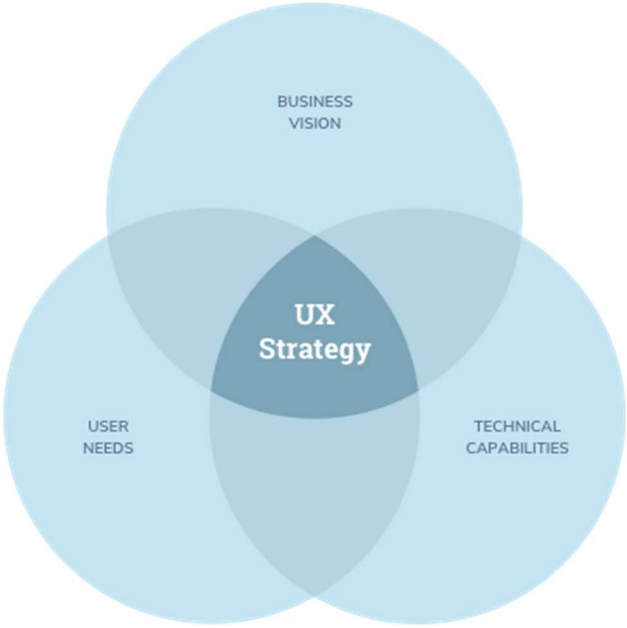
subASSIST
UX RESEARCH DOCUMENT - CS104

INTRODUCTION

STRATEGY

"UX strategies help businesses translate their intended user experience to every touchpoint where people interact with or experience its products or services. A solid UX strategy ensures that the business vision, user needs, and technical capabilities are aligned and helps to prioritize a team's attention and resources by keeping them focused on solving the right problems for target users".
MentorMate (2018)



RESEARCH

The research phase of a project serves many purposes. It is meant to help you understand the market space, the users, their needs, and their goals. You can look at it as the steppingstone towards defining the requirements for the product you are about to design.
UX Collective (2020)

ANALYST

The analysis phase aims to draw insights from data collected during the research phase, moving from "what" users want/think/need to "why" they want/think/need it. During this phase, designers confirm that the team's most important assumptions are correct.
The UX Design Process: Everything You Need to Know the UX Design Process:
Everything You Need to Know (2020)

INDEX

Strategy

STRATEGY

1. Brief and Scenario.
2. Understanding business, user requirements, and technology requirements.
3. Defining goals and objectives.
4. Project plan.

- Interview with the owner.
- Project plan.

Research

RESEARCH

1. Assumptions.
2. Competitors Analyst.
3. Pain Points.

- Observations when a real user tries to the website.

4. Questionnaire / Survey.
5. Persona.

Analyst

ANALYST

1. Summarize collected data.
2. What needs to be fixed with the website (features and fixes)
3. Clear planning and explanations were given with Gantt chart and timeline.
4. IA and organize site information (Card sorting)

STRATEGY

Brief and Scenario.

My client, Sam, and his Building & Construction Company. He has been in construction for the last 10 years and has now gone out on his own. There are a few areas that he has expressed wherein having a small construction business.

Business requirements:

Sam's business is to provide his customers with cost-effective, high-quality new home buildings. Alterations/renovations to existing dwellings.

Target audience:

Sam's target audience is Residential builds, new and old alterations, and mainly in the local area. Sam tries to avoid Commercial builds as his company is only small now consisting of 3 other workers. His target area is local (Diamond Harbour) as it can be more cost-efficient to build locally.

Main goals for the app:

Sam's main goals are to grow his database of local and Christchurch tradies so when he needs them and have a cleaner interaction from his website to social media platforms

The main thing you want users to be able to do on your app:

Sam wants 'subASSIST' to be a place to view, book the needed tradesman at any given time, generate invoices and quotes on the fly with a clean interaction from his website to social media.

Project plan:

The gantt chart is created to optimize workflow and ensure project planning is as efficient as possible. Above is the gantt chart for our project for UX research & Analysis on 'subASSIST.

Kickoff meeting and interview with a Contractor

An interview with the local builder Sam Hemapo was conducted by Mark Pepere and below was the feedback from questions we as a group created.

What do you like about your current way of finding other contractors and booking them?
Typically, it's word of mouth, I do have an advertisement in the local paper too.

What is most important for you in the process above?
Face to face or over the phone contact with a new client to personalize the connection.

What do you dislike about this process?

- *Not getting contact details.*
- *Not having prices displayed.*
- *Having no response from them after the first contact*

What is your target customer?

- *People looking for new Residential Buildings.*
- *People looking for renovations on their current dwelling.*
- *Doesn't want to Commercial projects now (Not big enough)*

What type/level of work is the focus on?

- *Residential Buildings*
- *Small alterations*

How do you find communication between your business and social media?
I have not put too much time and effort into social media advertisement.

How do you find analytics, and do you get enough information?
He doesn't get info about who, where, and how people navigate his page and would like to have that info.

What are your colour preferences?
Colour Preferences are to match the business colours.

Feedback conclusion and initial comments

After talking with Sam the Builder there is a clear market for an application to streamline the connection from contractor to the business management side of things.
Sam has expressed his dislike of having to do a full day of work and then come home to do more business management bookwork. Sam has also expressed that when he is looking to outsource work and find a subcontractor there can be some challenges as
My target audience will be focused on small to medium-sized businesses at the moment where larger businesses will already have a fully functional ERP software system in place.
There are some areas where Sam feels he could utilize technology to optimize the flow of his business that are not being met yet.

RESEARCH

Assumptions

Positives:

Face-to-face contact with clients building rapport.
Full control over the books and accounts
Some use of the grid principle has been applied.

Owners pain points:

- Connection. Sam has a hard time doing paperwork after a full day of work
- Quality. Sam has a hard time finding Quality and skilled tradespeople
- No all in one. There are no all-in-one products out there when it comes to software.

Assumed Negatives/Pain Points:

- The accounting package that Sam uses is not designed for construction it is more made for bigger businesses.
- He must manually add items into his accounting package like different types of timber and prices associated with the timber but the next time the item is updated he has to manually edit that item. He has hundreds of items he purchases and uses every month.
- Navigation through his ERP software can be trying at times.
- Having to keep all business cards and there are a few (Paper copy)
- Storing all paperwork in big filing cabinets can be a bit much for him.
- Having rain stop his company from working can be frustrating.

User cases

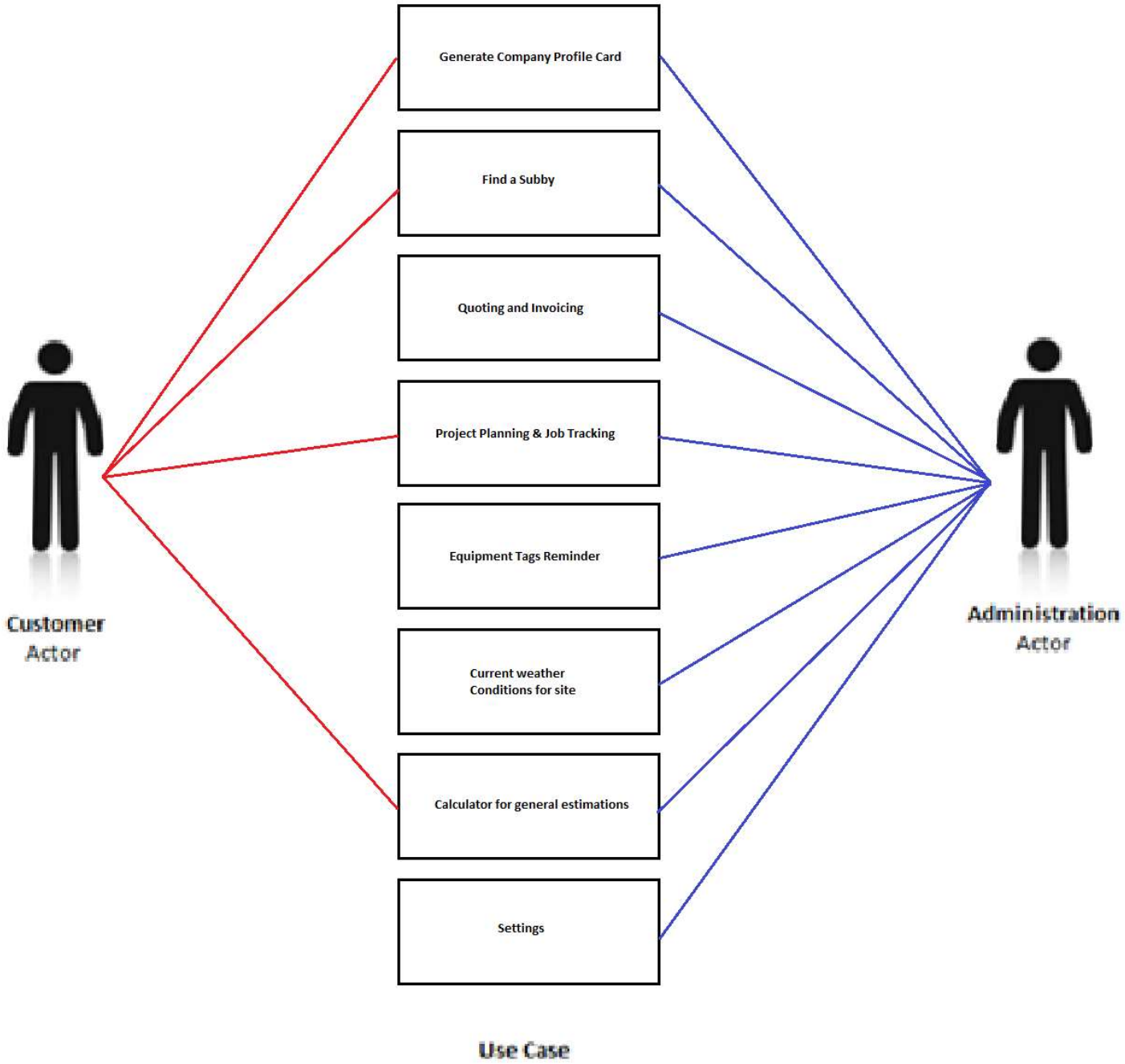
The use cases were used to brainstorm and obvious problems the users might have had with the site to come up with solutions to these problems before the site redesign begins

User stories.

1- Sam Sommer *is a* builder *who needs* a locale quantity surveyor *because* he wants to get to have plans *that he is* pricing measured up fast.

2. Peter Thompson *is a* Plasterer *who needs* a Painter *to* finish and paint *the* client's house *before the* closing date.

Use case diagram



Problems and goals

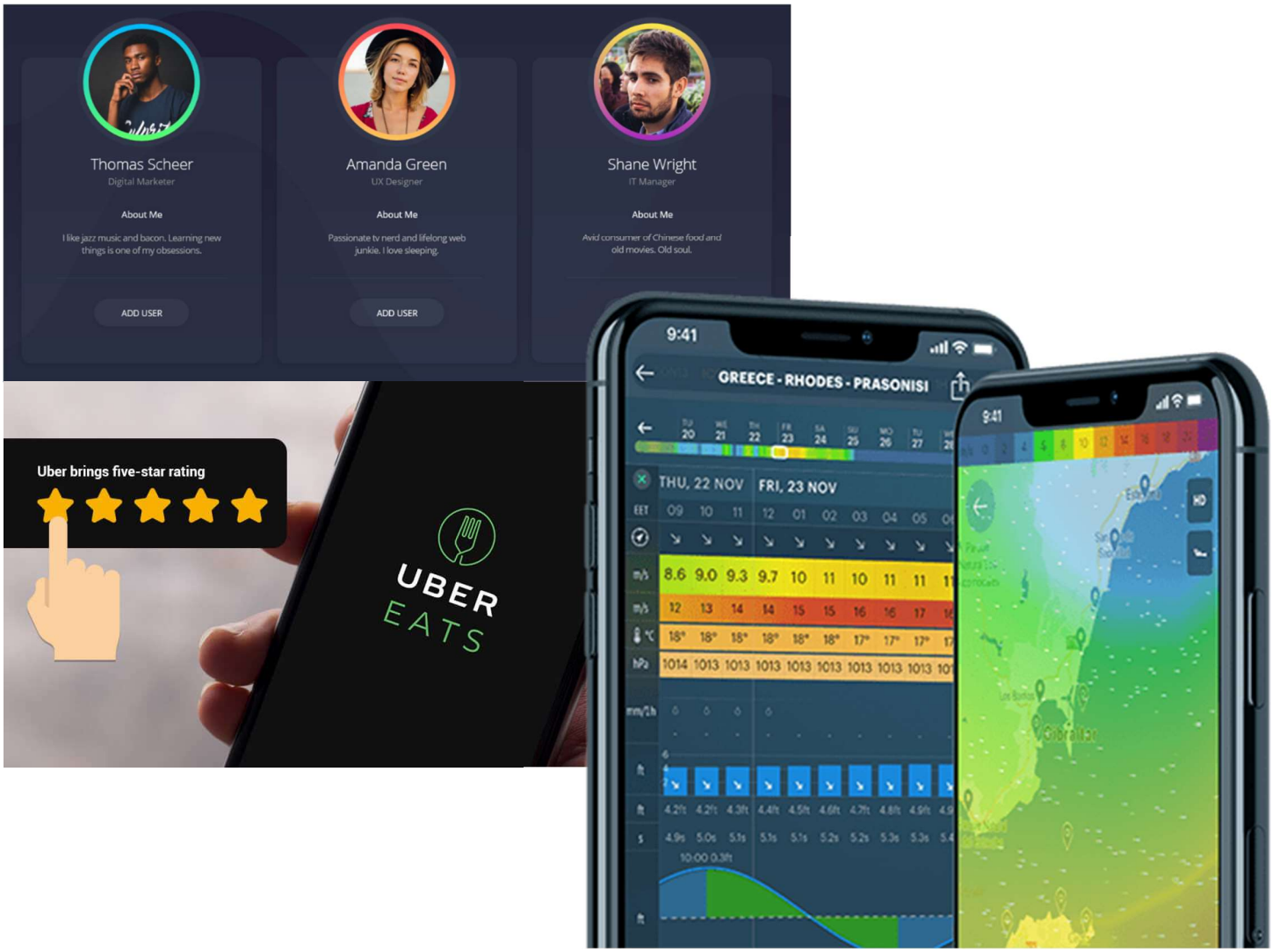
Problems:

- Difficult to find a locale and reliable contractors
- Quality of craftsmanship
- A lot of accounting packages out there that just don't cater to small to medium-sized construction companies

Goals:
Designing an app that allows users to find available sub-contractors in the locale area with a good reputation in advance.

Problems and goals
As the sole designer, I was responsible for the entire design process, from conception to completion which included:

Inspirations



Uber eats

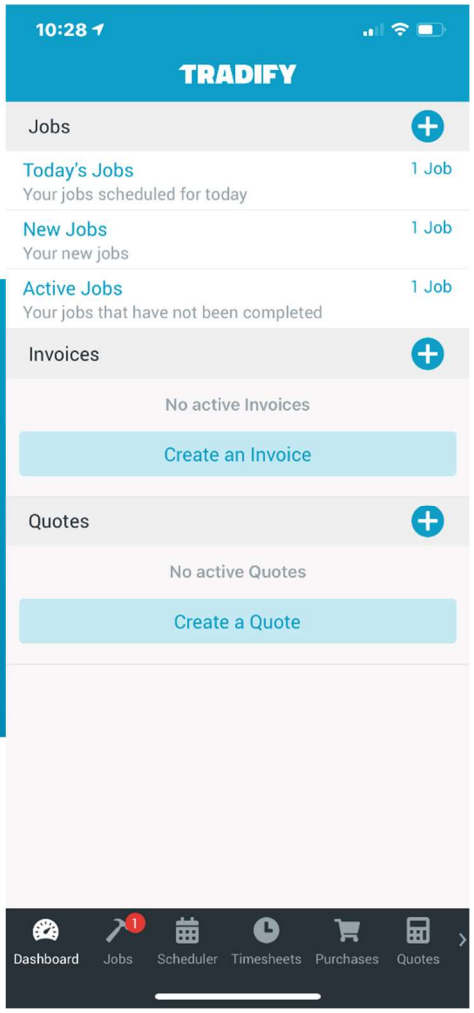
I think the uber eats 5-star rating system would be a great implementation on the profile business card, this would ensure that contractors that use this app would have feedback from previous contractors and clients.

Windy.com

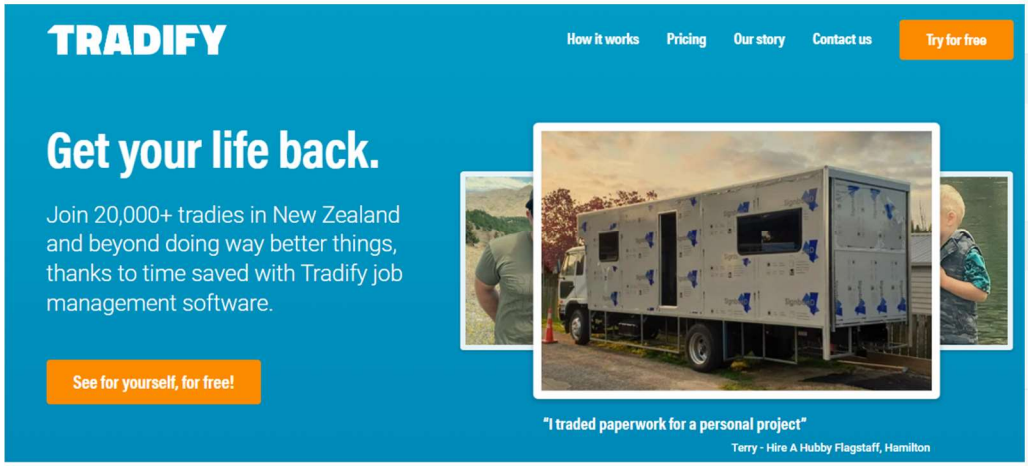
This app is amazing, it is pure and simple and does only a small number of functions but performs them well. I like the visual look and design of this app. There are some features in this application that I would like to implement within my weather app.

Competitors Analyst

The 3-competitor website that we chose to compare are as follows:



1. **Tradifyhq -** https://www.tradifyhq.com/nz
   Tradifyhq(2020)



Strengths

- Chatbox in the bottom right-hand corner for quires or feedback
- Good use of negative space.
- Typography is clearly ordered.
- Navigation is clear and well thought out.
- Autoplay carousel
- Pricing options displayed with dropdowns and a clear pricing format

Weaknesses

- Left and right arrows on header picture (Would prefer dots)
- The top 4 menu button is inconsistent, 2 are hyperlinks.
- Overlapping images

Opportunities

- Social media links
- There are a lot of good photos on the site but the layout could be optimized into better dropdown menus on the home page

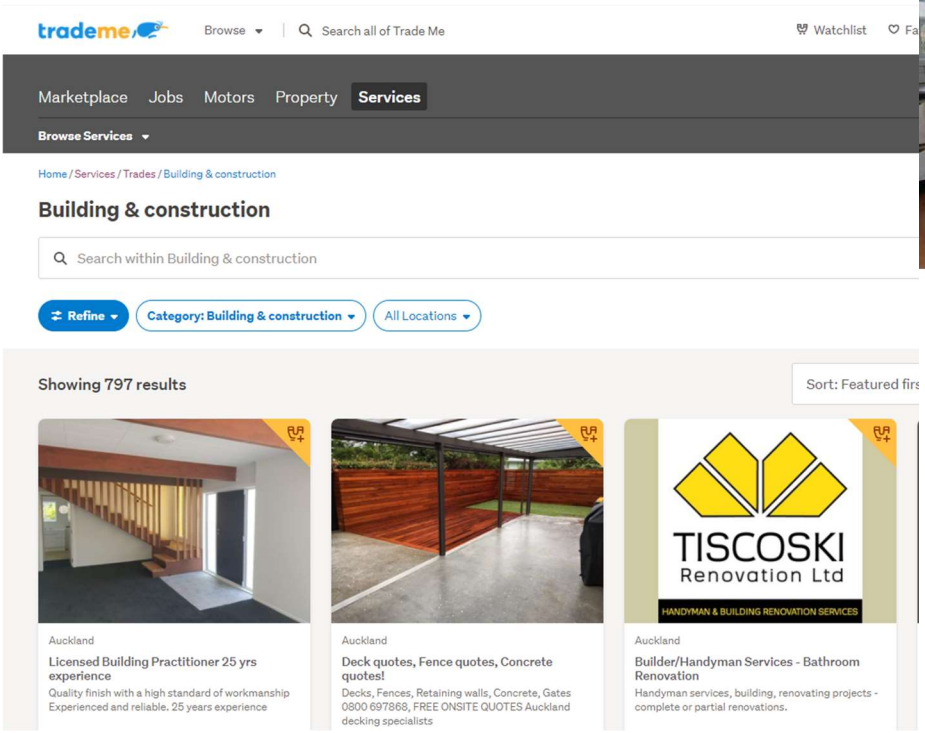
Threats

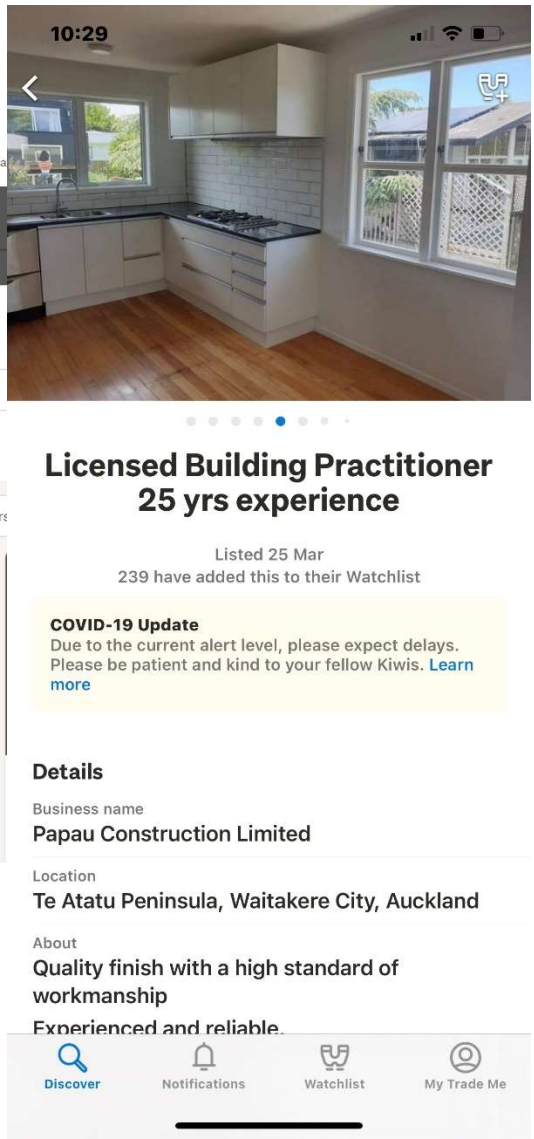
- The search function is not the best as it's a hit or miss on receiving the information you are looking for even if the keyword you have searched is on the site

Summary

The first app that I looked at was tradify (*Tradify, 2014*). This app was genuinely nice to look at with clever, thoughtful use of white/ negative space. The home page has utilized an auto-play carousel with wayfinding (an arrow that suggests you can scroll down) overlapped on the images. Navigation is clear and I can find everything within 3 clicks. Typography is clearly ordered, constant, and follows a typographical hierarchy. Clear use of Buttons and text throughout the app allows further exploration if the user wishes but everything can be accessed from the top navigation. My favorite part of the app is the drop-down hamburger menu that allows instant access to tradify's work how it works.

2. **Trademe -** https://www.trademe.co.nz/
Trademe (2020)





Strengths

- The site is very minimalistic.
- Navigation anywhere in 3 clicks.
- Good use of negative space.
- Typography is clearly ordered.
- Navigation is clear and well thought out.
- Autoplay carousel.
- Pricing options are displayed with dropdowns and a clear pricing format.

Weaknesses

- The sizing and header fonts are inconsistent.

Opportunities

- Under contact information there is nowhere for the user to enter contact information, better analytics could be gathered if there was
- More clearly displayed social media links.

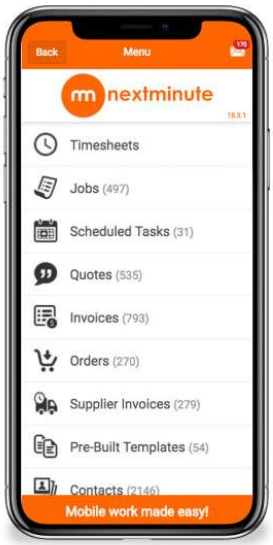
Threats

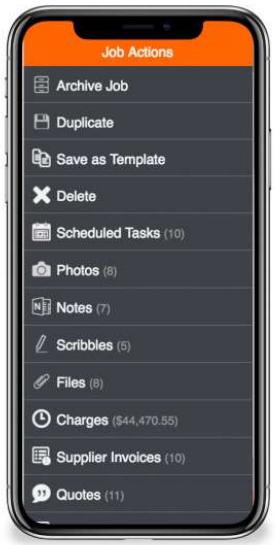
- There are no forms for feedback and user's analyst

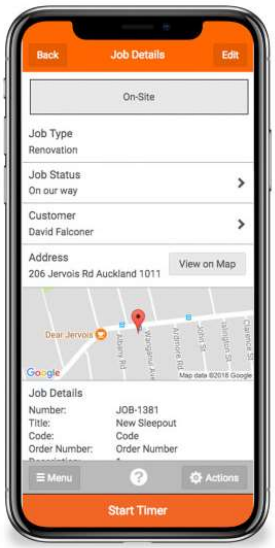
Summary

The second app that I visited was the TradeMe. The home page was set out very well with a clear direction of navigation to where you wanted to go. This app offered everything needed but ERP software. There was no accounting done from this app. Taking with a lot of contractors, not too many had heard of this app sub-function within TradeMe maybe due to advertisement.

3. **Next Minute -** https://nextminute.com/
Next minute (2020)







Strengths

- Great use of hero images.
- Simple and great navigation.
- Navigation anywhere in 3 clicks.
- Navigation is clear and well thought out.
- Autoplay carousel.
- Good use of negative space.

Weaknesses

- No payment options

Opportunities

- Allow users payment options ie click and collect/click and deliver

Threats

- There are no forms for feedback and user's analyst

Summary

The third app that I reviewed was Next Minute. The use of hero images and section made for a clean and crisp feel. The navigation was traditional and fix at the top of the page, allowing the user clear pathfinding. The theme is consistent throughout pages with minor changes such as grid views for images, scrolling animation. The app processed quickly and was well labeled to ensure the user can find relevant information.

Validation Assumptions

Validation		Q1	Q2	Q3
1	**Customers want to book a Job**	Would you prefer to book online, by phone, email, or social media?	Would you like further information about the photographer before booking?	Would you like a quote during the booking process?
2	**App customers find it difficult to navigate differently**	Would you like a quote during the booking process?	How easy is it to find out the tradies skills/suitability for your task?	How confusing did you find the extra tabs while looking through the app?
3	**The absences of attractive visual elements compel the customer to leave the website without booking or ordering**	How many clicks before you found quoting section?	How attractive do you find the user interface?	What elements did you dislike the most?

User Observation

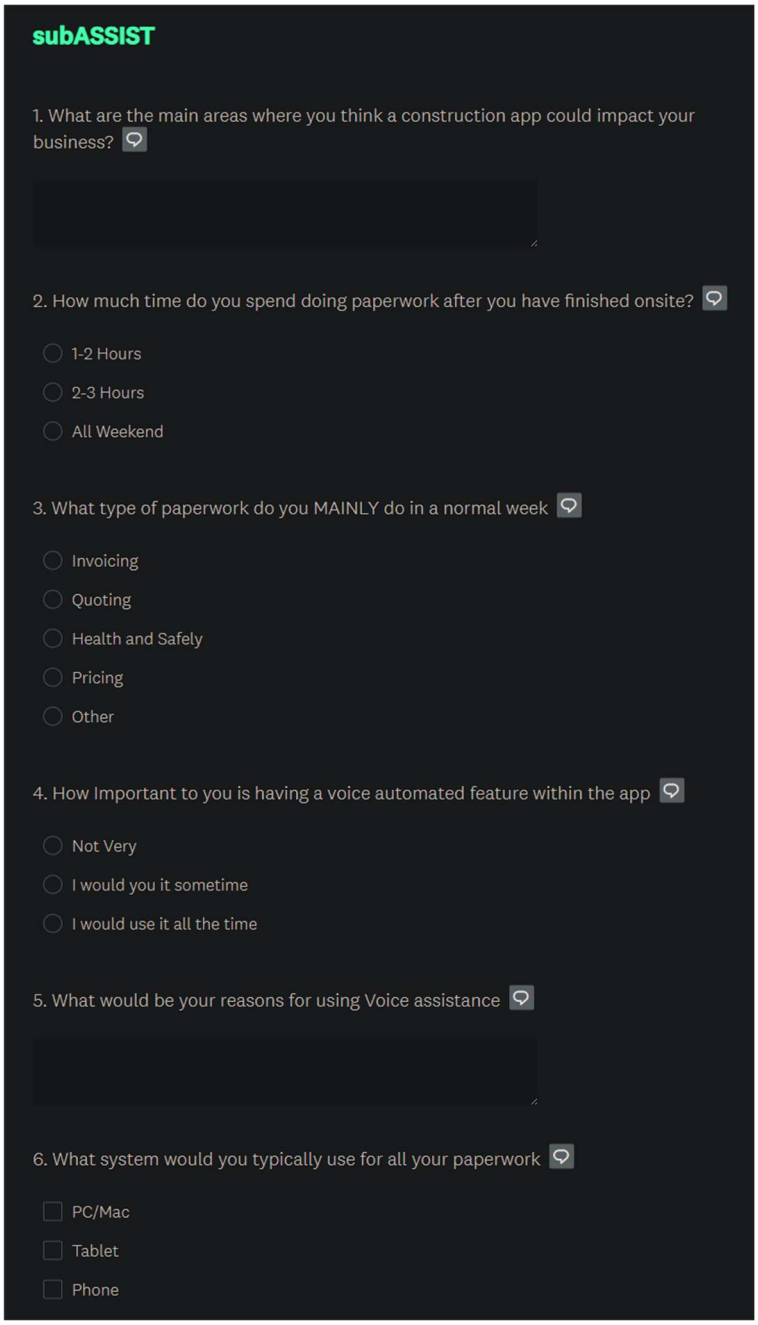
Testers Sam, Natalie, and Zara

- Confirmation of our previous assumptions with the addition of:
  Finding other poor design elements such as 'about me title with the same colour as background'
- Mood gauging

Summary

The takeaway from the validation of assumptions was there were a lot of very helpful apps out there that were good at what they did but no one app did everything all in one.

Surveys



subASSIST

1. What are the main areas where you think a construction app could impact your business?

2. How much time do you spend doing paperwork after you have finished onsite?

- 1-2 Hours
- 2-3 Hours
- All Weekend

3. What type of paperwork do you MAINLY do in a normal week

- Invoicing
- Quoting
- Health and Safely
- Pricing
- Other

4. How Important to you is having a voice automated feature within the app

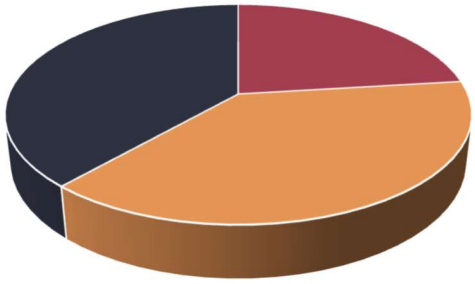
- Not Very
- I would you it sometime
- I would use it all the time

5. What would be your reasons for using Voice assistance

6. What system would you typically use for all your paperwork

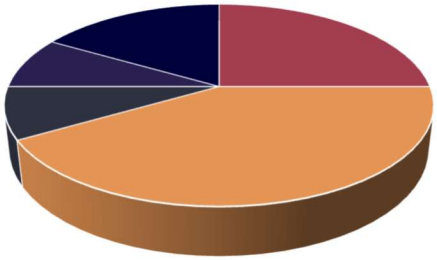
- PC/Mac
- Tablet
- Phone

2. How much time do you spend doing paperwork after you have finished onsite?



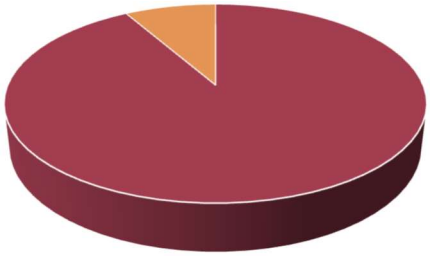
1 - 2 hours 2 - 3 hours All Weekend

3. What type of paperwork do you MAINLY do in a normal week



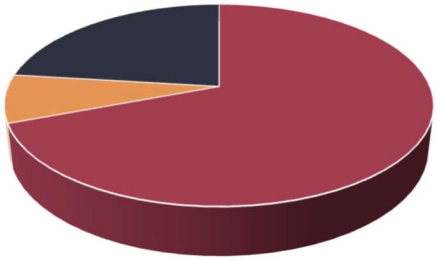
Invoicing Quoting Health and Safely Pricing Other

4. How Important to you is having a voice automated feature within the app



Not Very I would you it sometime I would use it all the time

6. What system would you typically use for all your paperwork



PC/Mac Tablet Phone

Survey results

Question 1: What are the main areas where you think a construction app could impact your business?

The feedback received on this question shows that the main areas that could be impacted were the accounting side and also the calculator for quick on-the-fly estimations to new clients.

Question 2: How much time do you spend doing paperwork after you have finished onsite?

2-3 hours a day was the common response for bookwork. This makes for a long day! Typically, when you are pouring concrete which takes about 12-14 hours of the day and then you have to come home and do another 2-3 hours of bookwork which can be hard.

Question 3: What type of paperwork do you typically do in a week.

- Invoicing
- Quoting
- Health and safety
- Pricing
- Other

Quoting seemed to be the winner here. Quoting is an important and sometimes time-consuming job to do. Especially knowing that the client might not even accept the quote.

Question 4: How Important to you is having a voice automated feature within the app.

The consensus here was not very important due to the importance of privacy by most.

Question 5: What would you use this system on more, Rate out of 10.

- PC
- Tablet
- Phone

PC what the highest picked here. I think/feel that there is an underestimation of phone use there as after the survey was conducted, I asked some participants to check their phone usage and a lot were surprised.

Question 6: What is your trade

- Builder
- Plasterer
- Painter
- Plumber
- Concrete Placer
- Electrician
- Other

The most common trade selected was building. I put that down to the entry-level to building is very low. Most kids out of high school could enter building and construction without much experience.

Personas

USER PERSONA

Felix Sommer

"Open to new building ideas and layouts never stop learning"

ABOUT

Felix is a full time qualified builder Builder. He loves to going out with her wife and friends.

GOALS

- Learn new, building skills and stay current on building trends
- Eat outside in a restaurant
- Meeting new people

FRUSTRATIONS

- Work-related issues
- Sleeplessness
- Misunderstanding

AGE:	30
JOB TITLE	Builder
STATUS:	Married
LOCATION:	Christchurch, New Zealand

Summary

Felix's persona was created as a target through the survey as the general contractor that would typically befit from this application.

USER PERSONA

Anne Stern

"I love to go out into nature to restore my energy "

ABOUT

Lena works in an office as a construction admin lead dealing with accounts and job tracking

GOALS

- Appreciate creativity
- Meet friends & Enjoy the life
- Wants to make the most of her day

FRUSTRATIONS

- Inaccuracy
- Impatient
- Lateness

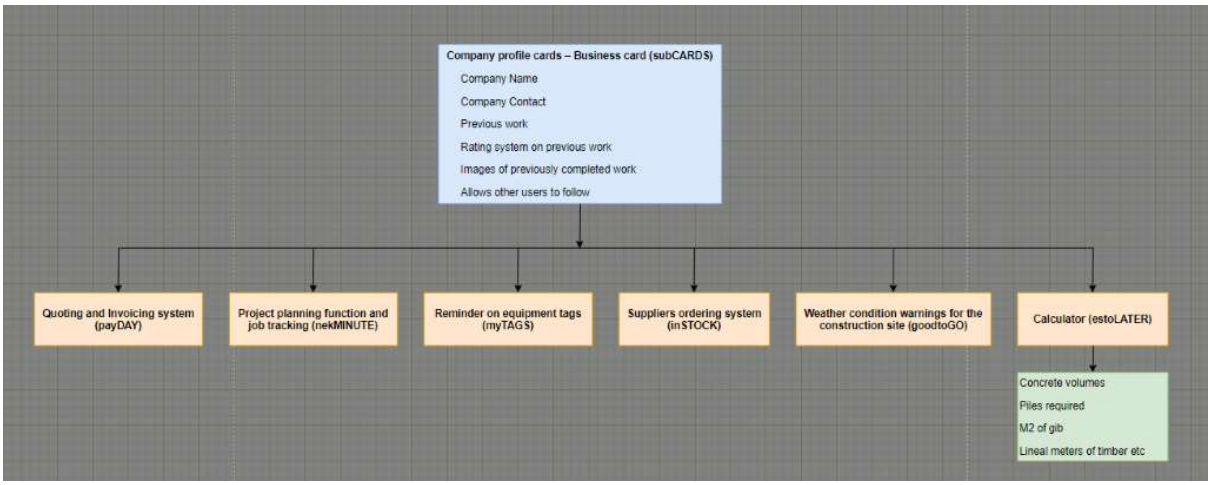
AGE:	32
JOB TITLE	Office Administration
STATUS:	In a relationship
LOCATION:	Christchurch, New Zealand

Summary

Anne's persona was created as a target through the survey as the general office administration that would typically befit from this application as working in a medium-sized company.

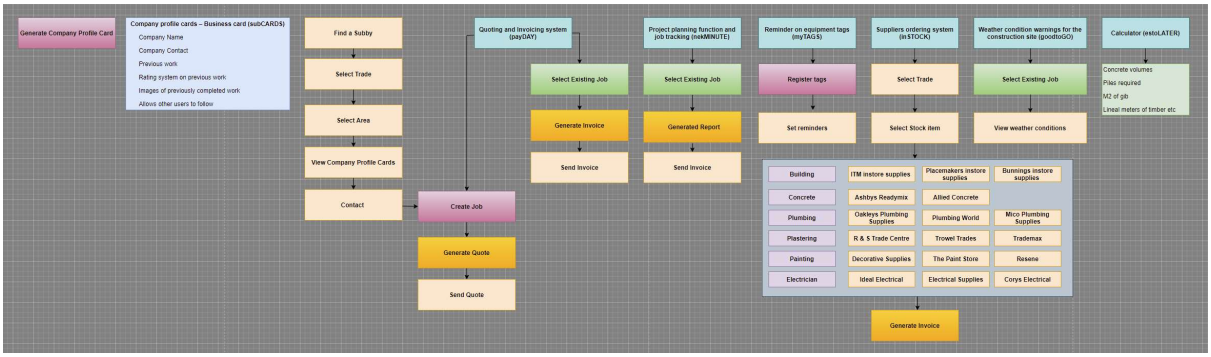
Site Map/Card Sorting

(Revisions 1 - 4)



Revision 1 Summary

The very basic layout of the main functions I wanted to start with. As for the layout itself, I knew there would need to be a lot of work in flushing out each function.

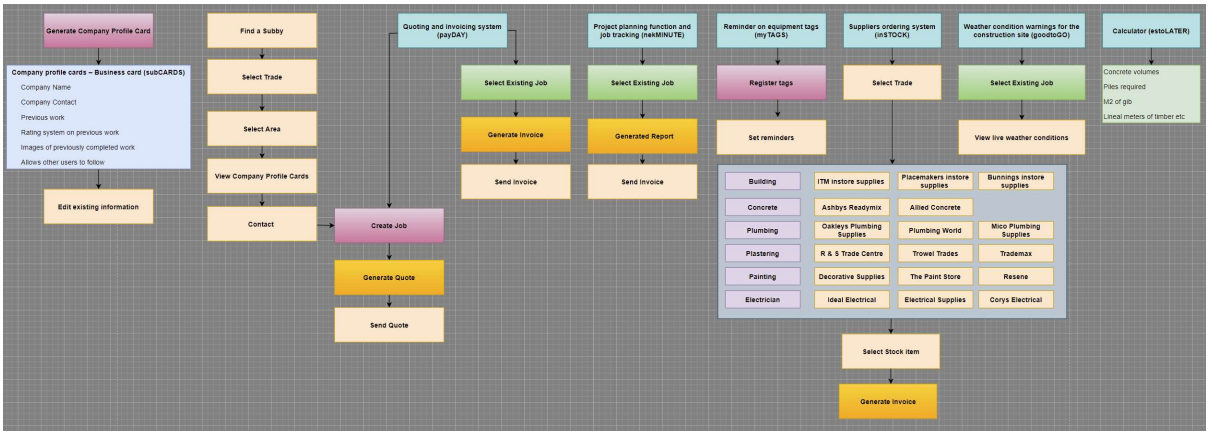


Revision 2 Summary

Here is where it starts to take sharp, with some functions tying in with each other. More functions were added after speaking to a few different contractors and finding out what else is needed for this app

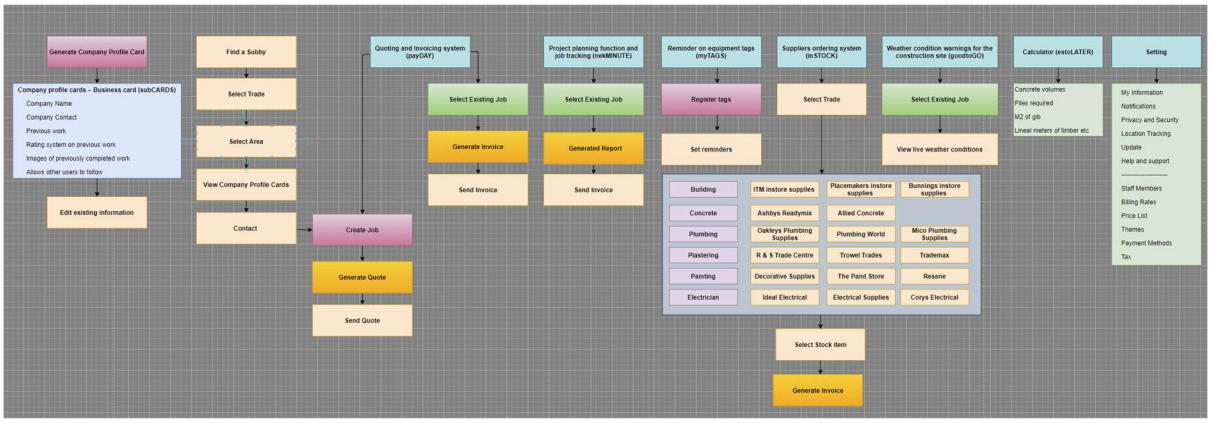
Site Map/Card Sorting

(Revisions 1 - 4)



Revision 3 Summary

Coming close to what I was considering, modified the supplier's section to better represent the flow.



Revision 4 Summary

Final site layout displayed above, I have also presented this to a few different contractors for advice on what functions would be utilized the most and what would best work for them. After presenting to the class it is clear that there needs to be some refinement on the size of the scope. Maybe the implementation of a premium version of the app where some of the above functions will be separated and added in the premium version.

Main function

Linking subcontractors together

Company profile cards – Business card (subCARDS)

- Company Name
- Company Contact
- Previous work
- Rating on previous work
- Allows other users to follow

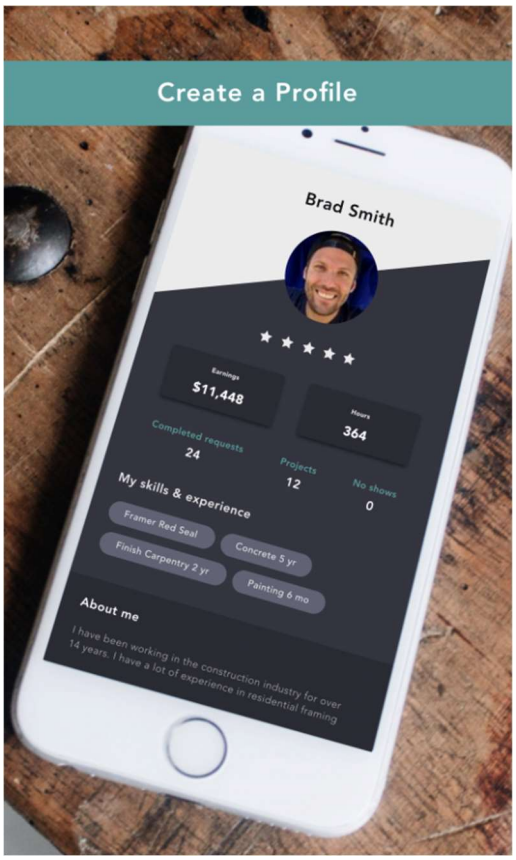
The idea behind this function

The idea behind this function is to allow the user to create a Profile card of their own and then display/advertise it on the app connecting contractors with the click of a button. The user profile card can be modified and updated at any time.

The profile card will display previous work that the user has completed with location, pictures, plans if possible, details, and any client feedback. This way if you are viewing someone else's card, you can get a feel for what they have done and their experience within the industry.

This will also be followed with a 5-star rating system and comment 1 being poor 5 being great, the purpose of this function is to allow another user to rate the product that you have provided to them.

If you do a job for another contractor once the job is complete, they have the option to rate your work and add any additional comments. This ensures that contractors uphold their end of the agreement. Badly review profile cards are pushed to the bottom of the search field when a contractor is on the search for another contractor.



https://canada.constructconnect.com/joc/news/technology/2018/05/new-app-connects-construction-firms-workers/attachment/british-columbia-main-faber-app-worker-profile

Gallery of existing work

Existing work to documents to be attached should include

- Site location
- Photos
- Comments from client and others if possible

The idea behind this function

The idea behind this function is to allow the user viewing another contractor to view their previous work and gauge their level of experience. The user view will be able to see the above. Site location, Photos, comments from previous clients, and their rating system. Again, this ensures that contractors uphold their end of the agreement.

Problems with this function

The initial setup process can be very time-consuming with the gathering and compiling of existing information.

https://www.jwhgroup.com.au/businesses/residential-building-wa/
https://milesconstruction.co.nz/

Quoting and Invoicing system

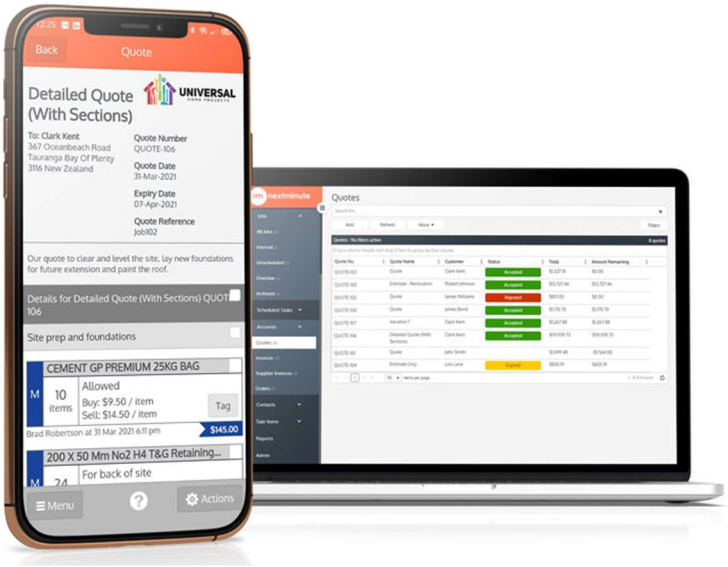
Create a job

Creating a new job would consist of

- **Client information**
  - Address
  - Email
  - Contact Number

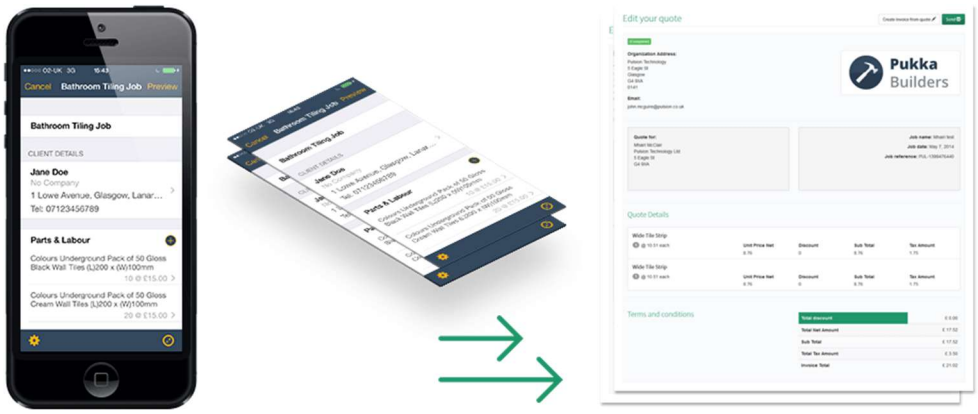
- **Job Start date a finish date**
  - Links with Project planning function

- **Site location**
  - Links to other functions link weather



- **Bank details**
  - Links to Quoting and Invoice function and Project planning function

- **Attached Stamped consent drawings**
- **Any related documents ie BeforeUdig, Linz data, NIWA rainfall intensity info, etc.**



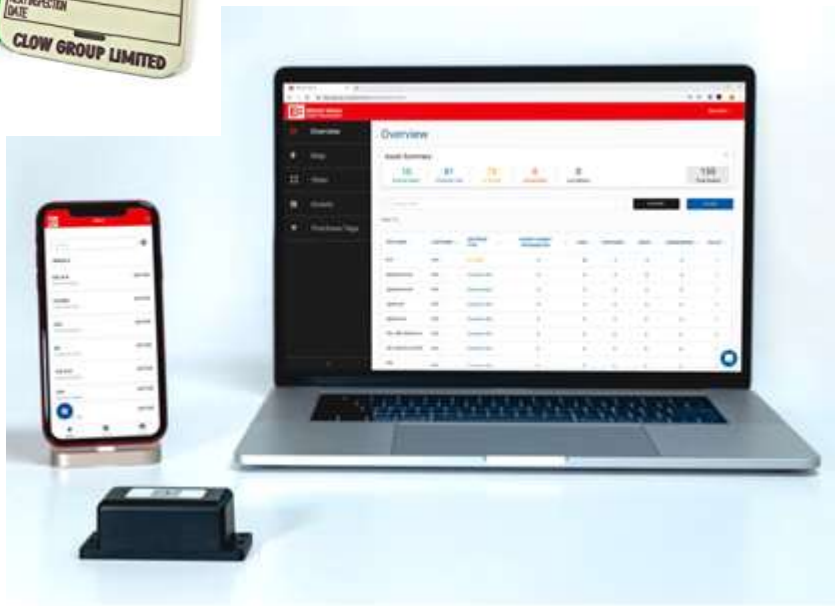
The idea behind this function

The idea behind this function automates the ERP software side of things so contractors have less time doing bookwork.

Once linked with another contractor

- There will be an initial informal contract. Once accepted a quote will be generated.
- If that sub-contractor accepts the quote, then the work will be added to the project management function and the job will commence.
- Then when the subcontractor has finished their part of the project it will be signed off in the Gantt chart.
- And there will be an invoice automatically generated.

Reminder on equipment tags (myTAGS)



Register all existing equipment
Set a reminder on due dates of retagging for existing equipment
Find and book a locate the certified person to tag your equipment
Worksafe. govt.NZ (2019)

The idea behind this function
The idea behind this function is very simple is notifies the client when their equipment needs to be re-tagged.

There will be an option to link with a directed qualified company that tags equipment and autopay for their service.

What Tagging of equipment means in New Zealand?
All Contractors in New Zealand need their equipment tested and tagged to ensure their equipment is up to OSH standards. I.e., all power cords, ladders, power tools, etc.

Suppliers ordering system (inSTOCK)

Select a trade

- Building
- Concrete
- Plumbing
- Plastering
- Painting
- Electrician

The idea behind this function

The idea behind this function is one of the more complex ones. The function's purpose is to streamline the process of a contractor ordering products from a local supplier. Feedback suggests that there is an issue with ordering supplies now due to limited supplies partly due to COVID 19 and the downturn in imports.

With this function, the user will already have their current project loaded. Once they select this function, they will be redirected to the closest supplier for the product that they need to ensure that the product is in stock.

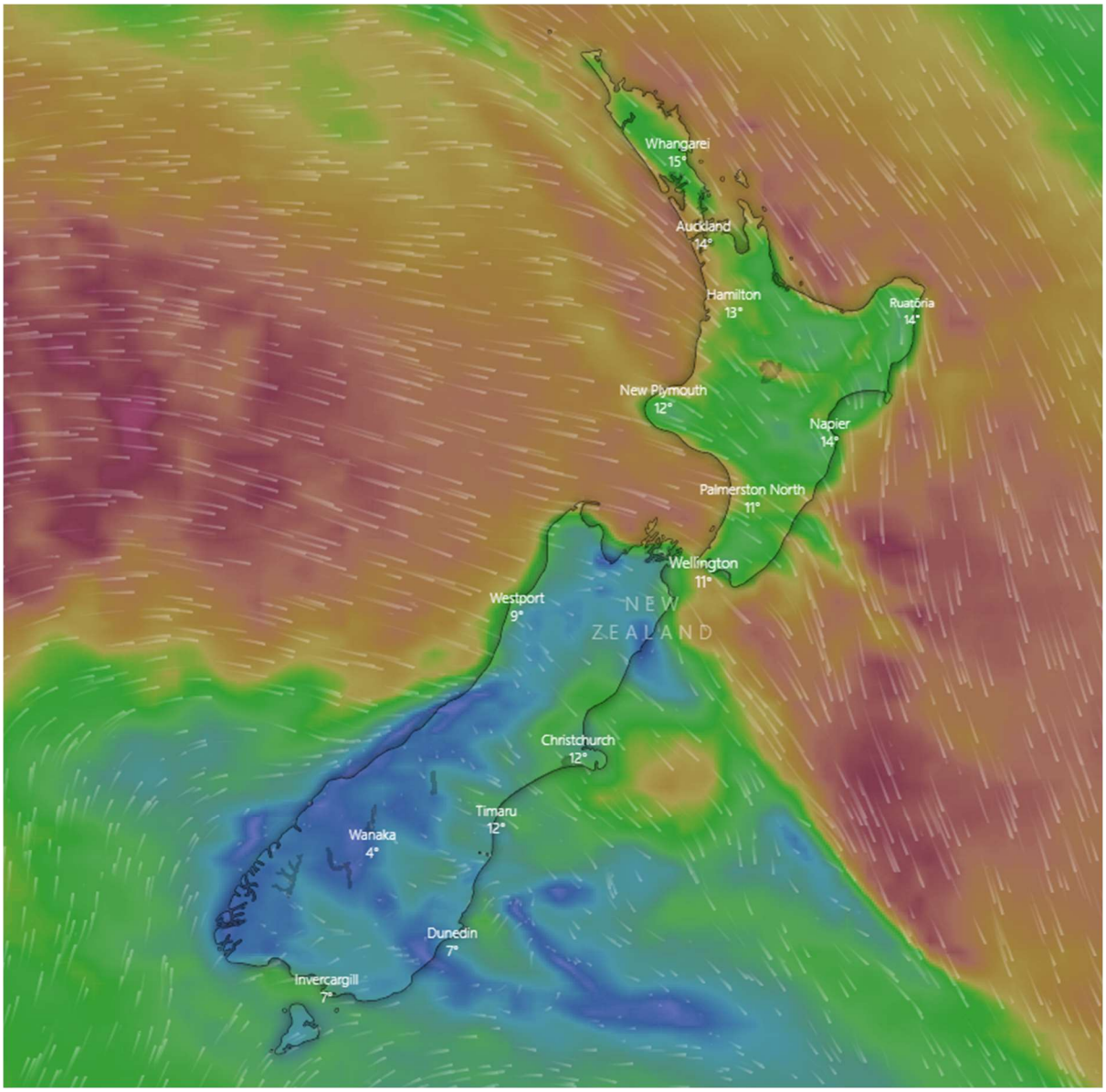
Problems with this function

After doing some investigations the main thing that is needed is the supplier API. Acquiring the needed and updated API is the hard part as a lot of suppliers do not like to give their API away easily.

Solution

If there is no way to acquire the latest and updated API on a regular basis then a portal to that merchant will need to be provided which is not ideal as I would like to keep everything in app.

Weather condition warnings for (goodTOGO)



https://www.windy.com/?-41.319,171.255,6

The idea behind this function

The idea behind this function is simple again, once you have an active job selected in the project tab, the app will register where you will be for that next day. While you are sleeping the weather app will notify you of the conditions if they are not ideal for the next day of work.

You can also load up the function manually and check for yourself as displayed above.

Problems with this function

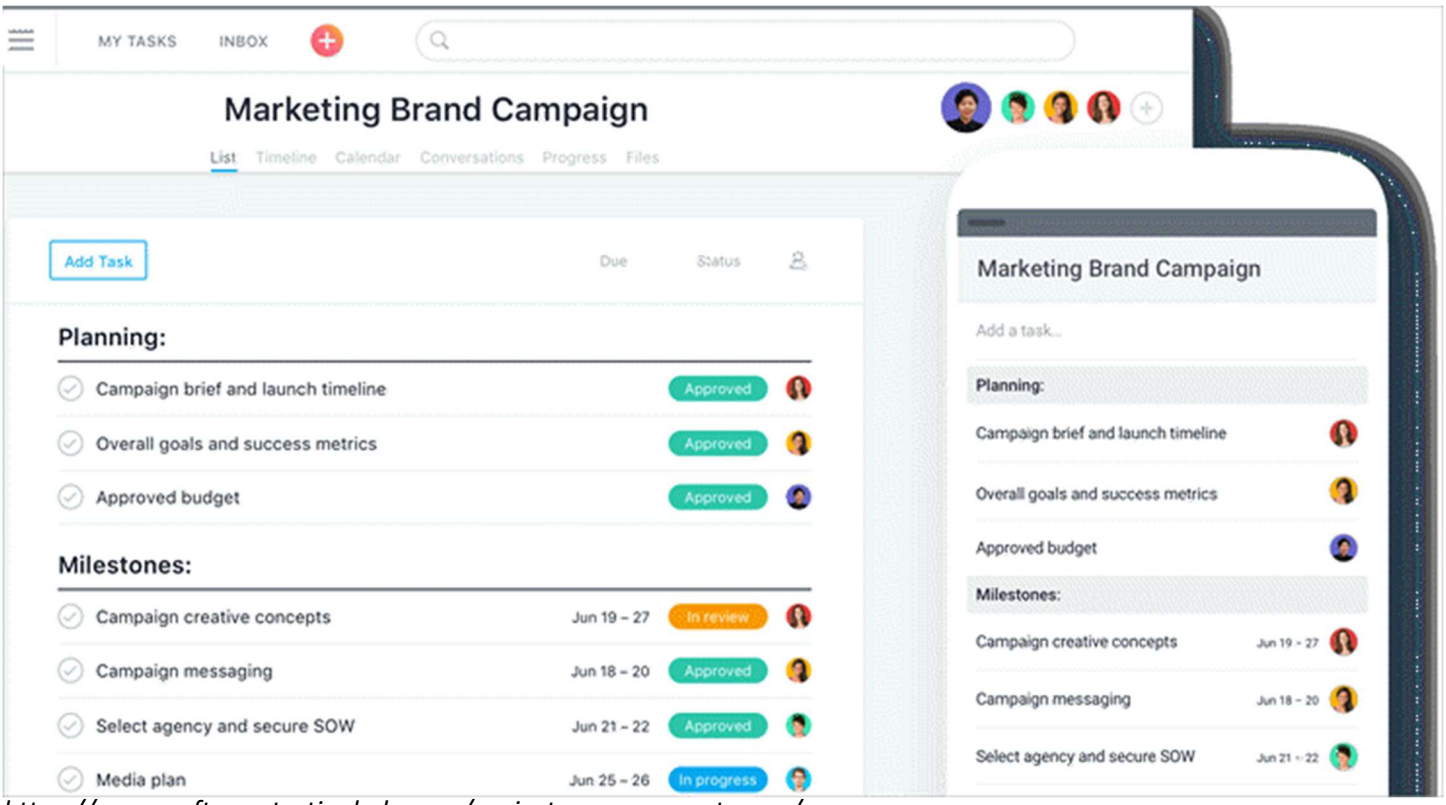
Location registration of the site when working in remote areas can sometimes be a problem.

There will also need to be a constant internet connection to the app for live updates and again when working in remote locations with no internet this function will not work.

Solution

If there is a problem with location registration, there will be a manual search popup where the user can search and pin on a map.

Project planning function and job tracking (nekMINUTE)



https://www.softwaretestinghelp.com/project-management-apps/

The idea behind this function

The idea behind this function is to take and manage jobs, ensuring that deliverables are being met on time and within budget.

The function itself will tie in with a lot of other functions and is generated after a quote has been accepted from the subcontractor. Once the sub-contractor has accepted the quote it will directly bring you to this function where you can plan out the project and its required deliverables.

Once the subcontractor has completed his section of the job he will go to this function and sign it off which in turn will autogenerate an invoice and send it once confirmed.

Problems with this function

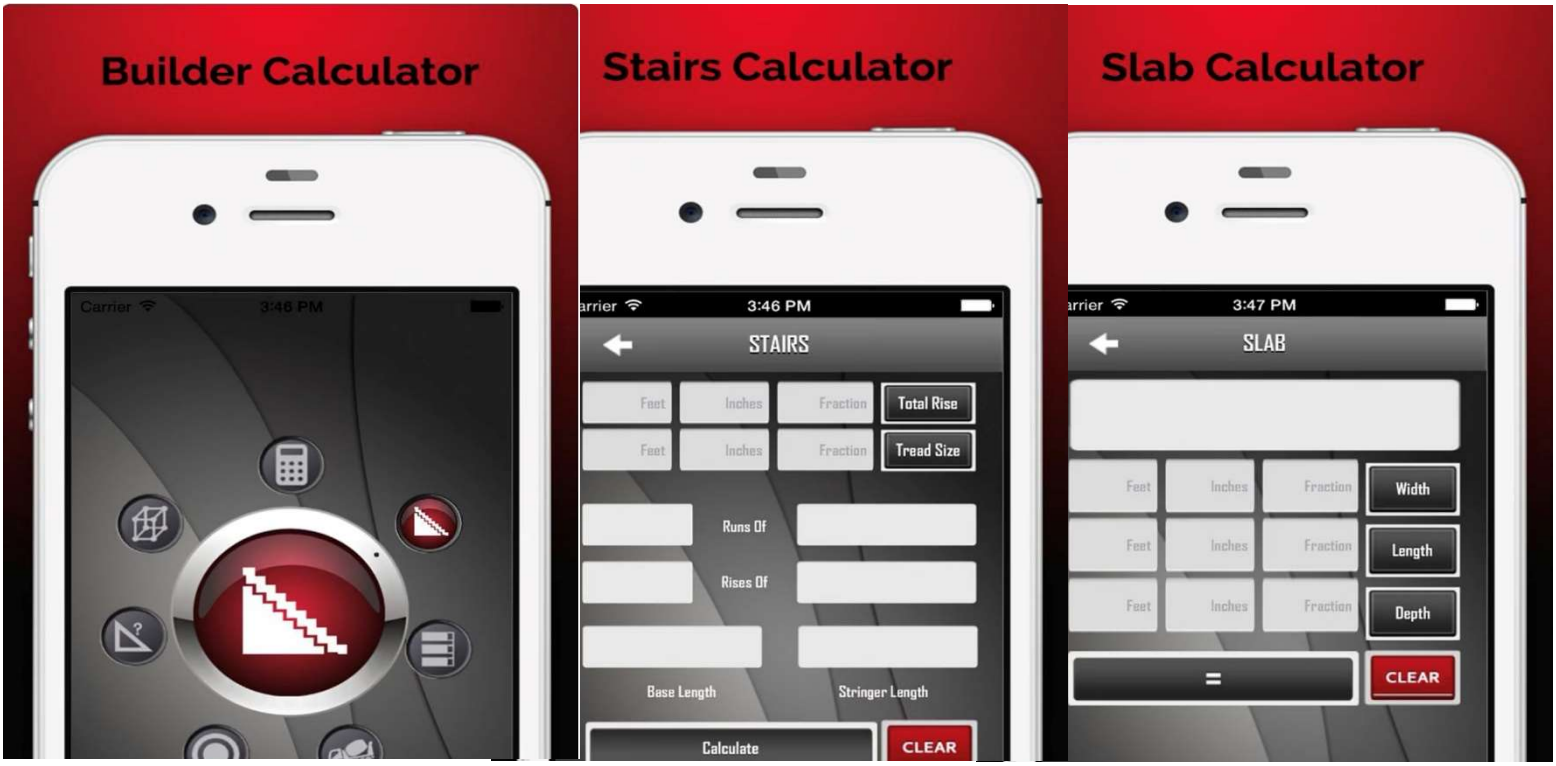
A more common problem with these types of functions is when there is a variation in which construction is already underway. I have experienced this personally. If not maintained properly there can be serious repercussions depending on the scope of works.

Solution

This will be up to the contractor who is running the job to maintain the project and the deliverables. All penalties will be pushed to the person maintaining the deliverables and should be reflected in a contract that is generated at

Calculator (estoLATER)

- Concrete volumes
- Piles required
- M2 of gib
- Lineal meters of timber

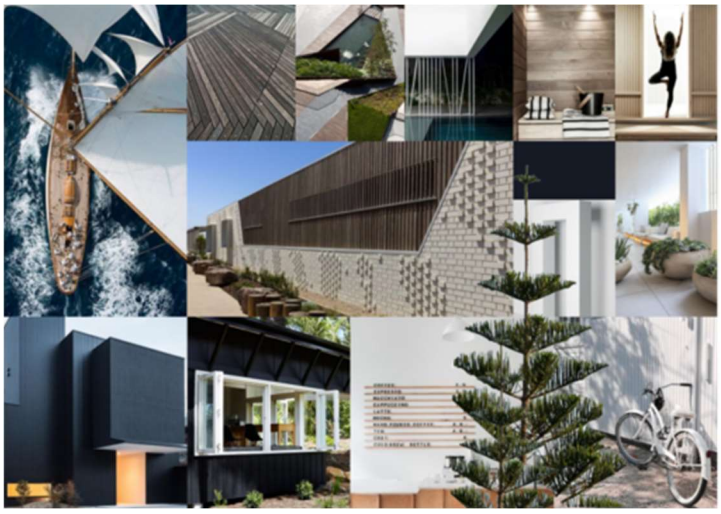


The idea behind this function
The idea behind this function is simple again, estoLater is a quickfire calculation application that allows the user to generate quick calculations on the fly while working.
estoLater calculations will include concrete volumes, number of piles required, square and cubic meterage required for most products i.e., Concrete, gib, skirting, architraves, carpet, etc.

Problems with this function
This Calculator will only serve as an estimation.

Solution
There will need to be heavy disclaimers that no liability will be held for any estimations that are generated through the application, the function serves as an estimation only.

Moodboard



momentum
BASE
02
INDUSTRIAL
DERELICT
CAUTION
BITE
DESTRUCTION

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