### Hasslily Hashim | 2018 | Applied Flexi Design Thinking

This document demonstrated the Design Thinking principles I applied at Education Services Australia (2014), Telstra + Telstra Health (2016-2018).

Define Refine

Design

**V**alidate

Iterate

**V**isualise

\_\_\_

**B**uild

**D**eliver



#### **Background**

Coming from design schools, I advocate humancentred design to all of the projects using the typical user-centred design process which currently called Design Thinking (DT). Design Thinking was recently commercialised as a standard design process (but not without misconceptions).

DT should be flexible and adaptable. I applied DT flexibly depending on the problems to be solved and can be aligned to the team's agile methodology and cadences.

This document demonstrated the Design Thinking I applied for Education Services Australia in 2014, Telstra and Telstra Health between 2016-2018.

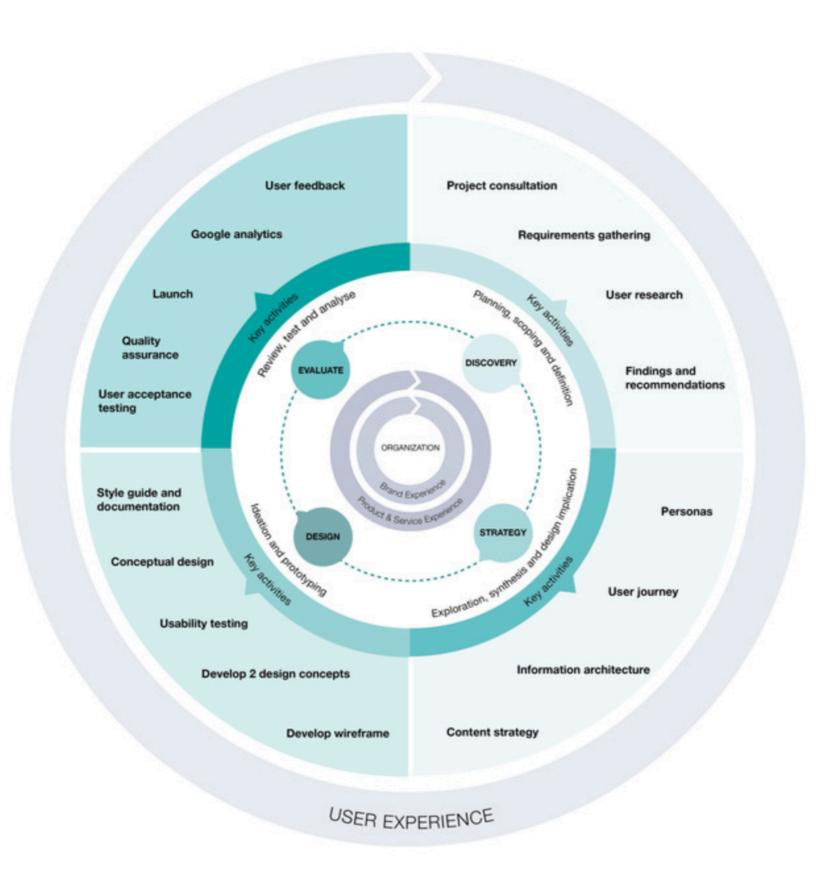
Define
Refine
Design
Validate
Iterate
Visualise

Build
Deliver



## Design Thinking for Education Services Australia (ESA)

I was invited to work with ESA to establish a design process for the design team due to their large ministerial non-profit education based projects. I introduced DT standardising the design processes and transparent to the organisation.



## Design Thinking for Tesltra + Telstra Health (2016-2018)

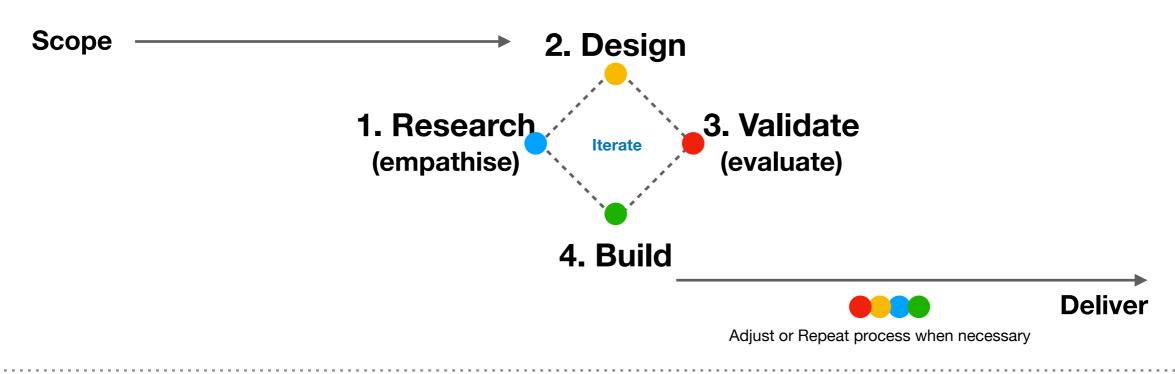
I had the luxury of attending 5 main projects at a time during my contract at Telstra and Telstra Health between 2016-2018.

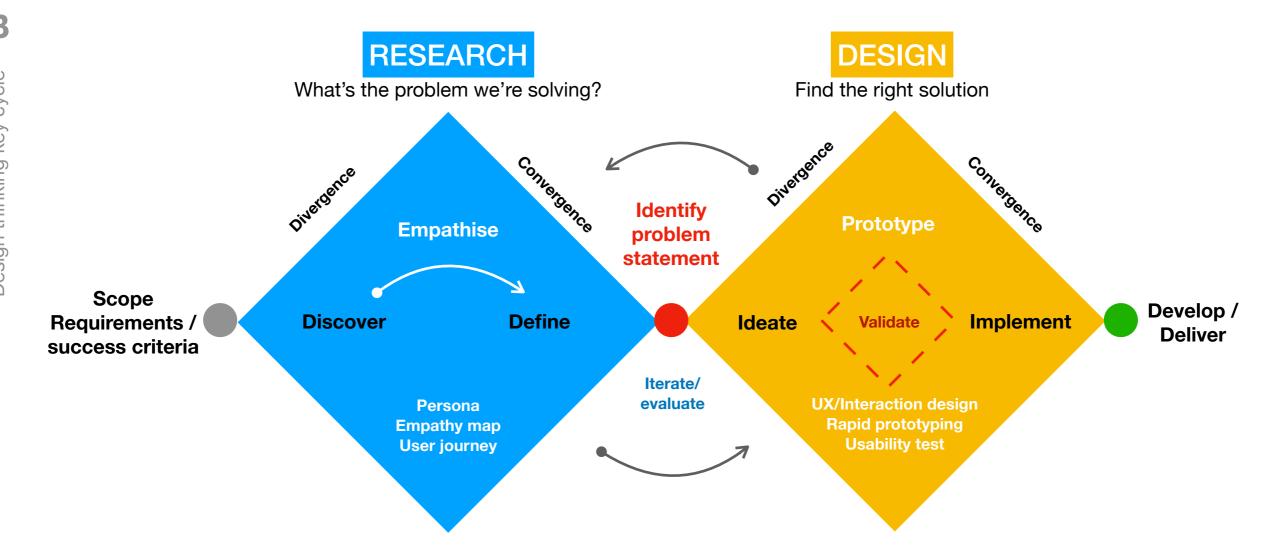
I was invited to HCD-lead the product team at Telstra Health to solve multiple applications that required to be consolidated into one app. The one health management app is called **HealthNow**.

I was a solo UX Designer for the small agile product team. I lead the design from ground up using **Flexi Design Thinking**.

The following pages encapsulate the processes I applied for the product including accessibility testing.

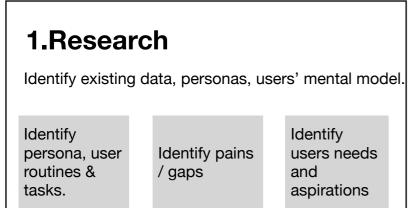
## DT I practiced for agile teams at Telstra & Telstra Health

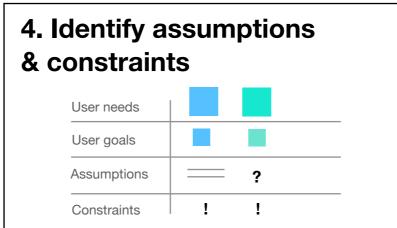


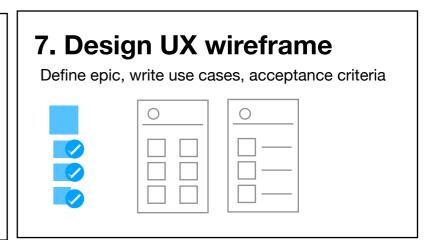


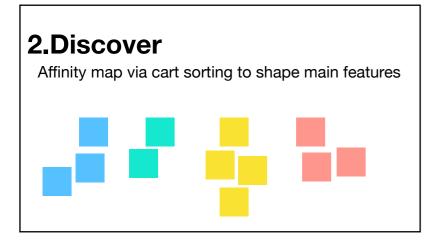
#### **Process**

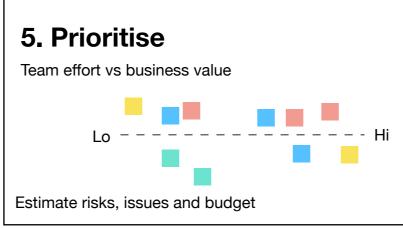
The following is the typical design thinking process which always flexible to apply based on project needs or problems to be solved.

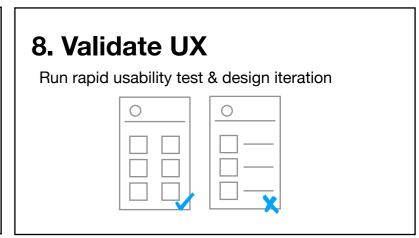




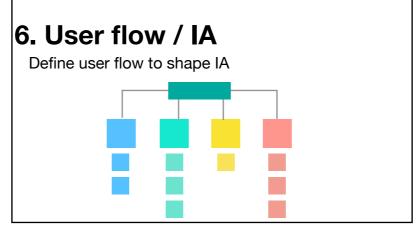


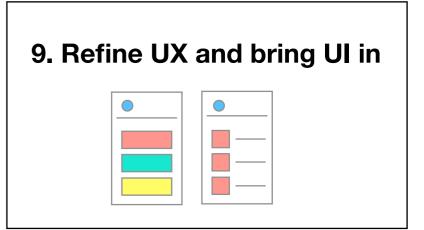






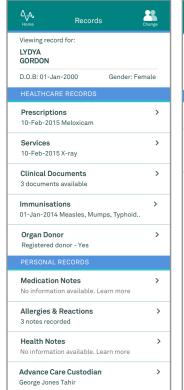






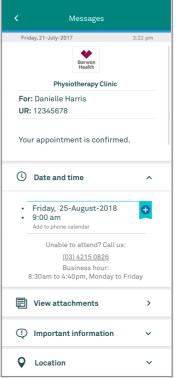
Develop & deliver +

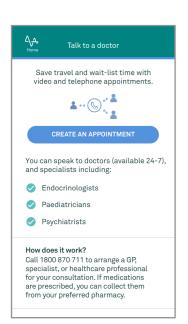
### Telstra Health HealthNow app



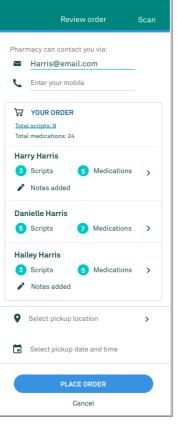


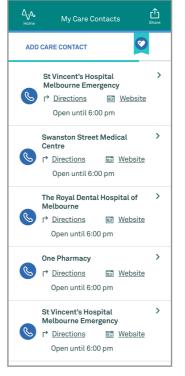


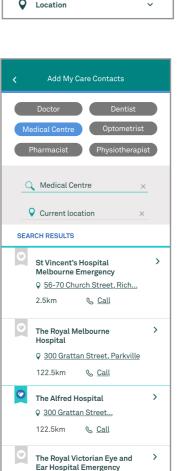


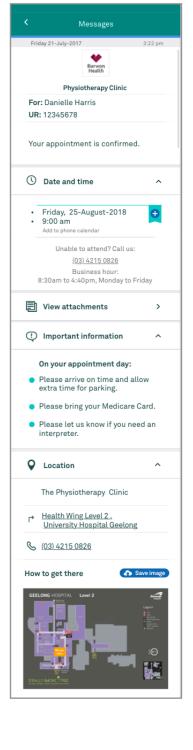












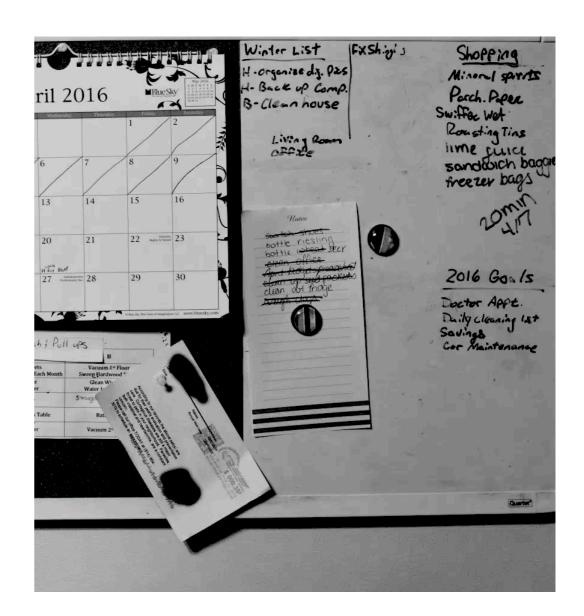
Built with Xamarin Forms. Designed using Sketch. Collaborate in Zeplin and InVision

## Discover

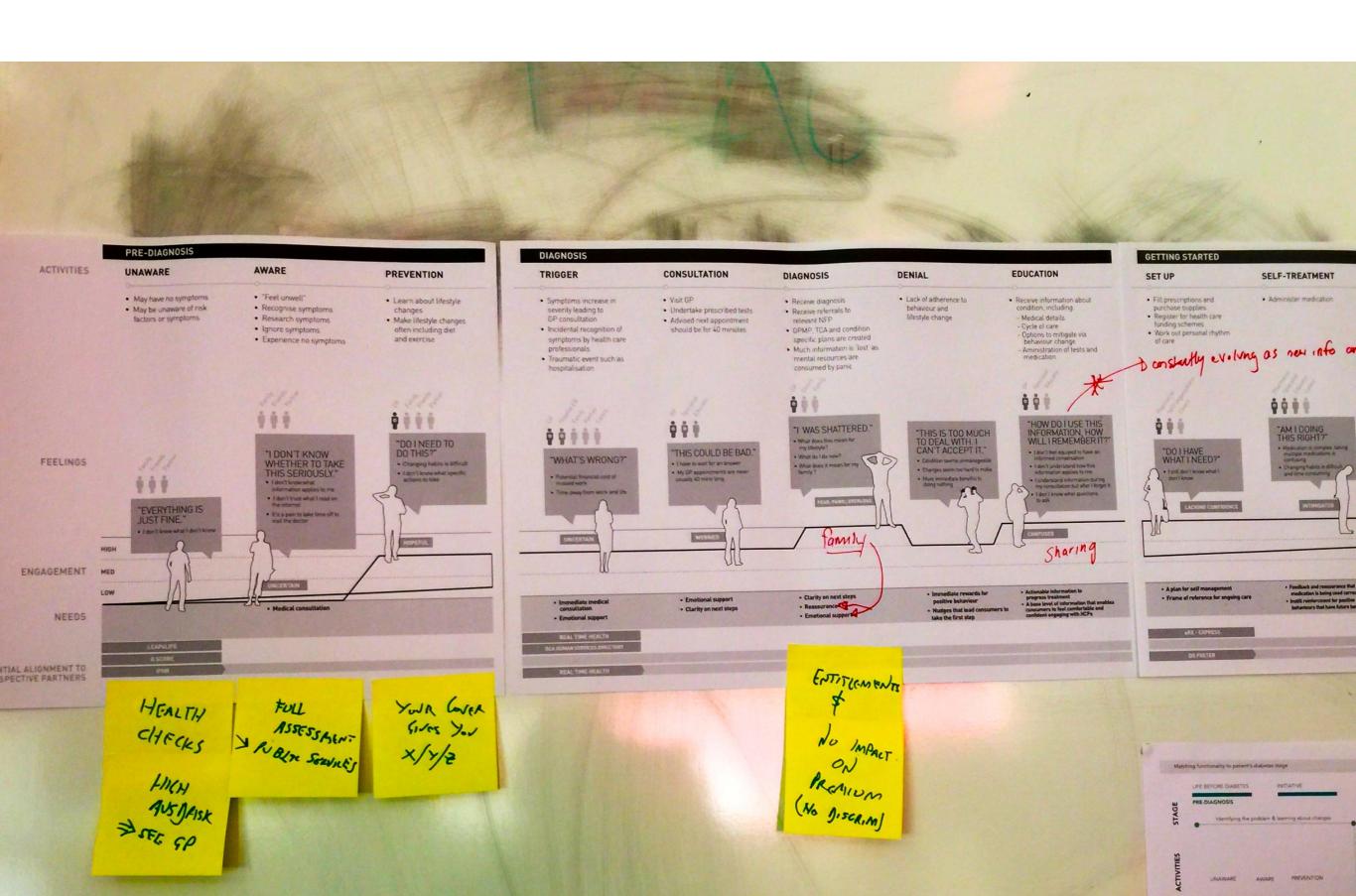
#### **Mental modelling**

From the user research and mental modelling activity, we learnt how people manage their health related routines.

- 1. People with health condition:
  - Monitor general health condition, blood pressure, blood sugar level
  - Manage and monitor medication consumption.
  - Create, manage and attend health appointments.
- 2. Parents, care givers, general consumers:
  - Create, manage and attend appointments.
  - Call after hours doctor.
  - Keep health contacts, appointments letters, in their diary, notebooks, on paper stuck on the fridge.
  - Order and collect medications.
  - Keep their doctor's appointments, referral letters, health records in a folder at home.



## Task analysis - Lifecycle of a patient with chronic health condition



# Discover

#### Gaps / pains

Based on individual's routine, their health conditions some gaps and pains revealed:

- 1. Trying to understand imbalanced emotions.
- 2. Self monitoring health condition using multiple devices and apps.
- Misplacing the appointment offers, referrals, prescriptions and essential health records.
- 4. Forgotten to attend an appointment.
- 5. Forgotten to take medications.
- 6. Unable to visit health practitioners or attend an appointment due to issues such as distance, tight schedules and mobility.
- 7. Delays when ordering medication due to a busy lifestyle.
- 8. Lack of immediacy to view health records.
- 9. Inconsistent ways of sharing essential care contacts with immediate family or trustees.
- 10. Prefers being notified appropriately to not missing an appointment or taking medications.

#### **Opportunities / inspirations**

From the interviews, we inspired by their aspirations:



1. Ability to have video consultation at any time, anywhere.



2. Ability to monitor health condition, manage medication from one platform.



3. Ability to share health records and contacts to immediate family.



4. Ability to purchase medicine and delivered to door.



5. Ability to have easy access, clarity of viewing self and family health records.



6. Ability to create and manage appointments.



 Personalised expert advices and reminders such as managing emotions, when to take medication, next appointments and viewing new records.



8. A one stop unified system to manage and support health condition.

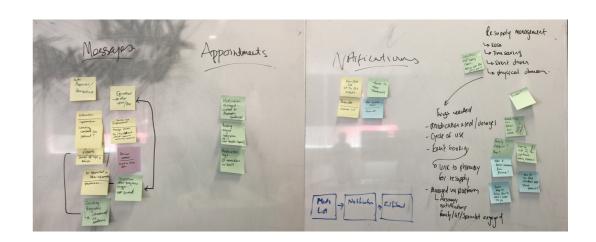
# **User journey**

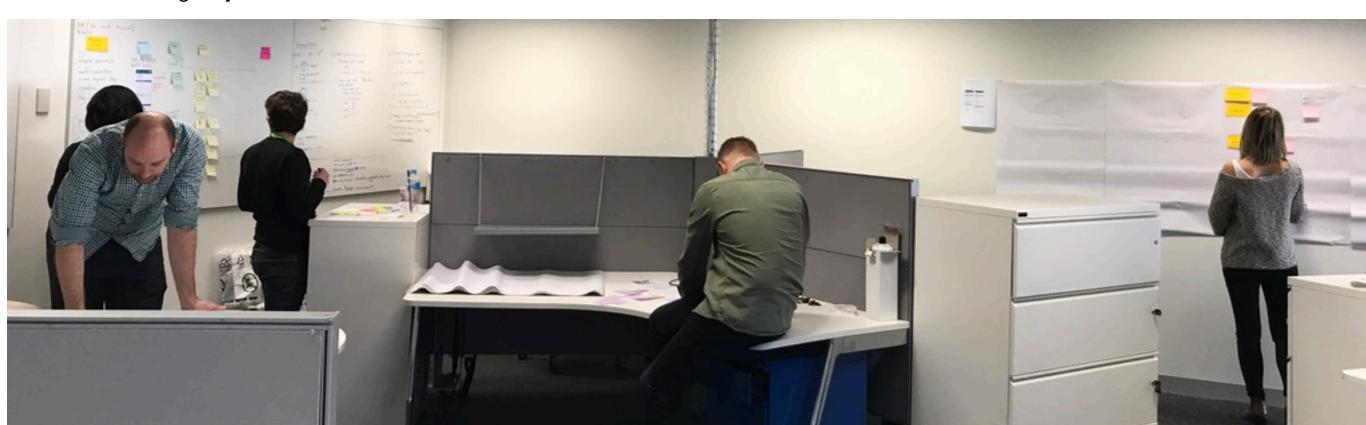
#### **Shaping the features**

From the user research findings, using affinity mapping we formed a long list of categories. The lists were further simplified through card-sorting activities:

- My data / my records
- Vitals
- Orders
- Messages / appointments / notifications
- Call a GP / doctor
- Find hospitals
- Emergency

User journey / user stories were aligned with user needs.





# Competitors

We recognised other apps integrated with My Health Records as competitors. We examined areas we could leverage, improve and innovate.

tyde

Profiles

Personalised and Connected Care for everyone

Tyde would like access to your My Health Record to Tyde to improve health mights

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HealthEngine

Book Health Appointment
HealthEngine Pty Ltd

Healthi 12+ View your My Health Record Chamonix Health

Source: <a href="https://www.myhealthrecord.gov.au/for-you-your-family/howtos/view-my-record-using-app">https://www.myhealthrecord.gov.au/for-you-your-family/howtos/view-my-record-using-app</a>

# **Architecture**

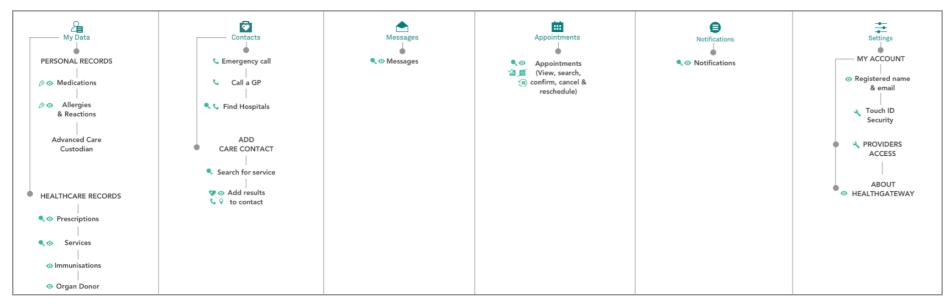
Based on approved features, high level information architecture was created. Integration workflow were structured with stakeholders via workshops led by teach team as we progressed.

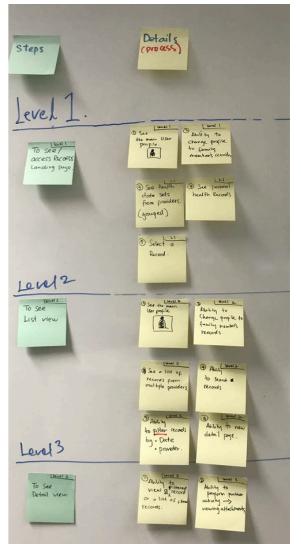
We practised co-design. Activities from workshops and planning sessions informed us about:

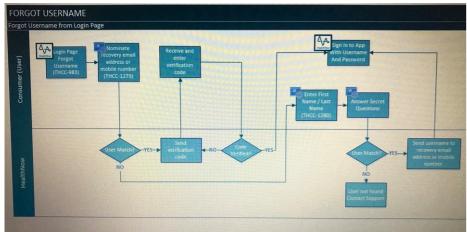
- Value vs effort & urgency vs impact
- Assumptions & constraints (risks, issues, budget)
- Technical design solution
- Prioritisation
- User evaluation and feedback
- User experience journey, flow and usability

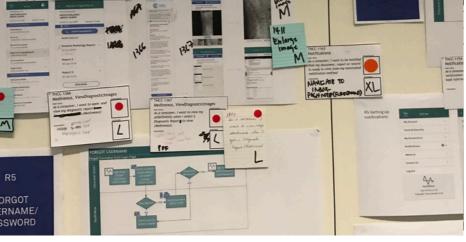


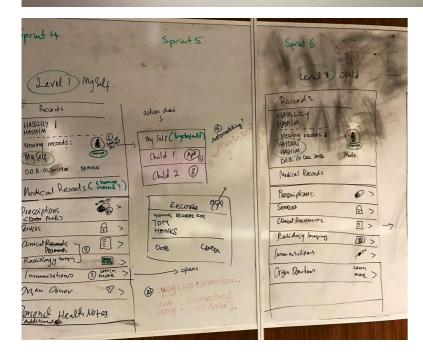
# **Architecture**

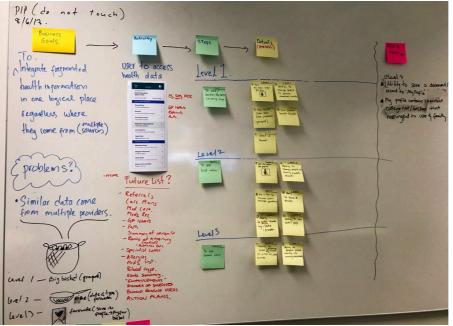






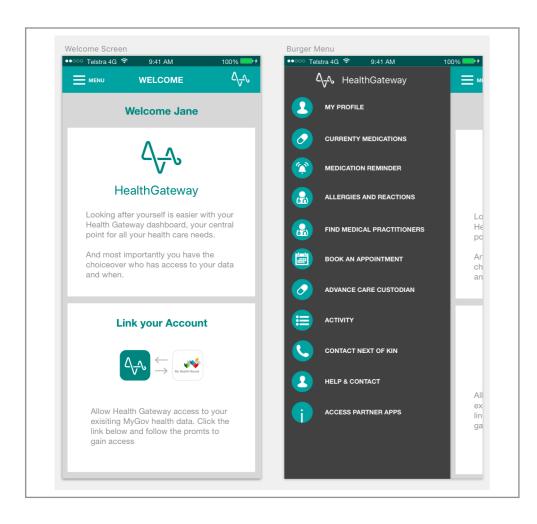








# Design ideation



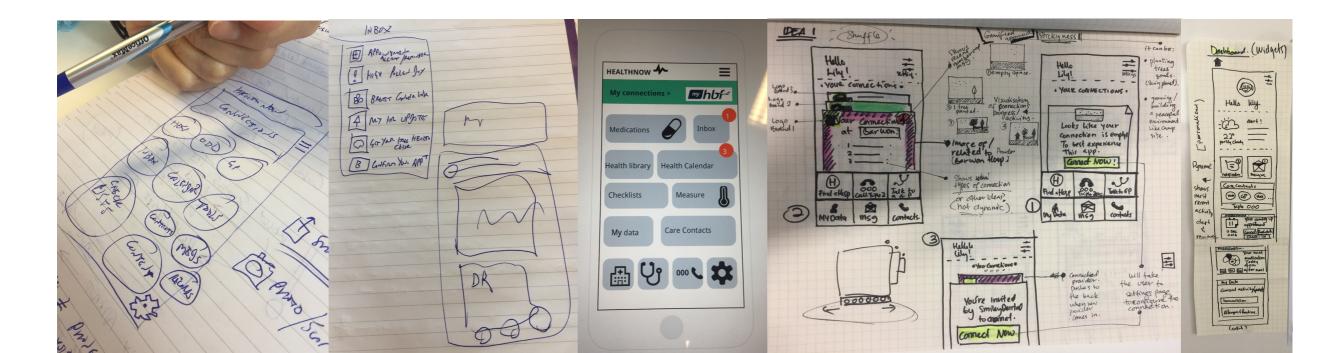
2016 - Hamburger menu.

What didn't work: This approach was not favoured by the business as it hid all the important features.

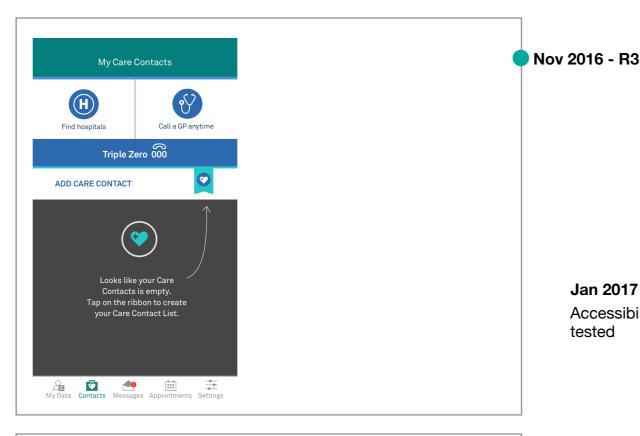
Goals: To simplify and display features equally, easy to find and recognisable by users. Must add value for business and stakeholders alike.

Approach: Co-design sketches - wireframes

Outcome: We called it "dashboard".



# Design ideation



HealthNow Hello **Victoria** My Health Record **CONNECT NOW** Jan 2017 - R4 H S 000 CALL TALK TO HOSPITALS \* 0

CONTACTS

HealthNow

YOUR CONNECTIONS

Barwon

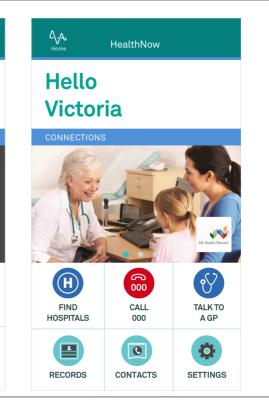
**SETTINGS** 

€ Settings

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RECORDS

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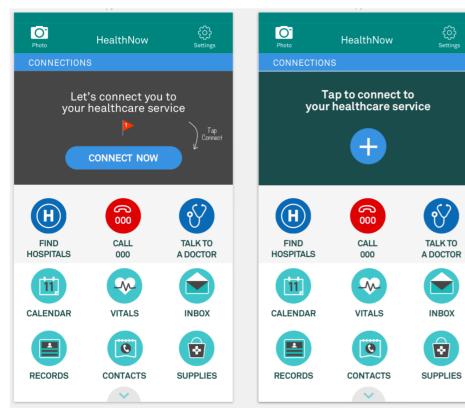


HealthNow

YOUR CONNECTIONS

Barwon

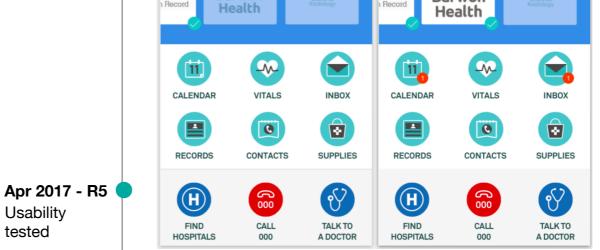
€ Settings



Aug 2017 - R5 Accessibility and Usability tested

Accessibility

tested



Usability tested

# Co-design: Sketching and wire framing with team / devs



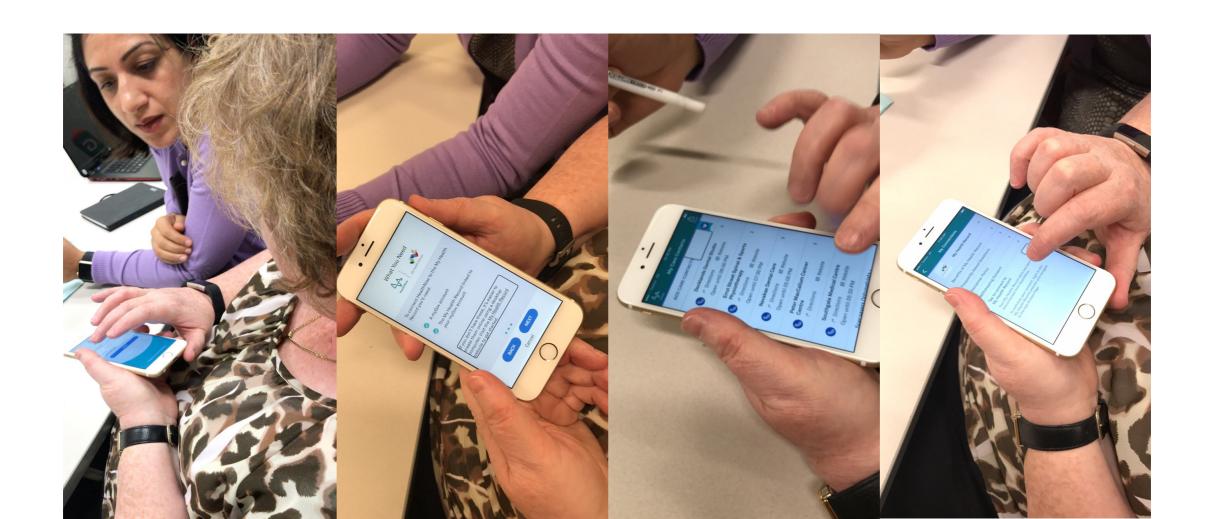
# **Validation**

#### **Accessibility testing**

Validating what we designed and built was crucial for the team to learn and keep on improving and optimising the experience.

We did an accessibility testing with a visual impaired participant guided by accessibility experts from one of Telstra's accessibility panels.

**Outcome:** Improved how we designed and structured the content. Created tasks for developers to associate a label to every form control, making our POUR (Perceivable, Operapable, Understandable, Robust) aligned to WCAG 2.0.



## **Validation**

#### **Usability testing**

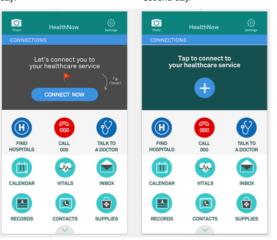
We solidified the experience by running usability testing for each features. Most of the features require integration with a health provider. We tested existed workflow such as the Barwon Hospital's outpatient appointments for messaging and notifications feature.

We rapidly tested the iterated prototype throughout 5 days of the testing week.

Outcomes were shared with team visually noting the pains, gains, value and opportunities. Workshops were necessary to refine interaction flow (front and back end).

Different design ideas were assessed in collaboration with internal designers using Hook principle ensuring we build a habit forming product. First prototype tested on the first

Iterated prototype tested on second day.



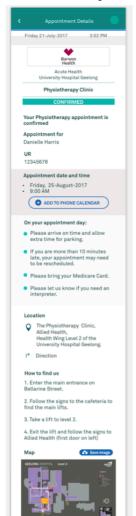
Pain points: Participants did not read the instruction how to connect to a provider on the dashboard.

Pain points: Participants missed the "+" button, and missed connecting to a provider.

Third iterated dashboard screen. Improved clarity of user task - how patient connect to a provider.

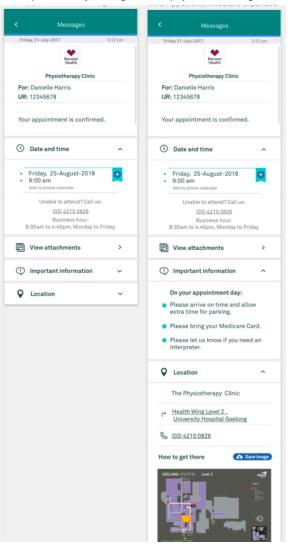


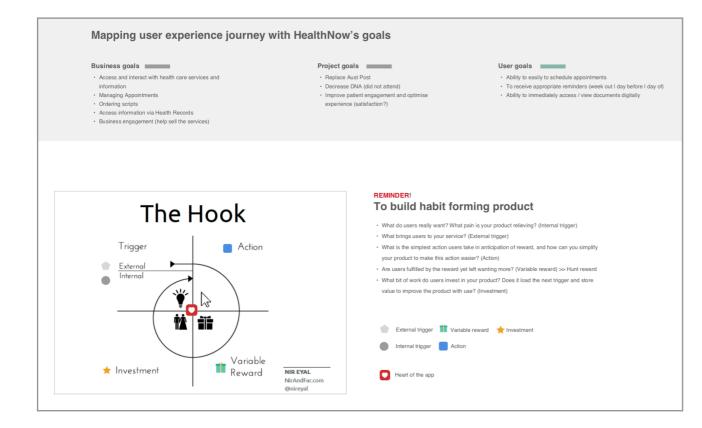
This message detail screen with real data was tested during the first day.

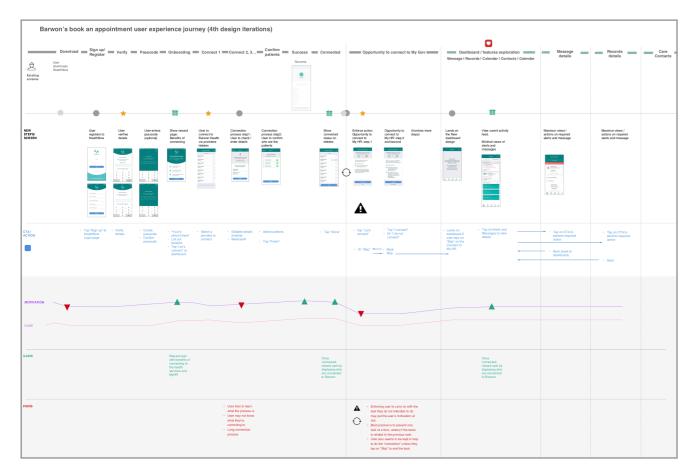


Pain points: Participants found that it was hard to identify some information due to the lenghty content

Improved message detail with grouped sections to reduce cognitive load. The message detail page was designed as templates that provides developers the ability to configure and display the data in the given section







#### Mapping user experience journey with HealthNow's goals Business goals Project goals User goals Replace Aust Post · Ability to easily to schedule appointments · Access and interact with health care services and · Decrease DNA (did not attend) To receive appropriate reminders (week out I day information · Managing Appointments · Improve patient engagement and optimise before I day of) Ordering scripts experience (satisfaction?) · Ability to immediately access / view documents Access information via Health Records digitally · Business engagement (help sell the services) Barwon's book an appointment user experience journey (3rd design iterations) Onboarding experience (from downloading the app to connect to Barwon) 2 <u>4</u>4 = ≛ \*\* To book an appointment experience Patient receiv "call to book" notification × Barwon sends a "call to book" notification \_

### **Validation**

#### Hybrid user research and rapid usability testing

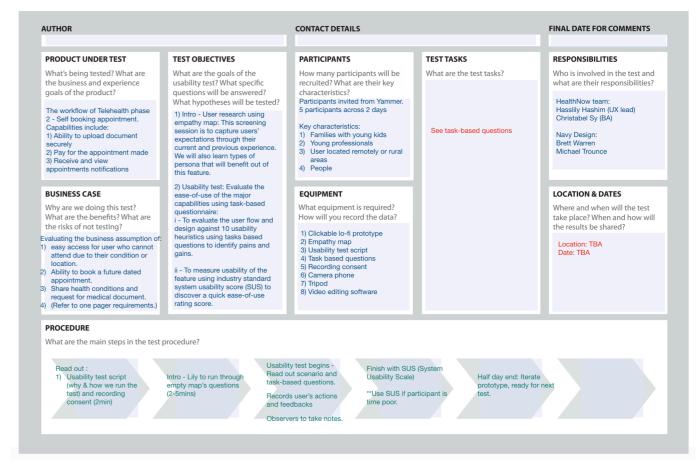
We used hybrid user research and rapid usability testing when we felt we needed more data from the users to validate our design, such as ordering script using HealthNow.

To do this we integrated with eRX Express. We run hybrid user research and rapid usability testing to improve complexity whilst giving better experience for user to find pharmacy via maps.

Paired with a developer I led the research and usability testing with 3 user groups. Pairing with a developer strengthen our empathy and understanding of the targeted users to keep our solution aligned to our research finding.

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#### **USABILITY TEST PLAN DASHBOARD**



#### Empathy map: Pre-experience (screening).

#### Purpose: To capture users' expectations - needs, wants and desires

Thinking about ordering a script or purchasing some medicines online / in-store, list out 3-5 words describing your saying, thinking, doing and feeling in each category below

#### SAYS **THINKS** What's your common process? What is your expectation before getting to the site? +Are drugs +Get it from the +Check on +Less or no +Easy +Don't like any GP. distance interaction waiting time dispensing distraction from information nearby home advertising process or the GP. available? +Expecting to +Ensuring get more informatipon dispensing time about drugs fits in daily interaction schedule. information. Once being prescribed, would you always get it immediately? What is your least expectation of the site? +Get +Lack of information on +Lack of information / prescriptions how to consume shared knowledge about immediately, drugs interaction. fast and cheap Age group: 30 - 60

User of: iPhone | Android Favourite app / website: Shopping online: Yes

Where would you always go? Online | In-store?

+Get +Buy
prescriptions suppliments or
in store. vitamins online

+Would choose familar / trusted / service quality pharmacy.

How do you usually travel (for work or do shopping?)

+Travel: nearby pharmacy - by walking, travel to work - train, shopping - car or online +Important: when I have medical condition / really sick

How frequent would you renew your script / purchase your medicine?

+Depending on health condition

How would it made you feel when you're not able to collect / purchase it on time?

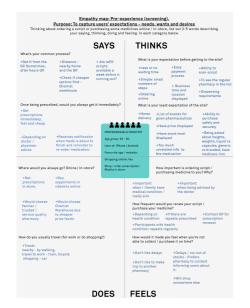
+Don't like delays

+Delays / run out of stocks - Prefers pharmacy to contact informing users about it.

How important is ordering script / purchasing medicine to you? Why?

#### **DOES**

#### S FEELS





#### Empathy map: Capturing users' expectations - NEEDS, WANTS, DESIRE through what they say, do, think and feel about their experience on ordering script /purchasing medication online / in-store.

Results from 13 participants from 3 health professionals group	NEEDS Important to me	WANTS OK not to have it right now	DESIRE Value added / great to have	PAINS Undesireble experience
SAYS				
Q1: What's your common process?	+ Call pharmacy to to the ck on immediately stock availability aright pharmacy to the ck on scripts available a options first week before it running out?  + Are refill pharmacy to the pharmacy that the pharmacy th	+Ensuring dispensing time fits in daily schedule.	+Ensure drugs interaction information available.  +Ability to scan a script easily	
Q2: Once being prescribed, would you always get it immediately?	+Get +Depending prescriptions on doctor/ immediately. physician advice about to finish. Will re-order when medication, fast and cheap +Receives anotification notification when receives a reminder.		+Fast and cheap +Refills reminder	
THINKS				
Q1: What is your expectation before getting to the site?	+Expecting to get more informatipon about drugs interaction information.  +Ability to scan script	+Dispensing time requirements +To see the regular that for given pharmaceutical	+Easy online +Simple: payment small process steps  +Have price displayed time and location +Easy dispensing process	+Don't like to wait +Don't like any distraction from advertising
Q2: What is your least expectation of the site?	+Ability to +Ability to have purchase information / safely and shared securely knowledge about drugs interaction.	+Have stock level displayed	+Visibility on how to consume pharmacist on information questions: about heights, weights, thome liquid vs capsules, delivery generic vs branded, have medicare /not.	+Too much unrelated info to the medication

Empathy map: Capturing users' expectations - NEEDS, WANTS, DESIRE

through what they say, do, think and feel about their experience on ordering script /purchasing medication online / in-store.

	NEEDS Important to me	WANTS OK not to have it now	DESIRE Value added / great to have	PAINS Undesireble experience	
DOES					
Q1: Where would you always go? Online   In-store?	+Get prescriptions in-store. +Would choose familar / trusted / service quality pharmacy.	+Buy suppliments or vitamins online	+Would choose Chemist Warehouse due to		
02: How do you usually travel (for work or do shopping?)	+Travel: nearby pharmacy - by walking, travel to work - train, shopping - car or online +Travel: with kids				
FEELS					
Q1: How important is ordering script / purchasing medicine to you? Why?	+Important: +Important: when I have medical when being advised condition / really by the doctor sick				
Q2: How frequent would you renew your script / purchase your medicine?	+Depending on health condition prescription renewal +Participants with health condition: repeats regularly repeats regularly reserved.				
Q3: How would it made you feel when you're not able to collect / purchase it on time?	+Will shop somewhere else if meds are not available		+Delays / run out of stocks - Prefers pharmacy to contact informing users about it.	+Don't like delays  +Don't like to make trip to another pharmacy when medication is not in stock	

# Usability testing questions and answering sheet.

SCREENS (SC1-5)	SC1 - Dashboard	SC2 - Script Order LP	SC3 - Create Order LP	SC4 - Set pick up location LP	SC4 -Set pick up location LP	SC4 -Set pick up location LP	SC5 - Create Order LP (pick up location selected)
Tasks	Start >>  1) Find the "Supplies" CTA t begin to create script order.	Task1: create order >>  1) Find the CTA to order script.	Task2: >>  1) New user: Set up pick up location.  2) Beturning user: Scan script	New user: Search and select preferred pharmacy.     Returning user: Search or edit and select preferred pharmacy  Both users: View map & filter	(Observe how users to set pick up location. And ask how does user usually perform search?)		Check selected pick up location  Task3: scan script >> 2) Scan script
Screens flow	HealthNow G	Script ordering	< Create order	₹ Set a pick up location	√ Set a pick up location	✓ Set a pick up location	< Create order
	CONNECTIONS  My Health Record  1 of 1  H) 600 FIND CALL TALK TO A GP  CALENDAR VITALS INBOX  RECORDS CONTACTS SUPPLIES	O INFO  一 Create order   Order history  >	PICK UP LOCATION  Tap to set your pick up location  SCAN SCRIPT  Scan the QR cor or barcode from your script	Current location ×  Current location ×  Map view :  Available from this pharmacy Carragarmungee Estate Pharmacy Open until 11:00 pm 2.5 km  56-70 Carragarmungee Estate Road, Craligleburn  Available from this pharmacy Chemist Warehouse Elizabeth Street Open until 11:00 pm 10.5 km  300 Elizabeth Street, Melbourne  PharmaSave Essendon Fields Pharmacy Open until 11:00 pm 10.5 km  ParmaSave Essendon Fields Pharmacy Open until 11:00 pm 10.5 km	Current location ×  Current location ×  Map view :  Available from this pharmacy Carragarmungee Estate Pharmacy Open until 11:00 pm 2.5 km  56-70 Carragarmungee Estate Road, Craligleburn  Available from this pharmacy Chemist Warehouse Elizabeth Street Open until 11:00 pm 10.5 km  300 Elizabeth Street, Melbourne  Pharmacy Open until 11:00 pm 10.5 km  Pharmacy Open until 11:00 pm 10.5 km  Ogen until 11:00 pm 10.5 km  Ogen until 11:00 pm 10.5 km  Ogen until 11:00 pm 10.5 km	Current location ×  Map view  Stordered Favourite Near me  Chemist Warehouse Elizabeth Street Open until 11:00 pm 10.5 km  300 Elizabeth Street, Melbourne  Available from this pharmacy Open until 11:00 pm 10.5 km  PharmaSave Essendon Fields Pharmacy Open until 11:00 pm 10.5 km  300 Grattan Street, Essendon  powered by Google	PICKUP LOCATION  Carragarmungee Estate Pharmacy  SCAN SCRIPT  Scan the OR cor or barcode from your script
QUESTIONS	1.You are ready to order your script. Thinking out loud, where would you begin?	1.Thinking about ordering your script online, tell us what you need to do here?	1.Thinking about ordering your script online, tell us what you need to do here?	You are to select a pickup location for your script. What would you do first and why/what is it influenced your decision?	6. Ribbon - Is it important to see / action on it here?	11. Are the information displayed helpful? Which one?	You have just selected the pickup location. Did you notice anything on the "Pick up location" section?
	2.Why did you choose to tap on that icon?	2. Why did you choose to tap on that icon?	2. Where would you start and why did you decide to proceed with it? (Location / Scan first?)	2. How do you commonly search for a place?By the name, street address, 'near me' or by a landmark?	7. What is your impression of the selection icon - "o"? Useful?		At this stage would you continue with ordering script or stop? If you choose stop, why?
	What is your interpretation on "supplies" icon and labelling?	3. What does "i" means to you?	3. How do you feel about the flow of this page?	3. How important is "map view" to you. What influence you to use it?	8. Is there anything else that you don't want to see here? (Distraction)		
			4. Are the instructions helpful / clear?	Looking at the "O" icon and the ribbon, which one would you tap on to set the pickup location? Why?	9. Thinking about searching the location quickly, how important is "filter" to you? What would you like have?		
	Does this screen match your expectation? If not, why?	Does this screen match your expectation? If not, why?	Does this screen match your expectation? If not, why?	5. What is your interpretation of the ribbon?	10. How important seeing Pharmacies that are not catering your script?	A. Does this screen match your expectation? If not, why?	
	B. What are you expecting to see on the next screen?	B. What are you expecting to see on the next screen?	B. What are you expecting to see on the next screen?			B. What are you expecting to see on the next screen?	

## **Validation**

