WEB & UX DESIGN SUMMATIVE PRESENTATION

START 07/09/2018 - PRESENTATION 27/09/2018

DANIEL CLARKE

inteliHomes

CONTENTS

OVERVIEW

CONCEPT:

The project scenario that I have chosen for our UX and Web design assessment is the “Home Automation Health and Security” option. The reason I chose this scenario is because I think this is an interesting topic that I believe not many people are familiar with but is the way of the future.

PROJECT IDEA:

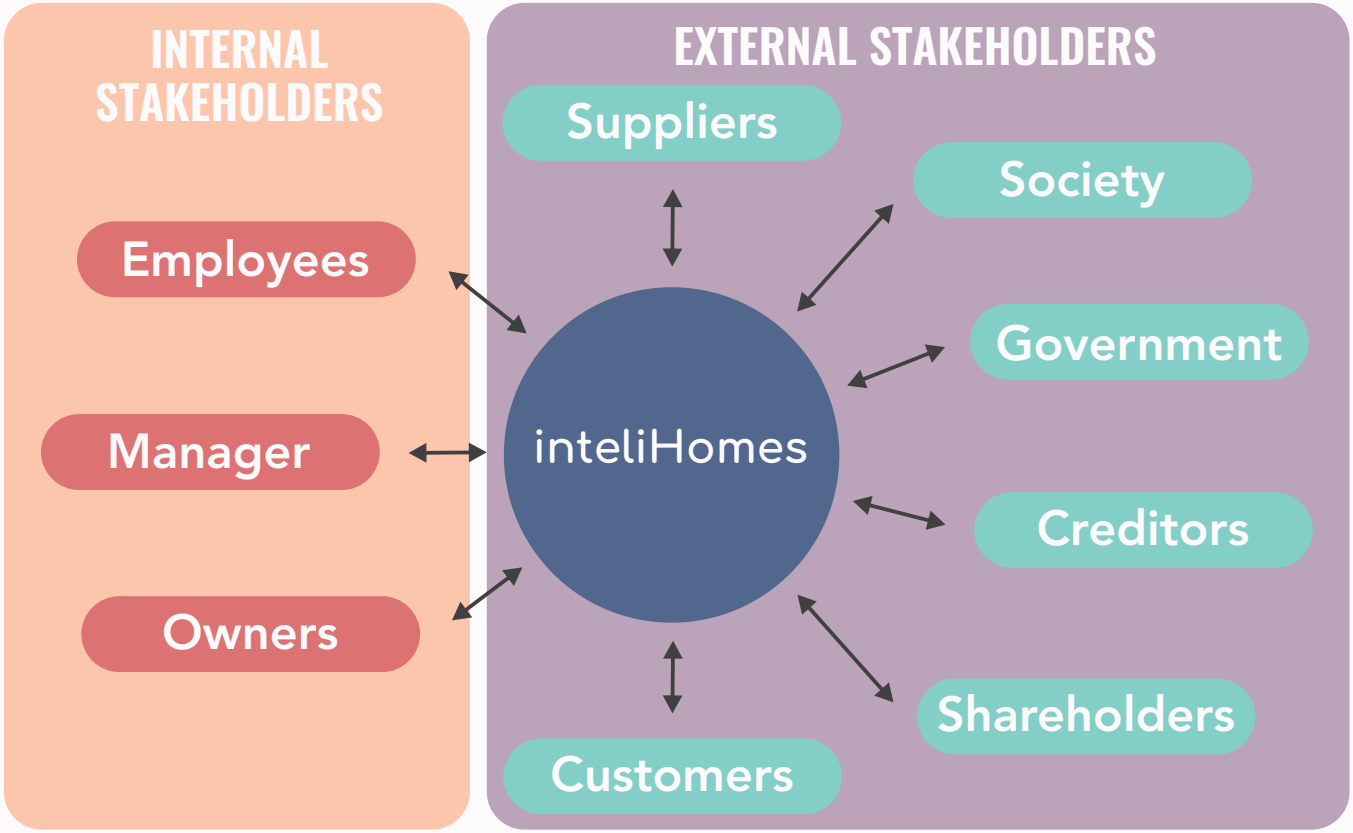
An electronics company by the name of “inteliHomes” (intelligent homes) are releasing a Home Automation service that includes these 3 categories: Security, Entertainment and Electricity, each of these Category will have their own smart devices.

Security: Camera System, door locking system and smoke alarms. Entertainment: Wifi routers, speaker assistant system and smart television. Electricity: Power usage monitoring system, climate control and a smart oven.

Each of these devices can be controlled through their downloadable web app. Wall mounted tablets will be part of the package but the web app can also be used on the smart TV and on any mobile. Mobile phones can control these devices from anywhere remotely.

OVERVIEW

THE STAKEHOLDERS OF intellihomes:



OVERVIEW

THE PROBLEM

The problems that a home automation company faces are; finding out the main user groups who will potentially purchase their product, what they would want out of the service and how to make the experience of their service more satisfactory for the user.

I plan to find out solutions to these problems by conducting an online survey, researching competitors websites and also researching other home automation web app ideas on the internet.

GROWTH

If a home automation business's planning is effective, it'll be in store for a lot of growth. Home automation has become incredibly popular, and a lot of home automation businesses are expanding to national levels and that's what "inteliHomes" is planning to do.

A home automation business owner must be an effective market analyzer. If they branch into the e-commerce world, they may need to balance profits from delivered goods while losing money from direct installation services. In general, however, a home automation business can grow a lot because of the general want for a new technology like this.

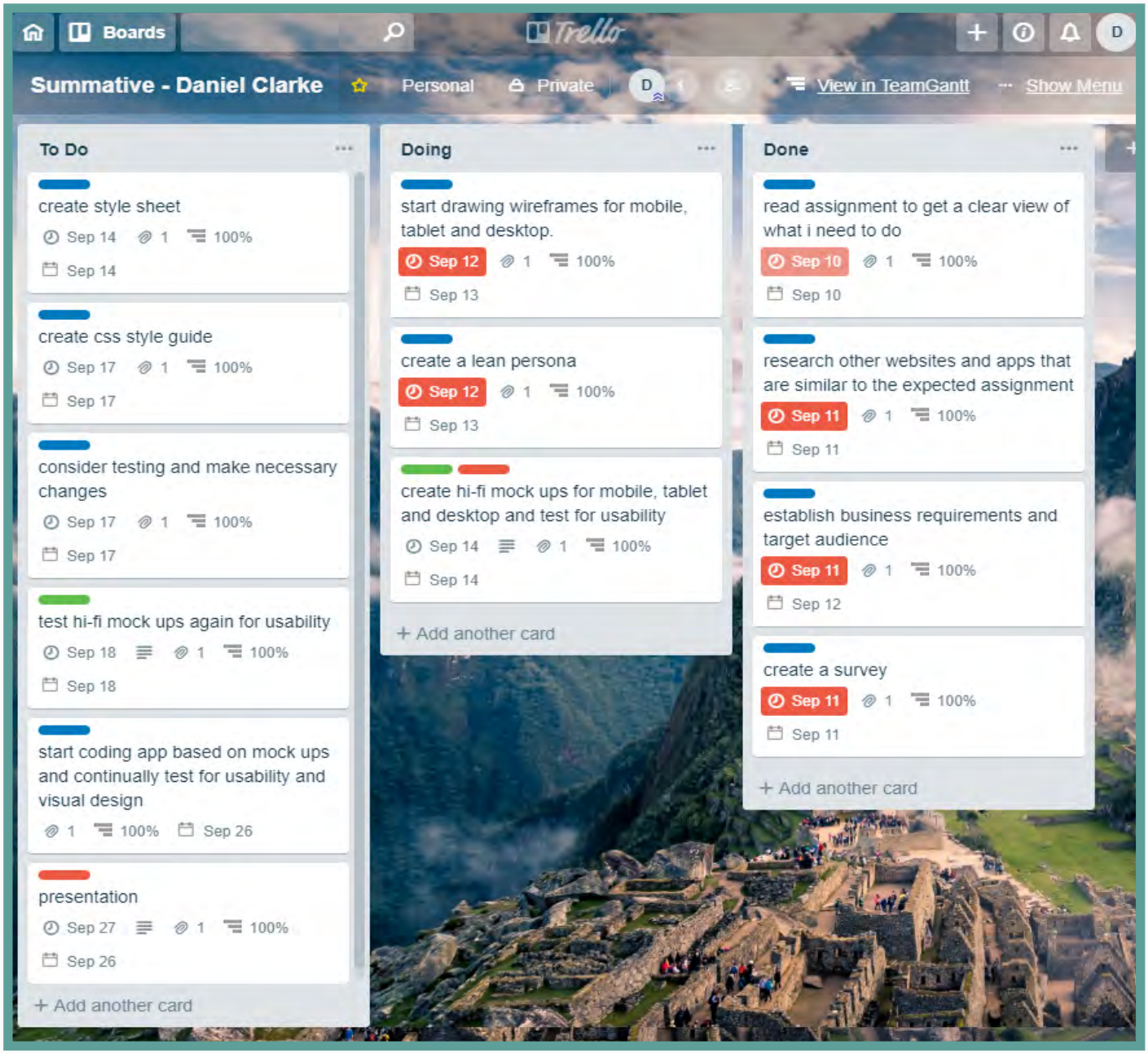
TIME LINE

TRELLO WORK PLAN:

I used an online project management programme called "Trello". This helped me keep track of each task that I had assigned myself.

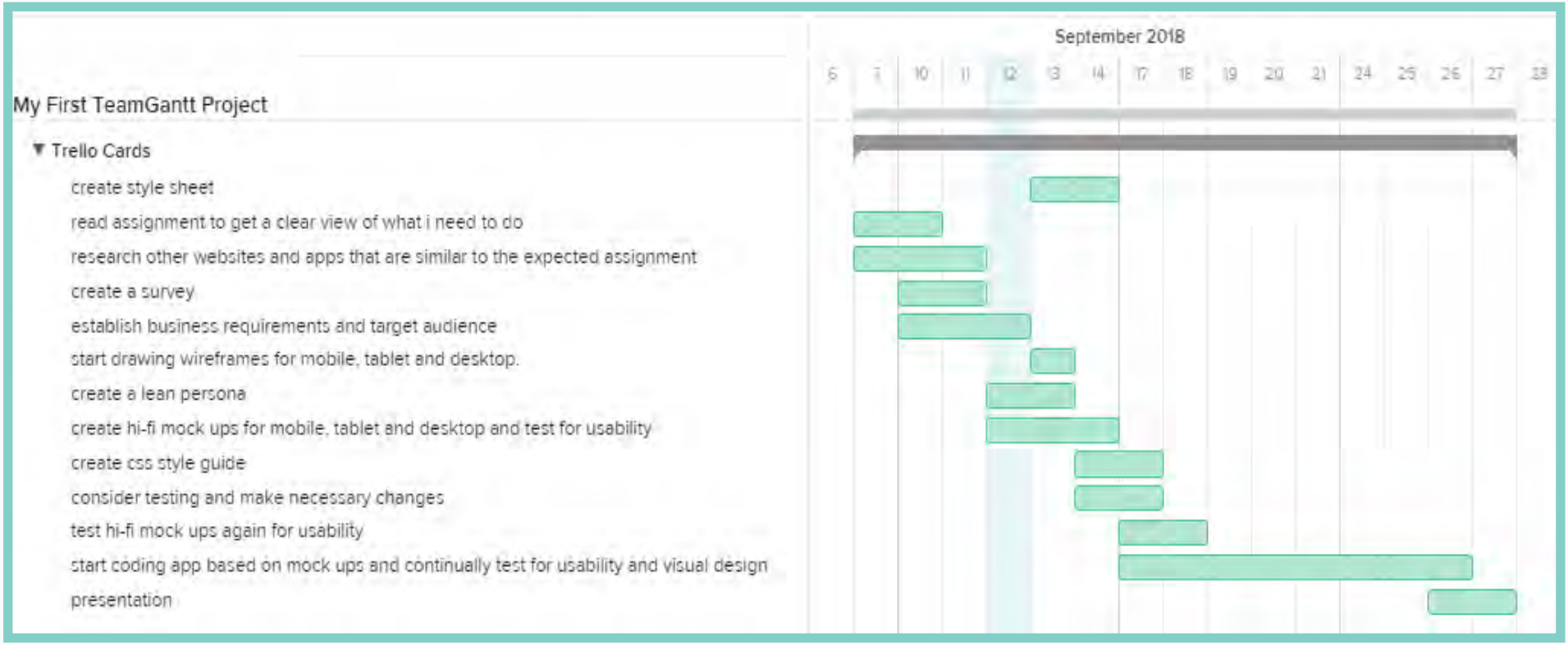
It also helped me sort which tasks where most important in real world situations e.g. general process, milestones and deliverables.

I used the key:
BLUE for general process
GREEN for milesones
RED for delieverables.



TIME LINE

GANTT CHART:



A feature in “Trello” was being able to create a Gantt chart that shows an accurate account of how long was spent on each task to be completed .

RESEARCH

SURVEY:

I created a survey based on "Home Automation" and went out to Wellington train station to get some statistics that helped me with some aspects of my web app design and persona Build.

I also put this survey on "Neighbourly Karori" to try and target an age group that would be more likely to own a house and therefore be interested in the prospect of home automation.

1. What age group are you?:
   18-24 ☐ 25-34 ☐ 35-44 ☐ 45-54 ☐ 55-65 ☐

2. What gender are you?:
   Female ☐ Male ☐ Other ☐

3. Do you own a house/rent or are a landlord?:
   Own ☐ Rent ☐ landlord ☐

4. Are you familiar with home automation?:
   Yes ☐ No ☐

5. Do you have any home automation devices in your house:
   Yes ☐ No ☐ If yes, what devices??

6. What home automation group would you find most important?
   (please give a ranking of 1st, 2nd or 3rd) :
   electricity ___ security ___ entertainment ___

7. What electricty sub groups would you find most important?
   (please give a ranking of 1st, 2nd or 3rd)
   power usage ___ climate control ___ cooking ___

8. What security sub groups would you find most important?
   (please give a ranking of 1st, 2nd or 3rd)
   camera system ___ locking system ___ smoke alrams ___

9. What home automation sub groups would you find most important?
   Entertainment: (please give a ranking of 1st, 2nd or 3rd)
   television ___ sound ___ wi-fi ___

RESEARCH

SURVEY RESULTS:

AGE GROUPS

18 - 24 : 10% 25 - 34 : 30% 35 - 44 : 50% 45 - 54 : 5% 55 - 65 : 5%

GENDER

MALE : 75% FEMALE: 25% OTHER: 0%

OWN HOUSE/RENT OR LANDLORD

OWN : 55% RENT: 40% LANDLORD: 5%

FAMILIAR WITH HOME AUTOMATION

YES : 85% NO: 15%

RESEARCH

SURVEY RESULTS:

HOME AUTOMATION DEVICES

YES: 85% NO : 15%

AUTOMATION GROUPS

ELECTRICITY 1ST : 20% ELECTRICITY 2ND : 30% ELECTRICITY 3RD : 50%

SECURITY 1ST : 50% SECURITY 2ND : 30% SECURITY 3RD : 20%

ENTERTAINMENT 1ST : 40% ENTERTAINMENT 2ND : 50% ENTERTAINMENT 3RD : 10%

The results from this part of the survey have given me the information I need to create the architecture for site mapping my web app. Security being the most important part of home automation therefore the first group to choose when arriving on the dashboard. Entertainment was the second most important and electricity being the third most important.

RESEARCH

SURVEY RESULTS:

AUTOMATION SUBGROUP (ELECTRICITY)

POWER USAGE 1ST :	50%	POWER USAGE 2ND :	30%	POWER USAGE 3RD :	20%
CLIMATE 1ST :	40%	CLIMATE 2ND :	40%	CLIMATE 3RD :	20%
APPLIANCES 1ST :	20%	APPLIANCES 2ND :	30%	APPLIANCES 3RD :	50%

The results from the subgroups part of the survey have given me the information I need to create the next part of the architecture for site mapping my web app. Within the electricity group three subgroups of home automation were asked to be ranked first, second and third. Power usage (monitoring) was the highest ranked, climate control came in second and appliances came in third.

RESEARCH

SURVEY RESULTS:

AUTOMATION SUBGROUP (SECURITY)

CAMERAS 1ST :	20%	CAMERAS 2ND :	30%	CAMERAS 3RD :	50%
LOCKING 1ST :	60%	LOCKING 2ND :	20%	LOCKING 3RD :	20%
SMOKE ALARMS 1ST :	30%	SMOKE ALARMS 2ND :	50%	SMOKE ALARMS 3RD :	20%

The results from the subgroups part of the survey have given me the information I need to create the next part of the architecture for site mapping my web app. Within the security group three subgroups of home automation were asked to be ranked first, second and third. The locking system was the highest ranked, smoke alarms came in second and security cameras came in third.

RESEARCH

SURVEY RESULTS:

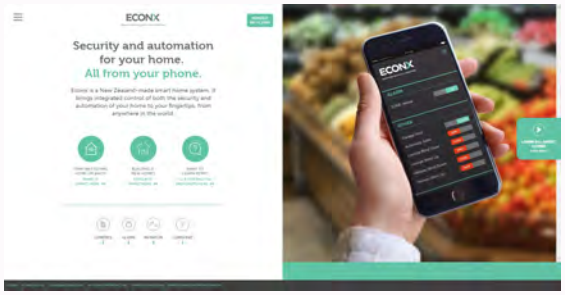
AUTOMATION SUBGROUP (ENTERTAINMENT)

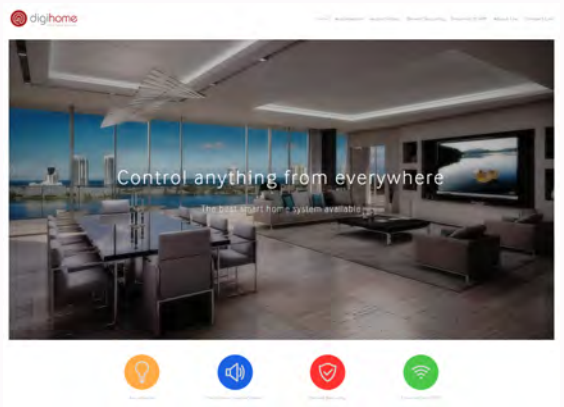
TELEVISION 1ST :	20%	TELEVISION 2ND :	30%	TELEVISION 3RD :	50%
SOUND 1ST :	10%	SOUND 2ND :	60%	SOUND 3RD :	30%
WI-FI 1ST :	80%	WI-FI 2ND :	10%	WI-FI 3RD :	10%

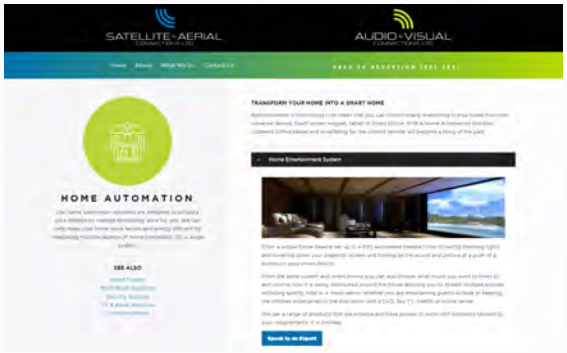
The results from the subgroups part of the survey have given me the information I need to create the next part of the architecture for site mapping my web app. Within the entertainment group three subgroups of home automation were asked to be ranked first, second and third. The Wi-Fi rounter system was the highest ranked, sound came in second and television came in third.

RESEARCH

COMPETITORS:







- I researched three New Zealand based home automation websites to try and get a deeper understanding of what home automation is, what they had to offer in terms of devices and services and also to try and get some inspiration for my web app.

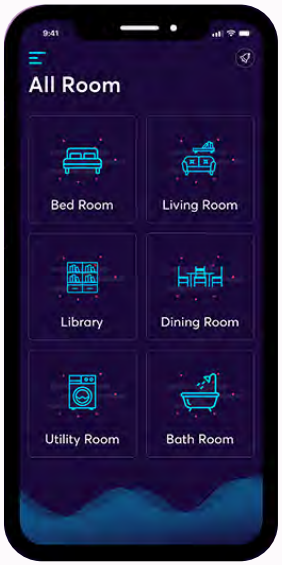
The three websites I looked into were:
- https://www.econx.co.nz/
- https://www.digihome.co.nz/
- https://www.sacl.co.nz/

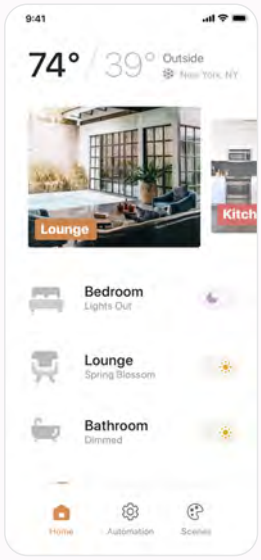
- All three of these websites offered a service that included a choice of devices ranging from security to entertainment and everything in between. They also included the installation of each device which I though was a great idea and took this into consideration.

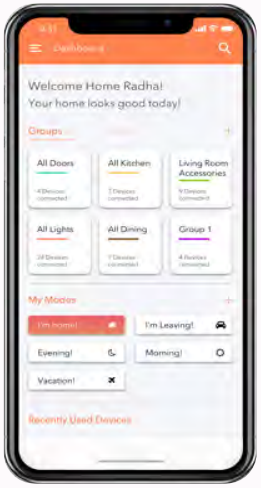
- I found the econx website the most influential as they were the only site that went into detail about how their app worked. There was a 3 minute video that showed how that service would make a users life easier and had a section that showed exactly how the app worked which I found very useful and drew inspiration from this for the design and function of my web app.

RESEARCH

INSPIRATION:







- I drew alot of design inspiration from researching home automation apps that I had found online. There were alot of well created apps and app ideas to research but I've only attached a very small sample of images to look at that helped me with different aspects of design features.

- I found through my research that most apps tended to separate the house into rooms and then have a list of how many devices were in each room, you could then access the control of each device by choosing the device itself. The control detail of each device can be very in depth and precise depending on what device is being controlled.

- I would have liked to design my app in a similar way to this but with the limited time and coding experience I decided to choose 3 main groups and sub groups to choose from and get an idea of what people found the most important through my survey questions. By doing this I could explore a smaller fraction of home automation in better detail.

PERSONA BUILD

USER GROUP 1:

Based on the survey that I put on Neighbourly Karori and face to face interviews at Wellington Train Station I was able to build an accurate persona for one of the user groups. Bruce owns a house and is familiar with home automation, he has a few devices already so would definitely be interested purchasing an inteliHomes home automation system.

BRUCE LEFTBRIDGE

AGE	38
OCCUPATION	Information Technology
STATUS	Married
LOCATION	Karori, Wellington
GENDER	Male
ARCHTYPE	Tech Dad

PERSONALITY

Extrovert — Introvert

Thinking — Feeling

Judging — Perceiving

TECHNOLOGY

- Software
- Mobile Apps
- Social Networking

MOTIVATIONS

- Weekends With The Family;
- New Technologies;
- Netflix On The Weekends;
- Working Hard.

FUSTRATIONS

- Stressful Days;
- Long Working Hours;
- Children Not Listening;
- Bad Wi-Fi Connection At Home.

GOALS

- Paying Off Mortgage;
- Spending More Time With Kids & Family;
- Going On Holiday;
- Going To The Gym.

PERSONA BUILD

USER GROUP 2:

Based on the survey that I put on Neighbourly Karori and face to face interviews at Wellington Train Station I was able to build an accurate persona for one of the user groups. Enrique currently rents a house, he is familiar and very interested in home automation. Once he owns his own house he will look to purchase an inteliHomes home automation system.

ENRIQUE SILVA

AGE	31
OCCUPATION	Product Designer
STATUS	In a Relationship
LOCATION	Khandallah, Wellington
GENDER	Male
ARCHTYPE	Hipster

PERSONALITY

Extrovert — Introvert

Thinking — Feeling

Judging — Perceiving

TECHNOLOGY

Software

Mobile Apps

Social Networking

MOTIVATIONS

- Free Weekends;
- Modern Technology;
- Partying With Friends;
- Watching Football.

FUSTRATIONS

- Not Enough Hours in the Day;
- House Being Cold When Returning home;
- The Wellington Housing Market;
- Public Transportation.

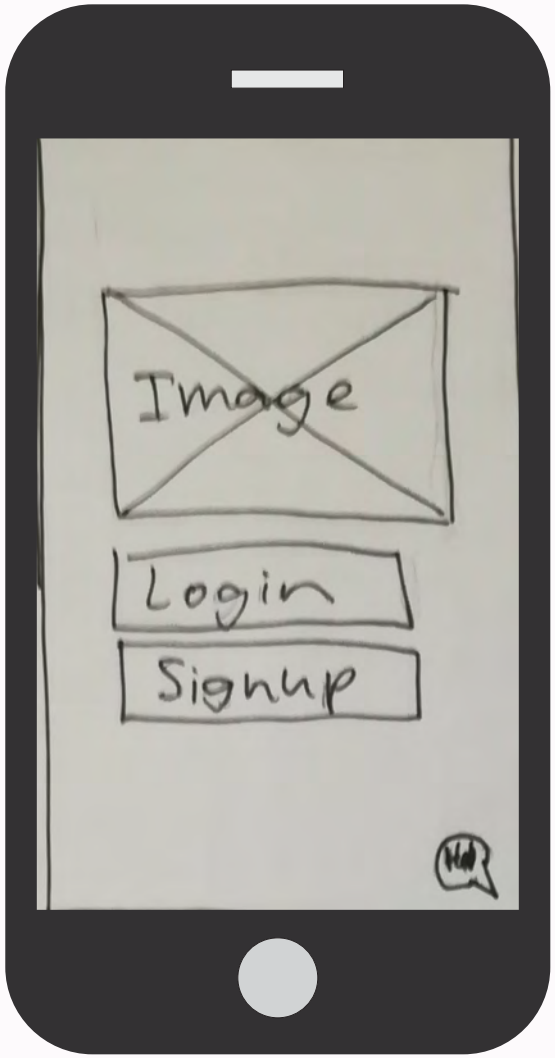
GOALS

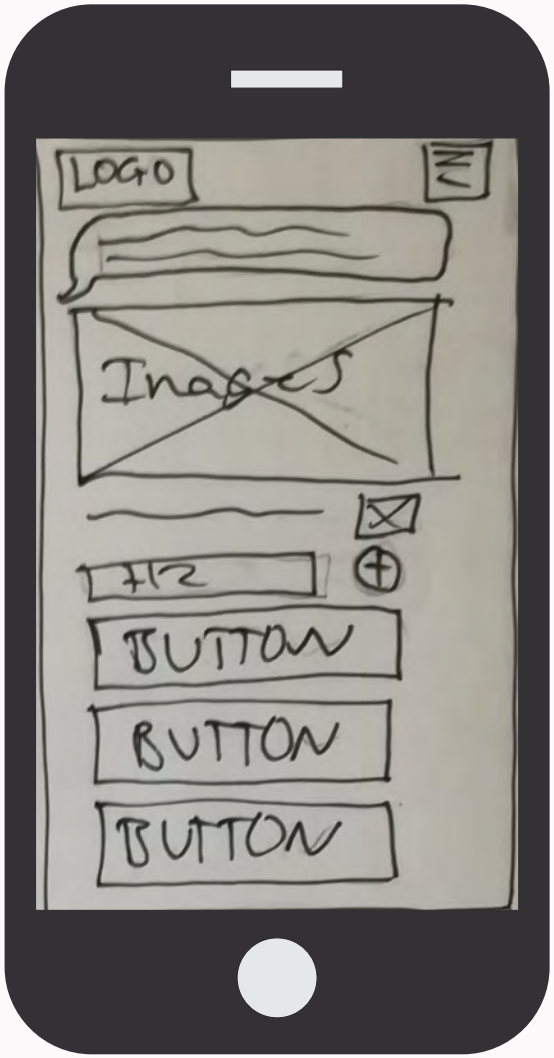
- Buying a House;
- Kitting Out The House with a Home Automation System;
- Joining a Football Team;
- Hanging Out With Friends More.


inteliHomes
“ask me anything”

WIRE FRAMES

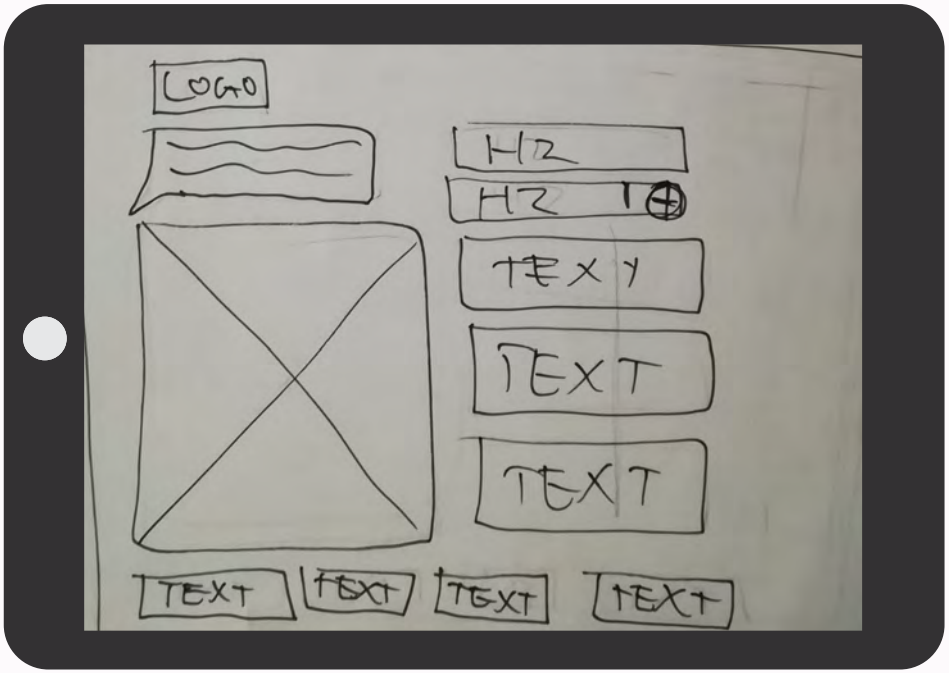
LO-FI SKETCHES MOBILE

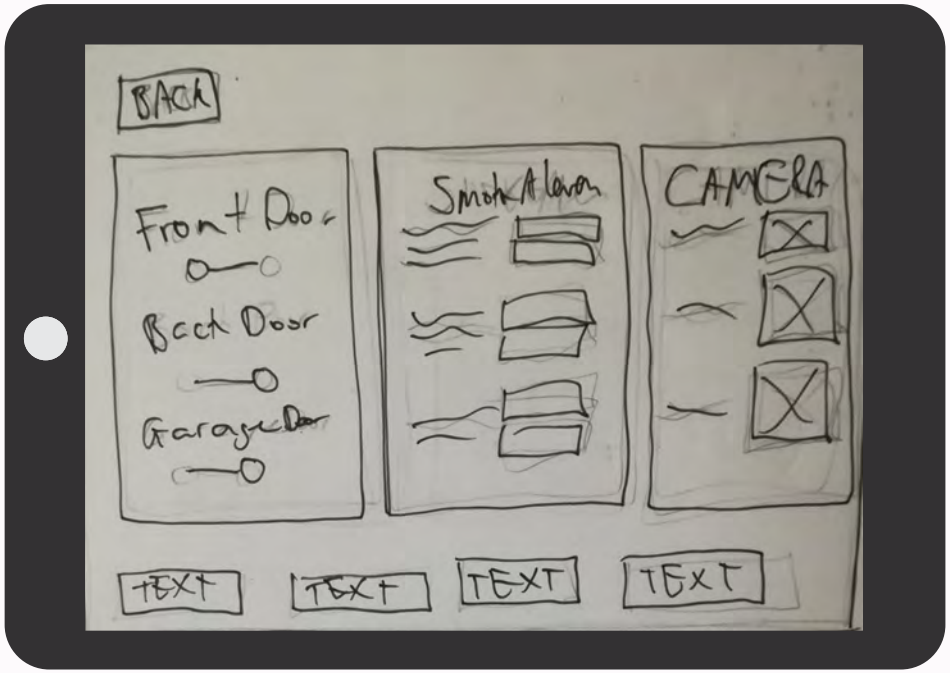




WIRE FRAMES

LO-FI SKETCHES TABLET/SMART TV

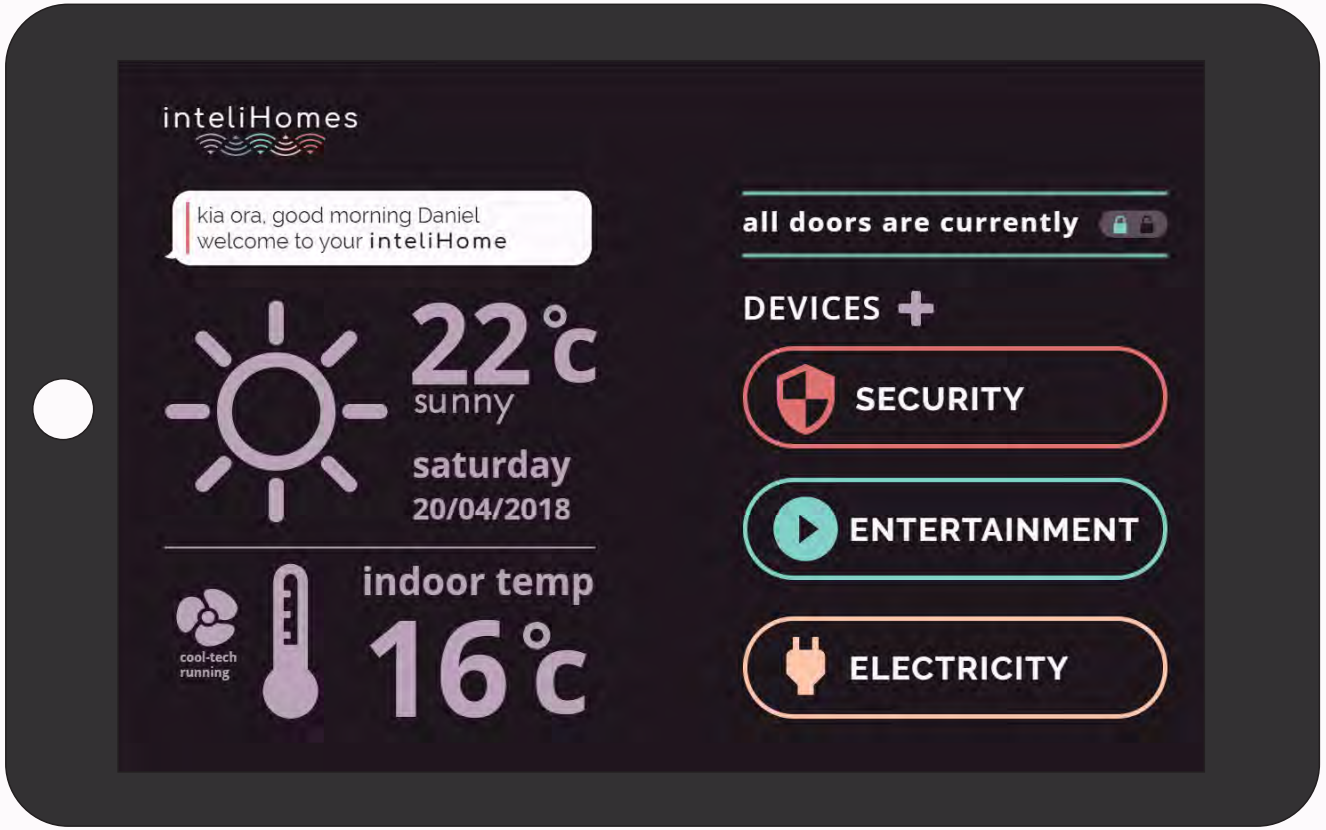




These are the initial wire frames that I sketched up for my web app designs on mobile, tablet and smart TV platforms. Many changes have been made since these lo-fi sketches.

WIRE FRAMES

HI-FI MOCKUPS



From my research into home automation web apps a dashboard/landing page that you could easily manoeuver through to control your devices was a common theme. The dash board would always include a greating of some sort and also the indoor and outdoor temperature display was also a popular choice.

inteliHomes

“intelligence in the palm of your hand”

USABILITY TEST

SCENARIO AND QUESTIONS

I tested the usability of my web app by creating a variety of scenarios and had testers run through them on UX Pin. I observed the movements of the testers and made notes as they used my web app. I then asked number of questions of overall usability and got individual feedback that helped me improve the functionality and understanding of my web app.

SCENARIOS:

1. Sign in to intelihomes.
2. View the front door camera.
3. Go back to the dashboard
4. Unlock the garage door.
5. Turn the wi-fi router in the bedroom on.
6. Set the assist speaker in the bedroom to only play music
7. Turn the living room climate control to auto and the fan off.
8. Go back to the dashboard.
9. Set the oven to bake.
10. What room is using the most electricity?
11. What is the current temperature of the house?

USABILITY TEST

QUESTIONS:

1. Are the subgroups in the correct main groups e.g. smart tv being in enterainment?
2. Is the web app easy to navigate?
3. The dashboard shows the status of all the doors that are locked is this relevant?
4. Any comments on improvements or what works well.

SCENARIO OBSERVATIONS AND COMMENTS:

While observing the testers run through the scenarios of my web app I was very pleased to see how easy they could manoeuver through it. After each scenario was presented most testers knew which button to press or where to scroll to without too much hesitation. There were obviously some moments where the testers didn't know what to press or where to go and their comments have helped me make changes to the design to make a better user experience.

All testers thought that the sub groups corresponded well with their main groups, they also noted that the web app was easy to navigate "feels like an app should feel". Everyone said that the locking notification was a good idea but a couple of comments made me re-think that part of the design. The overall comments on improvement were great and I'll take a deeper look into these next.

USABILITY TEST

CHANGES:

The main changes that I made to my design after the feedback from the usability tests are as follows:

1. Many testers commented on the colour I used for the door locking icons, I had used green for locked and red for unlocked. the testers said that they felt that green better represented open as it felt like it was green for go (open) and red for stop (locked). I made a small A/B test for this small scenario and 90% of the testers said that green was the better option for an open lock.

2. Testers commented on the heading that read “Devices” saying that they felt like they should be able to press it to add more devices. I ran another small A/B test on two different headings: “Devices” and “My Home” 80% of the testers chose the “My Home” heading more appropriate and less confusing.

3. One of the big changes I made came from the comments about the “locked doors” on the dashboard. Testers liked he idea but tried to press the locked icons that didn’t respond as that wasn’t their purpose. I have changed this section to read “your house is secure” with a big green tick to show that all doors are locked but only when you have left the house. This section of the app is now an alert that changes depending on the situation e.g. the smart oven is finished cooking, if a device isn’t connected to the wi-fi etc.

“intelligence at the touch of a button”

STYLE GUIDE

HEX COLOURS:

#1F171D

#3D353C

#FCFAFC

#BBA3BA

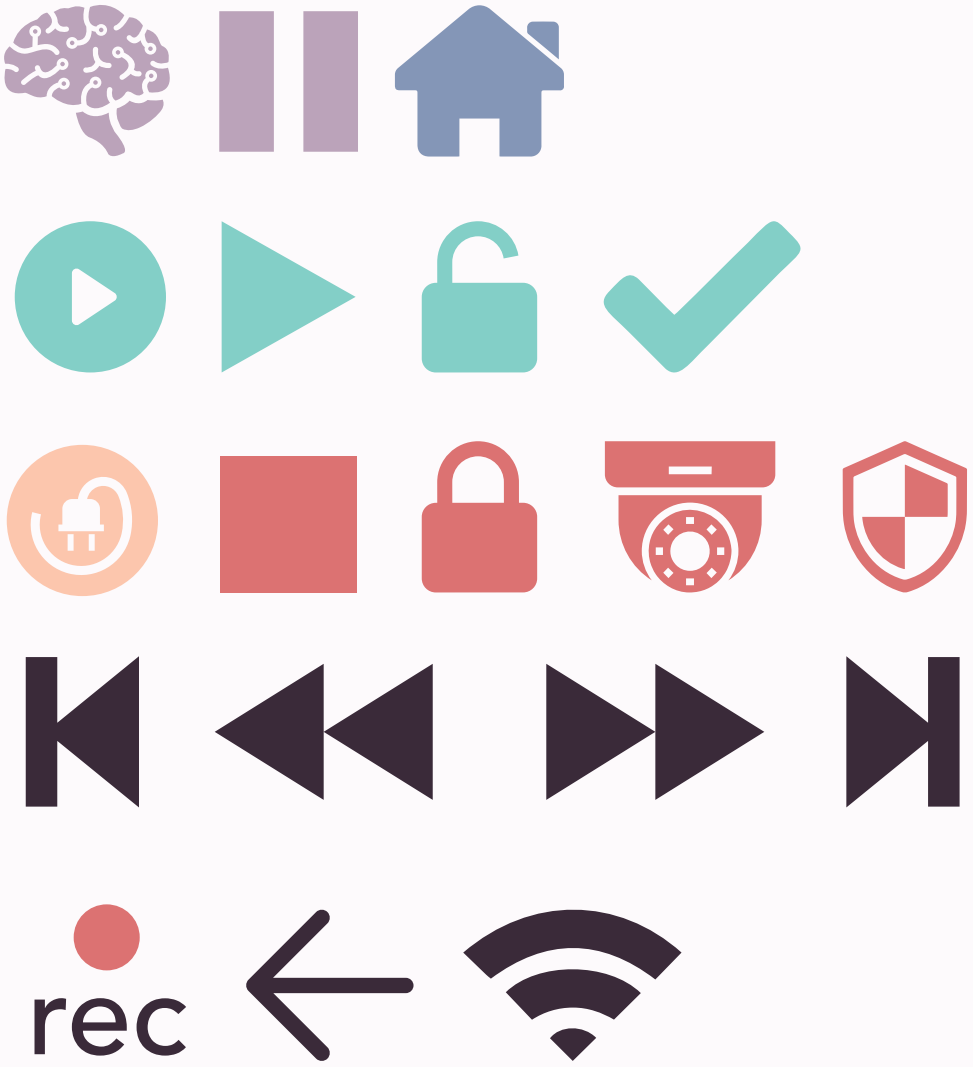
#8799B8

#83CFC7

#FCC6AC

#Dc7272

ICONS:



STYLE GUIDE

TYPEFACE:

OPEN SANS REGULAR
OPEN SANS SEMIBOLD
OPEN SANS BOLD

RALEWAY REGULAR
RALEWAY MEDIUM
RALEWAY SEMIBOLD
RALEWAY MEDIUM

LOGO DESIGN:

inteliHomes

(comforaa regular font)

I based the design of my logo on the repetitive wave (poipoi) pattern that is prevalent in Maori culture, carvings and artwork. By utilising the common wifi icon I was able to replicate a wave pattern by displaying them side by side alternating between upside down and right side up.

STYLE GUIDE

CSS METHODOLOGY:

SASS PARTIALS:

_cameras.scss

_dashboard.scss

_electricity.scss

_master.scss

_navAndHead.scss

_securityMain.scss

_signIn.scss

_variables.scss

_dashboard.scss

style.scss

_tablet.scss

VARIABLES:

```
$darkBurg: #1F171D;

$teal: #83CFC7;

$red: #DC7272;

$yellow: #FCC6AC;

$purple: #BBA3BA;

$blue: #8799B8;

$white: #FFFAF7;

$light: #ddd;

$mid: #aaa;

$dark: #555;

$darkPurp: #3D353C;
```

STYLE GUIDE

CSS METHODOLOGY:

BEM BLOCK CLASSES:	BEM ELEMENTS CLASSES:	BEM MODIFICATION CLASSES:
.sign	.sign__submit	.sign__submit--purple
.dashHead	.dashHead__logo	
.welcome	.welcome__kiaOra	.welcome__kiaOra--change
.sunny	.sunny__pic	
.secure	.secure__tick	
.myHome	.myHome__text	
.security	.security__text	
.entertainment	.entertainment__text	
.electricity	.electricity__text	
.containLock	.containLock__ext	
.containSub	.containSub__text	
.pageHeadingl	.pageHeading__text	.pageHeading__text--small
.camContain	.camContain__pic	
.live	.live__text	
.containPlay	.containPlay__control	

STYLE GUIDE

CSS METHODOLOGY:

BEM BLOCK CLASSES:

.cost

.roomControl

BEM ELEMENTS CLASSES:

.cost__used

.roomControl__touch

BEM MODIFICATION CLASSES:

.sign__submit--purple

BEM BLOCK CLASSES:

```
@import "variables";
@import "master";
@import "signIn";
@import "dashboard";
@import "navAndHead";
@import "securityMain";
@import "cameras";
@import "entertainment";
@import "electricity";
@import "tablet";
```


“your intelligent home”
inteliHomes
your house is secure
MY HOME
SECURITY
ENTERTAINMENT
ELECTRICITY
22°c
sunny
saturday
indoor temp
16°c
inteliHomes