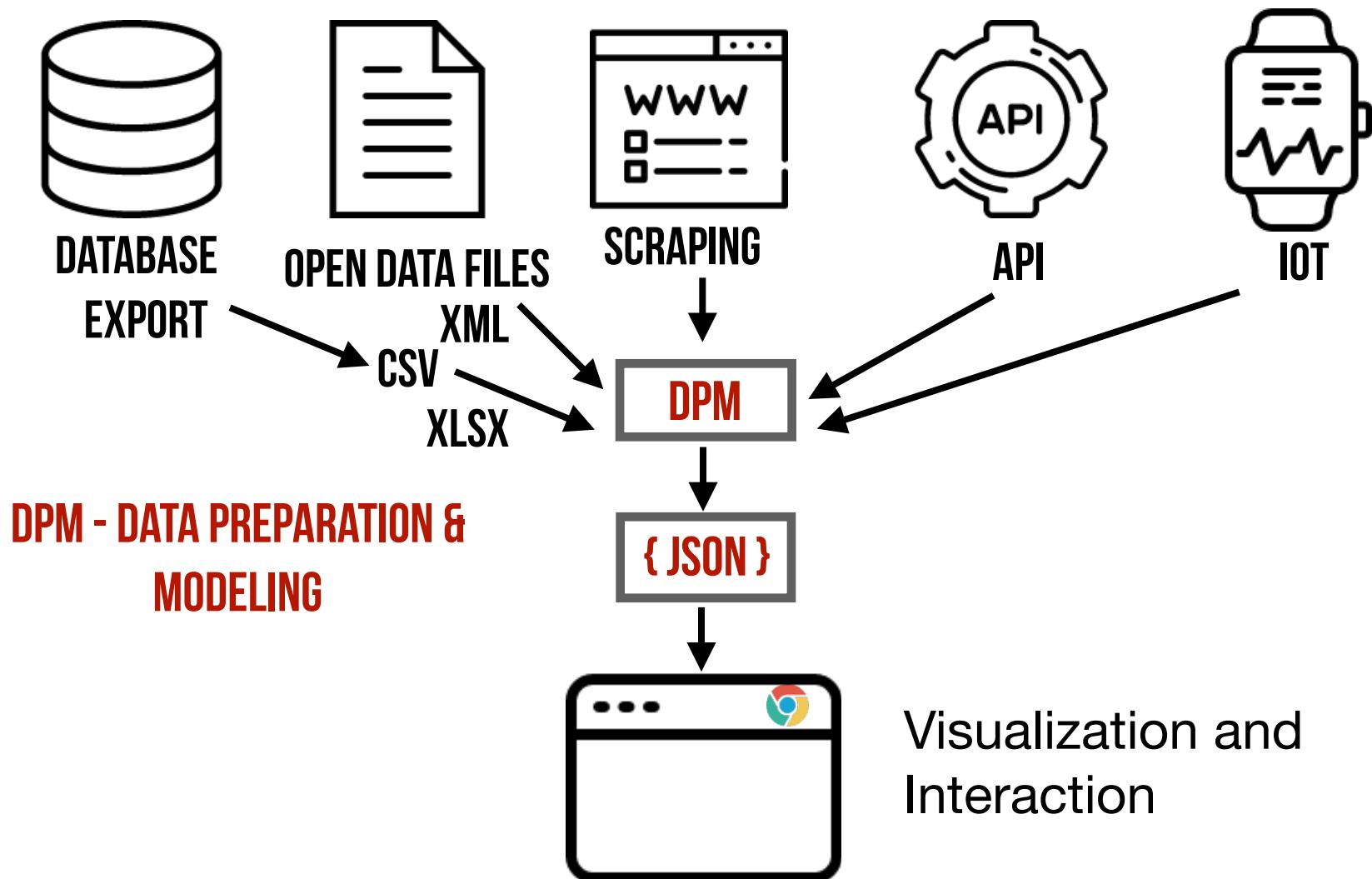
- Linear Regression
- Decision Tree
- Forest Model
- Boosted Model
- Count Regression
- Logistic Regression
- Decision Tree
- Forest Model
- Booted Model

Descriptive and Inferential Statistics (Hypothesis Testing)

Source: Udacity Model Selection Methodology Map

Problem Solving Framework





**How does data and its visualisation relate
to UX and story telling?**

**This has something to do with the “how much”
question in lead (導語) generation?**

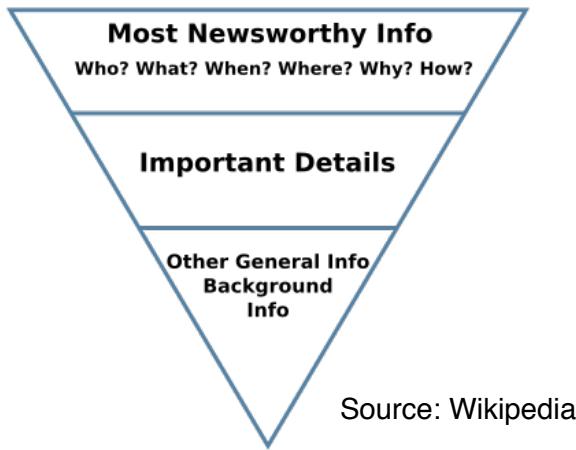
What is a “lead”?

A lead open our eyes into a story.

THE INVERTED PYRAMID

倒金字塔叙述法

1. 人 (人物) PERSONA
2. 景 (場景) CONTEXT
3. 物 (物件) ARTEFACTS
4. 用 (用例) USE CASE



1. 起 (背景) BACKGROUND
2. 承 (問題) CHALLENGE
3. 轉 (回應) RESPONSE
4. 合 (結果) RESULT

“The most important sentence in any article is the first one. If it doesn't induce the reader to proceed to the second sentence, your article is dead.”

— William Zinsser, On Writing Well

THE JOURNEY AS A STORY

elements (元素)

1. 人 (人物) PERSONA
2. 景 (場景) CONTEXT
3. 物 (物件) ARTEFACTS
4. 用 (用例) USE CASE

structure(結構)

1. 起 (背景) BACKGROUND
2. 承 (問題) CHALLENGE
3. 轉 (回應) RESPONSE
4. 合 (結果) RESULT

資料來源---劇本導引：
資訊時代產品與服務設計新法
作者余德彰，林文綺，王介丘

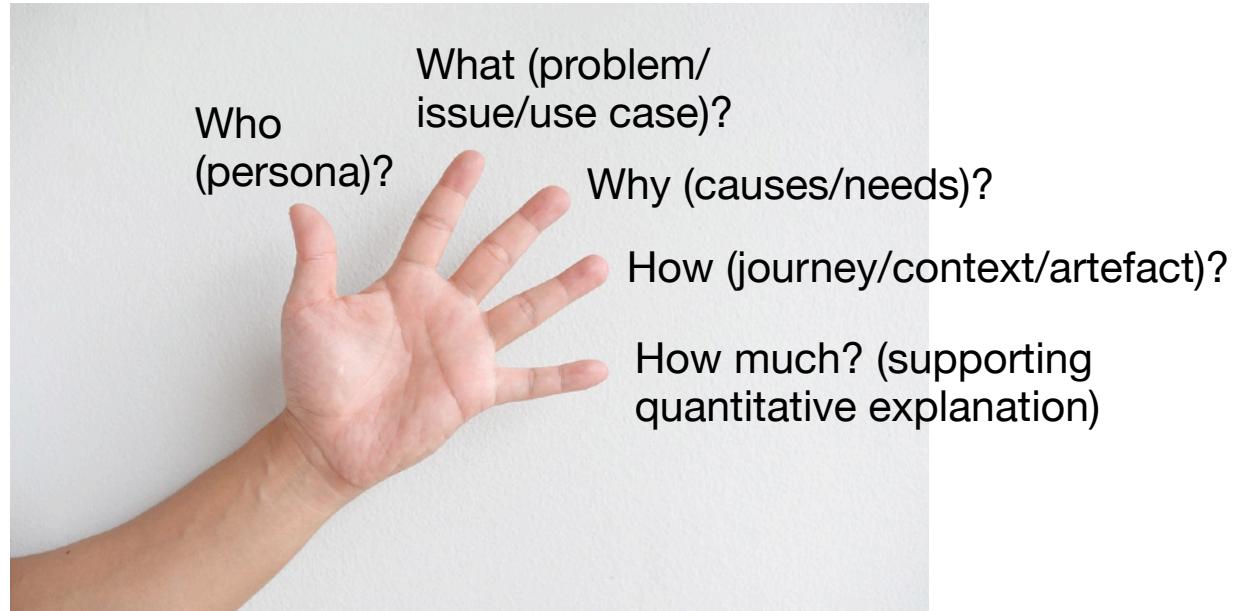
TRADITIONAL 4W1H



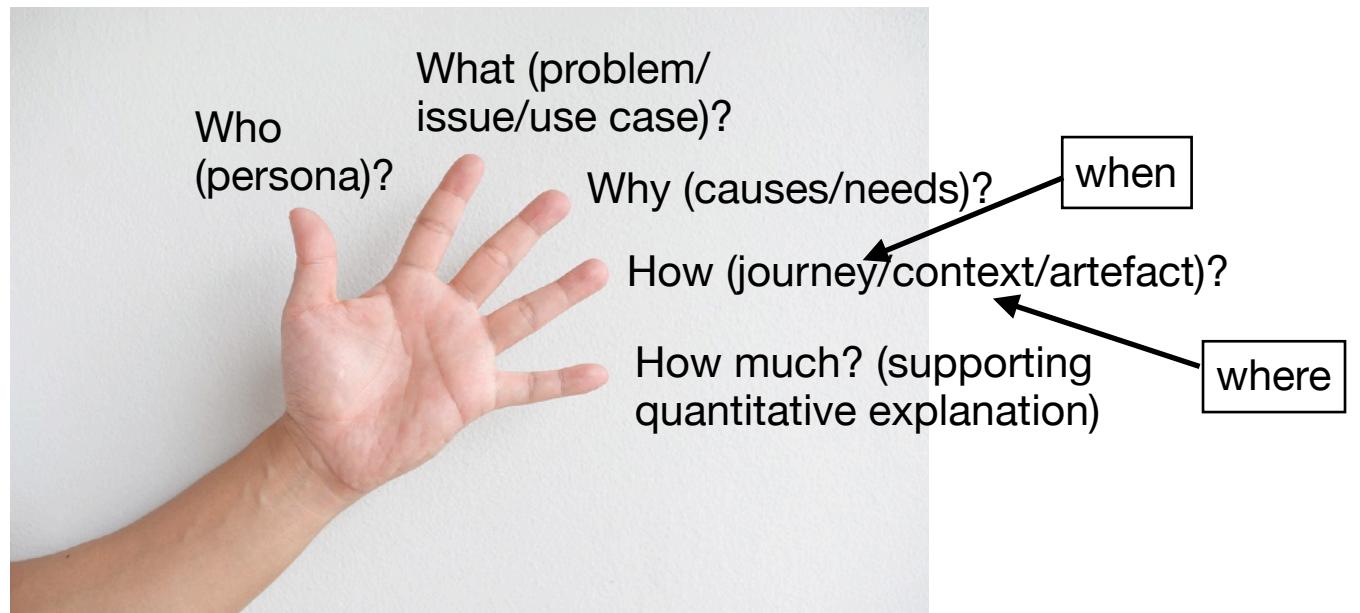
DATA NARRATIVE 3W2H



DATA NARRATIVE 3W2H



DATA NARRATIVE 3W2H



ADDING THE “HOW MUCH” QUESTION INTO THE LEAD



Protesters wear face masks during clashes with police in Central, Oct. 1. Photographer: Eduardo Leal/Bloomberg

Hong Kong’s Descent to Emergency Rule: 118 Days of Unrest

Published: 16 August 2019, 13:00 | Updated: 4 October 2019, 15:24



— Bloomberg 16 August 2019, 13:00 | Updated: 4 October 2019

<https://www.bloomberg.com/graphics/hong-kong-protests-timeline/>

 South China Morning Post

HONG KONG PROTESTS

100 days of protests rock Hong Kong

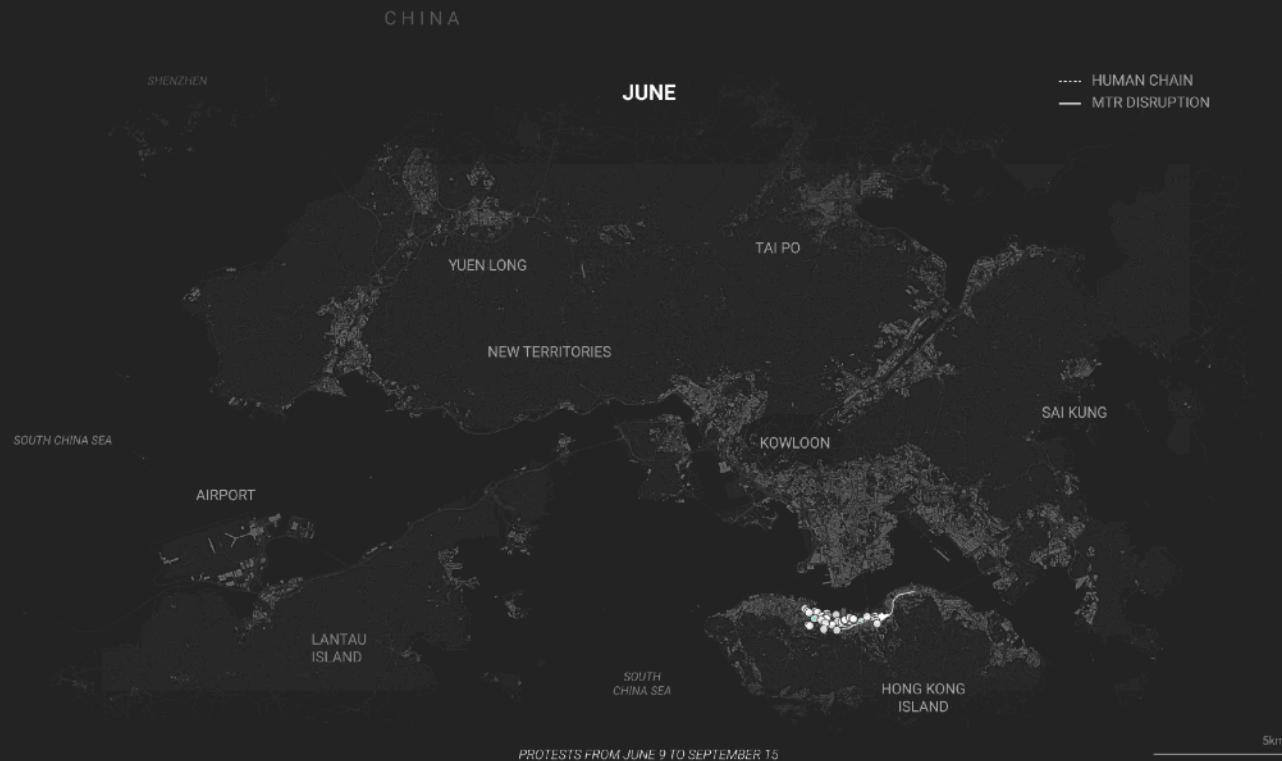
BY PABLO ROBLES, DARREN LONG AND DENNIS WONG
SEPTEMBER 17, 2019

Hongkongers have taken to the streets to demonstrate against the extradition bill in huge numbers. The protesters and the government are in no mood to compromise and police have found themselves thrust into the front line

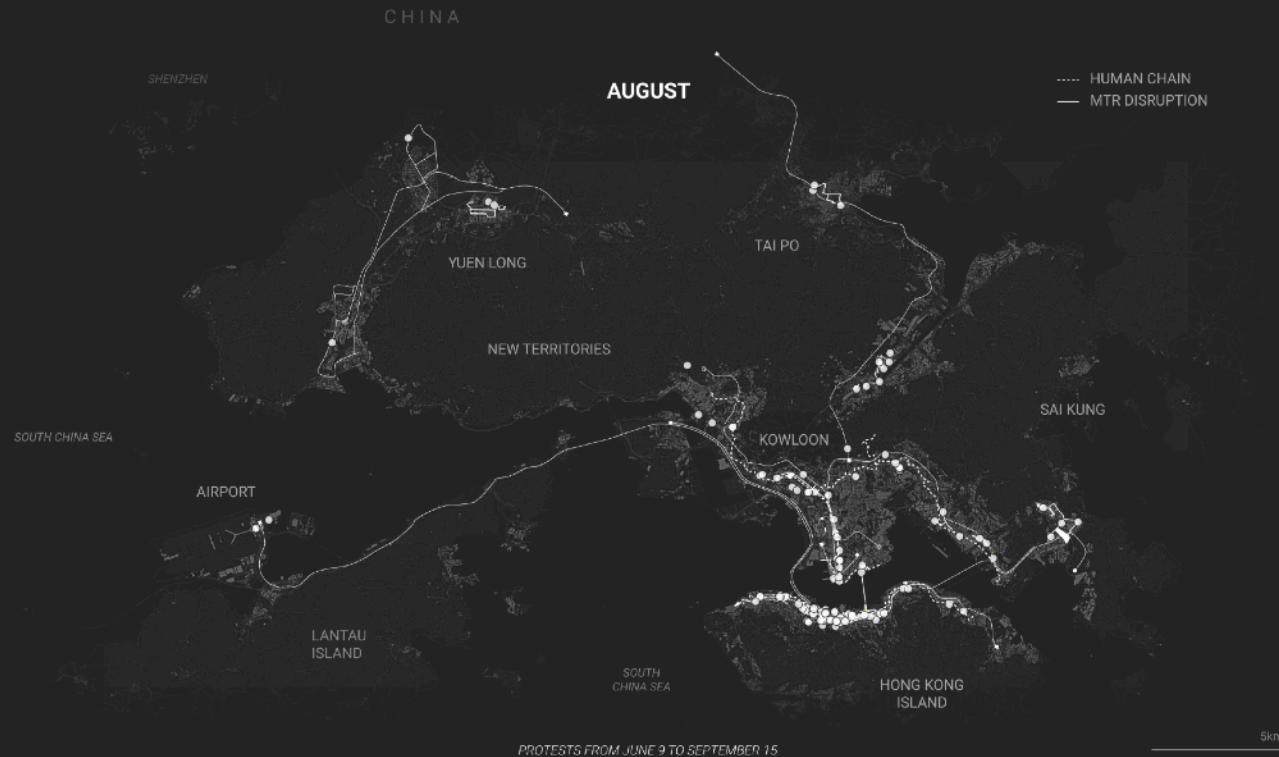
PROTEST FROM JUNE 9 TO SEPTEMBER 15

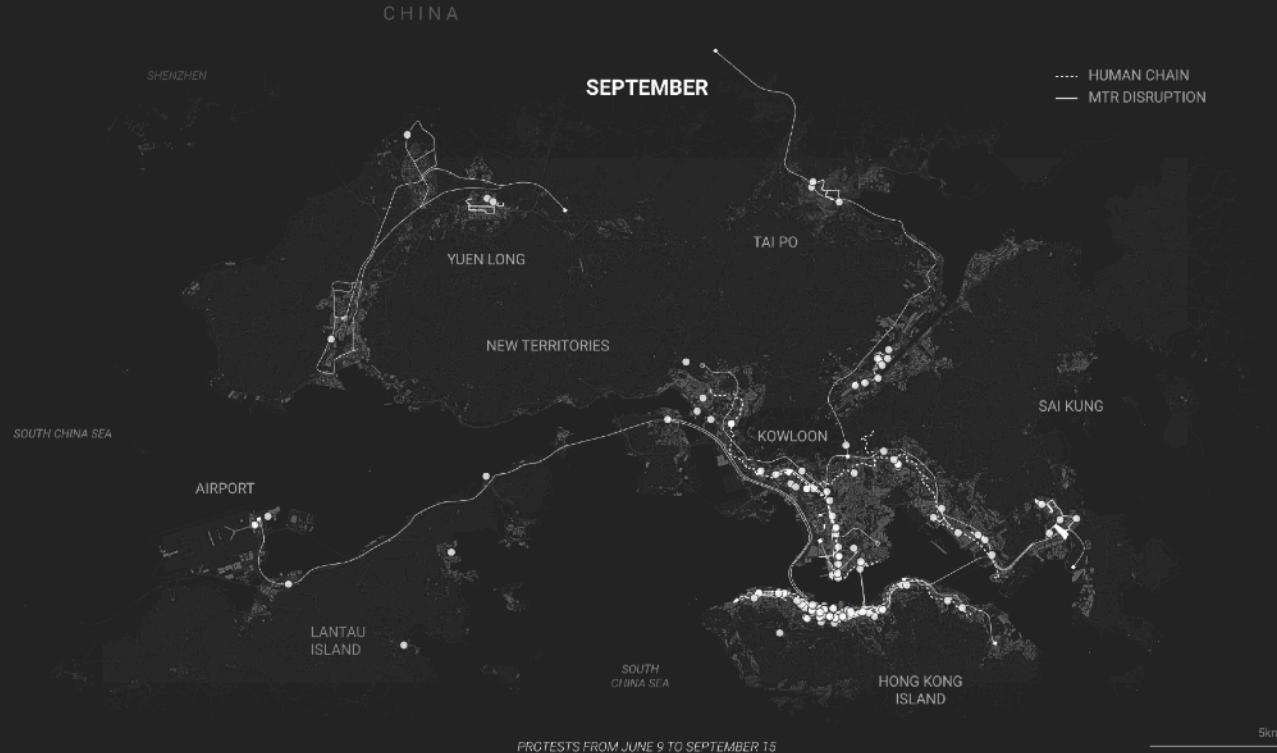
— SCMP Sep 17, 2019

<https://multimedia.scmp.com/infographics/news/hong-kong/article/3027462/hong-kong-100-days-of-protests/index.html>









From journey mapping to data mapping.

Alibaba's New Retail

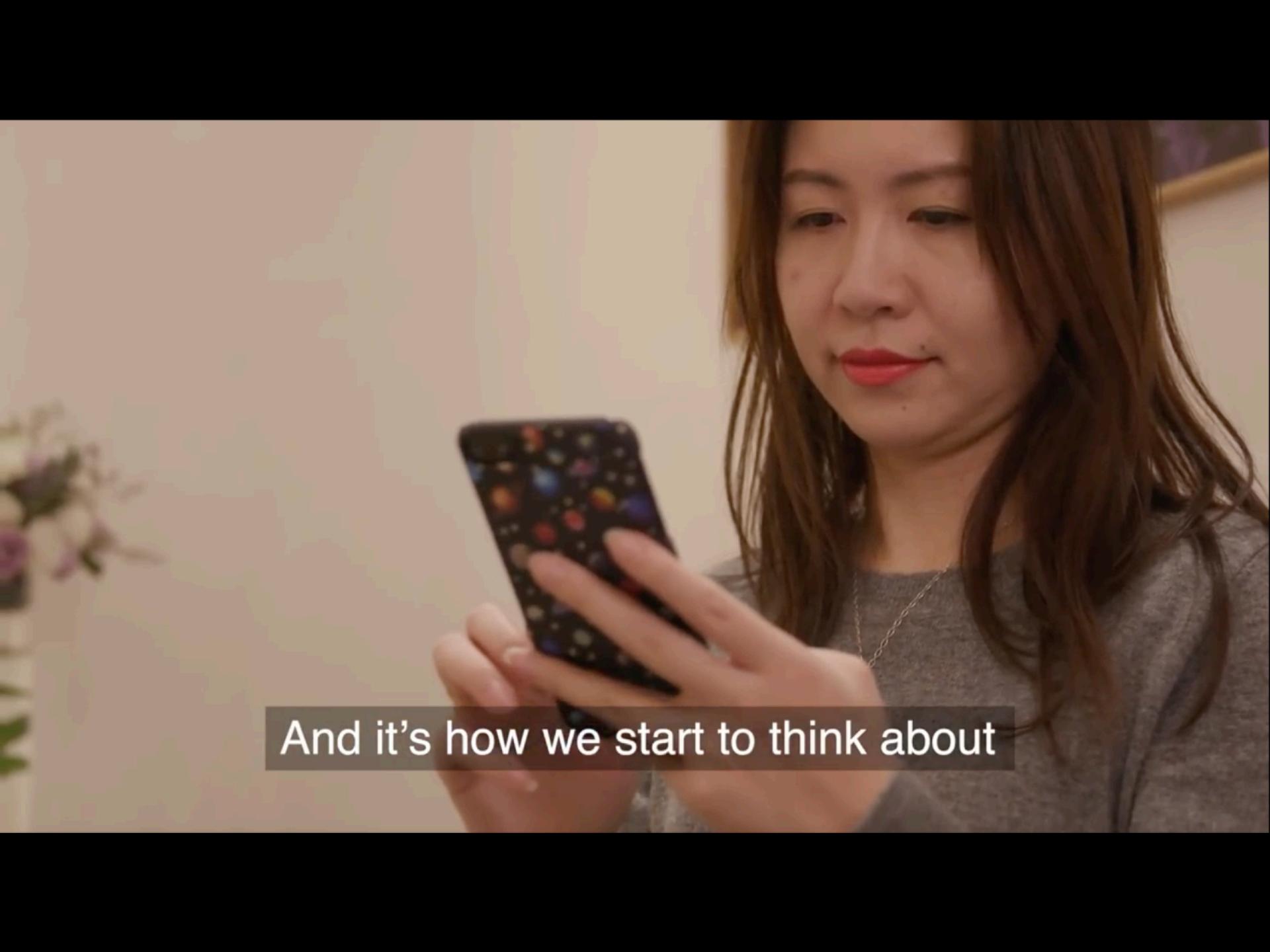
零售新體驗

問題陳述 (Problem Statement):

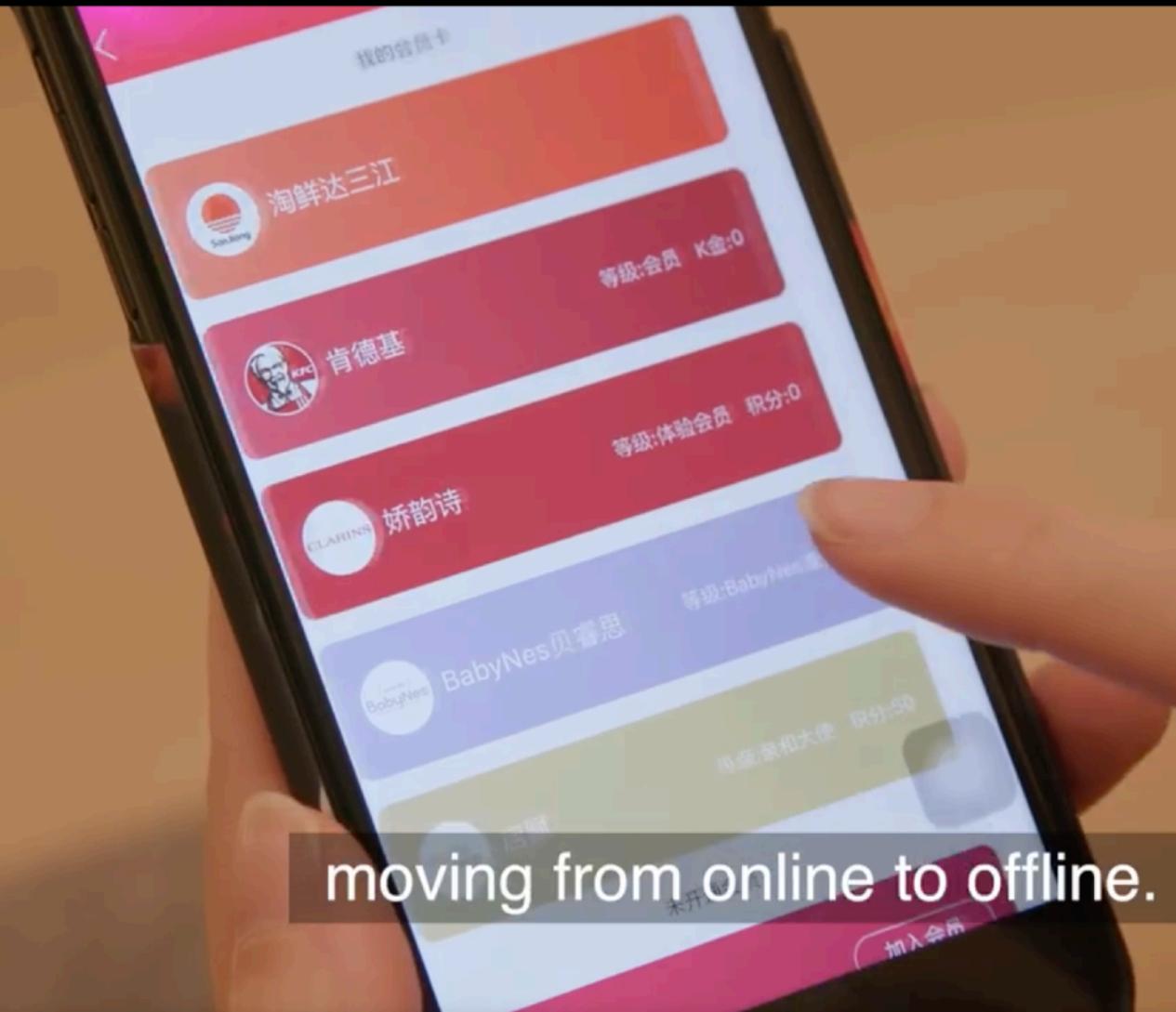
我們怎樣使到全職媽媽 (who) 能解
決同時照顧小孩和在超市內方便購得
所需物品 (what) 的問題，達到善用
時間，提升家庭和自我幸福 (why) 的
目標。



Source: Flickr ([mliu92](#))



And it's how we start to think about





But also thinking more about logistics and data technology



and how to bring in this idea of media and entertainment



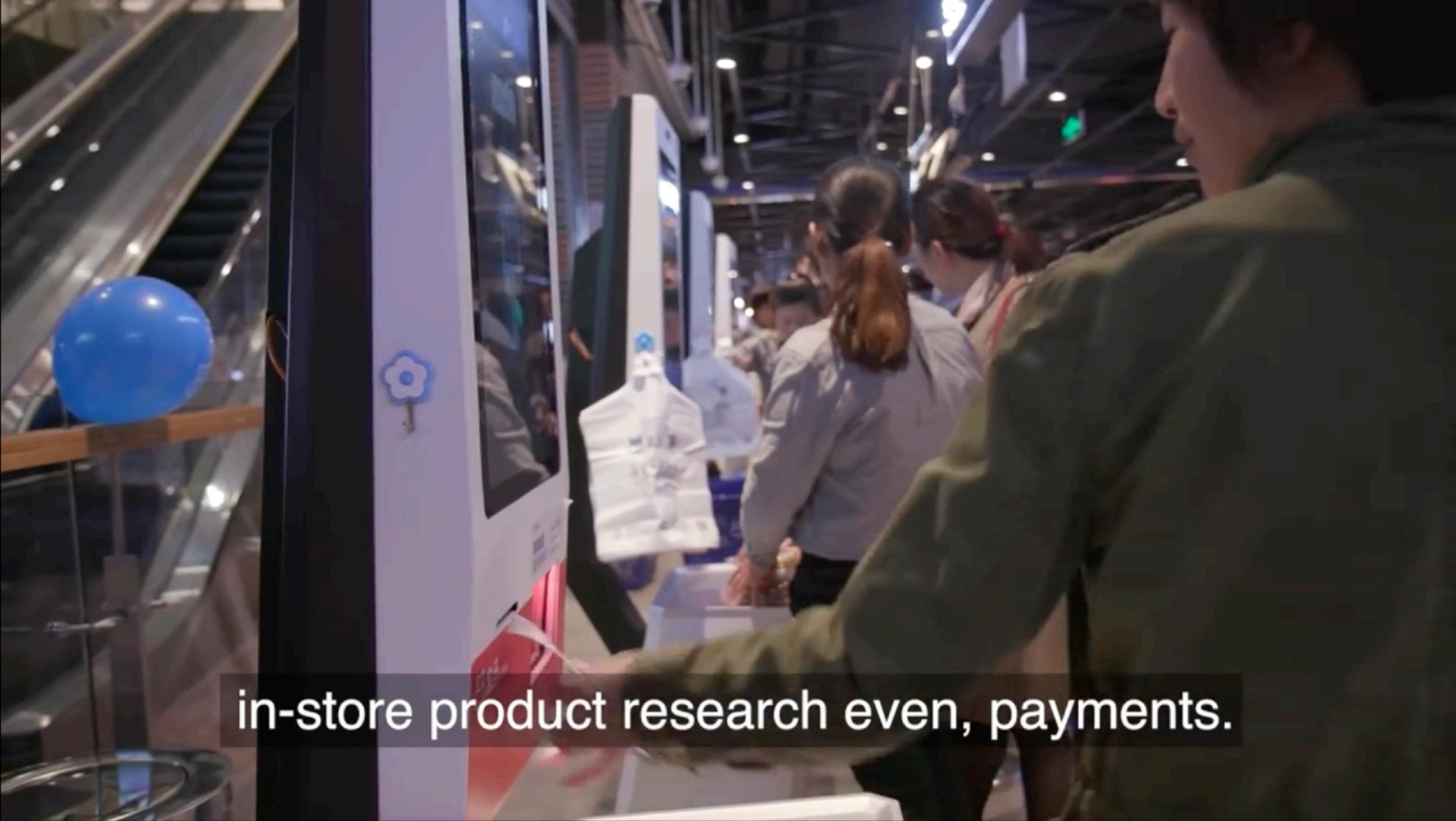
and gamification all into the sport of retail.



completely digital, delivering innovative, intuitive



and convenient shopping experiences



in-store product research even, payments.



online ordering for home delivery



That means consumers within a 3-kilometer radius

A photograph showing a delivery person from behind, wearing a yellow cap and a yellow vest over a dark jacket. They are pushing a grey metal shopping cart filled with grocery bags towards the entrance of a building. The building has brown and black panels. Some greenery is visible in the foreground.

can get their groceries in as fast as 30 minutes.

Challenges

挑戰

- ✓ 下載購物App的誘因
- ✓ 使用購物App的誘因
- ✓ 接受送貨到戶的誘因
- ✓ 找貨出貨的準確性
- ✓ 準時送貨交收的阻礙

Marriott's Experience

酒店平台新體驗

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(未來歷程圖)

HOME

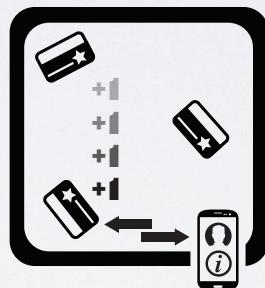


Joins loyalty program, creates a profile & installs phone app.

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

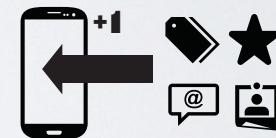
BOOKING

CHECK-IN

MEETUP

RETURN

INTERACTIONS OUTSIDE HOTEL

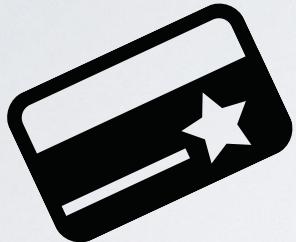


Prompted by app to tag places visited, ratings & social media for points — added to in-app database of recommendations.

Source: MIT Mobile Experience Lab

Prototyping (開展原型)

THE CARD



room key
point counter
status symbol

THE TABLE



the social hub

THE APP



shared memory
social networks
recommendations

LOYALTY

INTERACTION

DATA

Source: MIT Mobile
Experience Lab

**從使用者心智模式
切換到生產者心智模式**

- ✓ 從人物故事轉化為生產系統
- ✓ 從了解使用者體驗進展至建立系統
和數據
- ✓ 考慮成本效益

From Journey Mapping to Data Mapping

(從體驗歷程圖到數據關係圖)

HOME

LOBBY

ROOM

BOOKING

CHECK-IN

MEETUP

RETURN



USER JOURNEY MAP

profile, activity, location, points



Give check-in point

profile, activity, location, points

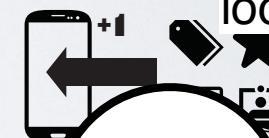
Interaction Data

Profile added to app network. Table lights up to show activity, interests shown on table & lobby display map.

INTERACT
OUTSIDE



Database



Review Data

profile, activity, location, points

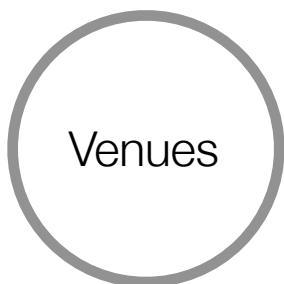
Profile visit for database updates.

Source: MIT Mobile Experience Lab

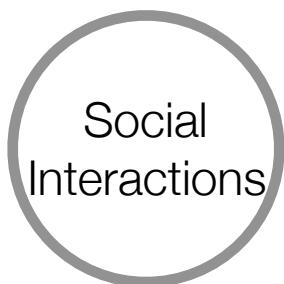
Data Entities to be Tracked



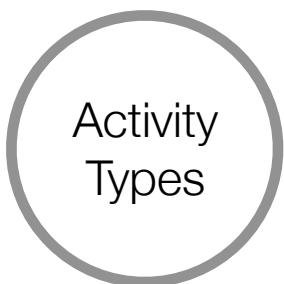
Guests



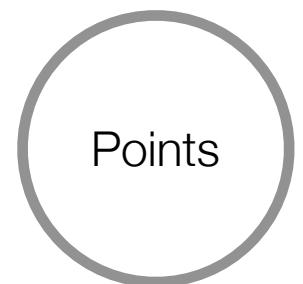
Venues



Social
Interactions



Activity
Types



Points

- 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

Challenges

挑戰

- ✓ 下載Mariott Social App的誘因
- ✓ 提供個人資料的誘因
- ✓ 資料可信性和保密的風險
- ✓ 接受配對和邀請的誘因
- ✓ 成功配對的條件和風險
- ✓ 分享經驗和點評的風險

From journey mapping to data mapping: Turn story into system, UX into data.

Onboarding: Setting the stage for the journey

啓程:如何踏出第一步?

Where to Start and Where to End

如何開展，如何結束

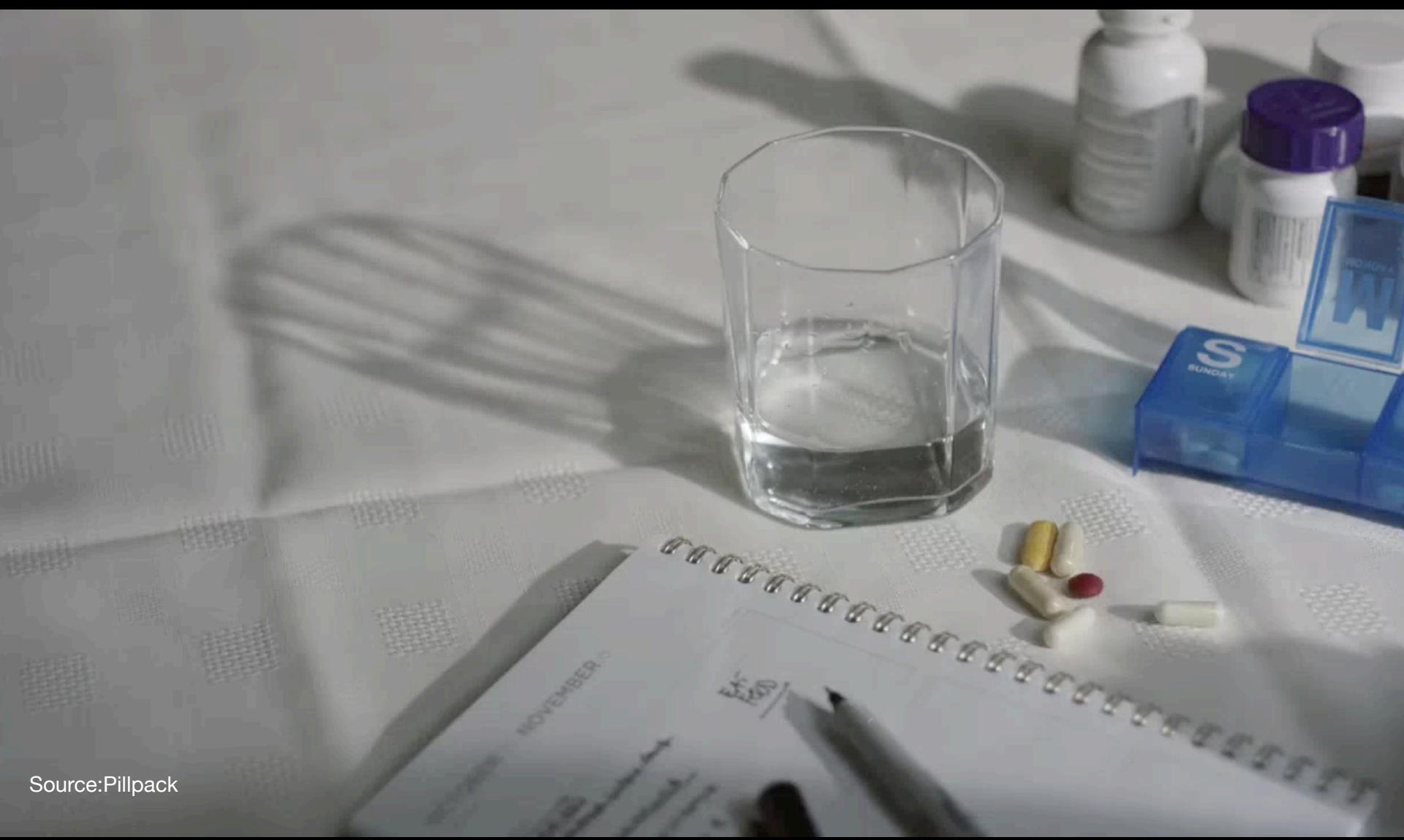
紙上原型開發 (Paper Prototyping)

CASE STUDY: REDESIGNING THE PHARMACY

Source: IDEO



Source: IDEO



Source:Pillpack

How to Communicate a New Pharmacy Service

從包裝設計開展的新服務

LABEL PROTOTYPE



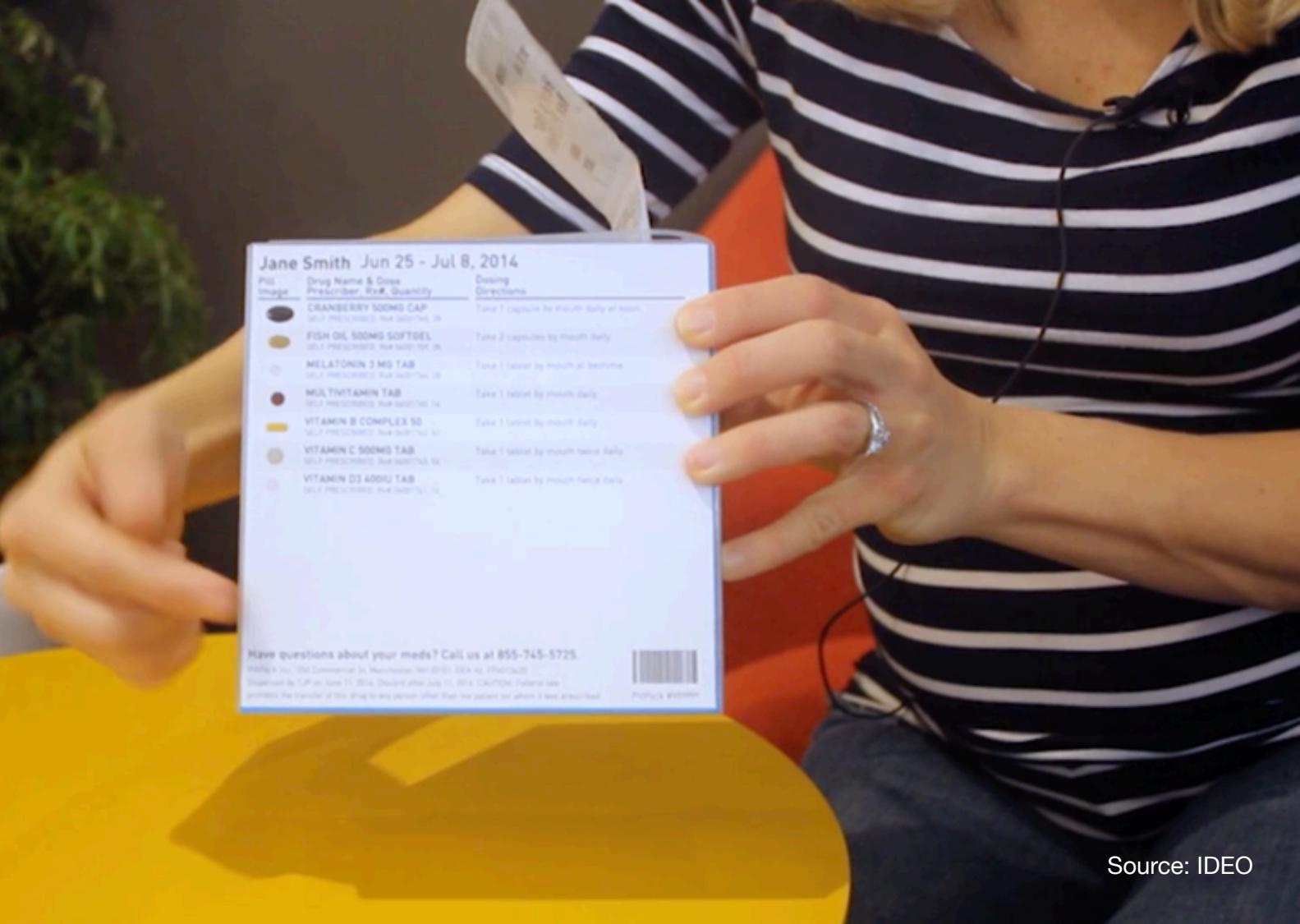
Source: IDEO



Source: IDEO



Source: IDEO



Jane Smith Jun 25 - Jul 8, 2014

Pill
Image

Drug Name & Dose
Prescriber, Rx#, Quantity

Dosing
Directions

CRANBERRY 500MG CAP
SELF-PRESCRIBED, RX# 12345678, 20

Take 1 capsule by mouth daily at breakfast.

FISH OIL 500MG SOFTGEL
SELF-PRESCRIBED, RX# 12345678, 20

Take 2 capsules by mouth daily.

MELATONIN 3 MG TAB
SELF-PRESCRIBED, RX# 12345678, 20

Take 1 tablet by mouth at bedtime.

MULTIVITAMIN TAB
SELF-PRESCRIBED, RX# 12345678, 14

Take 1 tablet by mouth daily.

VITAMIN B COMPLEX 50
SELF-PRESCRIBED, RX# 12345678, 10

Take 1 tablet by mouth daily.

VITAMIN C 500MG TAB
SELF-PRESCRIBED, RX# 12345678, 10

Take 1 tablet by mouth twice daily.

VITAMIN D3 400IU TAB
SELF-PRESCRIBED, RX# 12345678, 10

Take 1 tablet by mouth twice daily.

Have questions about your meds? Call us at 855-745-5725.

MediQ Rx, Inc., 300 Commerce St, Worcester, MA 01650, DEA # 19101420

Dispensed by TAP on June 11, 2014. Discard after July 11, 2014. CAUTION: Federal law
prohibits the transfer of this drug to any person other than the patient for whom it was prescribed.



Printed 4/10/2014

Source: IDEO

OUTCOMES

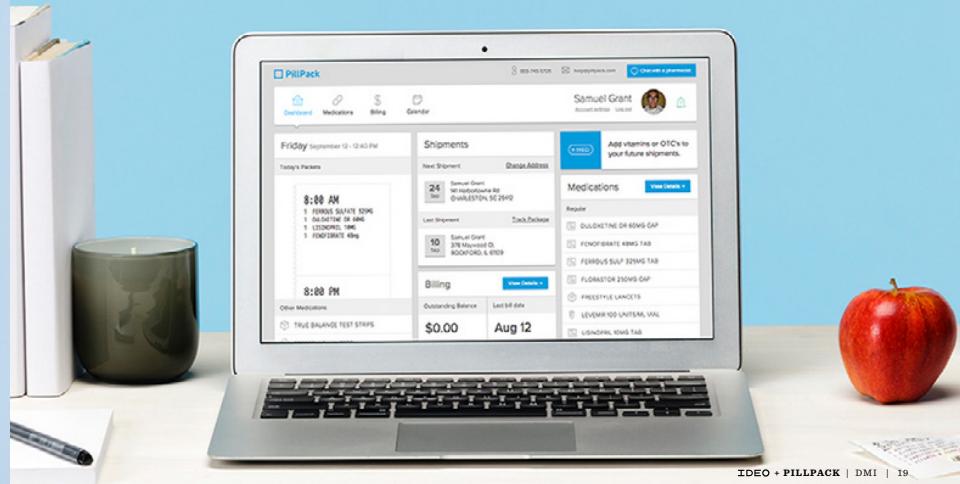
Physical Experience



IDEO + PILLPACK | DMI | 18

OUTCOMES

Digital Experience



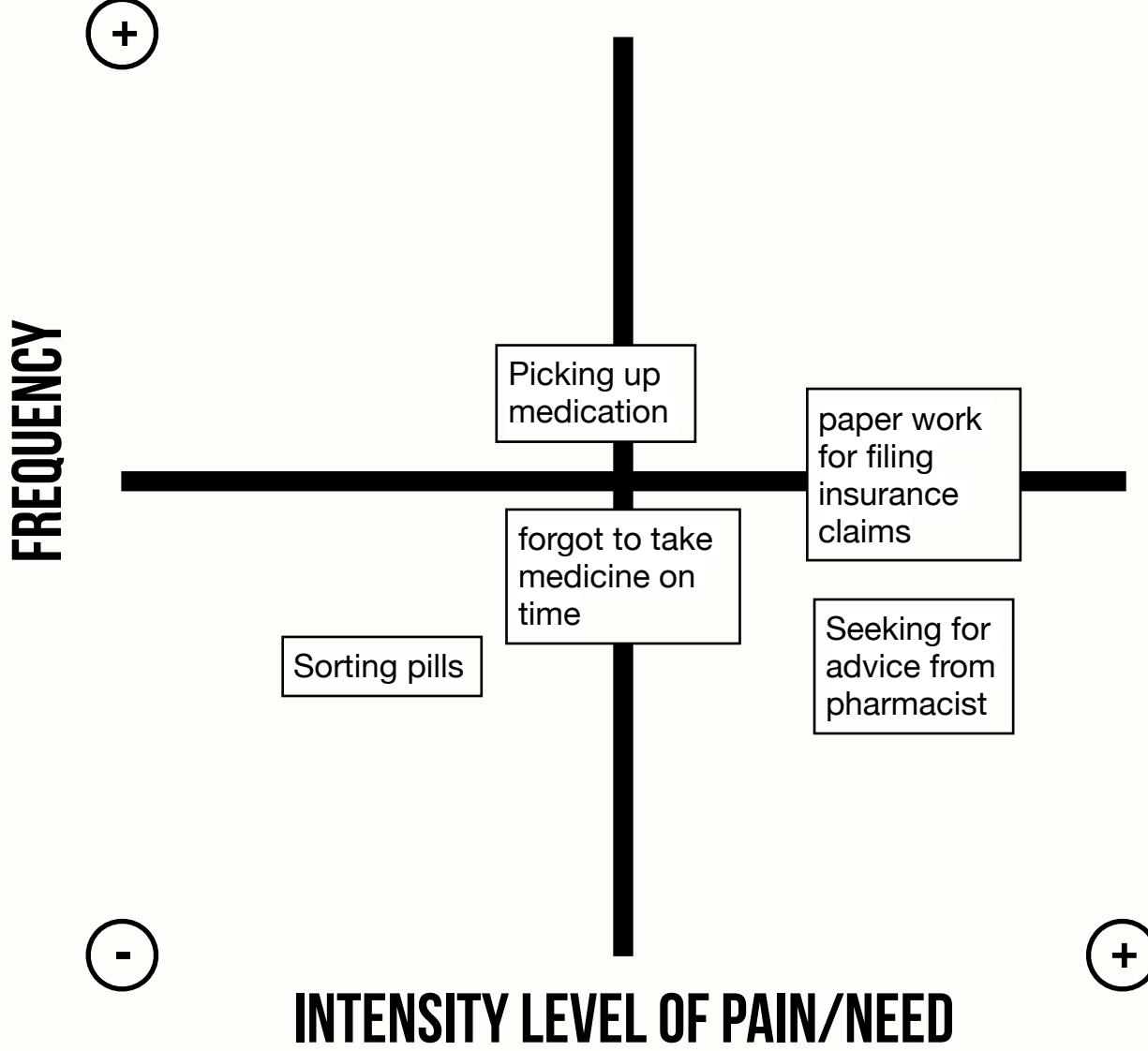
IDEO + PILLPACK | DMI | 19

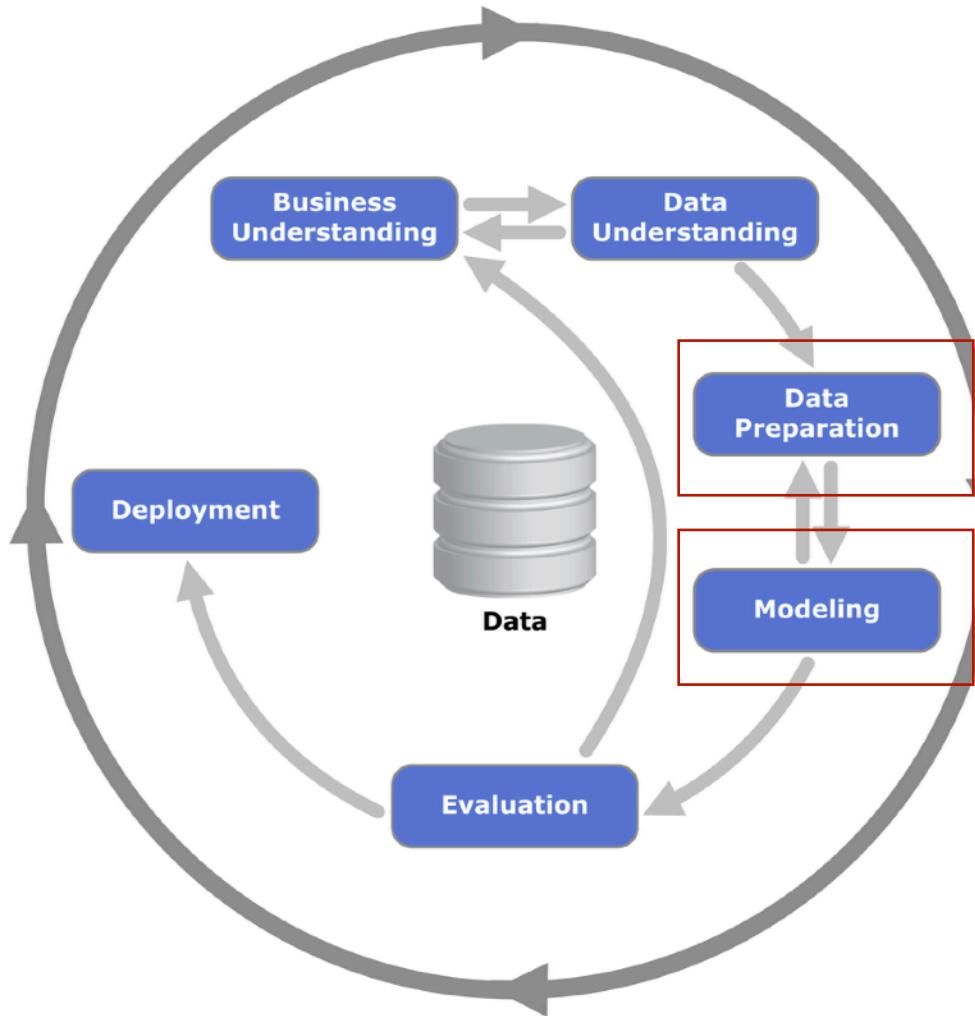
Source: IDEO

Challenges

挑戰

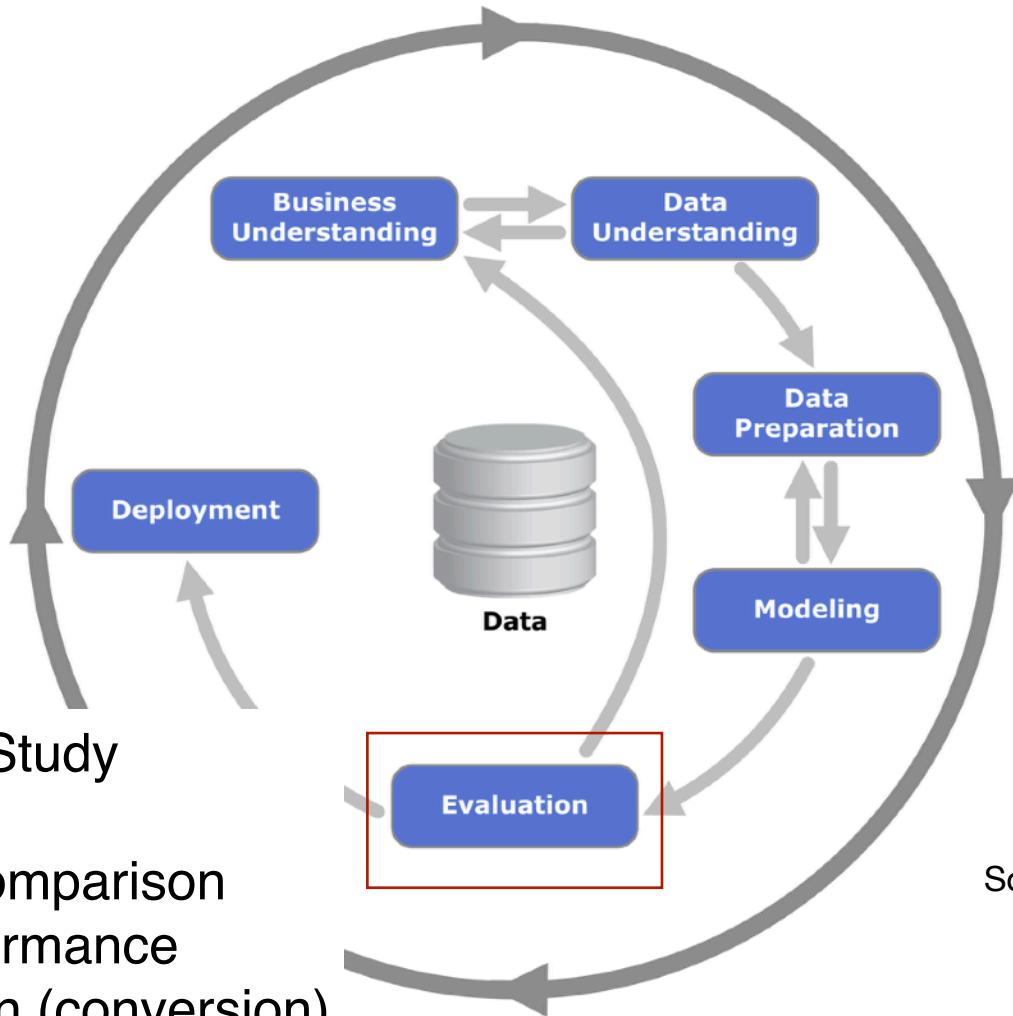
- ✓ 下載Pillpack App的誘因
- ✓ 提供個人資料的誘因
- ✓ 保險和醫療機構的支持和協作
- ✓ 訊息交換的準確性和時效
- ✓ 執貨出貨的準確性
- ✓ 準時送貨交收的阻礙





- Data Collection
- Data Cleaning
- Aggregation/KPI
- Machine Learning
- Data Visualisation

Source: CRISP-DM from IBM



Source: CRISP-DM from IBM

QUALITATIVE & QUANTITATIVE RESEARCH METHODS

DEMONSTRATION FROM PREVIOUS STUDENTS



Home About Archery Tutorials Ranking Clubs

https://yvonnexin47.github.io/hk_archery/index.html

HONG KONG ARCHERY

For local archery amateurs and anyone who would like to explore it with us.
One shot can have you hooked for a lifetime.



About Archey

2

https://github.com/ybsuen/ybsuen.github.io/blob/master/com5961-2019/student_projects/Final%20Project%20Report%20-%20Yvonne%20Xin%20-%201155112871.pdf

— 精選專題 —

點擊按鈕，查看特色專題詳情。

再次點擊按鈕可關閉詳情。

<https://juieyxyx.github.io/#section-offer>



聖誕專題

點進來瞭解聖誕的盛事

新店探路

來到新店由你告訴我

奶茶推介

滿滿幸福感和生命力

[https://github.com/ybsuen/ybsuen.github.io/blob/master/com5961-2019/student_projects/Final%20Report_JIANG%20Yuxuan\(Julie\).pdf](https://github.com/ybsuen/ybsuen.github.io/blob/master/com5961-2019/student_projects/Final%20Report_JIANG%20Yuxuan(Julie).pdf)

Explore Hong Kong Museums

Hong Kong has over 100 museums in varied kinds, and most of them are free. HK Museums Finder helps foreign visitors who are interested in Hong Kong's art, culture, history or science to find the most appropriate museums. If you have no idea which museum to go, check our **Recommendation** prepared for you.

<https://jianxiangsun.github.io/>

GO!

Museums Overview

https://github.com/ybsuen/ybsuen.github.io/blob/master/com5961-2019/student_projects/Jianxiang%20Sun%20-%20Final%20Web%20Design%20Report.pdf

港校传媒专业介绍

<https://hannahwei2991.github.io/finalproject/%E4%B8%93%E4%B8%9A%E4%BB%8B%E7%BB%8D.html>

各高校开设专业



香港大学
HKU



香港中文大学
CUHK



https://github.com/ybsuen/ybsuen.github.io/blob/master/com5961-2019/student_projects/COMM5961_Final%20Report_WEI%20Qianhan_1155112991.pdf

Class Presentation (Nov 18th)

5 minute presentation from student that contains a problem statement and a responsive web site that addresses the problem (methodology and process need not to be shown during the presentation but left to the final report)

Final Project (Due Dec 2nd)

- a. Complete a responsive web project design targeting a use case in which the user/customer journey contains pain points that need to be addressed with data driven features.**
- b. Document your development process from problem phase to solution phase using methodologies learned from the course.**

QUALITATIVE METHOD

REFINING YOUR “USER” UNDERSTANDING

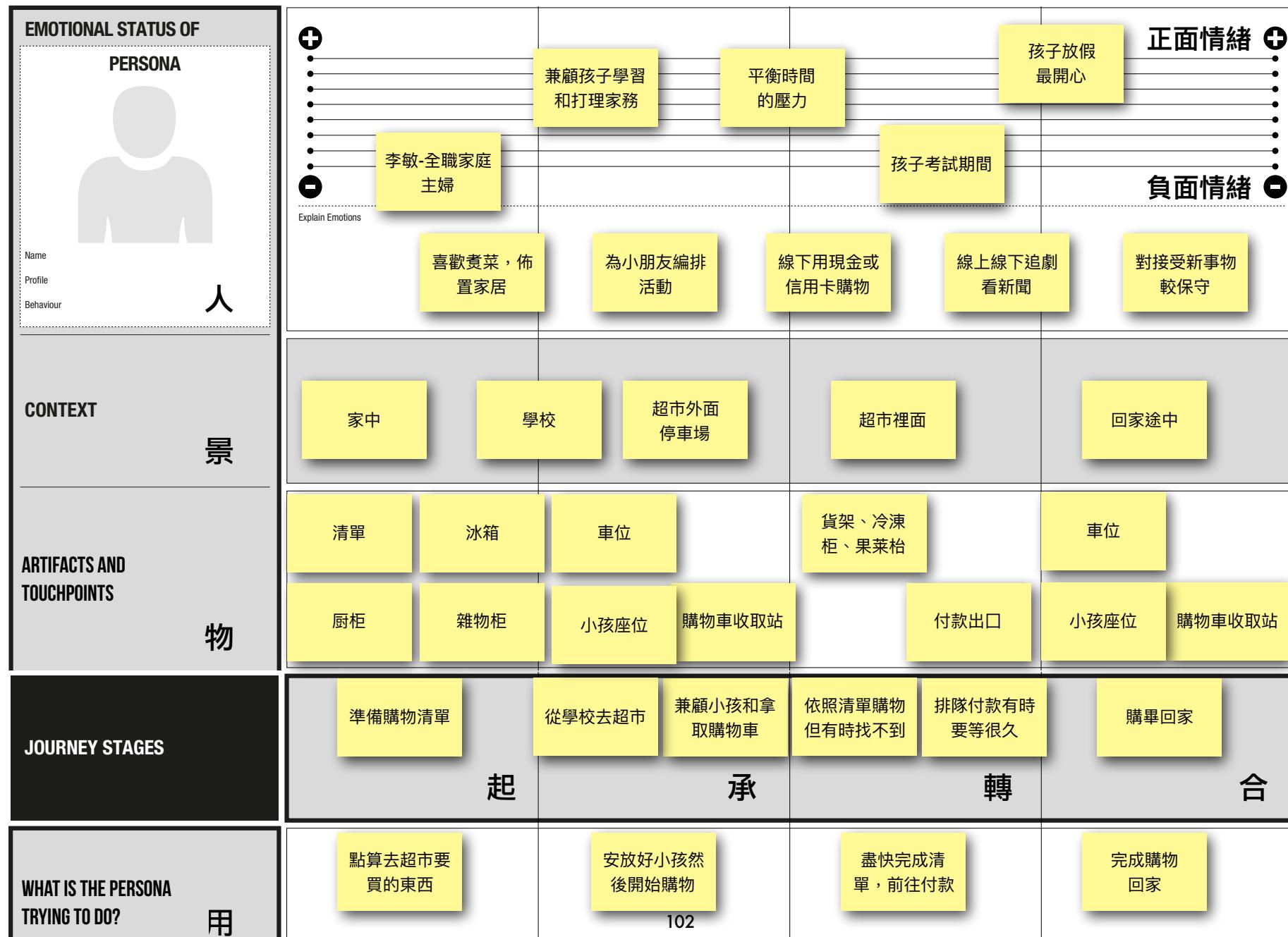
HOW TO FIND YOUR USERS AND THEIR NEEDS?

Persona Segmentation Table (人物分類表)

	年齡	性別	聘有家傭	家庭人數	居住狀況	教育程度	職業	網購習慣	每週買菜次數
1	18-24	男	有(同住)	1	父母親、兄弟姊妹及其配偶丈夫/妻子兒女	小學	漁農業	只會在線下實體店用現金購物	一週一次
2	25-35	女	有(不同住)	2	父母親、兄弟姊妹及其配偶	中學	製造業	只會在線下實體店用現金或信用卡購物	一週兩次
3	36-45	沒有	3-4		父母親及丈夫或妻子	高專	批發/分銷	在線下實體店用現金、信用卡或支付系統購物	一週三次
4	46-55			5-6	丈夫或妻子/男友或女友	大學	零售業	只會在線上用支付系統購物	一週四次
5	56-65			>7	丈夫或妻子及兒女	研究院	服務業	在線上或線下用支付系統購物	一週五次
6	66-				丈夫或妻子/男友或女友		政府/非政府	在線上或線下用信用卡或支付系統購物	一週六次
					獨住		全職照顧家庭	在線上或線下用現金、信用卡或支付系統購物	一週七次

Current Journey Mapping (現在歷程圖)

designthinkersacademy



問題陳述 (Problem Statement):

我們怎樣使到全職媽媽 (who) 能解
決同時照顧小孩和在超市內方便購得
所需物品 (what) 的問題，達到善用
時間，提升家庭和自我幸福 (why) 的
目標。

HOW MANY USERS SHOULD YOU TEST?

Topics

- [E-commerce](#)
- [Intranets](#)
- [Mobile & Tablet](#)
- [User Testing](#)
- [Web Usability](#)
- [Writing for the Web](#)

[▶ See all topics](#)**Recent Articles**

- [Five Mistakes in Designing Mobile Push Notifications](#)
- [Filling the Silence with Digital Noise](#)
- [Design Guidelines for Input Steppers](#)
- [UX Debt: How to Identify, Prioritize, and Resolve](#)
- [UX Guidelines for Recommended Content](#)

[See all articles](#)**Popular Articles**

- [10 Usability Heuristics for User Interface Design](#)
- [When to Use Which User-Experience Research Methods](#)
- [Usability 101: Introduction to Usability](#)
- [Flat UI Elements Attract Less Attention and Cause Uncertainty](#)
- [F-Shaped Pattern For Reading Web Content \(original study\)](#)
- [Design Thinking 101](#)
- [10 Best Intranets of 2017](#)
- [The Distribution of Users' Computer Skills: Worse Than You Think](#)
- [UX Research Cheat Sheet](#)
- [When and How to Create Customer Journey Maps](#)

Why You Only Need to Test with 5 Users

by Jakob Nielsen on March 19, 2000

Topics: User Testing

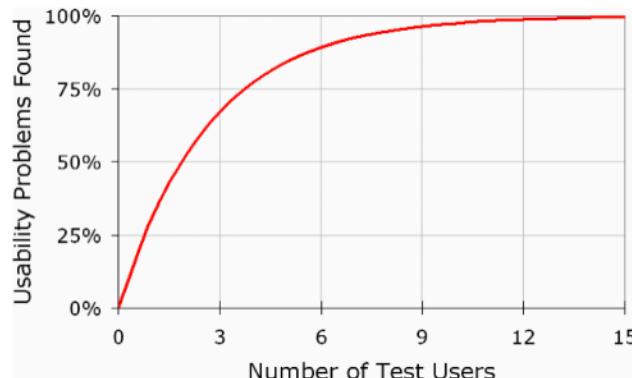
Summary: Elaborate usability tests are a waste of resources. The best results come from testing no more than 5 users and running as many small tests as you can afford.

Some people think that usability is very costly and complex and that user tests should be reserved for the rare web design project with a huge budget and a lavish time schedule. Not true. Elaborate usability tests are a waste of resources. The best results come from testing no more than 5 users and running as many small tests as you can afford.

In earlier research, Tom Landauer and I showed that the number of usability problems found in a usability test with n users is:

$$N(1-(1-L)^n)$$

where N is the total number of usability problems in the design and L is the proportion of usability problems discovered while testing a single user. The typical value of L is 31%, averaged across a large number of projects we studied. Plotting the curve for $L = 31\%$ gives the following result:





<https://www.youtube.com/watch?v=RhgUirqki50>

https://projects.invisionapp.com/share/KQ2P6RXMY#/screens — HP No Location

Sign In  [Locate Your Meineke](#)

No account? [Register Here](#)

City, State or ZIP Submit

Or call (888) 888-8888

Schedule an Appointment

11/24 Today 11/25 Sat 11/25 Sun 11/25 Mon Additional Dates  Customer Service

meineke Locations Coupons Services About Car Care Club Franchise Opportunities

First slide

< >

First Slide label

Duis mollis, est non commodo luctus, nisi erat porttitor ligula, eget lacinia odio sem nec elit.

○ ● ○

Find Offers at Your Local Meineke



Offers available at participating locations only.

Meineke Car Care Club

The Meineke Car Care Club offers great rewards and benefits, and saves you money on auto repair and maintenance down the road. As a member, we'll keep track of all the services performed and alert you when a new service is recommended.

- FREE Oil Change Service After Four Oil Changes
- FREE Annual Tire Rotation
- Personalized Service Reminders
- Members Only Discounts and Promotions

[Learn More >](#)

MADE WITH  INVISION

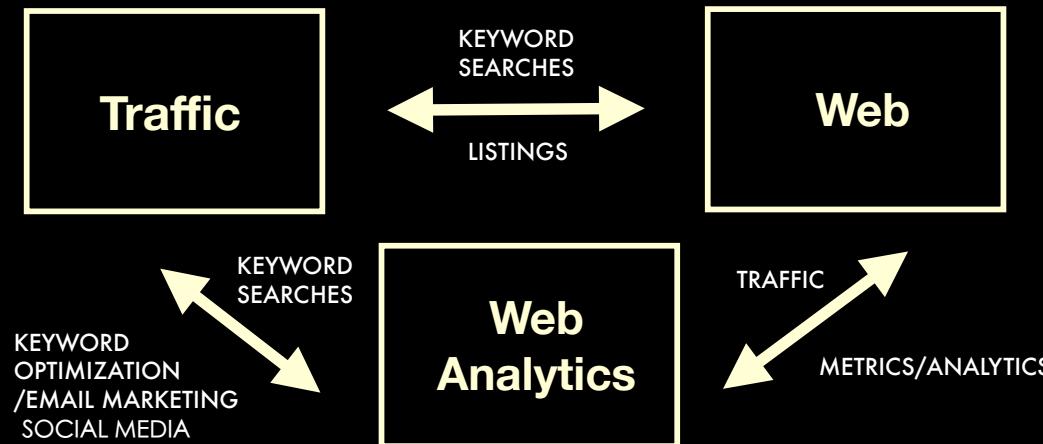
https://www.youtube.com/watch?time_continue=1&v=thNZIZmMDQo



<https://www.youtube.com/watch?v=X0FG0jCqLYQ>

QUANTITATIVE METHOD

VALIDATING YOUR DESIGN WITH ANALYTICS



- Web analytics tell you whether your web pages attract traffic (eye balls) or not.
- With feedbacks provided by web analytics, you make changes to your web pages, site structure, title, meta-tag, key word, and link strategies.

A **25.3% Conversion Rate**

B **47.8% Conversion Rate**

The image shows two versions of a landing page side-by-side. Both pages have a blue header bar with a search bar containing 'Search what - business or coding'. Below the header is a large yellow button with the text 'Create a CityClip page'. The main content area has a light blue background.

Version A: The headline reads 'Businesses grow faster online!' followed by a paragraph: 'Consumers use online searches to find local businesses. Get your business on the first pages of Google, Yahoo, Bing, AOL -- Guaranteed!'. Below this is a yellow button labeled 'View pricing plan'. To the right is a circular badge with 'Money Back Guarantee' and a '30-day Free Trial' offer. Below the badge is a photograph of a person's hands pointing at a laptop screen displaying a website.

Version B: The headline reads 'Businesses grow faster online!' followed by a paragraph: 'Consumers use online searches to find local businesses. Get your business on the first pages of Google, Yahoo, Bing, AOL -- Guaranteed!'. Below this is a yellow button labeled 'View pricing plan'. To the right is a circular badge with 'Money Back Guarantee' and a '30-day Free Trial' offer. Below the badge is a photograph of a person's hands pointing at a laptop screen displaying a website.

Both Versions: Below the headline, there is a section titled 'Fast and Easy' with the text: 'Building our CityClip page was fast and easy. And we made the first page appear in mobile phone and map search results.' At the bottom of this section is a small link 'Want to know more?'.

Source: UX for the Lean Startup by Laura Klein

A/B Test

“不测量，无市场”：A/B测试怎么做？

Back to School Special!
tnw.co



Celebrating back-to-school, we're offering a special package to all moms and dads. Click [here](#) for more info!

20% off until October 1st!
tnw.co



Celebrating back-to-school, we're offering a special package to all moms and dads. Click [here](#) for more info!

20% off until October 1st!
tnw.co



Celebrating back-to-school, we're offering a special package to all moms and dads. Click [here](#) for more info!

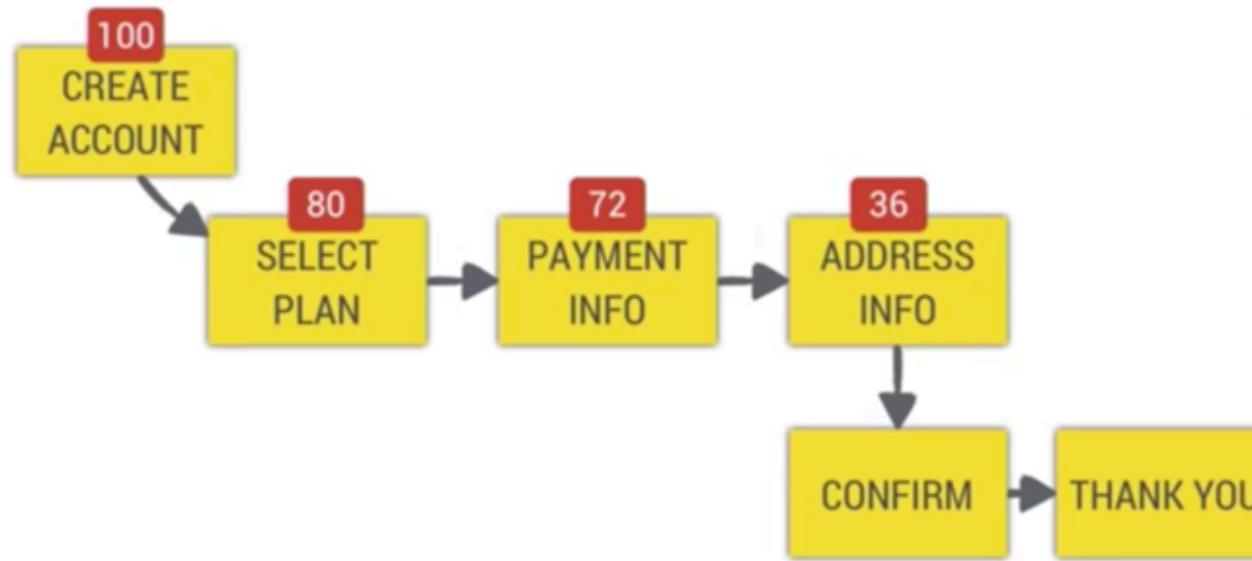
20% off until October 1st!
tnw.co

20%
Off!

Celebrating back-to-school, we're offering a special package to all moms and dads. Click [here](#) for more info!

Source:Dan Taylor

Example - checkout flow



Source:  Lean UX - Measurement - Qualitative & Quantitative

QUAL

[首页](#) > [业界](#)

BAT都在用的方法，详解A/B测试的那些坑！

范磊 2018年06月04日  阅读 2005  快速评论



Sean Ellis 是增长黑客模型 (AARRR) 之父，增长黑客模型中提到的一个重要思想就是“AB实验”，今天作者就带我们一起了解一下AB实验中有哪些玄机。

“如何把AB实验文化根植到公司的基因中去？” ，时代正在向所有的互联网公司发出提问。



微信公众号：梅花网

<https://www.meihua.info/a/71768>

Analytics

Tag Manager

Optimize

Data Studio

Surveys

Attribution

Audience Center

Analytics 360 Suite



Turn insights into action.

Get stronger results across all your sites, apps, and offline channels. Google Analytics Solutions offer marketing analytics products for businesses of all sizes to better understand your customers.

“Google’s analytics products helped us improve engagement by 33% and click-throughs by 21% for content promotions on

Analytics

Tag Manager

Optimize

Data Studio

Surveys

Attribution

Audience Center

Analytics 360 Suite

Overview

Capabilities

Features

Compare

Mobile Access

Success Stories

Resources



Improve the
customer
experience with
digital analytics.

Google Analytics gives you the digital analytics tools you need to analyze data from all touchpoints in one place, for a deeper understanding of the customer experience. You can then share the insights that matter with your whole organization.

SIGN UP FOR FREE

OBTAINING GOOGLE ANALYTIC TRACKING ID

Analytics

ADMIN **USER**

Account [+ Create Account](#)

- Account Settings
- User Management
- All Filters
- Change History
- Trash Can

Property [+ Create Property](#)

- Property Settings
- User Management
- .js Tracking Info** .
- PRODUCT LINKING**
 - Google Ads Linking
 - AdSense Linking
 - Ad Exchange Linking
- All Products
- Postbacks
- Audience Definitions
- Custom Definitions
- Data Import

View [+ Create View](#)

- View Settings
- User Management
- Goals
- Content Grouping
- Filters
- Channel Settings
- Ecommerce Settings
- Calculated Metrics BETA
- PERSONAL TOOLS & ASSETS**
 - Segments
 - Annotations
 - Attribution Models
 - Custom Channel Grouping BETA

Loading...

? **!** **≡**



ADMIN

USER

Account [+ Create Account](#)[Account Settings](#)[User Management](#)[All Filters](#)[Change History](#)[Trash Can](#)Property [+ Create Property](#)[Property Settings](#)[User Management](#)[Tracking Info](#)[Tracking Code](#)[Data Collection](#)
[Data Retention](#)
[User-ID](#)
[Session Settings](#)
[Organic Search Sources](#)
[Referral Exclusion List](#)
[Search Term Exclusion List](#)

PRODUCT LINKING

[Google Ads Linking](#)[AdSense Linking](#)[Ad Exchange Linking](#)[All Products](#)[Postbacks](#)View [+ Create View](#)[View Settings](#)[User Management](#)[Goals](#)[Content Grouping](#)[Filters](#)[Channel Settings](#)[Ecommerce Settings](#)[Calculated Metrics BETA](#)

PERSONAL TOOLS & ASSETS

[Segments](#)[Annotations](#)[Attribution Models](#)[Custom Channel Grouping BETA](#)[Custom Alerts](#)

 Analytics

ADMIN USER

Property [+ Create Property](#)

[Property Settings](#)

[User Management](#)

[Tracking Info](#)

Tracking Code

- Data Collection
- Data Retention
- User-ID
- Session Settings
- Organic Search Sources
- Referral Exclusion List
- Search Term Exclusion List

PRODUCT LINKING

- [Google Ads Linking](#)
- [AdSense Linking](#)
- [Ad Exchange Linking](#)

All Products

[Postbacks](#)

Tracking ID UA-20477509-1

Status Receiving traffic in past 48 hours.
1 active users right now. See details in [real-time traffic reports](#).

[Send test traffic](#) [?](#)

Website Tracking

Global Site Tag (gtag.js)

This is the Global Site Tag (gtag.js) tracking code for this property. Copy and paste this code as the first item into the <HEAD> of every webpage you want to track. If you already have a Global Site Tag on your page, simply add the `config` line from the snippet below to your existing Global Site Tag.

```
<!-- Global site tag (gtag.js) - Google Analytics -->
<script async src="https://www.googletagmanager.com/gtag/js?id=UA-20477509-1"></script>
<script>
  window.dataLayer = window.dataLayer || [];
  function gtag(){dataLayer.push(arguments);}
  gtag('js', new Date());

  gtag('config', 'UA-20477509-1');
</script>
```

The Global Site Tag provides streamlined tagging across Google's site measurement, conversion tracking, and remarketing products – giving you better control while making implementation easier. By using gtag.js, you will be able to benefit from the latest dynamic features and integrations as they become available. [Learn more](#)

Google Tag Manager

Our free tool Google Tag Manager can help you add tags to your site if you have many analytics and tracking tags. Consider using Google Tag Manager if:

- You use multiple analytics and ad performance tracking tools that require site tags.
- Adding tags to your website slows down your ability to run marketing campaigns.

[Learn how to get started with Google Tag Manager](#).

DEFINING CONVERSION GOALS

 Analytics

1



ADMIN USER

Account + Create Account

Property + Create Property

View + Create View

Account Settings

User Management

All Filters

Change History

Trash Can

Property Settings

User Management

Tracking Info

PRODUCT LINKING

Google Ads Linking

AdSense Linking

Ad Exchange Linking

All Products

View Settings

User Management

Goals

Content Grouping

Filters

Channel Settings

Ecommerce Settings

Calculated Metrics BETA



HOME

REPORTING

CUSTOMIZATION

ADMIN

Administration > View Goals

CfE Website / http://hksec.hk / hksec.hk

VIEW

hksec.hk

+ NEW GOAL

Import from Gallery

Search

<input type="checkbox"/>	Goal	<input type="checkbox"/> Id	Past 7 day conversions	Recording
<input type="checkbox"/>	Duration Count	Goal ID 1 / Goal Set 1	100	<input checked="" type="button"/> ON
<input type="checkbox"/>	Registration Page	Goal ID 2 / Goal Set 1	25	<input checked="" type="button"/> ON

18 goals left

View Settings

User Management

Goals

Content Grouping

Filters

Channel Settings

Ecommerce Settings

Dd Calculated Metrics BETA



ADMIN

USER

View

+ Create View

View Settings

User Management

Goals

Content Grouping

Filters

Channel Settings

Ecommerce Settings

Calculated Metrics BETA

- View schedule Viewed calendar or deadlines

ENGAGEMENT

- Media play Played interactive media, like a video, slideshow, or product demo
- Share / social connect Shared to a social network or emailed
- Newsletter sign up Signed up for newsletter or mailings

- Smart Goal Smart Goal not available.

Measure the most engaged visits to your website and automatically turn those visits into Goals. Then use this information to improve your Google Ads bidding. [Learn more](#)

 Custom**Continue**

Cancel

2 Goal description



HOME

REPORTING

CUSTOMIZATION

ADMIN

VIEW

hksec.hk

View Settings

User Management

Goals

Content Grouping

Filters

Channel Settings

Ecommerce Settings

Calculated Metrics BETA

PERSONAL TOOLS & ASSETS

Goal setup

Edit

Custom

Goal description

Name

Click the Contact Page Button|

Goal slot ID

Goal Id 3 / Goal Set 1 ▾

Type

- Destination ex: thanks.html
- Duration ex: 5 minutes or more
- Pages/Screens per session ex: 3 pages
- Event ex: played a video
- Smart Goal Smart Goal not available.

Measure the most engaged visits to your website and automatically turn those visits into Goals. Then use those Goals to improve your AdWords bidding. [Learn more](#)

Continue

Cancel

VIEW

hksec.hk

 View Settings

 User Management

 Goals

 Content Grouping

 Filters

 Channel Settings

 Ecommerce Settings

 Calculated Metrics BETA

PERSONAL TOOLS & ASSETS

 Goal setup 

Custom

 Goal description 

Name: Click the Contact Page Button
Goal type: Destination

3 Goal details

Destination

Equals to 

`://dev-com5961-demo.pantheonsite.io/stanley4/theme/contact.html`

Case sensitive

For example, use My Screen for an app and /thankyou.html instead of www.example.com/thankyou.html for a web page.

Value optional

 OFF

Assign a monetary value to the conversion.

Funnel optional

 OFF

Specify a path you expect traffic to take towards the destination. Use it to analyze the entrance and exit points that impact your Goal.

Verify this Goal

See how often this Goal would have converted based on your data from the past 7 days.

HOME

REPORTING

CUSTOMIZATION

ADMIN

Success.

CfE Website / http://hksec.hk / hksec.hk

VIEW

hksec.hk

View Settings

User Management

Goals

Content Grouping

Filters

Channel Settings

Ecommerce Settings

Calculated Metrics BETA Goal setup

Edit

Custom

 Goal description

Edit

Name: *Click the Contact Page Button*
Goal type: *Destination* Goal details

Edit

Done

CfE Website / http://hksec.hk / hksec.hk

VIEW

hksec.hk

 View Settings

 User Management

 Goals

 Content Grouping

 Filters

 Channel Settings

 Ecommerce Settings

 Calculated Metrics BETA

+ NEW GOAL

Import from Gallery

Search

<input type="checkbox"/>	Goal	Id	Past 7 day conversions	Recording
<input type="checkbox"/>	Click the Contact Page Button	Goal ID 3 / Goal Set 1	0	 ON
<input type="checkbox"/>	Duration Count	Goal ID 1 / Goal Set 1	100	 ON
<input type="checkbox"/>	Registration Page	Goal ID 2 / Goal Set 1	25	 ON

17 goals left

HOME REPORTING

CUSTOMIZATION

ADMIN

Search reports & help

Overview

Registration Page (Goal 2 Completions) vs. Select a metric

Hourly Day Week Month

● Registration Page (Goal 2 Completions)

10

5



Goal Completions

159

Goal Value

HK\$0.00

Goal Conversion Rate

3.43%

Total Abandonment Rate

56.08%

Duration Count (Goal 1 Completions)

121

Registration Page (Goal 2 Completions)

38

Goals

Goal Completion Location

Goal Completions % Goal Completions

Goal Completion Location

41 25.79%

Source / Medium

1. /event/hksec-2016-registration

8 5.03%

2. /event/hksec-2016-mixer-gathering-1

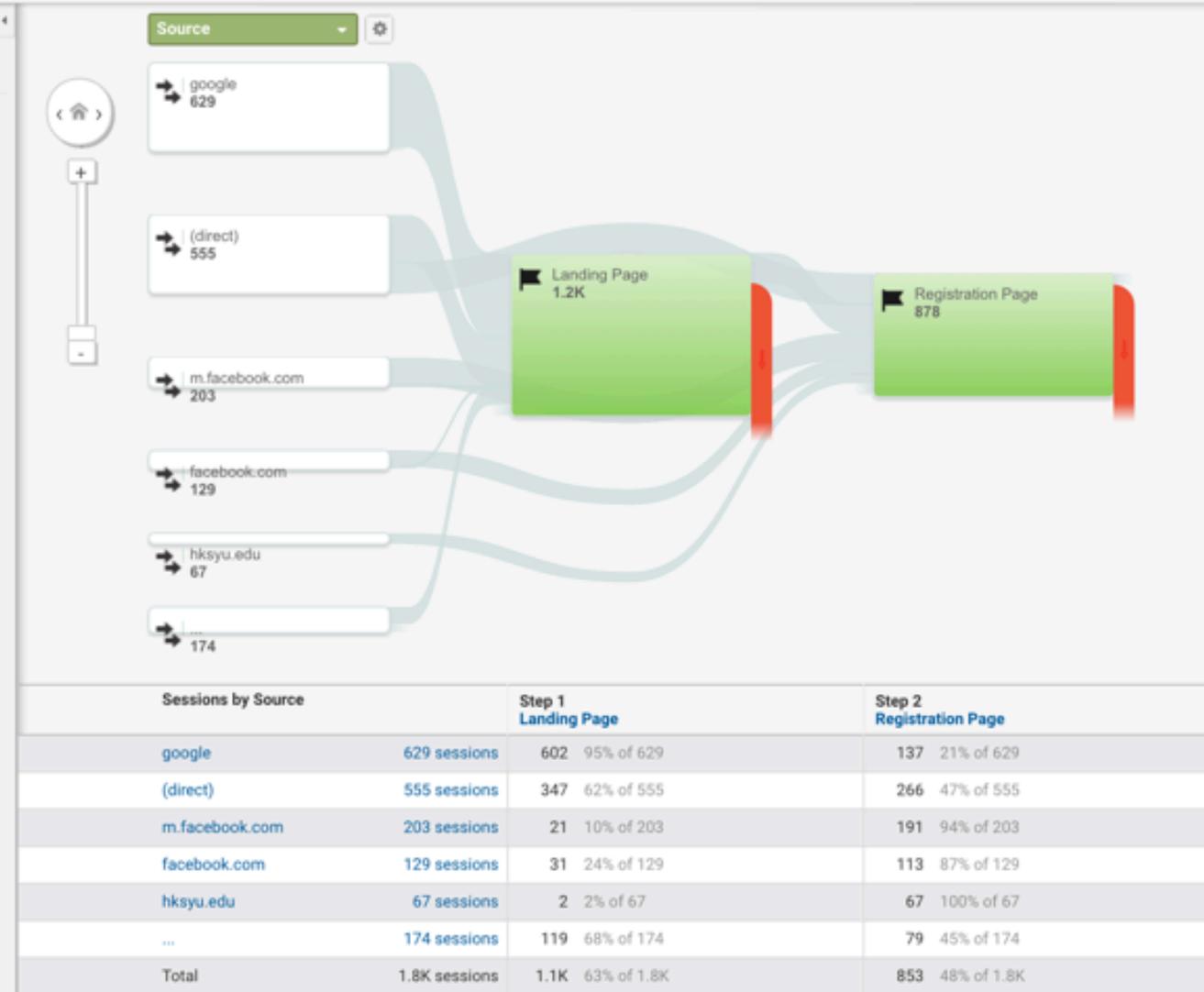
8 5.03%

3. /hksec2016-official-documents

Search reports & help

- Behavior
 - Overview
 - Behavior Flow
 - Site Content
 - Site Speed
 - Site Search
 - Events
 - Publisher
 - Experiments
 - In-Page Analytics

- Conversions
 - Goals
 - Overview
 - Goal URLs
 - Reverse Goal Path
 - Funnel Visualization
 - Goal Flow
 - Ecommerce
 - Multi-Channel Funnels
 - Attribution



SETUP A/B TEST WITH GOOGLE OPTIMISE



Optimize

All accounts ▾



Account Invitations

2



Create account

com5961 Stanley Demo



Container name ↑

Running

Total

Container ID

com5961 AB Test 1

0

1

GTM-WG6CM2M



portfolio



Container name ↑

Running

Total

Container ID

portfolio web

0

3

GTM-PDT39ZW



Python Rest Test





Optimize

All accounts ▾

com5961 Stanley Demo

Container name ↑

Running

com5961 AB Test 1

0

portfolio

Container name ↑

Running

portfolio web

0

Python Rest Test

Container name ↑

Running

Python Rest 1

0

x Create account

Next

Account name *

e.g. My account name

0 / 255

 Improve Google products (recommended)

Share data in your Optimize account with Google to improve Google's products and services. *If you disable this option, data can still flow to other Google products you've linked to your account.*

 Benchmarking (recommended)

Contribute anonymous data to an aggregate data set to enable features like benchmarking and publications that can help you understand data trends. All identifiable information about your website is removed and combined with other anonymous data before it is shared with others.

 Get in-depth analysis (recommended)

Give Google sales experts access to your Optimize account, including data therein so that you can get more in-depth analysis, insights and recommendations across Google products.

To use Google Optimize, you must first accept the terms-of-service agreement for your country.

United States



com5961 Stanley Demo

Container name ↑

Running

com5961 AB Test 1

0

portfolio

Container name ↑

Running

portfolio web

0

Python Rest Test

Container name ↑

Running

Python Rest 1

0

x Create account

Next

Account name *

com5961 Stanley Demo 2

22 / 255

 Improve Google products (recommended)

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United States

com5961 Stanley Demo		
Container name ↑	Running	1
com5961 AB Test 1	0	1
portfolio		
Container name ↑	Running	1
portfolio web	0	3
Python Rest Test		
Container name ↑	Running	1
Python Rest 1	0	1

X Create account

Next

Account name *

com5961 Stanley Demo 2

22 / 255

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United States



Optimize

All accounts ▾

com5961 Stanley Demo

Container name ↑

Running

com5961 AB Test 1

0

portfolio

Container name ↑

Running

portfolio web

0

Python Rest Test

Container name ↑

Running

Python Rest 1

0

Account name *

com5961 Stanley Demo 2

22 / 255

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Hong Kong

 I acknowledge I have read and agree to the [terms of service](#) I also accept the [Data Processing Terms](#) as required by GDPR. [Learn more](#) I also accept the [Measurement Controller-Controller Data Protection Terms](#) for the



Optimize

All accounts ▾

com5961 Stanley Demo

Container name ↑

Running

com5961 AB Test 1

0

portfolio

Container name ↑

Running

portfolio web

0

Python Rest Test

Container name ↑

Running

Python Rest 1

0

← Add container

Create

Container name *

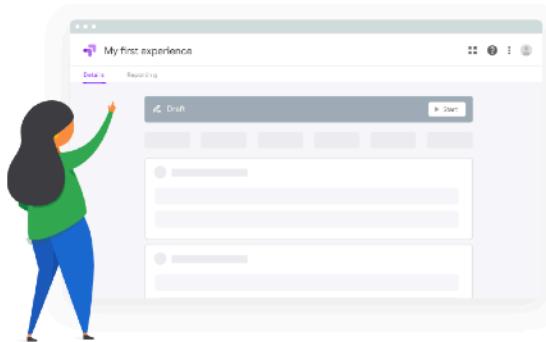
com5961 ab test demo 2

22 / 255

Note: Other account admins will have access to this container.

Experiences

Activity



Create your first experience

This is where you'll create experiments and personalizations for your website.

[Let's go](#) [Learn more about creating your first experience](#)[Terms of Service](#) • [Privacy Policy](#)

Container setup

CONTAINER INFORMATION

com5961 ab test demo 2
GTM-NPCWWHV

CONTAINER CHECKLIST



 Create account & container 

 Create an experience 

An experience can either be a test (A/B, redirect, or MVT) or a personalization.

 [Learn more](#)

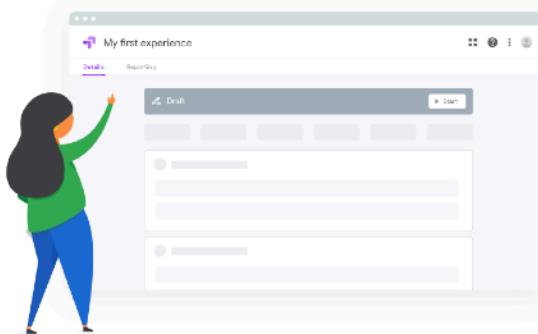


Optimize

All accounts > com5961 Stanley Demo 2
com5961 ab test demo 2 ▾

Experiences

Activity



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25%

Create account & container ▾

Create an experience ▾

Link to Google Analytics ▾

Your Optimize account must be linked to an Analytics property in order to collect data.

[Link property](#)

- [How to create a property](#)
- [Learn more about linking](#)

Start an experience ▾

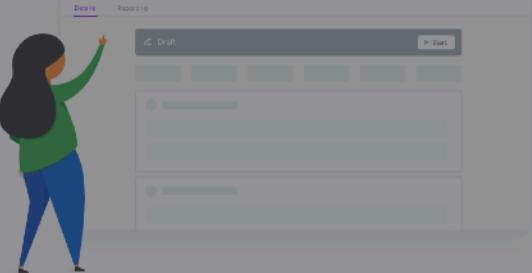
[Terms of Service](#) • [Privacy Policy](#)

All accounts > com5961 Stanley Demo 2

com5961 ab test demo 2 ▾

Optimize

Experiences Activity



My first experience

Draft Reporting

Let's go

Learn more about creating experiences

Terms of Service • Privacy Policy

X Link a property

Link

Select a property

Don't see the property you wish to link? Here are a few potential reasons why.

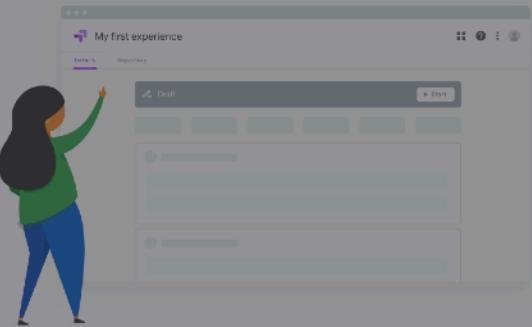
- You do not have permission to access the Google Analytics properties associated with the Google account you're using. [Learn more about Analytics permissions.](#)
- You might be using a Google account that is different from the one you use for Google Analytics. [Learn more about Google accounts.](#)

You can also skip linking for now, but it will be required to start an experience. For more information about linking, please refer to the [Optimize help center](#).

All accounts > com5961 Stanley Demo 2

com5961 ab test demo 2 ▾

Experiences Activity



Create your first experience

This is where you'll create personalizations for your users.

Let's go

Learn more about creating experiences

Terms of Service • Privacy Policy

Search for a property

My Git (UA-71445513-6)

Obsolete Data Driven Product & Services Class (UA-71445513-2)

Python Rest Test 1 (UA-71445513-7)

Stanley Data Visualisation Demo (UA-71445513-5)

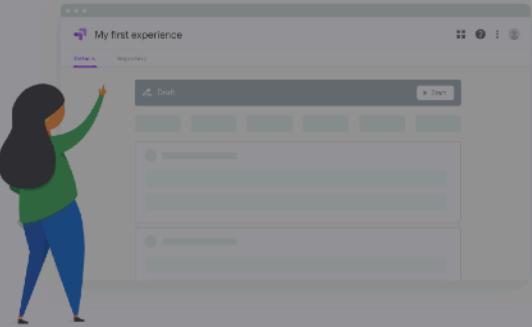
- You do not have permission to access the Google Analytics properties associated with the Google account you're using. [Learn more about Analytics permissions](#).
- You might be using a Google account that is different from the one you use for Google Analytics. [Learn more about Google accounts](#).

You can also skip linking for now, but it will be required to start an experience. For more information about linking, please refer to the [Optimize help center](#).

All accounts > com5961 Stanley Demo 2

com5961 ab test demo 2 ▾

Experiences Activity



Create your first experience

This is where you'll create personalizations for your website.

[Let's go](#)

[Learn more about creating experiences](#)

[Terms of Service](#) • [Privacy Policy](#)

X Link a property

Link

Google Analytics property

Stanley Data Visualisation Demo (UA-71445513-5) ▾ X

Views ⓘ

All Web Site Data

Linking this container to Google Analytics allows data to flow between the two products. This may result in additional hits. Additionally, information shared from Google Analytics to Optimize is subject to Optimize [terms](#) and settings, while information shared from Optimize to Google Analytics is subject to Google Analytics terms and settings. [Learn more](#)

Experiences

Activity



Create your first experience

Add Optimize snippet to your site?

You will need to add a short code snippet to your site before you can run Optimize experiments or personalizations. You can get the snippet now, or find it later on the container details panel.

[Skip for now](#) [Get Snippet](#)

25%

Create account & container ▾

Create an experience ▾

Link to Google Analytics ▾

Your Optimize account must be linked to an Analytics property in order to collect data.

-  [How to create a property](#)
-  [Learn more about linking](#)

4

Start an experience ▾

Experiences

Activity



Optimize snippet installation

Optimize is installed by adding a small snippet of code to your website to display Optimize experiences (tests and personalizations) to your visitors. [Learn more](#).

If you use **Global Site Tag (gtag.js)** to deploy Google Analytics, simply add the Optimize snippet to the config line.

```
<!-- Global site tag (gtag.js) - Google Analytics -->
<script async src="https://www.googletagmanager.com/gtag/js?id=UA-71445513-5"></script>
<script>
window.dataLayer = window.dataLayer || [];
function gtag(){dataLayer.push(arguments);}
gtag('js', new Date());

gtag('config', 'UA-71445513-5', { 'optimize_id': 'GTM-NPCWWHV'});
</script>
```

Paste the updated tag at the top of the <HEAD> on every web page you wish to personalize and test.

If you use **Google Tag Manager (GTM)**, [learn more](#) about how to use it with Optimize.

If you use **Universal Analytics (analytics.js)**, [learn more](#) about how to use it with Optimize.

Optional: If you encounter page flickering issues you can install the [anti-flicker snippet](#).

Done

25%

Create account & container

Create an experience

Link to Google Analytics

Your Optimize account must be linked to an Analytics property in order to collect data.

How to create a property

Learn more about linking

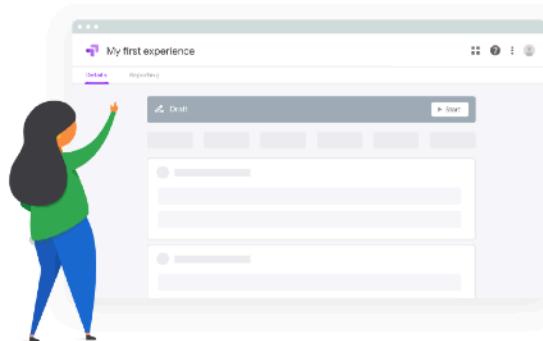
Start an experience

```
<!DOCTYPE html>
<html>

<head>
    <meta charset="utf-8">
    <meta http-equiv="X-UA-Compatible" content="IE=edge">
    <meta http-equiv="Content-Security-Policy" content="script-src 'self'
        https://www.google-analytics.com https://optimize.google.com https
        ://ajax.googleapis.com 'unsafe-inline' 'unsafe-eval'; style-src
        'self' unsafe-inline" https://optimize.google.com https://fonts
        .googleapis.com https://maxcdn.bootstrapcdn.com 'unsafe-inline';
        font-src 'self' https://fonts.gstatic.com" />
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <meta name="description" content="">
    <meta name="author" content="">
    <link rel="shortcut icon" href="../../docs-assets/ico/favicon.png">
    <title>JQuery + SQL Aggregation</title>
    <!-- Global site tag (gtag.js) - Google Analytics -->
    <script async src="https://www.googletagmanager.com/gtag/js?id=UA
        -71445513-5"></script>
    <script>
        window.dataLayer = window.dataLayer || [];
        function gtag(){dataLayer.push(arguments);}
        gtag('js', new Date());
        gtag('config', 'UA-71445513-5', { 'optimize_id': 'GTM-5MZBSV'});
    </script>
    <!-- Bootstrap core CSS -->
    <link rel="stylesheet" href="https://maxcdn.bootstrapcdn.com/bootstrap/3
        .7/css/bootstrap.min.css">
    <script src="https://ajax.googleapis.com/ajax/libs/jquery/1.12.4/jquery
        .min.js"></script>
```

Experiences

Activity



Create your first experience

This is where you'll create experiments and personalizations for your website.

Let's go

 [Learn more about creating your first experience](#)

25%

 Create account & container ▾

 Create an experience ▾

 Link to Google Analytics ▾

Your Optimize account must be linked to an Analytics property in order to collect data.

 [How to create a property](#)
 [Learn more about linking](#)

 Start an experience ▾



All accounts > com5961 Stanley Demo 2
com5961 ab test demo 2 ▾

Experiences

Activity



Create your f

This is where you'll crea
personalizations for you

Let's go

Learn more about creatin

[Terms of Service](#) • [Privacy Policy](#)

Create experience

Create

Name *

com5961 ab test demo 2

22 / 255

What is the URL of the page you'd like to use? This is called your **editor page**. * ⓘ

What type of experience would you like to create?

A/B test

Tests two or more variants of a page. Also called an A/B/n test. [Learn more](#)

Multivariate test

Tests variants with two or more different sections. [Learn more](#)

Redirect test

Tests separate web pages identified by different URLs or paths. [Learn more](#)

Personalization

Personalize your page for targeted visitors. [Learn more](#)



Optimize

com5961 ab test demo 2

com5961 ab test demo 2

A/B test



Details

Reporting

ⓘ Draft. Some setup steps must still be completed.



Start



Ⓐ ADD TARGETING RULES
Target your site visitors

⠀ CREATE VARIANTS
Customize your site

⠀ LINK TO ANALYTICS
Select a property and view

⠀ SET UP OBJECTIVES
Choose objectives to optimize

⠀ START
Schedule or start

ⓘ Targeting and variants



Get started by creating a variant of your site to test.

ⓘ [Learn more](#)

[Add variant](#)

Or, start by adding [audience targeting rules](#) instead.

Editor page: https://suenlabs.com/dataviz_demo/work.html

⠀ Description

← Optimize com5961 ab test demo 2 com5961 ab test demo 2 A/B test

Details Reporting

ⓘ Draft. Some setup steps must still be completed.

ADD TARGETING RULES > CREATE VARIANTS > LINK TO ANALYTICS

Target your site visitors Customize your site Select a property

ⓘ Targeting and variants

Get started by creating a variant

Learn more Add variant

Or, start by adding audiences

Editor page: https://suenlabs.com/dataviz_demo/work.html 🖊

Description

X Add variant

Variant name *

Variant 1|

9 / 255

Done

com5961 ab test demo 2 (Status: Draft)

Variant 1

Standard

No changes

Done

Body <body>

STANLEY

WORK CHART TABLE MAP

jQuery + SQL Aggregation Demo

Aggregation Count of Items From Product Table

You can check out the product table from the menu. The red "Get Data" button below will let you aggregate the items by product category.

Visualization

January 11, 2018

Welcome to try out these which utilize several popular libraries for presenting

Edit element

DIMENSIONS

1265px 653px

LOCATION

0px 0px

0px -96px

TYPOGRAPHY

A Montserrat, sans-serif 14px 400

B 2



com5961 ab test demo 2 (Status: Draft)

Variant 1



Standard ▾

1 change



Save



body



div



STANLEY

WORK

CHART

TABLE

MAP

MAP 2

TIMELINE

CONTACT

jQuery + SQL Aggregation Demo

Aggregation Count of Items From Product Table

You can check out the product table from the menu. The red "Get Data" button below will let you aggregate the items by product category.

Visualization Demo

January 11, 2018

Welcome to try out these simple visualization demos which utilize several popular Javascript/JQuery libraries for presenting data.

January 11, 2018

Done

Cancel



Variant 1



body

STANLEY

Link <a>

jQuery + SQL

Aggrega

You can check
items by produc

Edit HTML

Element Selector
a.navbar-brand

Elements: 1

```
1 <a class="navbar-brand" href="index.html" style="color: yellow; " >STANLEY</a>
```

Replace

Will replace the HTML of the selected element

Cancel

Apply

January 11, 2018

A Montserrat, sa



body > div > div > div > a

<> 🔍 ⚙️



WORK

CHART

TABLE

MAP

MAPS

TIMELINE

CONTACT



jQuery + SQL Aggregation Demo

Aggregation Count of Items From Product Table

You can check out the product table from the menu. The red "Get Data" button below will let you aggregate the items by product category.

Visualization

January 11, 2018

Welcome to try out these visualizations which utilize several popular JavaScript libraries for presenting data.

January 11, 2018

Remove

Edit text

Edit HTML

Insert HTML

Run JavaScript

auto auto

auto auto

TYPOGRAPHY

A Montserrat, sans-serif



body > div#ww > div > div > div > div#box1 > MORE



Aggregation Count of Items From Product Table

Container <div> #box1

You can check out the product table from the menu. The red "Get Data" button below will let you aggregate the items by product category.

Hide Me Show Me Get Data Clear Data

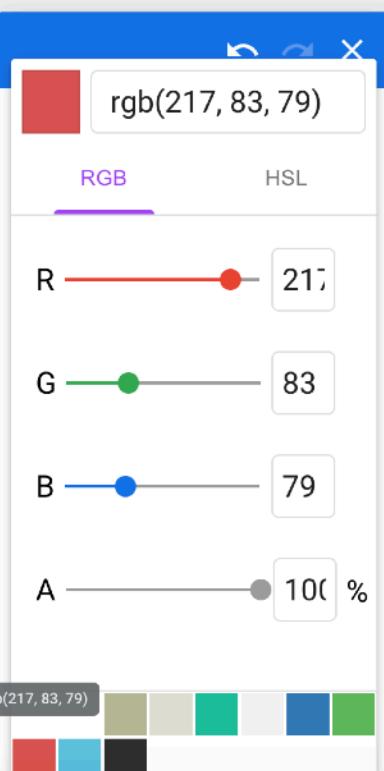
Visualization

January 11, 2018

Welcome to try out these which utilize several popular libraries for presenting

January 11, 2018

These libraries include JQuery DatatableJS, L



com5961 ab test demo 2 (Status: Draft)

Variant 1

Standard

1 change

Save

Link <a> X

STANLEY

WORK CHART TABLE MAP

jQuery + SQL Aggregation Demo

Aggregation Count of Items From Product Table

You can check out the product table from the menu. The red "Get Data" button below will let you aggregate the items by product category.

Visualization

January 11, 2018

Welcome to try out these which utilize several popular libraries for presenting

Close palette

BACKGROUND

- rgba(0, 0, 0, 0)
- none
- repeat

BORDER

- 0px 0px 0px -1!
- 15px
- none
- 0px
- .../0ff 0ff 0ff 0



body >

Edit CSS

```
1 #title_name {  
2   color:orange;  
3 }
```

STANLEY

jQuery + SQL

Aggregate

You can check
items by produc

ⓘ This dialog includes only changes that can be represented as CSS. To see and edit all changes, refer to the change list.

Cancel

Save

which utilize several pc
libraries for presenting

1000

com5961 ab test demo 2 (Status: Draft)

Variant 1

Standard ▾

2 changes

Save

body > div > div > div > a#title_name

Link <a> #title_name X

STANLEY

WORK CHART TABLE MAP MA

jQuery + SQL Aggregation Demo

Aggregation Count of Items From Product Table

You can check out the product table from the menu. The red "Get Data" button below will let you aggregate the items by product category.

Visualization

January 11, 2018

Welcome to try out these which utilize several popular libraries for presenting

Edit element

DESTINATION index.html

DIMENSIONS 135.8px 50px

LOCATION auto auto

auto auto

TYPOGRAPHY A Montserrat, sans-serif

com5961 ab test demo 2 (Status: Draft)

Variant 1

Standard ▾

2 changes

Done

Container <div>

STANLEY

WORK CHART TABLE MAP MAP 2 TIMELINE CONTACT

jQuery + SQL Aggregation Demo

Aggregation Count of Items From Product Table

You can check out the product table from the menu. The red "Get Data" button below will let you aggregate the items by product category.

Visualization Demo

January 11, 2018

Welcome to try out these simple visualization demos which utilize several popular Javascript/JQuery libraries for presenting data.

optimise.google.com/optimize/home/?hl=en-US#accounts/4703180712/containers/13369210/experiments/7

Optimize com5961 ab test demo 2 com5961 ab test demo 2 A/B test

Details Reporting

Objectives [?](#)
The website functionality you wish to optimize. [Learn more](#)

PRIMARY OBJECTIVE

Add experiment objective ▾

Settings

Optimize installation [⚠](#)
Optimize installation verified with errors
Last checked by the Optimize editor on Mon, Nov 4, 2019, 1:59 PM GMT+8 [Run diagnostics](#)

Email Notifications [?](#)
Receive important notifications about this experience. [Learn more](#)

Traffic allocation [?](#)
Percentage of all visitors eligible for this experience. 100.0% 2



Opt

Choose an objective

Details

Report

Name

Type ↑

Description



Contact Me (Goal 1 Completions)

Google Analytics Goal

Destination



Bounces

System

Bounces is the number of single-page visits.



Pageviews

System

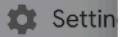
Pageviews is the total number of pages viewed. Repeated views of a single page are counted.



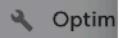
Session Duration

System

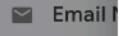
The length of a session in seconds. A session lasts as long as there is continued activity.



Setting

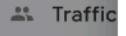


Optim

Optimiz
Last ch

Email

Received



Traffic

Percent



▶ ⚙ Acquisition

ADMIN

USER

▶ 📊 Behavior

▼ 🏁 Conversions

▶ Goals

Overview

Goal URLs

Reverse Goal Path

Funnel
Visualization

Goal Flow

▶ Ecommerce

▶ Multi-Channel
FunnelsAttribution BETA

View Settings



User Management



Goals



Content Grouping



Filters



Channel Settings



Ecommerce Settings

+ NEW GOAL

Import from Gallery

	Goal	Id	Goal Type
<input type="checkbox"/>	Contact Me	Goal ID 1 / Goal Set 1	Destination

19 goals left



optimize.google.com/optimize/home/?hl=en-US#accounts/4703180712/containers/13369210/experiments/7

Optimize com5961 ab test demo 2 com5961 ab test demo 2 A/B test

Details Reporting

Objectives ⓘ
The website functionality you wish to optimize. [Learn more](#)

PRIMARY OBJECTIVE

Contact Me (Goal 1 Completions)
Google Analytics Goal

ADDITIONAL OBJECTIVES
[Add additional objective ▾](#)

Settings

Optimize installation ⓘ
Optimize installation verified with errors
Last checked by the Optimize editor on Mon, Nov 4, 2019, 1:59 PM GMT+8 [Run diagnostics](#)

Email Notifications ⓘ
Receive important notifications about this experience. [Learn more](#)

landing page ab test (Status: Draft)

Variant 1

Standard ▾

5 changes

Save

body > div > MORE

STANLEY WORK CHART TABLE MAP MAP 2 TIMELINE CONTACT

Container <div> **jQuery + SQL Aggregation Demo** X

Aggregation Count of Items From Product Table

You can check out the product table from the menu. The red "Get Data" button below will let you aggregate the items by product category.

Visualization Demo

January 11, 2018

Welcome to try out these simple visualization demos which utilize several popular Javascript/JQuery libraries for presenting data.

January 11, 2018



Optimize

com5961 AB Test 1
landing page ab test A/B test

Details

Reporting

Google Analytics

Optimize uses Google Analytics for measurement.

Property

Stanley Data Visualisation Demo

View

All Web Site Data

Experiment ID

KajXNH7oQIm_I67KSX9KXQ



Objectives ?

The website functionality you wish to optimize. [Learn more](#)

PRIMARY OBJECTIVE

[Add experiment objective ▾](#)

Settings

Optimize installation ⚠

Optimize installation verified with errors

Last checked by the Optimize editor on Mon, Nov 4, 2019, 2:15 PM GMT+8

[Run diagnostics](#)

Email Notifications ?



Optimize

com5961 AB Test 1
landing page ab test A/B test

Details

Reporting

Google Analytics

Optimize uses Google Analytics for measurement.

Property

Stanley Data Visualisation Demo

View

All Web Site Data

Experiment ID

KajXNH7oQIm_l67KSX9KXQ



Objectives ?

The website functionality you wish to optimize. [Learn more](#)

PRIMARY OBJECTIVE

**Contact Me (Goal 1 Completions)**

Google Analytics Goal



ADDITIONAL OBJECTIVES

[Add additional objective ▾](#)

Settings

[Optimize installation](#) ⚠



Optimize

com5961 AB Test 1
landing page ab test A/B test

Details

Reporting

Running

End



Started manually: Mon, Nov 4, 2019, 2:23 PM GMT+8

Expiration scheduled: Sun, Feb 2, 2020, 2:23 PM GMT+8

Targeting and variants

Audience targeting

Who should see this experience?

All visitors to the page(s) targeted above.

Manage variants

Original

0

50% weight



Variant 1

0

50% weight



Assignment #8 (Due Nov 11th)

- a. Set up Google Analytics for a single page app with goal setting.**
- b. Link it to Google Optimize with AB Test.**

Assignment #9 (Due Nov 11th)

- a. Complete site-map and wire-frames for your final project.**
- b. Conduct usability study with 5 target users using wire-frames to validate the user journey and pain points.**

Assignment #10 (Due Dec 2nd)

- a. Write up a personal reflection (no more than 2 pages A4 size) on your learning through this course.**
- b. Describe your learning goal for the future.**

THE END