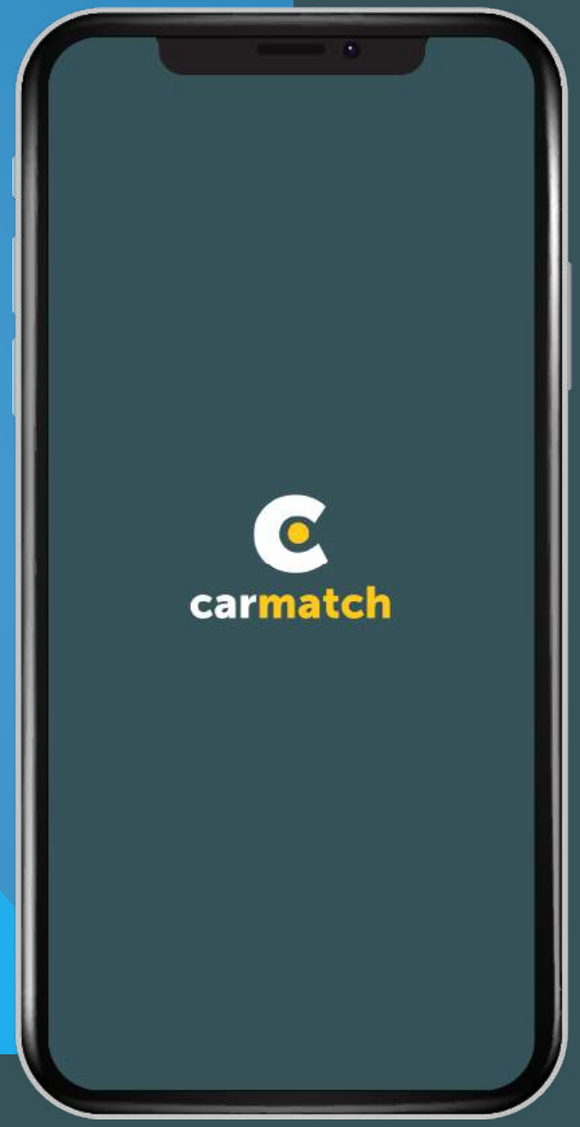
CARMATCH MOBILE APP

UX/UI DESIGN



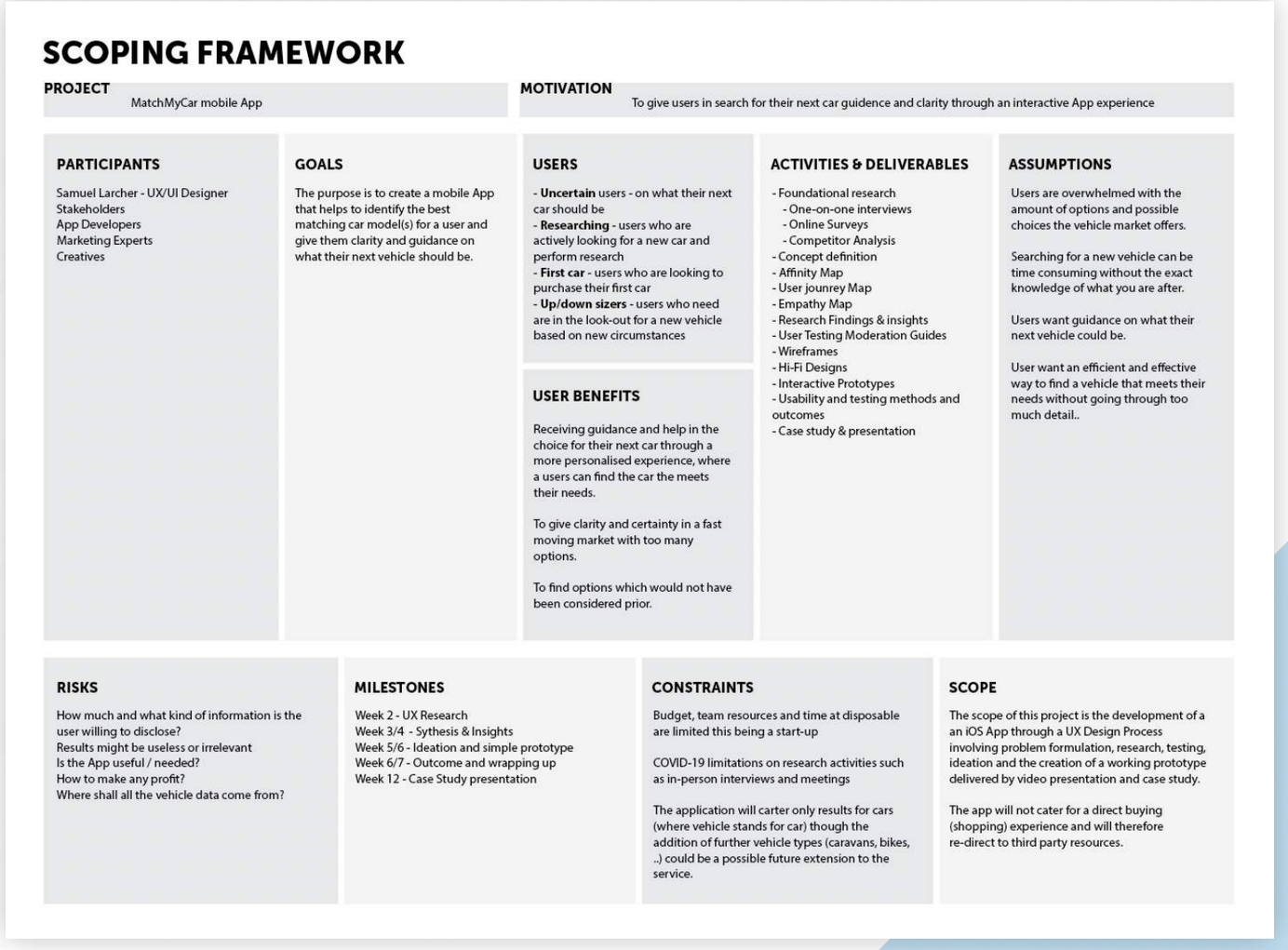
Presented by Samuel Larcher

1 DISCOVER

Understanding the Problem space

1.1 Project Scoping

To gain clarity and better understanding of the business and the project goals I created a Scoping Framework which outlines project based aspects such as Risks, User Benefits as well as Activities & Deliverables.



SCOPING FRAMEWORK

PROJECT
MatchMyCar mobile App

MOTIVATION
To give users in search for their next car guidence and clarity through an interactive App experience

PARTICIPANTS

Samuel Larcher - UX/UI Designer
Stakeholders
App Developers
Marketing Experts
Creatives

GOALS

The purpose is to create a mobile App that helps to identify the best matching car model(s) for a user and give them clarity and guidance on what their next vehicle should be.

USERS

- **Uncertain** users - on what their next car should be
- **Researching** - users who are actively looking for a new car and perform research
- **First car** - users who are looking to purchase their first car
- **Up/down sizers** - users who need are in the look-out for a new vehicle based on new circumstances

USER BENEFITS

Receiving guidance and help in the choice for their next car through a more personalised experience, where a users can find the car the meets their needs.

To give clarity and certainty in a fast moving market with too many options.

To find options which would not have been considered prior.

ACTIVITIES & DELIVERABLES

- Foundational research
  - One-on-one interviews
  - Online Surveys
  - Competitor Analysis
- Concept definition
- Affinity Map
- User jounrey Map
- Empathy Map
- Research Findings & insights
- User Testing Moderation Guides
- Wireframes
- Hi-Fi Designs
- Interactive Prototypes
- Usability and testing methods and outcomes
- Case study & presentation

ASSUMPTIONS

Users are overwhelmed with the amount of options and possible choices the vehicle market offers.

Searching for a new vehicle can be time consuming without the exact knowledge of what you are after.

Users want guidance on what their next vehicle could be.

User want an efficient and effective way to find a vehicle that meets their needs without going through too much detail..

RISKS

How much and what kind of information is the user willing to disclose?
Results might be useless or irrelevant
Is the App useful / needed?
How to make any profit?
Where shall all the vehicle data come from?

MILESTONES

Week 2 - UX Research
Week 3/4 - Sythesis & Insights
Week 5/6 - Ideation and simple prototype
Week 6/7 - Outcome and wrapping up
Week 12 - Case Study presentation

CONSTRAINTS

Budget, team resources and time at disposable are limited this being a start-up

COVID-19 limitations on research activities such as in-person interviews and meetings

The application will carter only results for cars (where vehicle stands for car) though the addition of further vehicle types (caravans, bikes, ..) could be a possible future extension to the service.

SCOPE

The scope of this project is the development of a an iOS App through a UX Design Process involving problem formulation, research, testing, ideation and the creation of a working prototype delivered by video presentation and case study.

The app will not cater for a direct buying (shopping) experience and will therefore re-direct to third party resources.

1.2 Problem Statement

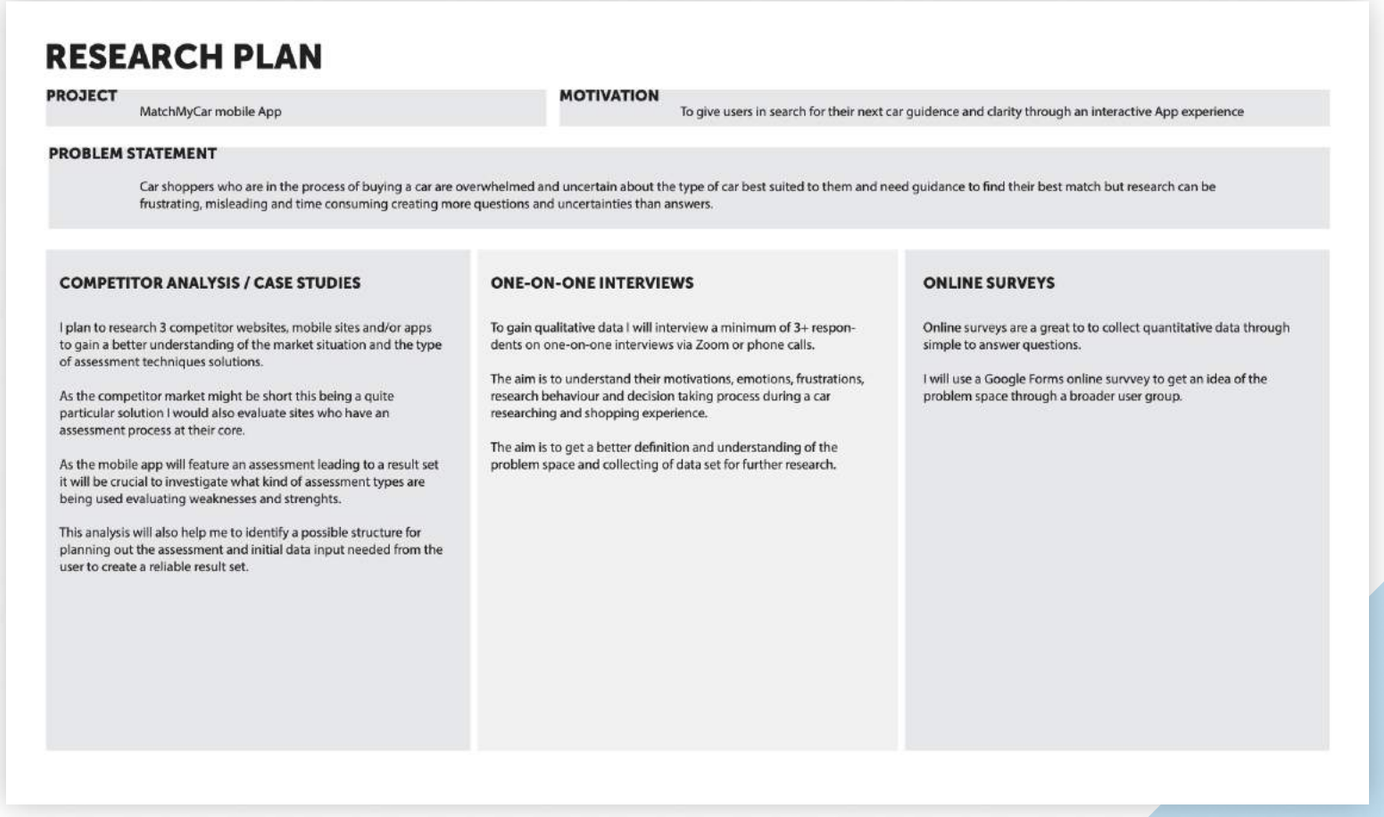
The next step was to develop a Problem Statement to gain a better understanding of the problem space.

Car shoppers who are in the process of buying a car are **overwhelmed and uncertain** about the type of car best suited to them and need guidance to find their best match but research can be **frustrating, misleading and time-consuming** creating more questions and uncertainties than answers.

1.3 Research Plan

I developed a research plan for the project and chose a combination of Competitor Analysis / Case Studies, one-on-one interviews and online surveys.

One-on-interviews where chosen to get qualitative data where online surveys would be used to get quantitative data & insights.



RESEARCH PLAN

PROJECT
MatchMyCar mobile App

MOTIVATION
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PROBLEM STATEMENT

Car shoppers who are in the process of buying a car are overwhelmed and uncertain about the type of car best suited to them and need guidance to find their best match but research can be frustrating, misleading and time consuming creating more questions and uncertainties than answers.

COMPETITOR ANALYSIS / CASE STUDIES

I plan to research 3 competitor websites, mobile sites and/or apps to gain a better understanding of the market situation and the type of assessment techniques solutions.

As the competitor market might be short this being a quite particular solution I would also evaluate sites who have an assessment process at their core.

As the mobile app will feature an assessment leading to a result set it will be crucial to investigate what kind of assessment types are being used evaluating weaknesses and strenghts.

This analysis will also help me to identify a possible structure for planning out the assessment and initial data input needed from the user to create a reliable result set.

ONE-ON-ONE INTERVIEWS

To gain qualitative data I will interview a minimum of 3+ respondents on one-on-one interviews via Zoom or phone calls.

The aim is to understand their motivations, emotions, frustrations, research behaviour and decision taking process during a car researching and shopping experience.

The aim is to get a better definition and understanding of the problem space and collecting of data set for further research.

ONLINE SURVEYS

Online surveys are a great to to collect quantitative data through simple to answer questions.

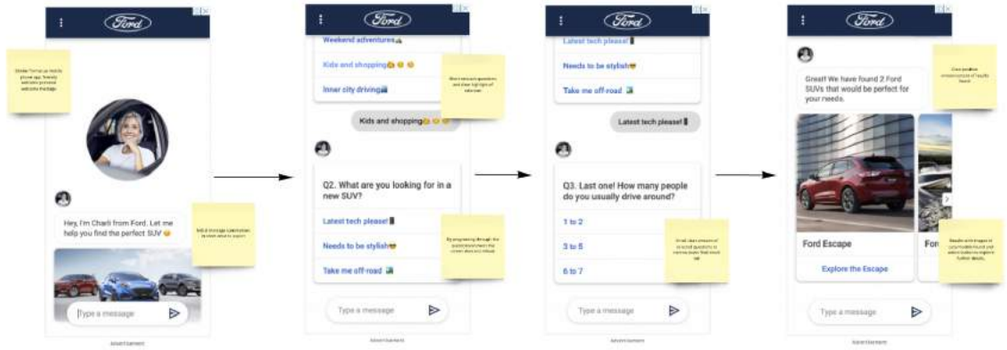
I will use a Google Forms online survvey to get an idea of the problem space through a broader user group.

1.4 Analysing competitors / case studies

Below I listed some market & competitor analysis samples I found during research. I listed positives and negatives and summarised my findings in conclusion summaries.

Ford / Interactive Online Ad / Quiz

Interactive web ad in form of a quiz from Ford. The quiz asks users to answer a few simple questions to find the perfect ford SUV. After a series of questions, the users receives a result set of matching SUV models.



Positives

- Short and easy to understand questions
- Intuitive interface behaviour simulating a messaging mobile app
- Instant responses and quick flow
- Personalised introduction (Charlie)
- Easy and quick quiz - it takes a short time to get results.
- No explanation needed on how it works - very simple
- Visually appealing through simplicity

Negatives

- The quiz is Ford and SUV specific and therefore excludes other user groups
- The result set is only Ford and SUV specific
- The result set has minimal information user has to click to get any more information
- There are no options for any granular adjustments / settings
- This being an ad the user can not retain the information / save the information
- No step indicator - user does not know how many quiz questions are awaiting him/her

Conclusion

The Ford SUV ad banner quiz achieves what it is aimed for - the user receives suitable FORD SUV's cars after compiling a short quiz in form of selections. The interface and design is minimalistic and appealing and a touch playful through the use of smilies without loosing professional trust. The result set is very minimalistic with just the SUV name and image being displayed.

Driverbase / Car Matching Filtration / web & iOS App

https://driverbase.com/recommendation/step1

Online assessment / quiz titled "Which SUV is best for you?" This assessment (quiz) prompts the user to answer a series of questions in form of selections (radio buttons). The result set is a suitable SUV model based on answered questions.

Positives

- Finding a car match in 3 steps - clearly outlined and does not seem time consuming
- Relatively easy to use form sliders to drag selection in a position best suited
- Loading circle during process of searching for results gives user feedback that something is happening in the background
- The result sets shows some useful information and stats without the user to have to click any further
- Ap provides a classic cars search filtration (as also seen on carsales)

Negatives

- Not sure what 'Rate Vehicle' is and how that affect the result set
- App seems in times clunky and overall I get the impression it does not seem to be refined and user friendly - rather a responsive website in mobile state rather than a dedicated app feeling
- Text and user fields are rather small
- No options to register or save the data and not other options which would need a user registration eg. account profile, settings, preferences,...
- The search results seem to to access just a specific database of cars (currently available to purchase) rather than a general suggestion which models would suit
- Just for US market / not for Australian market

Conclusion

The DriverBase App is an iPhone app which at first appearance seems easy to use and being able to provide a good result set of vehicles at the end of the process. However, after playing around with the interface I got the impression I browse an adopted mobile website packed in an App rather than a sophisticated phone app for the purpose. Some styles and overall usability could be improved and are lacking detailing. The App also just shows vehicles from dealers or available for purchase rather than suggestion for a vehicle. The App therefore just works for the US market. I did like the fact that the app goes through a quick assessment process and the result set shown gives the user some useful info and specs.

1.5 User Research

carmatch
MOBILE APP - UX/UI DESIGN

1 : 1 Interviews

4
INTERVIEWEES

I interviewed most users using Zoom to be able to capture their emotional responses to their answers.

Users where excited and gave positive responses to a question asking if they would use an app which would guide them to relevant vehicle matches.

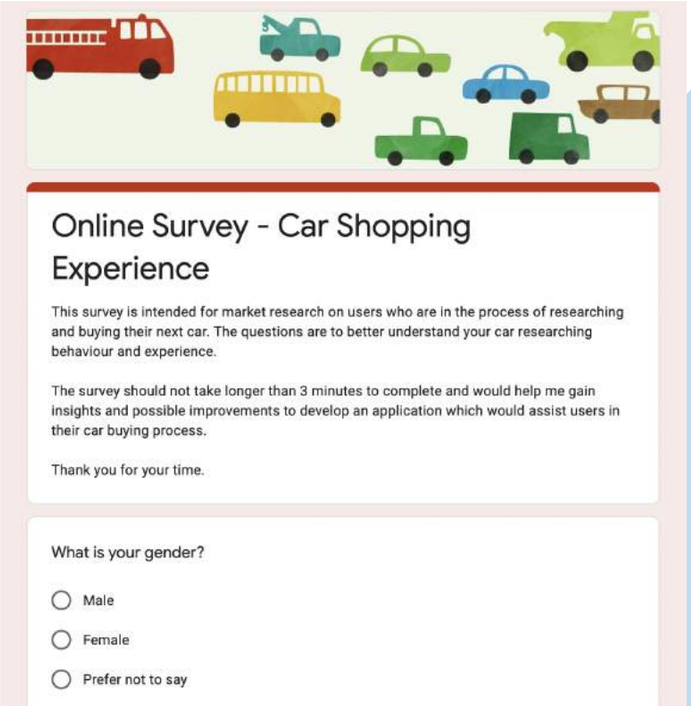
Online Survey

23
RESPONSES

I promoted the online survey in form of Google Form in different social channels including Facebook and LinkedIn as well as specific groups and forums.

Over 90% of respondents confirmed that vehicle research is a time-consuming task.

Due to COVID-19 restrictions and lock-down measures interviews had to be held using digital solution (Zoom) - I also used family members to gain necessary data in these restricted times.



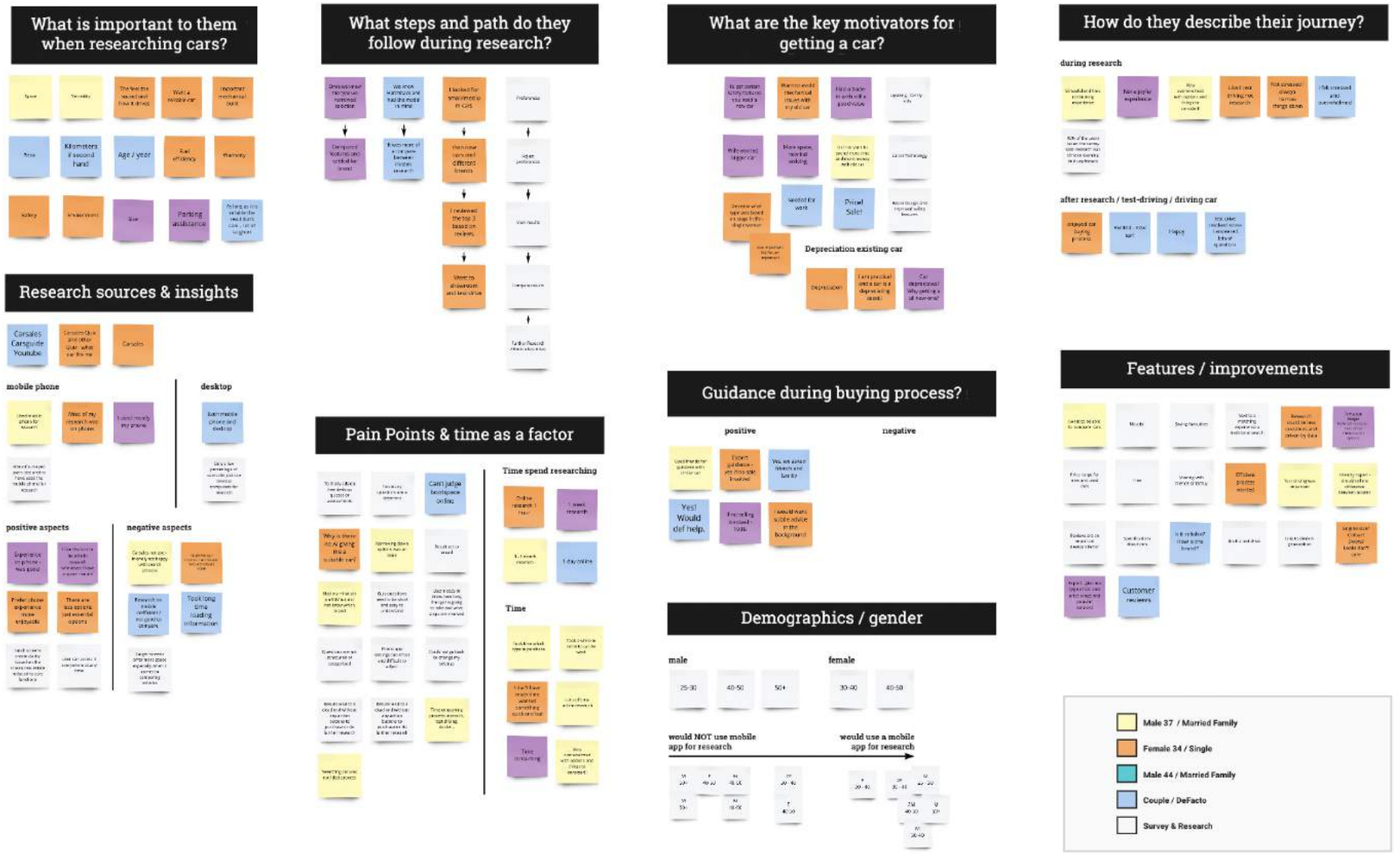
2 DEFINE

Synthesise our research to generate insights
to uncover what problem we are trying to solve

2.1 Affinity Map

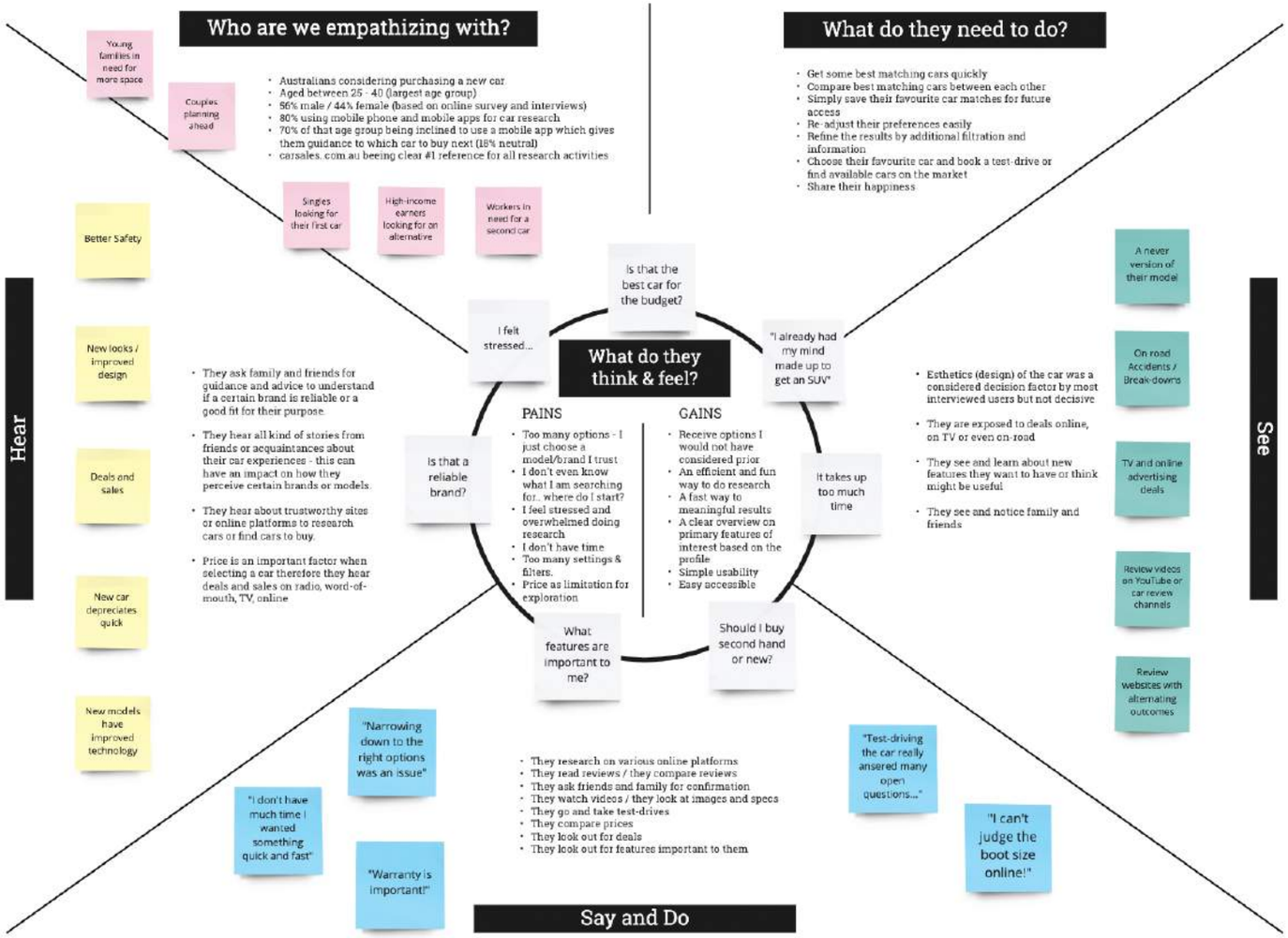
I summarised and sorted information highlights I collected trough the research state into an Affinity Map grouping data to show insights.

Groups created highlight Pain Points, Research Sources as well as some Demographic insights.



2.2 Empathy Map

The next step was the creation of an Empathy Map to better understand what the users think, see, hear, feel, do as well as listing Pains & Gains.



2.3 Research Insights

I highlighted some key findings from the performed research.

For uncertain car buyers researching the (next) car to buy is a time-consuming task describing it as an overall negative (frustrating) experience.

Researched vehicle quizzes / assessments are time-consuming, uninspiring and the results are mostly too broad and irrelevant.

The majority of respondents and interviewees use(d) their phone and phone apps to research their next vehicle; all the interviewees used carsales.com.au at some point in their journey.

Interviewees with uncertainty which car to buy showed interest and excitement in a system which would guide them to relevant, matching vehicles.

A lack of an application in the Australian market for matching uncertain car buyers with vehicles through an assessment / quiz style system.

2.4 Personas

Based on the information synthesized from the research as well as considering the definition of the problem statement I found the following persona to be an ideal match moving forward.

I highlighted and summarised findings in form of goals, pain points as well as thoughts.

Karen (36)

Single - Team Leader / Manager

"I am pretty **busy and pragmatic**. I don't have much **time** ... I narrowed down a selection of cars and obtained **3 options**"

Bio

Karen grew up in Sydney's Inner West where she also attended University. She travelled Europe but after that settled in Sydney to launch her career and be close to her family. Karen reached great career goals and used her car to commute to Sydney's CBD. This has changed during COVID-19 where she is now mostly working from home. She uses her car for shopping, family & friend visits and holiday trips to escape city life. Karen needs a reliable car but she looks ahead to her future and wants the safety and enough space for family life ahead.

Goals

- Receive options for suitable cars in at least time as possible
- Finding a suitable car based on some personalised preferences
- Being able to book a test drive easily
- Receive further information about the car options based on reviews and user comments
- Receive further car insights eg. depreciation index - brand quality index
- Making it a less stressful but more fun, automated and streamlined experience for Karen

Pain Points

- Time researching - Time is a valuable asset to Karen and she wants to spend as least time as possible researching cars
- Search Filtration - Karen is overwhelmed by the amount of options of the search filtration however narrows it down to aspects she believes are the best and most suitable
- Too many question - During her research Karen felt she had to answer too many questions / too many options making it a stressful experience to her.
- Where is AI? Karen wonders why there isn't an AI yet being able to match a car for her... it would be so much easier!

Motivators

Price

Depreciation

Reliability / Quality Build

Size

Design / Looks

Power / Engine

Research resources

Carsales.com.au | 1-2 Online quizzes

Carsguide.com.au | YouTube

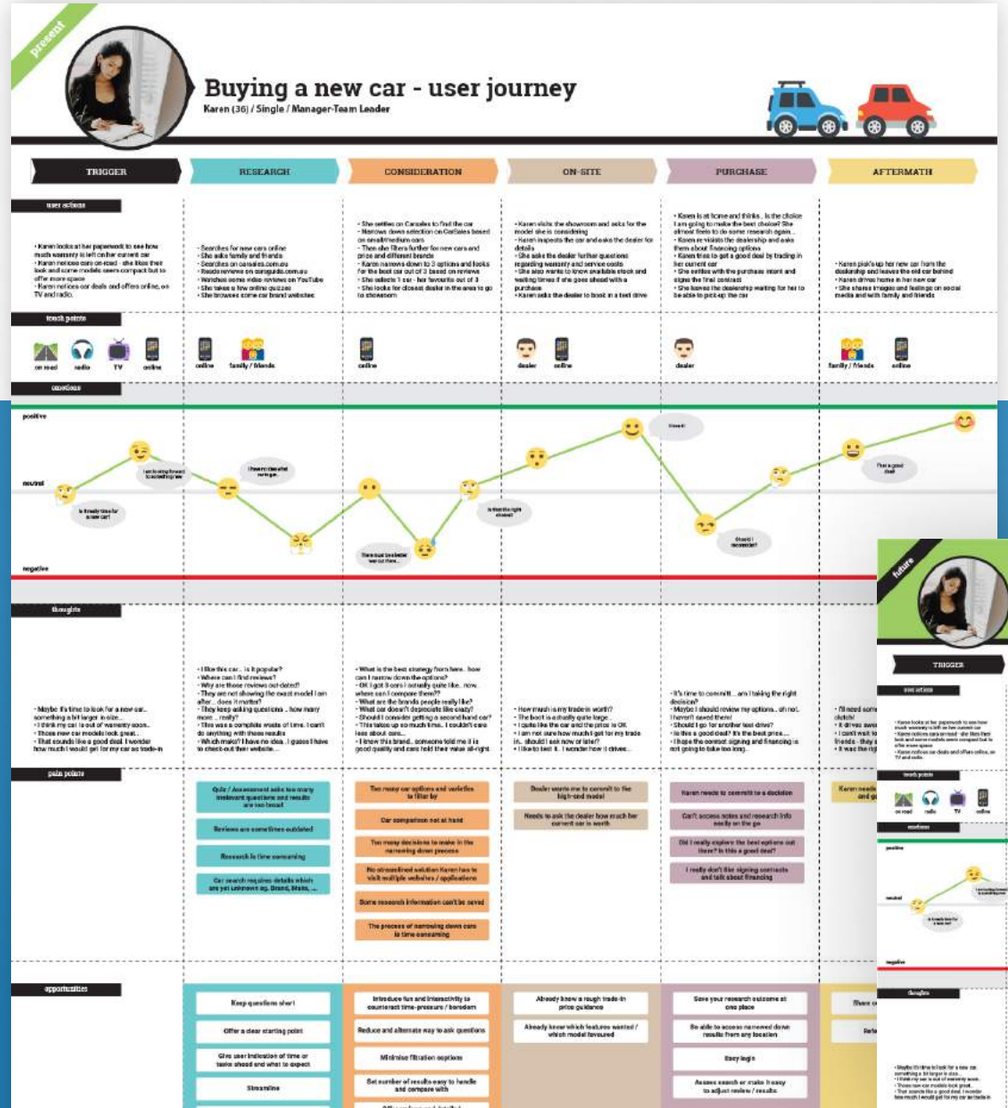
Specific Brand Websites

*"My decision was also based on **my stage in-life**, you know, I am **single**.. but I was thinking of **my future**.. something bigger in **size**.. you know my **future is important** ..."*

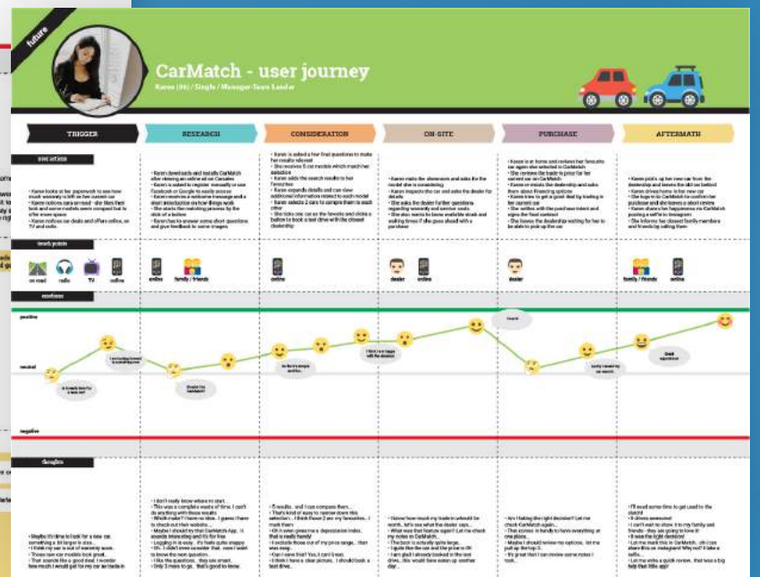
Thoughts

- My current car is out of warranty.. what if it breaks down?
- Do I want to keep investing in a car out of warranty?
- It's best to get a new car before it depreciates to much..
- I know my budget... I know I want a small/medium car...
- I am single but if I meet someone I want a safe and spacious car for the time ahead..
- I want definitely a car that doesn't break down... something easy to maintain
- I am just so busy.. when should I find time researching?
- I need a plan.. I have to narrow down cars and will look up reviews.... then I will test-drive
- Why isn't there a streamlined process out there for this? I am so not interested in cars ..
- I need some valuable specific results... I don't need some broad assumptions....
- What did my friend drive again? Is that a quality brand?

2.5 Customer Journey



I then developed a customer user journey for the present as well as the future scenario. The journey map also lists user thoughts at different times in their journey as well as a graph showing the users emotional state.



It was especially interesting to me to see and compare the projected changes of the emotional state of the user.

3 DEVELOP

Synthesise our research to generate insights
to uncover what problem we are trying to solve

3.1 How might we

From the Insights gathered in the Define stage I now brainstormed some “How might we” questions and highlighted the one I found most suitable and in-line with my problem statement.

How might we able to streamline effectively research and decision-making processes for car buyers so that their experience becomes a joyful one worth sharing with friends and family?

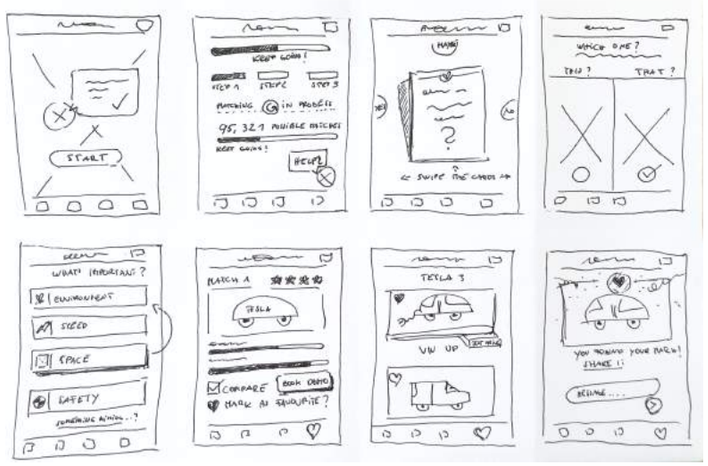
How might we reduce the steps involved to show car models to car buyers, so they don't lose interest and get frustrated but keep the results relevant and precise?

How might we incorporate useful features for car buyers, so they keep coming back using the solution as a tool rather than treating it as a one-off?

3.2 Ideation

Moving forward and to the Ideation process I used crazy 8's and story boarding to brainstorm ideation solutions. The HMW matrix helped to understand feasibility of some of those ideas - I put my attention especially on those marked high value and easy to apply.

CRAZY 8'S



STORYBOARD

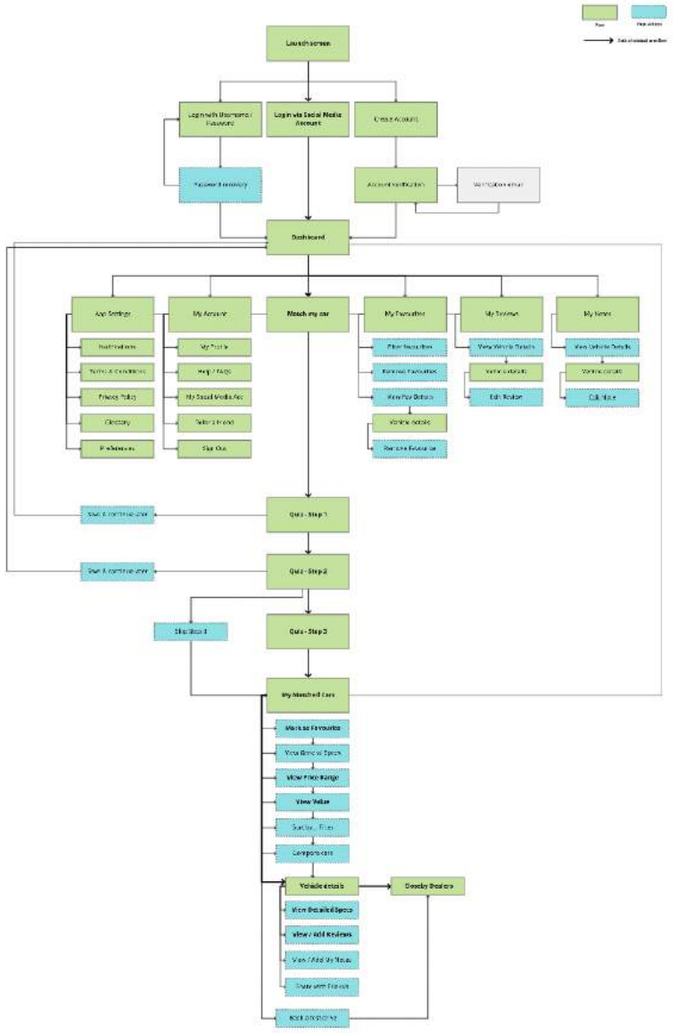
HMW MATRIX

3.4 Card sorting & IA

I used card sorting to improve labelling and grouping of the information and used it as a base for a more detailed IA (sitemap) where I also chose to highlight the path of the user flow (in bold) as detailled out under point 3.5

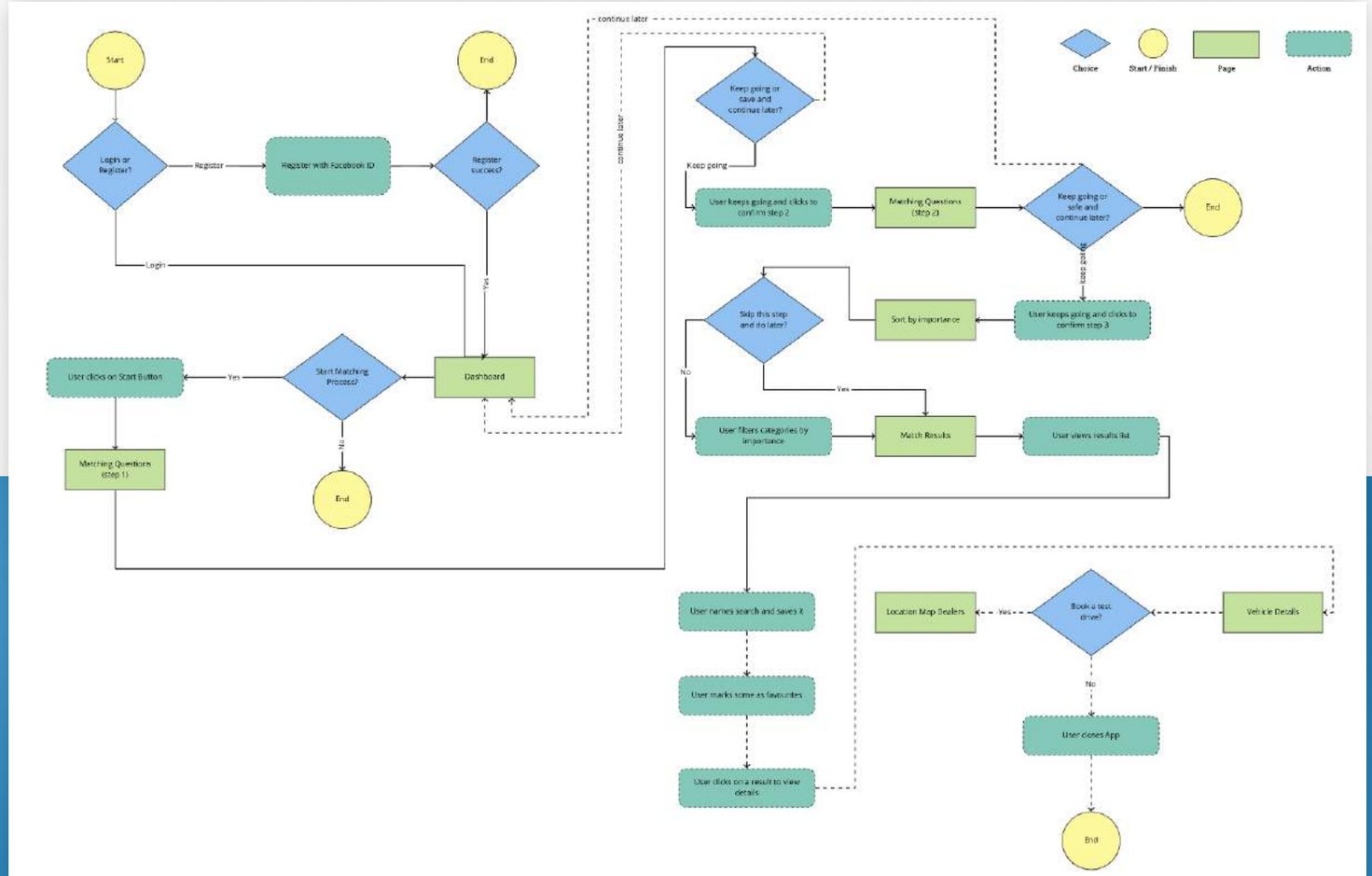
CARD SORTING

INFORMATION ARCHITECTURE



3.5 User Flow

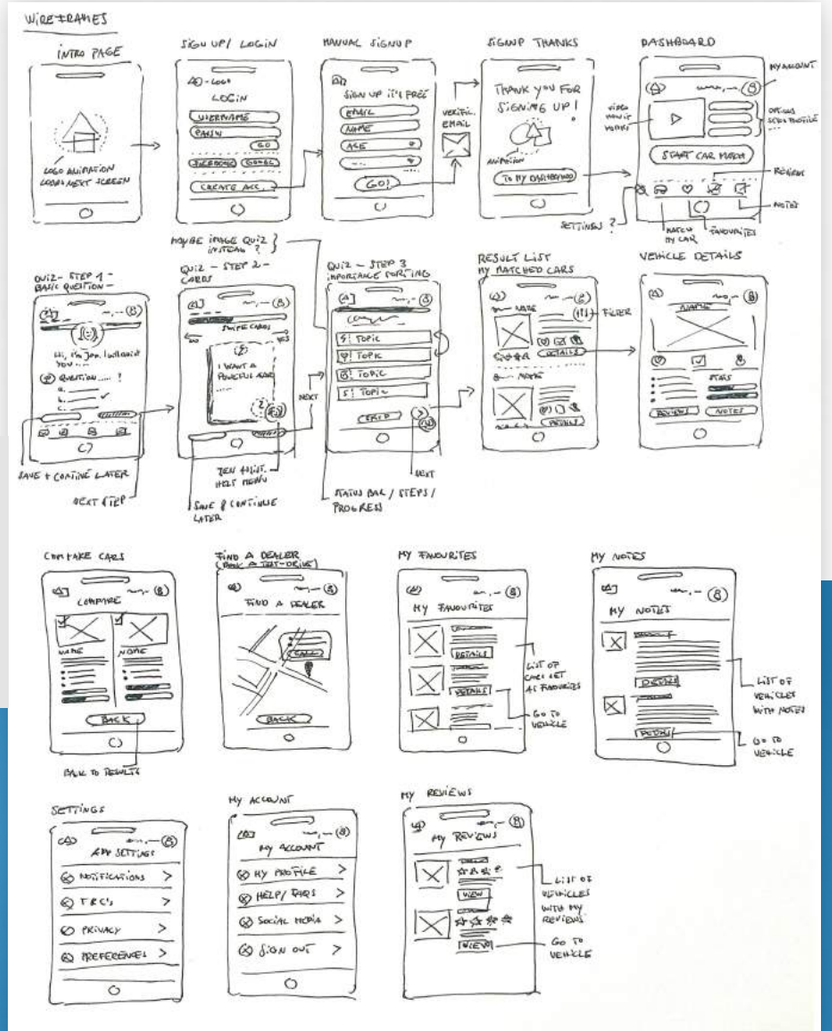
The User Flow was a helpful exercise to understand how the persona (Karen) would browse the system and to gain clarity where decision points as well exit points (end points) could be. The User Flow underwent some revision.



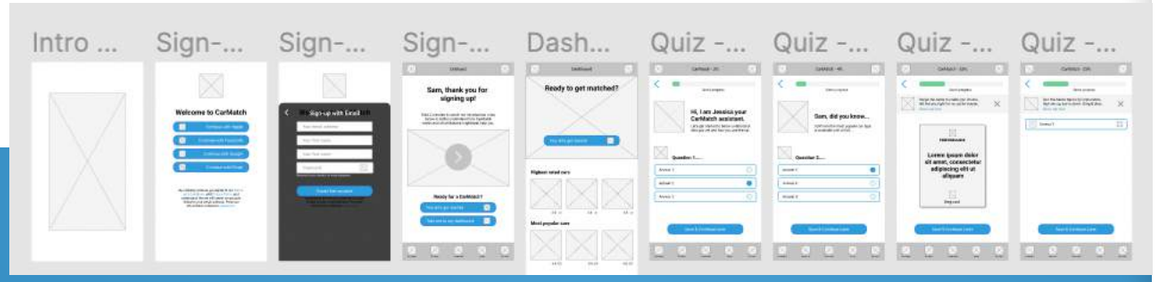
3.6 Wireframes

I decided to start the wireframing and prototyping chapter with hand-drawn wireframes trying to focus on the essential task without disruption of an application and tools. I then digitalised those (already as an iteration) into Figma where I kept developing and iterating them further. I approached our mentor for feedback and with questions several times throughout this chapter which was extremely valuable.

HAND SKETCHED



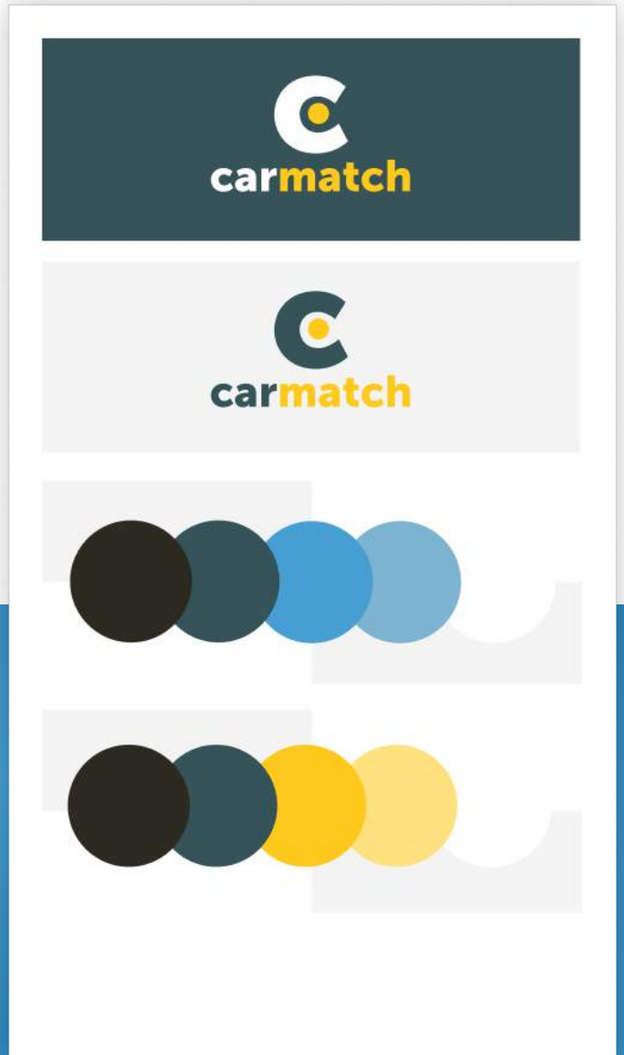
DIGITALISED IN FIGMA

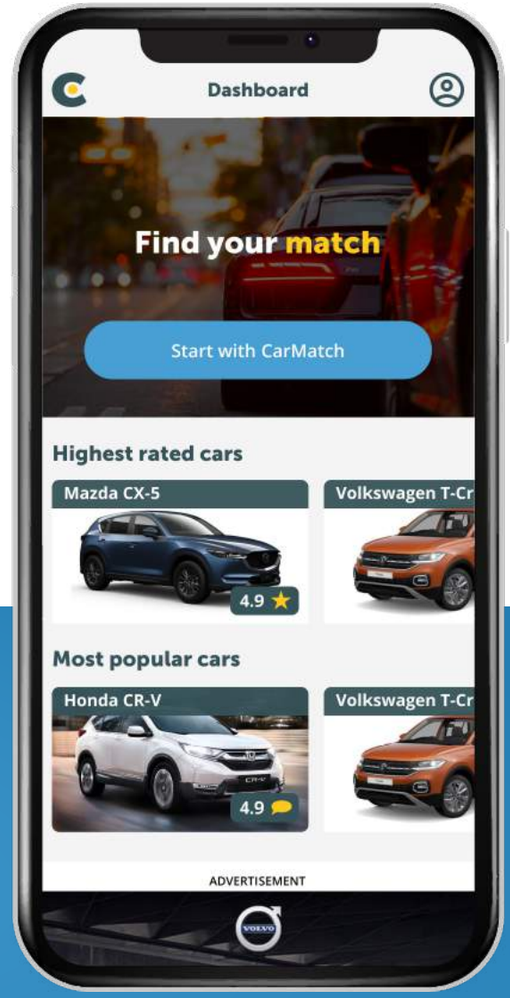


3.7 UI Design

I decided to name the brand/product ‘CarMatch’ and worked on a simple iconographic brand. The colours chosen are contrast rich and the overall design direction minimalistic and neutral to follow a “form follows function” agenda.

I also wanted to ensure to stay on track with the project framework constraints ensuring a digital startup with limited resources and time could deliver such solution.





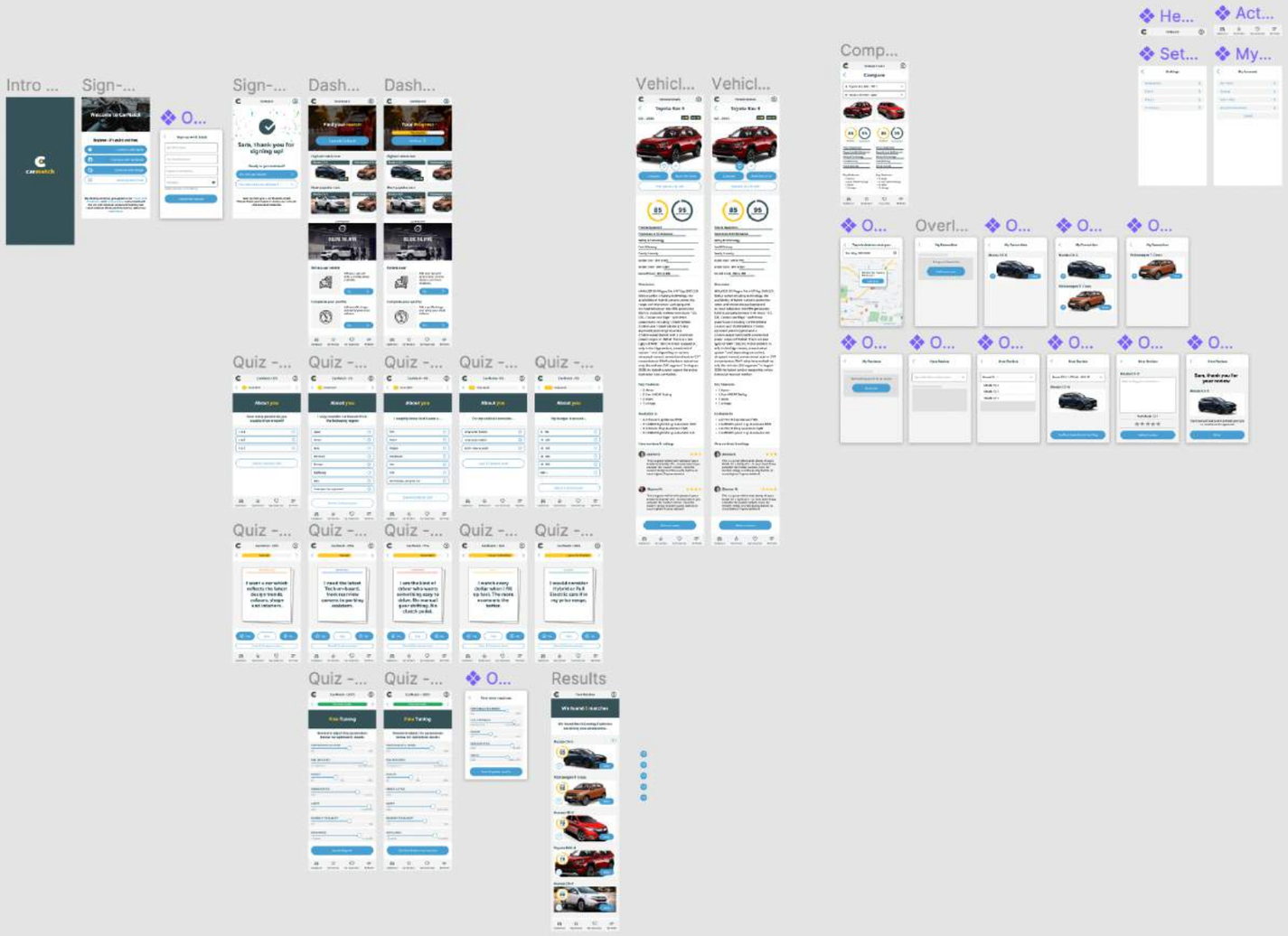
4 DELIVER

We build and test our solutions

4.1 Prototyping

From the static wireframes in Figma I created an interactive prototype with the aim for a user to step through different scenarios then used in user testing.

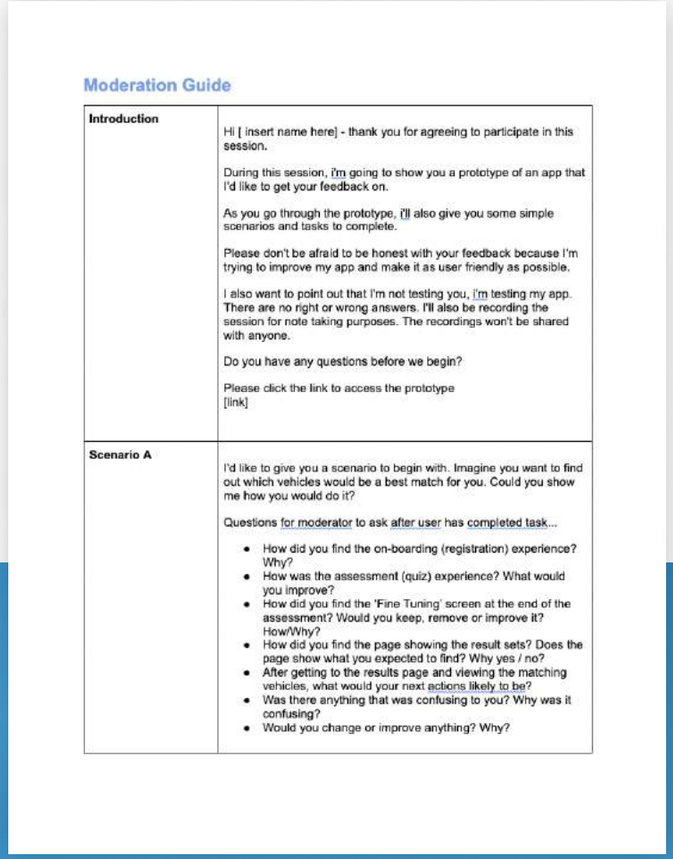
The most challenging part was to ensure good usability and flow through the quiz/assessment section. I found the use of overlays a practical solution for the user to access key information at certain stages.



4.2 Usability Testing Planning

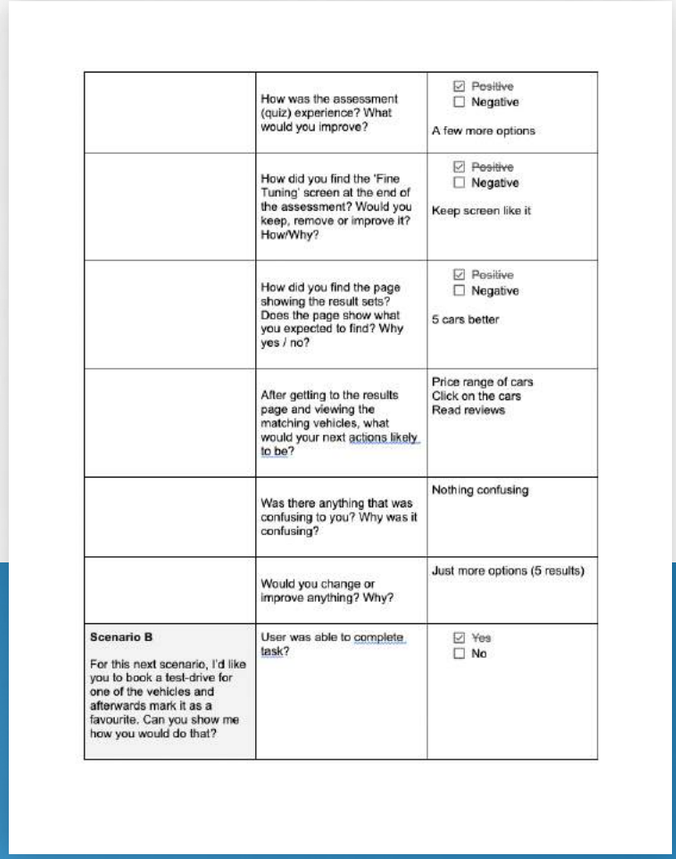
For Usability and Testing of the prototype I developed a plan consisting of 4 different scenarios the user had to go through and some quantitative question at the end of each test to gain some additional insights.

A report summarises the findings as well the items found appropriate to apply at the given phase.



Moderation Guide

Introduction	Hi [insert name here] - thank you for agreeing to participate in this session. During this session, i'm going to show you a prototype of an app that I'd like to get your feedback on. As you go through the prototype, i'll also give you some simple scenarios and tasks to complete. Please don't be afraid to be honest with your feedback because I'm trying to improve my app and make it as user friendly as possible. I also want to point out that I'm not testing you, i'm testing my app. There are no right or wrong answers. I'll also be recording the session for note taking purposes. The recordings won't be shared with anyone. Do you have any questions before we begin? Please click the link to access the prototype [link]
Scenario A	I'd like to give you a scenario to begin with. Imagine you want to find out which vehicles would be a best match for you. Could you show me how you would do it? Questions for moderator to ask after user has completed task... • How did you find the on-boarding (registration) experience? Why? • How was the assessment (quiz) experience? What would you improve? • How did you find the 'Fine Tuning' screen at the end of the assessment? Would you keep, remove or improve it? How/Why? • How did you find the page showing the result sets? Does the page show what you expected to find? Why yes / no? • After getting to the results page and viewing the matching vehicles, what would your next actions likely to be? • Was there anything that was confusing to you? Why was it confusing? • Would you change or improve anything? Why?



	How was the assessment (quiz) experience? What would you improve?	☑ Positive ☐ Negative A few more options
	How did you find the 'Fine Tuning' screen at the end of the assessment? Would you keep, remove or improve it? How/Why?	☑ Positive ☐ Negative Keep screen like it
	How did you find the page showing the result sets? Does the page show what you expected to find? Why yes / no?	☑ Positive ☐ Negative 5 cars better
	After getting to the results page and viewing the matching vehicles, what would your next actions likely to be?	Price range of cars Click on the cars Read reviews
	Was there anything that was confusing to you? Why was it confusing?	Nothing confusing
	Would you change or improve anything? Why?	Just more options (5 results)
Scenario B For this next scenario, I'd like you to book a test-drive for one of the vehicles and afterwards mark it as a favourite. Can you show me how you would do that?	User was able to complete task?	☑ Yes ☐ No

4.3 Prototype Testing

For the testing of the Hi-fi Prototype I interviewed 5 participants. I chose to try a software suggested by our mentor named Lookback as well as Zoom for these sessions.

I split the sessions in 3 and 2 as I noticed the clear need of improvement in certain parts such as the assessment/quiz after the 3rd session.

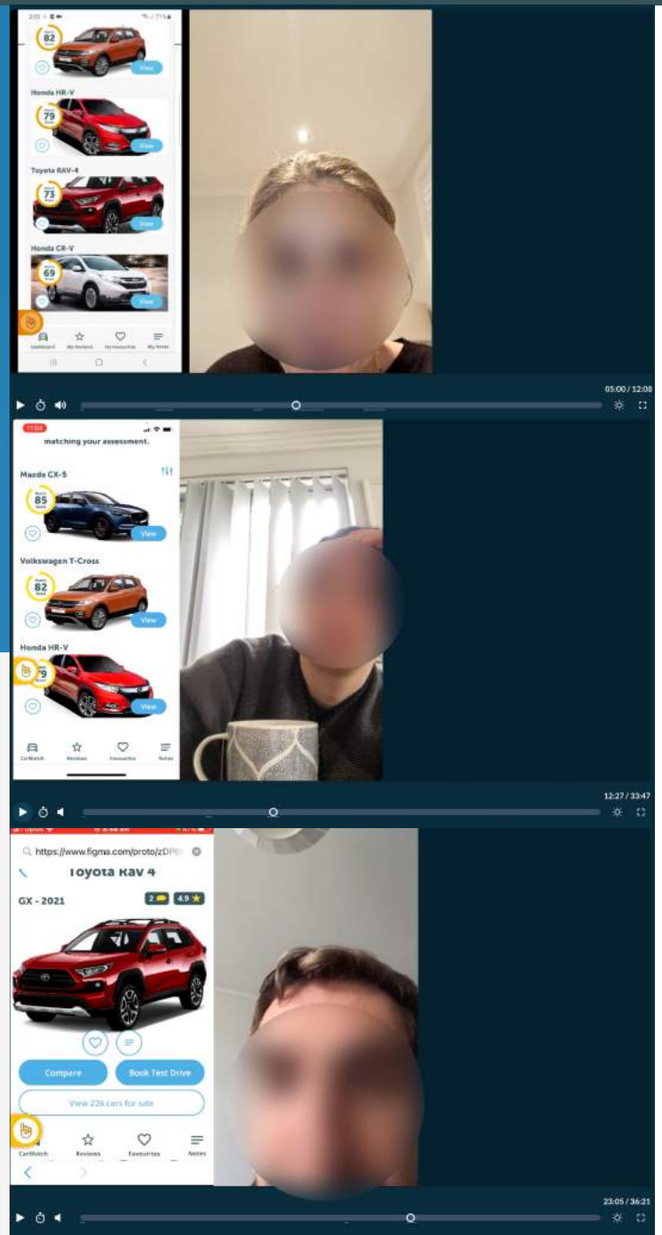
Due to COVID-19 restrictions and lock-down measures interviews had to be held using digital solutions (Zoom/Lookback) - I also used family members to gain necessary data in these restricted times.

Users Tested

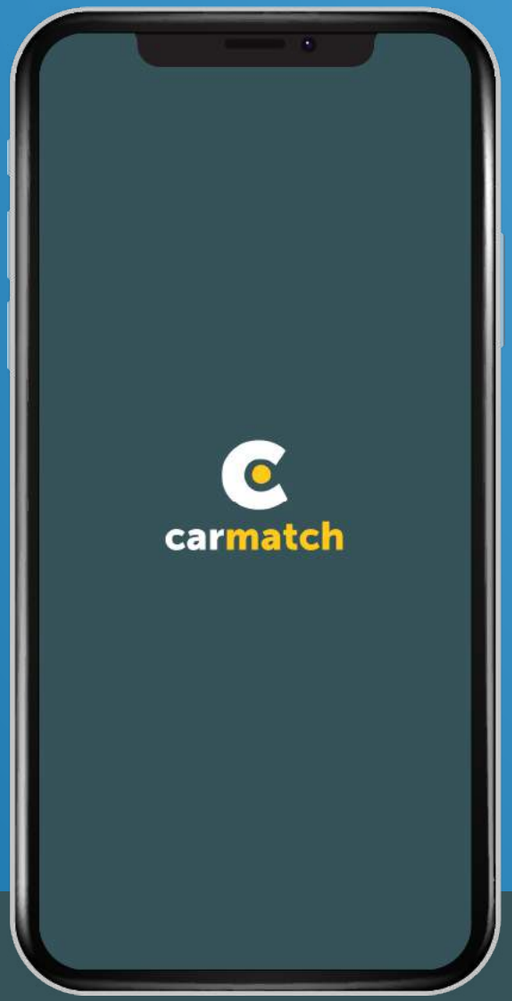
5

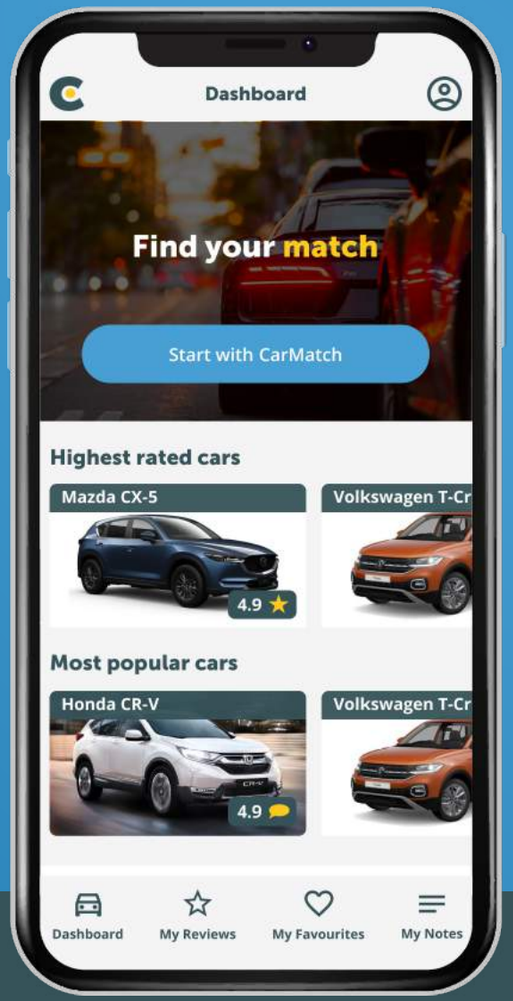
INTERVIEWEES

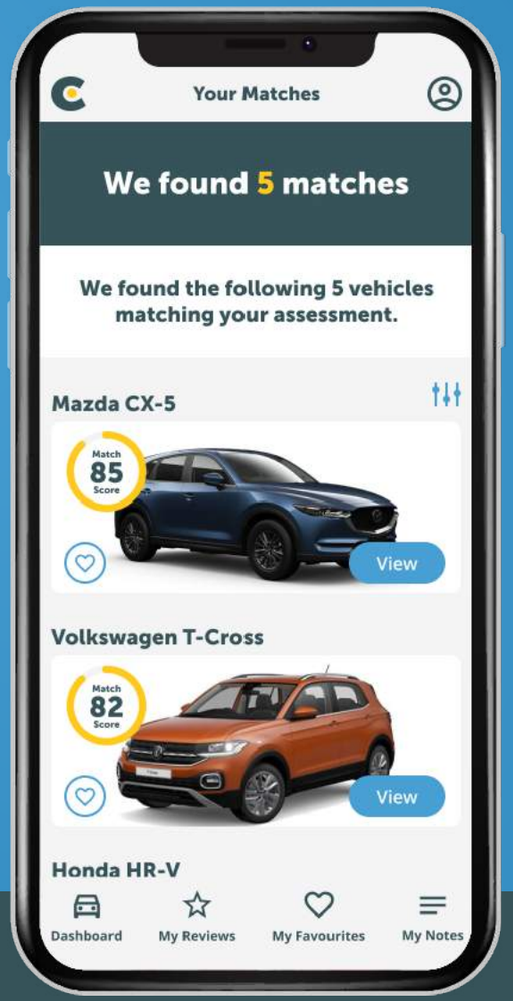
The sessions helped to gain important insights such as:
the approval of the 'Fine Tuning' thought to be too overwhelming.
all interviewees requested/expected 5 vehicles as a number of results.

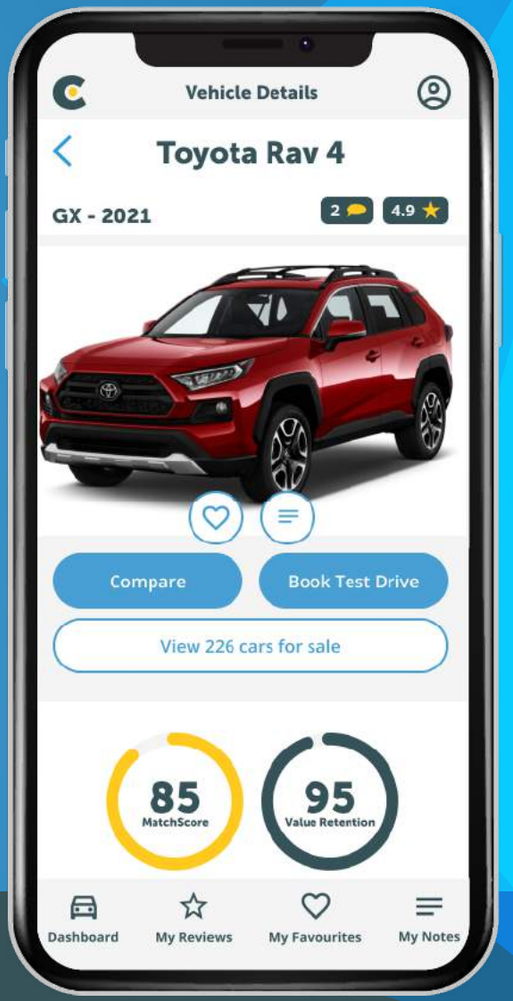


4.4 The Prototype

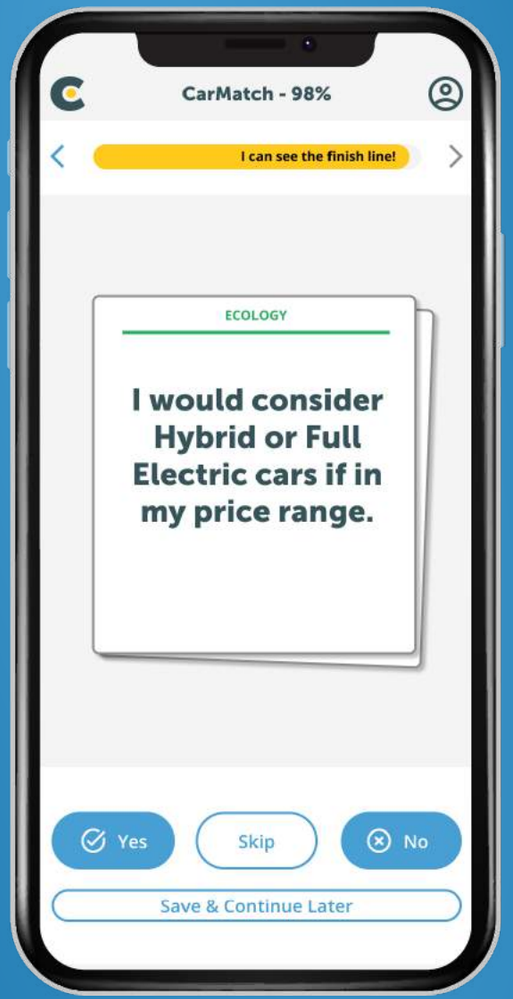








4.5 Conclusion



Based on the research performed, the lack of direct competing solutions found in Australia and the user testing results evaluated I believe the system could find a suitable niche market and succeed.

Further, testing and thoughts would need to be addressed on the development of the assessment/quiz part to make it as efficient and reliable as possible by using adequate questions ensuring a valuable result set.

Monetization is assumed to be gained through advertising though other avenues could be possible (and would need to be investigated) such as the introduction of free vs premium features.