# Opportunity Identification & Digital Prototyping

## Preliminary Design Cycle

INFO30008 Interactive Technology Project

**Group 1**

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# EXECUTIVE SUMMARY

We have identified a lack of clear communication and frustration surrounding the Covid-19 pandemic. Therefore, we took this opportunity to create an interactive technology to improve these aspects as we transition to Covid normal.

Initially we researched existing apps (Covid Safe), technology and information provided to the public. We identified the following main stakeholder groups involved in the issue:

- Citizens
- Government
- Business
- Healthcare
- Education

By recognising the possible concerns and paradoxes between stakeholder groups, we conducted six semi-structured interviews with the following stakeholders: two interviewees from healthcare (aged care, other), three from businesses (retail, hospitality, travel) and one from education (student).

The responses were organised into main themes and the interests were reanalysed to ensure a suitable design direction.  These themes are:

- Contact tracing
- Covid-19 passport
- Checking in
- Communication
- News
- Mental health.

Each member presented 1-3 design ideas based on different themes. They focused on design prototypes to explore potential uses and solutions to the problems recognised. Four prototype interviews have been conducted so far. The top three designs from the interviews include:

1. E-tag check-in system.
2. Covid passport app.
3. Covid-19 communication app.

We will continue conducting further testing on all the prototypes and analyse the results to help us come to a conclusion on the most useful design idea which we will expand on in the next development stage.

# SITUATION-OF-USE

**Using a digital photograph of the Covid Safe Application created by the Australian Government to explore the current gap in the market.**



The Covid App had less than 70% engagement and leaves a niche gap in the market for a new application to be created and implemented to conduct contact tracing for Australians. Hotspots were never listed and current news headlines also did not appear on the app.
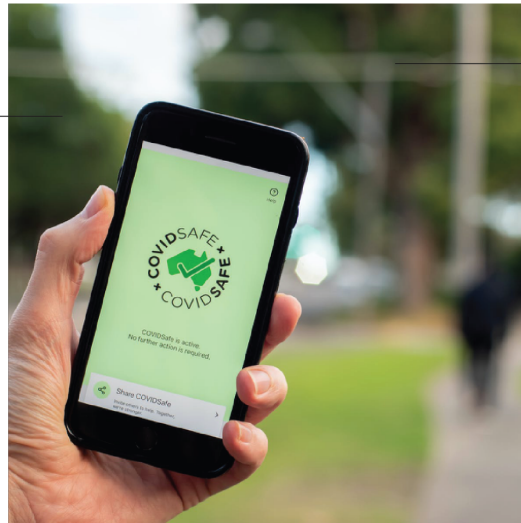
The Australian Government invented the Covid Safe App which was a digitial contact tracing app to help combat the ongoing COVID-19 pandemic however it never worked properly and has been abandoned.

*Figure 1: Covid Safe Application*

Because Australia currently has not implemented a successful covid app, we believe that there is an opportunity for development. The Covid Safe application (Figure 1) was the previous application supported by the Australian Government. The development of the app cost around 14 million AUD to date with only ever a 44% uptake at its peak. Despite this cost, it has only identified 17 close contacts. There were strong issues within the functionality and utility of the design and the app has been discarded for future use and development.



Currently there are few trusted sources to attain the Victorian Covid Hotspot list.

The Guardian website also asks the user to subscribe once they have reached 9 free article views making it hard for the general public to access this list.

*Figure 2: The Guardian Victorian Covid Hotspot website*

This left a gap in the market for data collection including hotspot information and user checkins using the QR codes around Victoria for contact tracing. The use of a Covid-19 app will increase Covid-19 action and response and benefit future situations in which Covid-19 will impact Australian lives. Businesses could rely on the new Covid-19 app for reliable information and to feel safer within the community as they go about their work. For example, the Guardian website (Figure 2) and the Government DHHS website are the current leading websites that deliver information regarding Victorian Covid Hotspots to the general public. An app that contains this information about Hotspots that also creates a platform containing a profile with vaccination information and recent covid test could benefit people all over Australia.
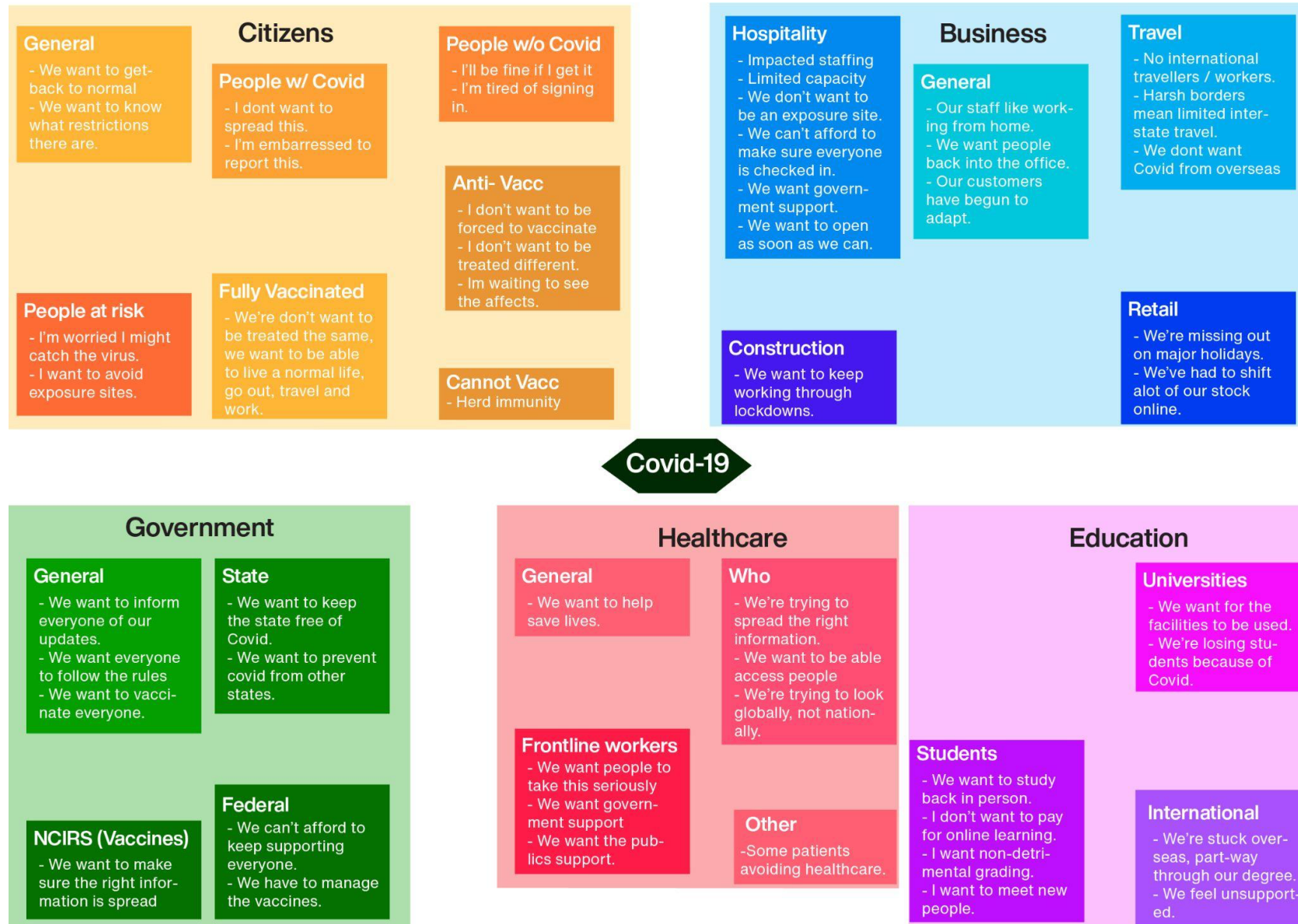
| 415-429 Racecourse Road and Flemington Road | 13/08/2021 | 12:10pm - 12:50pm | Case attended venue | 17/08/2021 |
|---|---|---|---|---|

*Figure 3: Screenshot of hotspot data (indicating the lengthy period of time between date of exposure (13/08) and the date added (17/08) - 4 days later.*

Figure 3 demonstrates the time between the date of exposure within a hotspot and the information release date. There is a need for a faster contact tracing process as it shows a total of four days in which the public could have been exposed. The new app could speed up Covid tracing, reducing transmission within the community and making Victoria a safer place.

Currently there are also no means or way to digitally track covid vaccinations in an easy and accessible way. There are many stakeholders including the education department and health care workers that would benefit from a Covid-19 App that helps to provide a secure and accessible way to access information.

# RICH PICTURE
## STAKEHOLDERS

## Citizens

**General**
- We want to get-back to normal
- We want to know what restrictions there are.

**People w/ Covid**
- I dont want to spread this.
- I'm embarressed to report this.

**People w/o Covid**
- I'll be fine if I get it
- I'm tired of signing in.

**Anti- Vacc**
- I don't want to be forced to vaccinate
- I don't want to be treated different.
- Im waiting to see the affects.

**People at risk**
- I'm worried I might catch the virus.
- I want to avoid exposure sites.

**Fully Vaccinated**
- We're don't want to be treated the same, we want to be able to live a normal life, go out, travel and work.

**Cannot Vacc**
- Herd immunity

## Business

**Hospitality**
- Impacted staffing
- Limited capacity
- We don't want to be an exposure site.
- We can't afford to make sure everyone is checked in.
- We want govern-ment support.
- We want to open as soon as we can.

**General**
- Our staff like work-ing from home.
- We want people back into the office.
- Our customers have begun to adapt.

**Travel**
- No international travellers / workers.
- Harsh borders mean limited inter-state travel.
- We dont want Covid from overseas

**Construction**
- We want to keep working through lockdowns.

**Retail**
- We're missing out on major holidays.
- We've had to shift alot of our stock online.

## Covid-19

## Government

**General**
- We want to inform everyone of our updates.
- We want everyone to follow the rules.
- We want to vacci-nate everyone.

**State**
- We want to keep the state free of Covid.
- We want to prevent covid from other states.

**NCIRS (Vaccines)**
- We want to make sure the right infor-mation is spread

**Federal**
- We can't afford to keep supporting everyone.
- We have to manage the vaccines.

## Healthcare

**General**
- We want to help save lives.

**Who**
- We're trying to spread the right information.
- We want to be able access people
- We're trying to look globally, not nation-ally.

**Frontline workers**
- We want people to take this seriously
- We want govern-ment support
- We want the pub-lics support.

**Other**
- Some patients avoiding healthcare.

## Education

**Universities**
- We want for the facilities to be used.
- We're losing stu-dents because of Covid.
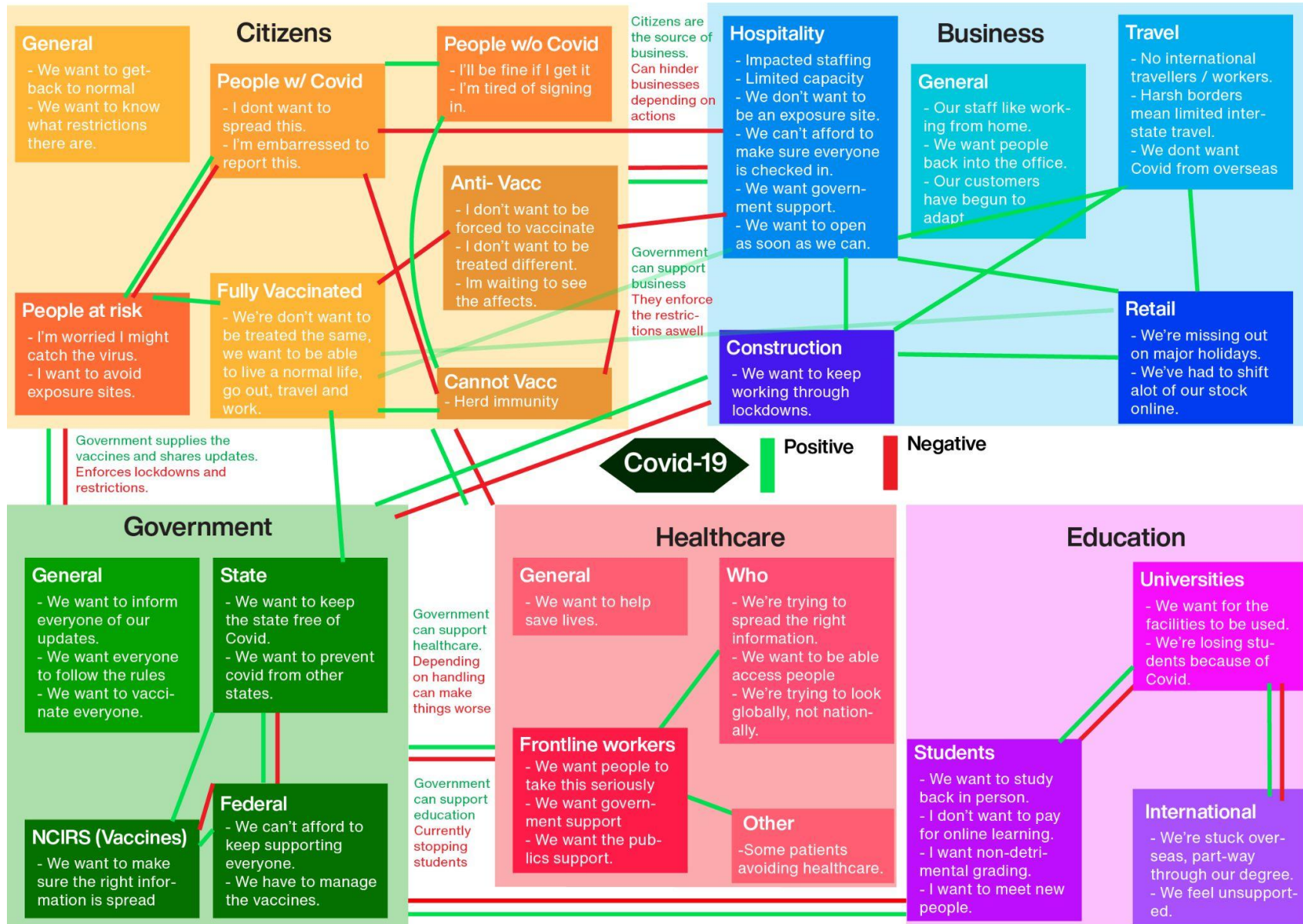
**Students**
- We want to study back in person.
- I don't want to pay for online learning.
- I want non-detri-mental grading.
- I want to meet new people.

**International**
- We're stuck over-seas, part-way through our degree.
- We feel unsupport-ed.

# RICH PICTURE
## STAKEHOLDER RELATIONSHIPS



**Citizens**

**General**
- We want to get-back to normal
- We want to know what restrictions there are.

**People w/ Covid**
- I dont want to spread this.
- I'm embarressed to report this.

**People w/o Covid**
- I'll be fine if I get it
- I'm tired of signing in.

**Anti- Vacc**
- I don't want to be forced to vaccinate
- I don't want to be treated different.
- Im waiting to see the affects.

**People at risk**
- I'm worried I might catch the virus.
- I want to avoid exposure sites.

**Fully Vaccinated**
- We're don't want to be treated the same, we want to be able to live a normal life, go out, travel and work.

**Cannot Vacc**
- Herd immunity

Citizens are the source of business. Can hinder businesses depending on actions

Government can support business They enforce the restrictions aswell

Government supplies the vaccines and shares updates. Enforces lockdowns and restrictions.

**Business**

**Hospitality**
- Impacted staffing
- Limited capacity
- We don't want to be an exposure site.
- We can't afford to make sure everyone is checked in.
- We want government support.
- We want to open as soon as we can.

**General**
- Our staff like working from home.
- We want people back into the office.
- Our customers have begun to adapt.

**Travel**
- No international travellers / workers.
- Harsh borders mean limited inter-state travel.
- We dont want Covid from overseas

**Construction**
- We want to keep working through lockdowns.

**Retail**
- We're missing out on major holidays.
- We've had to shift alot of our stock online.

**Covid-19** | Positive | Negative

**Government**

**General**
- We want to inform everyone of our updates.
- We want everyone to follow the rules
- We want to vaccinate everyone.

**State**
- We want to keep the state free of Covid.
- We want to prevent covid from other states.

**NCIRS (Vaccines)**
- We want to make sure the right information is spread

**Federal**
- We can't afford to keep supporting everyone.
- We have to manage the vaccines.

Government can support healthcare. Depending on handling can make things worse

Government can support education Currently stopping students

**Healthcare**

**General**
- We want to help save lives.

**Who**
- We're trying to spread the right information.
- We want to be able access people
- We're trying to look globally, not nationally.

**Frontline workers**
- We want people to take this seriously
- We want government support
- We want the publics support.

**Other**
-Some patients avoiding healthcare.

**Education**

**Universities**
- We want for the facilities to be used.
- We're losing students because of Covid.

**Students**
- We want to study back in person.
- I don't want to pay for online learning.
- I want non-detrimental grading.
- I want to meet new people.

**International**
- We're stuck over-seas, part-way through our degree.
- We feel unsupport-ed.

# INTERVIEWS

Six interviews were conducted between the 2nd – 10th of August 2021. The interviewees were selected based on the rich picture and their respective stakeholder categories can be found in the interview matrix below. These interviews allowed us to explore the issue from the viewpoint of a stakeholder. It was conducted as a semi-structured interview that allowed for probing questioning [see Appendix 1 for interview procedure]. Each interview took 16 - 40 minutes. The qualitative data from these interviews was collected and analysed for any major or recurring themes.

## INTERVIEWEE MATRIX

| Interviewee number | Pseudonym | Stakeholder category | Short description | Interviewer |
|---|---|---|---|---|
| 1 | Mark | Business *Hospitality* | Mark is a venue manager who runs a venue with many guests for dinner and has been greatly impacted by lockdowns. | Sam Turner |
| 2 | James | Business *Travel* | James is a hostel manager who is dealing with the effects of Covid-19 on international travel. | Sam Turner |
| 3 | Rose | Business *Retail* | Rose is a retail worker and university student. She works part-time at a hardware store in Melbourne's inner east. In July 2021, the store was listed as a tier two exposure site, as a result the store closed for 2 days for all staff to get tested. | Nicola Toomey |
| 4 | Hannah | Education *Student* | Hannah is a student who moved into a dorm. She provides insights on how Covid-19 is managed in the building and social experience within. She also provides insights into how the pandemic has affected her university life. | Vaishali Nair |
| 5 | John | Healthcare *Other* | John is a health & wellness clinic owner who has experienced 6 closures and has suffered significant loss of profit, emotional distress, higher operating costs, business and customer uncertainty. Although they closed during the lockdowns, membership revenue has been eliminated and staff wages, rental and other costs have continued. | Paris Eckert |
| 6 | Anna | Health Care *Aged care* | Anna works in high-risk facilities. Due to lockdowns, her work moved online. As an aged care staff member it was important that she got vaccinated early. | Manami Fujikawa |

## INTERVIEWEE 1

### Information

| | |
|---|---|
| **Participant number and pseudonym** | P1 - Mark (alias) |
| **What is their stakeholder role?** | Venue Manager, Hospitality, Business |
| **What skills, knowledge and experience do they bring in this role?** | Viewing the Covid-19 from a business perspective, and an individual impacted by a tier 1 outbreak. |
| **Completed PLS** | Yes |
| **Completed Consent form** | Yes |
| **Interviewed by** | Sam Turner |

### Interview Transcript

**How have you been impacted by Covid-19?**
Loss of workers, limited capacity and covers - overall loss of business

**What technologies or techniques do you currently use to manage Covid-19?**
Implemented QR check-ins, a Covid safety quiz for staff, home delivery.

**Do you think those technologies/techniques are working well at the moment?**
Kind of - Overall complacency

**Is there anything that you can think of to improve these technologies/techniques to manage Covid-19?**
Not really - Everyone is over it.

**What is their view on each other group (stakeholders)**
Guests. Some of them try but others intentionally avoid following advice.

**What is that group's main goal?**
To eat at the restaurant

**How do they contribute to the effects of Covid-19 / Or prevent it?**
They could introduce Covid to the restaurant.

**How do you collect information about Covid-19? From which sources? Which one is your main source?**
Dhs website

**Is it reliable?**
Kind of - not always up to date around major press conferences.

**Is it easy to access?**
Yes

**What do you think could be done to improve this service?**
Signing up for automatic notifications and improving clarity

**How effective is contact tracing right now?**
Not effective - very high complacency

**How many people sign-in digitally? How many not? How many no attempts?**
Some will intentionally not sign in, others are just lazy or forget

**Do you have any ideas on how contact tracing could be improved?**
In theory it should work but it's been shot down by Murdoch.

**A Tier One case happened in your venue, what was the response?**
We had to call the Covid hotline after receiving an email from the hospital. They had to verify that it was legitimate because they weren't updated on it. We then provided all the information about staff and guests that we had. It was a case from Thursday and we were updated on Saturday. It then came onto the site two days later.

**What actions did you take?**
I entered isolation on my own advice, but we weren't sure how it was meant to work with housemates ect. It was on day twelve that they (Government) got in contact - they asked if I was isolated, my test results and offered a hotel if I couldn't isolate myself. Conflicting advice on housemates.

**Do you use the current CovidApp / Service Victoria? If so, what for?**
Yes I have it, I use it to check-in

**Did they know that you can book appointments? Entry Permits ect.**
Yes, but I don't because it just takes you to a website so it's useless.

**How viable is the idea of a vaccination passport to you?**
It needs to happen; it should be selective but it's also going to need to be supported by the government.

**What are its main benefits?**
Benefits to the economy, it's going to save lives if it's implemented, and it'll let us get back to normal.

**What are its main disadvantages?**
Hesitancy - the vaccine has been held up by the media and scepticism. Who do you trust? There could also be religious reasons for not getting vaccinated.

**Would this be something that you could see being implemented?**
Yes, but on the business to start with to choose how they would like to enforce the rules.

**What changes would you like to see as we move into a Covid normal future?**
Clearer communication, better contact tracing, a sense of unity between states which means the Federal Gov. needs to step up its actions and influences.

**What are you most excited to get back to?**
For hospitality in Melbourne to get back to normal, I want to go to the pub with my friends.

# INTERVIEWEE 2

## Information

| | |
|---|---|
| **Participant number and pseudonym** | P2 - James (alias) |
| **What is their stakeholder role?** | Business - Hostel Manager |
| **What skills, knowledge and experience do they bring in this role?** | Dealing with the effects of Covid-19 on international travel |
| **Completed PLS** | Yes |
| **Completed Consent form** | Yes |
| **Interviewed by** | Sam Turner |

## Interview Transcript

**How have you been impacted by Covid-19?**
No international travellers, interstate travellers - no travellers.

**What technologies or techniques do you currently use to manage Covid-19?**
Sanitising stations, posters, temperature gun, auto-email.

**Do you think those technologies/techniques are working well at the moment?**
Kind of

**Is there anything that you can think of to improve these technologies/techniques to manage Covid-19?**
More direct information.

**What is their view on each other group (stakeholders)**
Guests. Yeah they do try.

**What is that group's main goal?**
They live at the hostel

**How do they contribute to the effects of Covid-19 / Or prevent it?**
The hostel relies on the guest to follow the protocol outside of the venue so that they don't get bring it back.

**How do you collect information about Covid-19? From which sources? Which one is your main source?**
HR department - Receives from the Government . Email received within 4 hours - can contact for more information. Google - for more general information (cases) to future plan

**Is it reliable?**
Yes

**Is it easy to access?**

Yes


**What do you think could be done to improve this service?**
Direct from the government and specific information for the venue.


**How effective is contact tracing right now?**
Not effective - very high complacency


**How many people sign-in digitally? How many not? How many no attempts?**
Will sign in initially when they come to stay also kept on a registry that keeps track of occupants.


**Do you have any ideas on how contact tracing could be improved?**
No idea


**Do you use the current CovidApp / Service Victoria? If so, what for?**
No - Still uses QR scanner app


**Did they know that you can book appointments? Entry Permits ect.**
No


**How viable is the idea of a vaccination passport to you?**
Would like a passport at sporting events etc. To encourage vaccination. Get the hostel back to normal.


**What are its main benefits?**
A sense of normality, motivation and progression


**What are its main disadvantages?**
Exclusivity - Restricts certain groups of people that might not have been able to get vaccinated or chose not to.


**Would this be something that you could see being implemented?**
Yes,  but on the business to start with to choose how they would like to enforce the rules.


**What changes would you like to see as we move into a Covid normal future?**
Clearer communication, direct info, improve contact tracers


**What are you most excited to get back to?**
Travel, getting back to normal.

# INTERVIEWEE 3

## Information

| | |
|---|---|
| **Participant number and pseudonym** | P3 - Rose (alias) |
| **What is their stakeholder role?** | Retail worker – Hardware store |
| **What skills, knowledge and experience do they bring in this role?** | Store was impacted by Covid-19, the store closed for 2 days for all staff to get tested. |
| **Completed PLS** | Yes |
| **Completed Consent form** | Yes |
| **Interviewed by** | Nicola Toomey |

## Interview Transcript

**How have you been impacted by Covid-19?**
I am currently a university student and Covid has impacted my ability to study on campus and we have been forced to go online for all my classes which has had a big impact on my studies. I work part time at a hardware store, the way we work has changed during the pandemic. Like I have worked in different areas like Click and Collect,  and adapting quickly to those sorts of situations.

**At work, are there any technologies or techniques you have been using to manage Covid-19?**
At most or all places we have the QR code checking in system, where all the customers and the staff all have to sign into when they enter the store or start their shift. That's about it at our store at the moment.

**Do you think checking in with QR codes is working well at your workplace?**
Most customers do sign in, I would say there are definitely some people who don't for example tradies (who do not care about it), but (as staff) we try to remind everyone when they pay for their items at the register to sign in.

**Are there any people at your workplace who have trouble checking in?**
Yes, there are definitely some people who do have trouble checking in, and in those instances one of the workers will have to use their own phone and ask the customer for their details to check them in.

**What kind of people have trouble checking in?**
Mostly older people, people who don't have phones or people who don't know how to use QR codes, or just have trouble getting it to actually scan. So mostly older people.

**Are there many customers who do not have a phone?**
Yes, I have encountered a few customers who did not have a phone and just asked for log books. Again they are mostly older people, normally older men.

**So do you just manually write that information down?**

Yes, in the past we did manually write it down, but in the end we just started to do it ourselves (using another staff member's phone to put in their information using Service Victoria QR code). For example their home phone number, sometimes they might not even have a home phone number.

**How do you manage the physical log book?**
Well that's a very good question, I did not have much direction on what to do with it. We just kept it for our own record, in case there was an issue we could contact them.

**So do you think the contact tracing is working well as most people are checking in?**
Well we were a tier 2 exposure site (Back in mid July).

**What happened then?**
Well, I did not hear about anyone getting a text, notification, or information, because of course all the staff are also singing in.

**So how long did it take to get a notification?**
So it happened on the Thursday before the fifth lockdown, so the day before the lockdown happened, and it was the next Wednesday that it got listed as an exposure site on the Victorian exposure sites website. I was working on the Wednesday that it got listed as an exposure site, and we only found out through one of my workmates having a look at the daily lists of exposure sites and seeing it there.

**On the website?**
Yeah.

**So no one contacted you or management to let you know?**
Not that I was familiar with. I believe my work mate and I were the first ones to know.

**Is that[communication] something you think that should be improved with contact tracing?**
Yeah, the notification  process should be improved. Yeah because just after that I had spoken to a couple of people who had signed in on the exposure day and they did not get notified, any text or anything.

**What happened after you found out you were an exposure site?**
Every staff that was there on that day had to get tested and isolated until they got a negative result, others staff (that weren't there on that day) could get tested if they wanted to.

**Because of lack of staff did the store have to close?**
When we found out we did shut down the store for the rest of the day, we found out at about midday. The next day we managed to have enough staff receive negative tests, so we opened again at 9am.

**How do you collect information about Covid-19? And is it reliable? Easy to access?**
The main source is social media, mostly Twitter. I follow the DHHS on Twitter where I get daily updates and exposure site updates.  Yeah I would say it is realisable and easy to access.

**How could how you collect information be improved?**
Potentially if there was an all-round government site, or place where all the stats, exposure sites and information was put together, a one-stop shop that is backed by the government.

**Do you feel like you are always up to date with the current restrictions? How could you use technology to help you keep up to date?**

I always feel a bit unsure about the restrictions, like the time we are allowed to exercise each day. I think tech could be used to help me keep up to date. The current Covid App is a good idea but not really great, I think it needs to be updated to be more useful. I don't really use it (or service Victoria App).

**In regards to contact tracing, was there anyone who had a negative opinion about checking in?**
Most people were happy to check in, sometimes customers would make some comments about it being like "ugh this is annoying", or they were getting frustrated that the QR scan would not work for them on their phone. Like trying to tap on the camera but it would not recognise the QR code. That is customers' biggest frustration.

**How do you manage the amount of people in the store at one time?**
We do have a pretty big limit, which is posted on the door to our store, but it is never much of an issue because the store is so big. We do not have any staff members counting the number of people in the store at one time, we probably couldn't manage to have a staff member counting customers since we are usually understaffed. But only tradies are allowed in our store during lockdowns as we are an essential business, so someone checks if they are a registered tradesperson. That is the only form of regulation we have had.

**Would it be useful to use technology to track how many people are in the store at once?**
Yes it would be useful for me, as both a customer and if there was an app or something to track how many people are in stores at once. So we would know if we have exceeded the limit. It will allow customers to have an informed decision.

**What would you like to see as we move into a covid normal?**
I'm excited to go back to uni.

**What are you most excited to get back to?**
I'm excited to travel again, especially internationally.

## INTERVIEWEE 4

### Information

| | |
|---|---|
| **Participant number and pseudonym** | P4 - Hannah (alias) |
| **What is their stakeholder role?** | Citizen - Student |
| **What skills, knowledge and experience do they bring in this role?** | Knowledge on how covid is managed in the building and social experience within. Insights into uni life. |
| **Completed PLS** | Yes |
| **Completed Consent form** | Yes |
| **Interviewed by** | Vaishali Nair |

### Interview Transcript

**How have you been impacted by Covid-19?**
Mobility: expected to be worse in the shared accommodation, no gathering in common spaces. But allowed to gather for meals, presence of casual encounters, no physical university experience, difficult to plan ahead and get stability. Not as bad as she thought.

**What technologies or techniques do you currently use to manage Covid-19?**
No communal meetings, helpful having a Facebook grp for residents, discord server for orientation, measures not as strict so you are able to join certain activities, able to make friends, not allowed to leave rooms without a mask, you can't have visitors, assigned toilets by room. If someone contracts covid, she has to call the people and those assigned to areas with them will be informed immediately. (These people are given food pack, assigned individual bathroom)

**Do you think those technologies/techniques are working well at the moment?**
'If someone gets the delta variant, we would probably all be in trouble.' Lots of people are still interacting, it is not reasonable to have a mask 24/7 for casual stuff like going to the washroom.

**Is there anything that you can think of to improve these technologies/techniques to manage Covid-19?**
Assign specific mealtimes, you are only supposed to sit in every second chair, social distancing when masks are off. In theory, it is safer to bring food to your room, but may deprive you of social contact.

**How do you collect information about Covid-19? From which sources? Which one is your main source?**
Main source: ABC news push notifications, has all the updates. 'dad somehow knows everything before I do'. Googling the department of health and safety.

**Do you ever feel like this source itself is not enough?**
Pretty comprehensive, tweets of talks and then a summary, to the point but has all of the news, unlike CNN which has huge articles.

**14**

**Is it reliable?**

Yeah, at the moment, unless there is government interference and currently there isn't which might be the reason for budget cuts.

**Is it easy to access?**

Yeah, accessed through the app, no account, select notifications you want. (Victoria, local news, no US news, covid updates, Vic news).

**What do you think could be done to improve this service?**

Not much: it has a lot of information, but is summarized and push notifications, no need to look at articles if not interested can always google later, daily summaries.

**How effective is contact tracing right now?**

Marking locations with the Service Victoria app is useful if you can't remember place or time. Yeah, I guess to a certain extent, knowing where they've been is useful and can get tested b4 symptoms to show. Believes it is less effective with delta variants.

**How many people sign-in digitally? How many not? How many no attempts?**

Some people don't (seen people go into shops): confusing for elderly to use?? People protesting lockdown and denying vaccinations.

**Do you have any ideas on how contact tracing could be improved?**

Sometimes it feels like not much media coverage on exposure sites, needs more reminders (check newer exposure sites), sometimes forget to check new exposure sometimes sometimes.

**Do you use the current CovidApp / Service Victoria? If so, what for?**

QR code scanner is better on it (check in), ages to boot up.

**Did they know that you can book appointments? Entry Permits etc.**

No, I was completely unaware after using the app for a long time. Only look at check in. She felt it is more natural to book vaccination at DHHS website. Unclear messages on why you can't get a vaccine (saying too young when eligible). Going to the local GP for an appointment. Used an online portal and they can book one appointment there. She got intimidated out of it by a gp who provided an extreme version of information. Irresponsible about informing about AstraZeneca relative to other common medication like birth control

**How viable is the idea of a vaccination passport to you?**

I think of a Medicare card when mentioning the possibility of a physical object. Medicare card, physical card but also order your online copy of Medicare card on a phone. Really good ideas, important information, business can use it to identify vaccinated people using it. Government needs to provide incentives beforehand like putting a time from when people need to get vaccines to attend events.

**What are its main benefits?**

Keep up to date, useful information, party ('I could say hey if you want to come need to show proof of vaccination'), low cases. When everything is open and we can travel, it can be useful.

**What are its main disadvantages?**

People will hate as it is another form of identification (government surveillance). She personally doesn't find it a bother because the government has all of it anyways. 'To live in a society, you need to give up a certain

personal freedom.' The extra restriction might suck or needing vaccination might be hard for some. Variants should be there for people that can't get vaccinated due to sickness.

**Would this be something that you could see being implemented?**
Absolutely. Similar to Medicare cards and driver's license

**What changes would you like to see as we move into a Covid normal future?**
Change, govt for incentives about vaccinations (maybe by restricting freedom to people that choose not to vaccinate). Government action surrounding that. Plan ahead, visit people, go to university, make friends. After moving in she felt isolated from everyone. Believes it is difficult to keep cases at zero.

**What are you most excited to get back to?**
UNI! Before the pandemic started wasn't bothered because she was a homebody. After a while she realised it wasn't good: hard to socialize, awkward stunted conversations via zoom. Only met on zoom makes it difficult to connect better.

**Any last thoughts.**
None, said most of what she wanted to say at this point

# INTERVIEWEE 5

## Information

| | |
|---|---|
| **Participant number and pseudonym** | P5 - John (alias) |
| **What is their stakeholder role?** | Business -  health & wellness clinic owner |
| **What skills, knowledge and experience do they bring in this role?** | Has experienced 6 closures and has suffered significant loss of profit, emotional distress, higher operating costs, business and customer uncertainty. |
| **Completed PLS** | Yes |
| **Completed Consent form** | Yes |
| **Interviewed by** | Paris Eckert |

## Interview Transcript

**How have you been impacted by Covid-19?**
[Our centres have] experienced 6 closures and has suffered significant loss of profit, emotional distress, higher operating costs, business and customer uncertainty. We have been closed during the lockdowns, membership revenue has been eliminated and staff wages, rental and other costs have continued.

**What technologies or techniques do you currently use to manage Covid-19?**
We use the Services Victorian Covid-19 Check-In application for members when we are open. In our Centre we rely on the Worksafe Victoria website advice for best practice in www.worksafe.vic.gov.au.

**Do you think those technologies/techniques are working well at the moment?**
When open, the check-in app helps with OH&S compliance only. Our Centres use membership RFID tags to record attendance of all members daily.

**Is there anything that you can think of to improve these technologies/techniques to manage Covid-19?**
Our aged members often do not have access to mobile phones.  We have to supply a tablet for this purpose, or rely on a manual paper record.

**How do you collect information about Covid-19? From which sources? Which one is your main source?**
Victorian Government Covid - www.coronavirus.vic.gov.au

**Is it reliable?**
Sometimes the information is not updated when announced – an example is when lockdown has been announced at 5pm for an 8pm lockdown. Some staff affected by closures have also found difficulty accessing the CentreLink payments due to website failure issues. No phone access is available to assist and time restrictions for claims apply creating additional stress.

**Is it easy to access?**
Yes it is easy to access, however not always up to date.

**What do you think could be done to improve this service?**
Up to date information and sufficient notice of all changes to implement what is required.

**How effective is contact tracing right now?**
I do not believe that the contract tracing has been adequate in Victoria in the past. Primary and secondary contacts have not been made for days according to some media reports. I have no personal experience at OsteoStrong with contract tracing issues.

**How many people sign-in digitally? How many not? How many no attempts?**
I observe many people not signing in on entry to many shops and businesses and staff make little or no attempt to ensure compliance. At OsteoStrong all Members tag on using an RFID reader recording and staff ensure compliance.

**Do you have any ideas on how contact tracing could be improved?**
The Government could issue Covid ID tags that could be used with simple RFID or scanning technologies to record attendance at sites across Victoria. This would be a simple and relatively cheap option. A central database would be used to record, track and trace. No doubt civil liberty organisations would oppose this technology. But it would be much better than the current "trust" system in use today.

**Do you use the current CovidApp / Service Victoria? If so, what for?**
Yes for members and visitors

**Did they know that you can book appointments? Entry Permits ect.**
No I was not aware of a booking system

**How viable is the idea of a vaccination passport to you?**
I think this is a good idea

**What are its main benefits?**
A non-forgeable passport is a better idea than the current "certificate" in use already that could be easily copied and forged.

**What are its main disadvantages?**
Civil liberty, criminal and gang groups will argue that it is a privacy breach and could be used for other non-Covid purposes. Given the current shutdown impact on small and medium businesses like OsteoStrong and the impact on the wider economy and community, I do not believe that privacy is a valid argument at present.

**Would this be something that you could see being implemented?**
Hopefully yes.

**What changes would you like to see as we move into a Covid normal future?**
Unfortunately we have to accept that Covid 19 is not going away, so we need to ensure widespread vaccination in elderly, at risk health compromised people, as soon as possible. Then implement a Covid Vaccination Passport system for the general community that enables free interstate and overseas travel again, opening up the economy and social networks Nationally and Internationally. This is a critical step towards a Covid normal – this is being done in other EU, UK, Asia and US countries. We need to keep up with this change or our economy and community will suffer irreversibly.

**What are you most excited to get back to?**
Interstate and overseas travel


**Any last thoughts.**
The people making the decisions about lockdowns have not suffered any financial losses during the closures. They have received full wages, additional stay at home allowances to cover home office costs, and in most cases pay increases.  The Victorian Premier has said that "we are all in this together", however some are affected much more financially than others. If we are being locked down, all workers affected need to be financially compensated in a timely and adequate way.

# INTERVIEWEE 6

## Information

| Participant number and pseudonym | P6 - Anna (alias) |
| --- | --- |
| What is their stakeholder role? | Age Care Worker - Administration |
| What skills, knowledge and experience do they bring in this role? | Works in high risk facilities, work moved to online, got vaccinated early |
| Completed PLS | Yes |
| Completed Consent form | Yes |
| Interviewed by | Manami Fujikawa |

## Interview Transcript

**How have you been impacted by Covid-19?**
I think the biggest impact for me has been working from home. I was working in an office full time before and now full time at home, so just on a daily level. It's also isolation, restriction and other changes in our lives.

**What technologies or techniques do you currently use to manage Covid-19?**
The big two are QR codes when I go out, and Zoom for work. I also sometimes use Microsoft teams to collaborate with my colleagues, but it's mainly zoom that I use to contact people. I don't tend to do a lot of online ordering to be honest.

**Do you think those technologies/techniques are working well at the moment?**
I think Zoom generally works well. The QR codes on a practical level work pretty well, in terms of physically using them, they're fine, as a tool to track people they seem to be working pretty well. I guess the biggest disappointment was the COVIDsafe app that was developed early when COVID first started… Tremendous amounts of resources went in and apart from all the functional functions, it's never been used for the intended purpose, so I don't know what went wrong but it was a missed opportunity and a waste of resources by the government.

**Is there anything that you can think of to improve these technologies/techniques to manage Covid-19?**
I guess I don't really know about development so I don't have much to say, but I guess these have to be electronic so it's okay for most people but limited to some. Yeah, I can't really think of any improvements.

**How do you collect information about Covid-19? From which sources? Which one is your main source?**
I guess little bit from press conferences, but then given that there's so many changes so I tend to go to the government COVID site if I want something specific like something I can/cannot do.

**Is it reliable?**
Yes, I think that's why I go to the government website because it's always accurate, although there are some delays.

**I understand that you work in an age care facility, how has COVID-19 affected your work place and people you interact with?**
It had a huge impact actually. All my colleagues and I are working fulltime from home now so that's changed our forms of communication and ways of getting work done. As an organisation, we have 20 residential facilities and we have 10,000 clients across all of VIC and TAS, so obviously it has had an impact on the residents, their families, and clients, of course like everybody else. Fortunately, we've never had any COVID positive cases so we've been fortunate in that regard but nonetheless we've put in a tremendous amount of resources in terms of PPE, time, and it's cost the organisation millions of dollars. It's also changed everybody's work life, those in corporate offices, those at site, and changing practices… But overall, particularly now, people are now getting really tired, long term exhaustion and without really a definite end in sight of the pandemic… people are more used to working how they have to but it's more the long term slog that is taking a toll at the moment.

**Do you think there's enough resources that can help people who are struggling with isolation and mental health due to COVID-19?**
I don't think so… I do think there are programs like Beyond Blue and lifeline which are great, and having the health system we do have is good, but I understand that some people are trying to access such services and haven't been able to… I started doing some work with someone at work who specializes in mental health as we've had some cases of self harm in our facilities which we haven't fully understood if it relates to COVID. Residents are finding it really difficult during this time, so there are great resources out there but not enough, whether it's a money issue or professional staff available to help or… I think we just need a lot more.

**How does the facility you've worked at contact trace? (Aged care facility residents may not have phones/ know how to use QR code scanning apps)**
The residents are tracked as they're already registered with the facilities. Last year, the organisation purchased thousands of devices so that the family members and the residents could communicate easier without complicated use of technology like phones.

When there was an outbreak of COVID in northern Tasmania last year, due to the poor communication between the facilities and the organisation, we heard about the outbreak through three different sources, and it was very delayed. It was a really poor communication and poor usage of technology so some kind of technology that helps for better tracking and communication would've made the situation better.

**How viable is the idea of a vaccination passport to you?**
I think it would be a game changer, because it means we can live a different life. Big things like traveling internationally, or attending large events… but from the age care perspective would be a game changer too because every person who enters the facility needs to be screened each time, which has been a massive use of resources.

Basically, you need to fill out a 2 page document each time, and over time we have collected tens of thousands of pieces of paper that we usually don't look back at but just for formality purposes. It's not the same as the passport but the same principle, but especially going forward, opportunity would be immense.

**What changes would you like to see as we move into a Covid normal future?**
I would really like to see some electronic passports. In the future when everyone has had the opportunity to get vaccinated, although it's not the case yet, we would need some form of technology to track who's been

vaccinated to keep people safe, such as entering age care or the residents. Just move more freely, do more things… Bring it on!!

**What are you most excited to get back to?**
It's funny, there is no particular thing I'd like to get back to…. Obviously I'd love to be able to travel and such and leave Melbourne…. But I think the big thing is just having that freedom we had before, and knowing that we have it. Just the mental freedom of not having restrictions and not worrying (about numbers etc). Just being free of the constant tracking of numbers etc. mental health load of constant high level vigilance. If someone asked me if I'd rather be able to travel internationally or have that mental freedom, I think I'd choose the latter. The mental space that COVID and it's numbers take up is not okay.

# INTERVIEW THEME SUMMARY

After conducting a thematic analysis on the interview transcription excerpts, the major points of conflict for these stakeholders included:

1. Contact tracing
2. Covid-passport
3. Checking in
4. Communication
5. News
6. Mental Health

A clear message in all the interviews is that every interviewee is eager to get back to a normal life. Five out of the six interviewees stated that they are excited to travel both interstate and internationally once the borders are open again. Rose and Hannah are both university students and are excited to return to on-campus learning. As Anna works in aged care, she is waiting for the mental freedom of not having Covid-related restrictions and lockdowns. These are some of the motivations our interviewee stakeholders have mentioned and should be considered in our proposed technology.

## THEME 1 - Contact tracing

Overall, our interviewees have a negative regard towards Victoria's contact tracing.

- Mark (P1), James (P2), Rose (P3), John (P5) and Anna (P6) do not believe that contact-tracing has not been effective.
- Hannah (P4) the university student believes contact-tracing has been "effective to a certain extent".

James (P2) the hostel manager only signs in guests in "initially when they come to stay also kept on a registry that keeps track of occupants." If a staff member or visitor has Covid-19, it makes it hard to track where they have been in the hostel.

Mark (P1), Rose (P3) and John (P5) said the speed of notifications has been too slow and communication has been poor:

- Mark (P1) found it difficult to deal with a positive case in the hospitality venue he works. He was not sure what to do when he was notified. He had to "chase for the information" and "it took from Thursday to Sunday for any response." He was finally "contacted on day 12 for information".
- In mid-July 2021, Rose's (P3) hardware store was listed as a tier two exposure site but she "did not hear about anyone getting a text or notification about it". It took six days for them to be notified they were an exposure site. She suggested that the contact tracing "notification process should be improved as some staff members who check in everyday did not receive a text message to let them know they had visited an exposure site.
- John (P5) said that "primary and secondary contacts have not been made for days according to some media reports".
- Anna (P6) mentioned that communication was "very delayed "when there was a Covid outbreak in Tasmania. "It was really poor communication and poor usage of technology so some kind of technology that helps for better tracking and communication would've made the situation better."

## THEME 2 - Covid-19 passport

All interviewees had a positive response to our idea of implementing a Covid-19 Passport.

- However Mark (P1) would feel "more comfortable" if it was a government backed initiative. Benefits for the economy and to reduce the spread of the virus.
- James (P2) thinks that it would "encourage vaccination", "get the hostel back to normal" and would feel more comfortable attending large sporting events".
- Hannah (P4) feels it would be a good idea if "businesses can use it to identify vaccinated people", but "the government needs to provide incentives beforehand like putting a time from when people need to get vaccines to attend events". She also thinks it is essential for future travel.
- John (P5) feels a "non-forgeable passport is a better idea than the current "certificate" in use already that could be easily copied and forged."
- The implementation of a Covid passport "would be a game changer for" the aged care industry Anna (P6) is in. "It means we can live a different life" and do "big things like traveling internationally, or attending large events… but from the age care perspective would be a game changer too because every person who

Some interviewees discussed some potential disadvantages of implementing a Covid-19 passport:

- Mark (P1) believes that there could be public backlash and religious reasons, it would need to be "clear and unified."
- James (P2) thinks this may cause exclusivity. It could "restrict certain groups of people that might not have been able to get vaccinated or chose not to."
- Hannah (P4) believes some "people will hate as it is another form of identification". But she personally doesn't find it a bother because "the government has all of it anyways."


## THEME 3 - Checking in

All of our interviewees are familiar with the Service Victoria QR code check-in system.

Downsides of the current system:

- Mark (P1) believes that they are "not very effective" as the government "tries to enforce [it] but some people actively avoid checking in so that their information remains private."
- Rose (P3) stated that the staff at the hardware store are impacted in their jobs because of the QR code system. There are "some people who do have trouble checking in" so the staff at the store will use "another staff member's phone to put in their information using Service Victoria QR code. Sometimes customers do not have a mobile phone number that they can be contacted on. It is mostly older people who don't have phones or do not know how to scan QR codes. John also mentioned that their "aged members often do not have access to mobile phones, so [they] have to supply a tablet for this purpose or rely on a manual paper record."  Anna also commented that checking in has "to be electronic so it's okay for most people but limited to some".
- John (P5) sees the Service Victoria QR code check-in system as something that helps with OH&S compliance only. They prefer to use their "centres use membership RFID tags to record attendance of all members daily".

Attitudes towards using Service Victoria QR code check-in system:

- Rose (P3) mentioned that "Most customers do sign in" however "are definitely some people who don't for example [tradesmen] (who do not care about it)".
- Rose (P3) also stated while "most people were happy to check in", sometimes customers would make some comments about it being like "ugh this is annoying", or they were getting frustrated that the QR scan would not work for them on their phone. That is our customers' biggest frustration."
- Hannah (P4) has observed that "people protesting lockdowns and denying vaccinations" are more likely to not check in. From her experience shopping she has witnessed many people not signing in.

Suggestions to improve Service Victoria QR code check-in system:

- John (P5) has suggested that "the Government could issue Covid ID tags that could be used with simple RFID or scanning technologies to record attendance at sites across Victoria. This would be a simple and relatively cheap option. A central database would be used to record, track and trace. No doubt civil liberty organisations would oppose this technology. But it would be much better than the current "trust" system in use today."

## THEME 4 - Communication

Our interviewees feel that communication between the government and the public is slow and not updated regularly enough:

- Mark (P1) uses the DHS website as source of information as he finds it "reliable", however his concern is that it is not updated regularly. He hopes he can use technology to help his business receive industry related notifications and communication in a timely manner.
- As a hostel manager James (P2) collects information about Covid-19 from the HR department and the Government. When he emails them, it normally takes four hours to receive a response.
- Rose (P3) was very concerned about the speed of contact-tracing communication. She believes "the notification process [for contact tracing] should be improved "as it took six days from exposure to be listed as an exposure site. Staff who "had [checked] in on the exposure day and they did not get notified, any text or anything."
- Rose (P3) also "always feels a bit unsure about the restrictions, like the time we are allowed to exercise each day". She believes "technology could be implemented to help me keep up to date".
- Hannah (P4) "feels like not much media coverage on exposure sites". She also feels there "needs to be more reminders" to check newer exposure sites as she sometimes forgets to check new exposure sometimes.
- John (P5) has stated that "although information regarding current restrictions is easy to find" a lot of the information is not updated when announced. An example is "when lockdown has been announced at 5pm for an 8pm lockdown. Some staff affected by closures have also found difficulty accessing the Centrelink payments due to website failure issues. No phone access is available to assist and time restrictions for claims apply creating additional stress." He also believes that more notice should be given when new restrictions are put in place. This is so the business can adjust accordingly.
- Anna (P6) always uses the "government website because it's always accurate" however she also mentions how updates are too delayed.

## THEME 5 - News

Our interviewees collect information from various sources. These include, Google, DHS site, ABC news WorkSafe Victoria, press conferences and social media (Twitter):

- Mark (P1) and James (P2) use a combination of sources depending on which information they're after. DHS for official restrictions and google for case numbers etc. They think this information could be improved and more reliable if it was "direct from the government and specific information for the venue".
- Rose (P3), who is also a university student mainly uses social media to receive information. She "follows the DHHS on Twitter where I get daily updates and exposure site updates. "
- Hannah (P4) uses ABC news as she finds it "comprehensive" and easy to access information through their app. It is displayed and written in an appealing format that is to the point but has all the news. This is unlike CNN which shows huge articles and is hard to read. She also uses their push notifications to receive updates.
- In John's (P5) health and wellbeing Centre they "rely on the Worksafe Victoria website advice for best practice" and also "collects most of their information from Victorian Government Covid". He likes to use government sites as they are reliable.
- Anna (P6) gets some information from "press conferences, but then given that there's so many changes so I tend to go to the government COVID site if I want something specific like something I can or cannot do."

## THEME 6 - Mental Health

Both Hannah (P4) and Anna (P6) also touched on the negative effects Covid-19 has had on people's mental health:

- Hannah (P4) feels that "at the beginning she didn't mind as she was a homebody, but after a while she realised it wasn't good: hard to socialize, awkward stunted conversations via zoom." She also feels that meeting people via zoom also makes it difficult to connect better.
- Anna (P6) has stated that "people are now getting really tired, long term exhausted and without really a definite end in sight of the pandemic". She doesn't think there are enough resources that can help people who are struggling with isolation and mental health. She is aware of programs like Beyond Blue and lifeline but stated "some people are trying to access such services and haven't been able to. She mentions that "residents [at the aged care facilities] are finding it really difficult during this time, so there are great resources out there but not enough, whether it's a money issue or professional staff available to help or… I think we just need a lot more."

## DISCOVERED STAKEHOLDERS' CONCERNS

| Stakeholder groups | Stakeholder | Expected interests/concerns | Interviewee No. | Discovered interests and concerns |
|---|---|---|---|---|
| **Health care** | Age care workers | Prevent bringing covid into nursing homes | P6 | <ul><li>Delays in government sites</li><li>Pandemic has required them to put in lots of resources</li><li>The situation may be affecting mental health of residents</li><li>Wants method to track who has been vaccinated</li><li>Feels like electronic passport can greatly reduce the use of resources</li></ul> |
| | Hospital workers | Wants to save and protect people | - | |
| | Front-line workers /clin | Wants to minimise risk of COVID<br><br>Wants people to follow restrictions | - | |
| | WHO | Spread right information Access people | - | |
| | At-home carers | Prevent the people cared for to be harmed | - | |
| | Testers | Wants to flatten the curve | - | |
| **Citizens** | Had covid | Wants to live a normal life<br><br>Wants to avoid getting and spreading COVID | - | |
| | Has covid | | - | |
| | Hasn't had covid | | P1,P2, P3,P4,P5, P6 | |

| | | | | |
|---|---|---|---|---|
| | People at risk | Wants to avoid covid and protect their health<br>Avoids high-risk areas | | |
| | Families of those at risk | Wants to know how to support but also not contract covid | | |
| **Vaccination** | Vaccinated | When can we go back to normal life | P4 | ● Wants benefits or advantages for being vaccinated<br>● Wants government to put more incentives for people to get vaccinated<br>● Was difficult to find reliable and consistent source for eligibility and potential side effects for vaccine<br>● People might not want another form of identification on the phone |
| | Hasn't vaccinated | Don't want to get covid<br>Wants to know when eligible for vaccine | - | |
| | Anti-vaccination | Do not want to get side effects of vaccine | - | |
| | Cannot vaccinate | Wants to avoid getting covid completely | | |
| **Businesses** | Hospitality | Affected by lockdowns<br><br>Wants to open businesses<br><br>Avoid being an exposure site<br><br>Stimulus package from government | P1 | ● Having to look for information instead of just being informed<br>● Interested in business specific updates<br>● Electronic passport to be clear and unified |
| | Travel | Want to go back to the workspace | P2 | ● Direct and specific information<br>● Wants to encourage vaccination |

| | | | | |
|---|---|---|---|---|
| | | | | ● Bring hostel back to normal |
| | Clinic | Higher chances of becoming an exposure site<br><br>Loss of profit | P5 | ● Significant loss of profit<br>Higher operation costs<br>● Membership revenue eliminated<br>● Delays in updates on government website<br>● Interested in a non-forgeable passport |
| | Retail | Concerned about economy affecting their businesses<br><br>Wants to minimise lockdowns | P3 | ● Wants information directly if the retail becomes an exposure site<br>● Exposure resulted in shop closing<br>● Wants all-round government site |
| | Construction | Needs volunteers and how to minimise risk while carrying out work | - | |
| | Lower risk businesses | Open up state for economy<br><br>Keep people safe | - | |
| **Education** | Students | On-campus study | P3, P4 | ● Wants on-campus study<br>● Go back to in-person socialising<br>● Harder to befriend people |
| | Universities | Losing students to covid<br>Want facilities used | - | |
| | International | Wants to know when border opens<br><br>Wants to return home | - | |

# DESIGN IDEAS OVERVIEW

As revealed in our rich picture and interviews, there are many stakeholders involved in this project which have conflicting views with other stakeholder groups. Dorsts describes these problems as a paradox which is "a complex statement that consists of two or more conflicting statements" (Dorst 2015, p. 51). Below we have noted what paradox each design idea is dealing with.

| Number | Theme | Name | Paradox the app is dealing with | Created by |
|---|---|---|---|---|
| 1 | Covid passport | Covid Passport | *Government:* Need a valid ID system that allows for individuals to prove their vaccination status and their personal information regarding COVID-19. There is no current system that allows citizens to do so.<br><br>*Businesses:* Do not want to sacrifice their staff to constantly ask and check all visitors' vaccination paperworks. | Manami Fujikawa |
| 2 | Contact tracing | Covid Passport (Check in history) | *Government*: Requires all visitors and workers at workplaces to use the Service Victoria QR Code app with limited exceptions.<br><br>*Businesses*: Creates a safer environment with relevant and fast hotspot information.<br><br>*Citizens*: May feel more comfortable with a quicker return on information and feel secure in their daily doings. | Paris Eckert |
| 3 | Checking in | Checked In (E-tag system) | *Government*: Requires all visitors and workers at workplaces to use the Service Victoria QR Code app with limited exceptions.<br><br>*Businesses*: Do not want to sacrifice their staff to check if all visitors have checked in. We observe some customers frustrated about checking in.<br><br>*Citizens*: Might not care, do not have time, do not have the means or do not have the ability (e.g do not own a smartphone) to sign in. | Nicola Toomey |

| 4 | Communication | Aus-19 | *Government:* Requires all businesses and citizens to follow certain restrictions which they need to be able to update.<br><br>*Businesses:* Businesses are required to update their practices according to the most current restrictions, which they have to interpret.<br><br>*Citizens:* Citizens are affected by these changes in a large range of fields such as travel, shopping, going out ect. They are required to know when changes occur.<br><br>*Education & Healthcare:* Both groups are affected by the changes which in turn changes how they can operate. They must then relay this information to those they service. | Sam Turner |
|---|---|---|---|---|
| 5 | Data and Statistics | Statistics | *Government*: Gives out all the accurate information to the general public for them to check on their own.<br><br>*Businesses*: Wants accurate information and frequent updates more suitable for their business.. Wants it to be easy when the user is too busy to access devices other than a phone.<br><br>*Citizens*: Wants a consistent source of data and statistics while giving visual interest while maintaining their personal preferences.<br><br>*Education & Healthcare:* Needs a place to acquire all the information and data required quickly and efficiently. They want a method to filter data according to their own interests. | Vaishali Nair |
| 6 | Mental health | Covid Support Community | *Citizens:* Suffering under the restrictions imposed by the government and not enough mental health resources available<br><br>*Healthcare*: Need an online mental health support system that is lacking in quantity currently. BeyondBlue and other apps are not enough. | Manami Fujikawa |

| | | | | |
|---|---|---|---|---|
| | | | *Government:* Need to impose restrictions and harsh lockdowns in order to slow down the spread of the Virus. Need a space where citizens feel comfortable and supported during the pandemic. Want to reduce suicide rates that may be affected by lockdowns and restrictions. | |
| 7 | Motivation | Check in rewards | *Government:* Want a system that motivates more people to frequently check-in to venues for easier and more effective contact tracing.<br><br>*Citizens:* Some feel that checking in is not necessary. Some feel that it's not effective. Some do not want to be caught in an exposure site, hence do not check in. Need a positive incentive to check-in to venues consistently.<br><br>*Businesses:* Not everyone is checking into venues properly and consistently. Want people to check-in to venues more frequently and consistently. Don't want people who don't check-in to visit businesses, but would create a reward system for those who do. | Manami Fujikawa |

## DESIGN IDEA 1 - COVID PASSPORT
## Designed by Manami

COVID passport digital ID is a way for an individual to display their personal information relating to COVID-19 when asked as we are moving towards a COVID normal as vaccinations are starting to roll out. This digital ID contains the person's name, age, nationality, their Medicare number as well as their vaccination information such as the type, date administered, document number, test date and test result. This also contains their health condition and whether they are exempt from wearing a mark, as this is a common concern of businesses when people do not follow the government guidelines and restrictions. It is important to note that their vaccination information and documentation must be valid and verified by the government or the application.

## DESIGN IDEA 1 PROTOTYPE
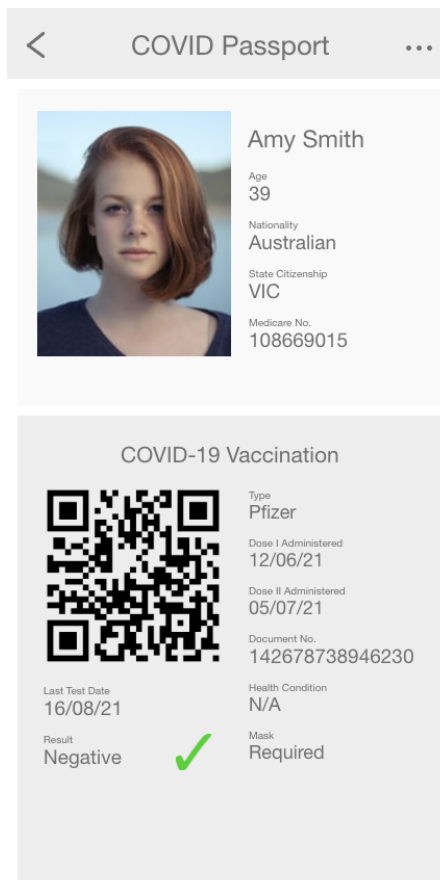


*Screen one: Passport details.*

## DESIGN IDEA 2 - CHECK IN HISTORY
## Design by Paris

Covid Passport is an idea that collects all check in spots using the QR codes in businesses and locations around Victoria. By scanning the QR codes scattered around all venues and businesses in Victoria, the user's location will automatically appear under the 'my check-ins header/ page'. This will create an easier way for people to keep a record of their locations and be notified immediately if their location coincides with a hotspot. It will keep track of all Victorian Hotspots and send a notification to the user if they have been in close contact with someone with Covid-19. This will appear in red as a notification on their phone.

and then allow for the Victorian hotspots to correspond and notify a user if they have attended a hotspot by appearing in red. This idea will fast track a user to determine if a location they have visited was a potential hotspot and to allow for faster covid tracing.

## Prototype
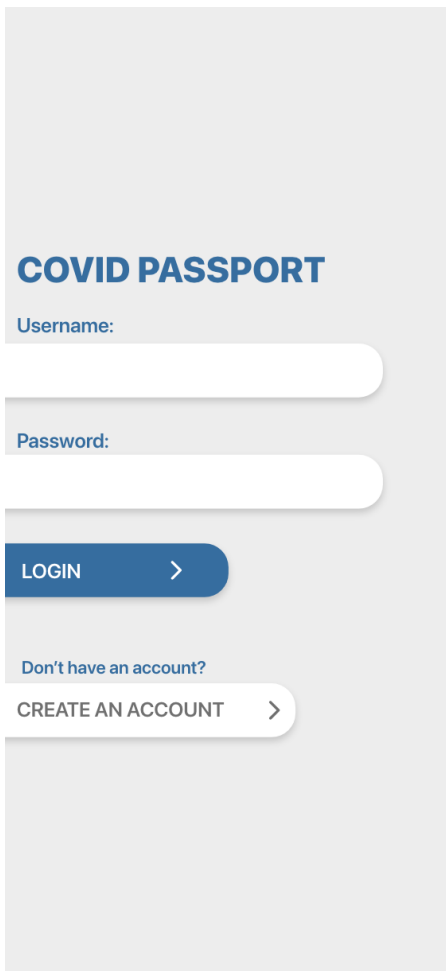


Screen one: Login page.          Screen Two: Check-in overview.          Screen Three: Victorian Hotspots.
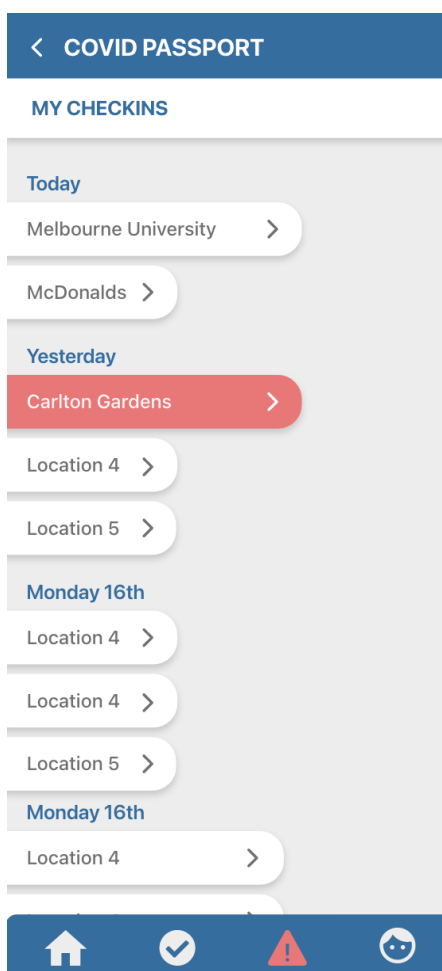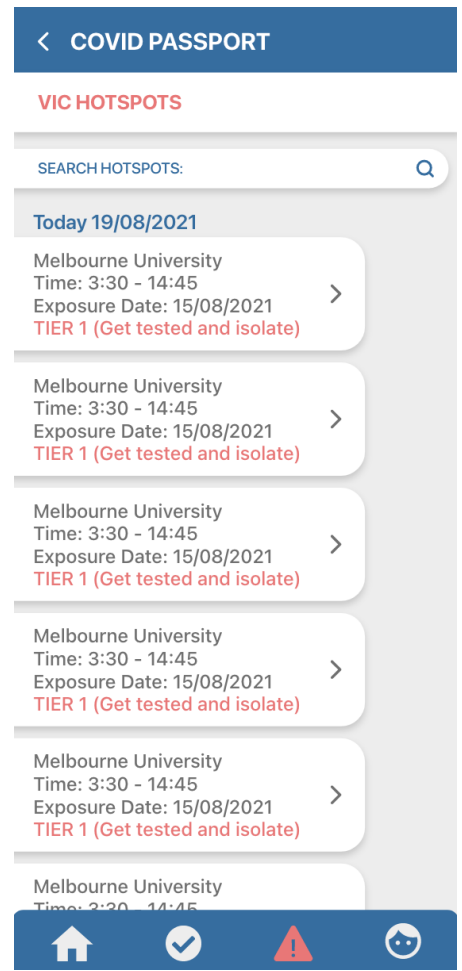
## DESIGN IDEA 3 - E-TAG SYSTEM
## Design by Nicola

The Victorian government has stated that "all workplaces require all visitors and workers to check-in using the free Service Victoria QR Code app with limited exceptions" (Coronavirus (COVID-19) Victoria 2021). The government has stressed that record keeping is a crucial part of keeping Victorians safe. However, it has been revealed through our interviews that not everyone is satisfied with the current system.

Checked In is an app that offers an alternative to the current Service Victoria QR code system. It aims to make checking in as simple and effective as possible. Each person and check-in location has its own unique ID number. On the app it is displayed as a virtual card.  Whenever a person enters a venue, an e-tag system will automatically check them in. This system will prevent visitors from not checking in. This is something that should be considered as Rose (P3) the hardware store retail worker revealed that many tradesmen "do not care or do not have time to sign in" when entering her store. John the health and wellbeing centre owner observes daily that "many people not signing in on entry to many shops and businesses and staff make little or no attempt to ensure compliance".

This e-tag system also eliminates the frustration caused by QR codes not scanning properly. Rose (P3) mentions how "frustration occurs when the QR code is not recognised on someone's phone, become impatient" and that
"Some customers express that it is annoying to constantly sign into every shop they visit". By removing this sense of frustration visitors will feel that they are moving towards a Covid normal and being less impacted by Covid-19 in their daily life.

This technology is inclusive to everyone. Those people who do not have a smartphone (through our interviews it has been concluded that there is a certain demographic of elderly people who do not have smartphones) , are able to order a physical version of the card which also uses the same e-tag system. Multiple ID numbers can be added to a single app, therefore non-smartphone users can add their ID onto the app of someone they trust.

The implementation of a physical card e-tag system will ease the impact on retail and hospitality venues. Both Mark (P1) the hostel manager and Rose (P3) mentioned how staff members must "manually sign [non-smartphone users] in" when they visit their workplace.

Both smartphone and app users' check-ins will be automatically added to the 'My Places' tab on the app. Exposure sites will also be listed on the app.  Users will receive an alert if an exposure site matches the site and check-in location of a user.

One of the risks of this design idea is that it will take a while for everyone to download the app and register an account. Some people may never download it. In that instance QR codes could still be used in the transition period. It will take quite a lot of time and money to install the e-tag system into each check in location. Hopefully this effort would not go to waste as after the pandemic it could be used for other purposes.
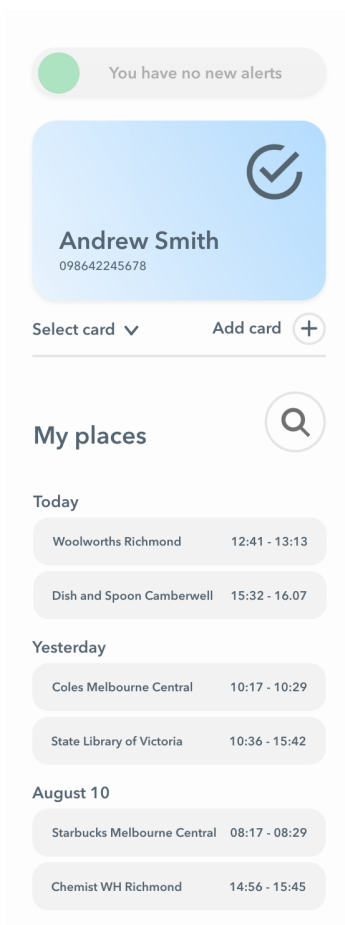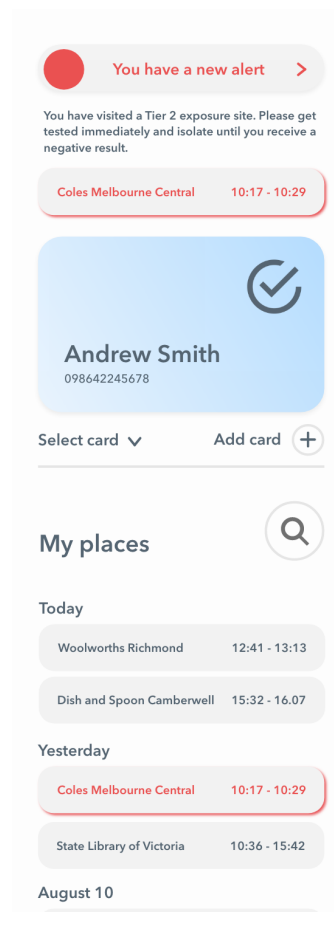
**Prototype**
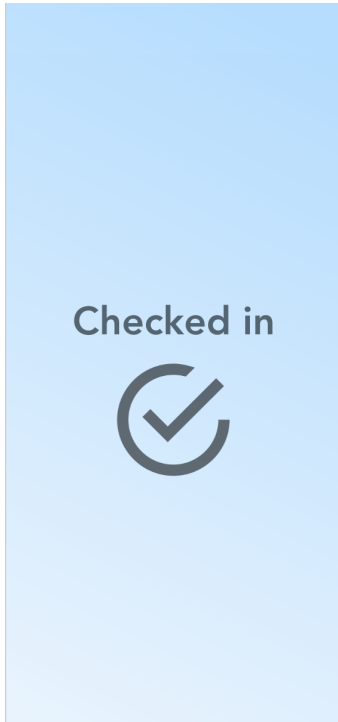


*Screen One: Splash page.*
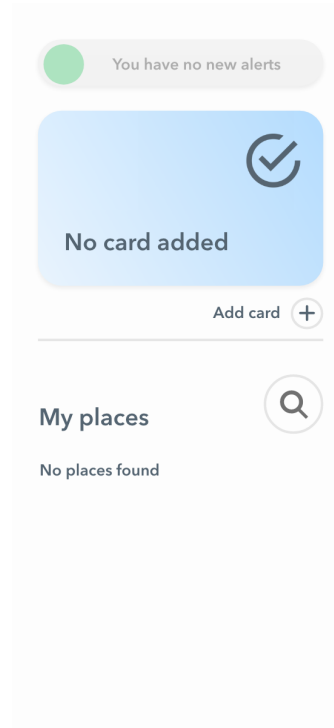


*Screen Two: Add Card.*



*Screen three: Check-in place.*



*Screen four: Exposure site notification.*

## DESIGN IDEA 4 - COMMUNICATION
## Design by Sam

In response to the changing nature of Covid-19, the Government is constantly updating the restrictions that affect all other stakeholders. This can include an increase of restrictions across all parties, such as the most recent lockdown, or can be industry-specific changes such as capacity limits in hospitality. These changes are decided on and implemented by the State Government, which means that the restrictions can vastly vary when travelling interstate.

All other stakeholder parties must be constantly aware of these changes and change their practices in response. This is the first paradox that this design touches on, the Government requires all parties to follow the restrictions; however, this requires all other parties to sometimes, as Mark (P1) described, "Sift through an 80-page document for details relating to them". The second paradox that arises from this issue is that due to the dissemination of this information through secondary sources, a conflict can occur between two parties due to differences in interpretation or how up to date the information is.

Aus-19 is an application that explores ways that this situation may be improved. In the first prototype screen, a notification system will be triggered when an update occurs that directly relates to the individual and their preferences. These preferences can extend to location or stakeholder type.

The second screen shows how it might feature in a more holistic application. It is imagined that it would sit alongside the check-in and covid passport functions to create a more cohesive application. An added benefit to this approach is that to access any of these features, the one up will be downloaded which would increase uptake.

The next two screens show how the user may search for specific terms or keywords that focus their result or, alternatively, they might use the filter button. It is intended that this information will be tailored to their preferences. This would be entered in a profile type set-up and would consist of information such as location, vaccination status and stakeholder type so they will receive industry specific information.

It will be marketed as the companion to life in the new Covid normal and not as a system for the Government to track people which was one the reasons for the initial application's slow uptake.

The risk involved with this design is that the information delivered will have to be timely, released when the updates are made which would mean any changes would have to be made ahead of time. Secondly, the information must be consistent, the advice given in one industry update must not conflict with another. For example, hospitality venues should be given the same information as their patrons. Thirdly, this cannot be the only source of the information since it would imply that all stakeholders would have to be users. Lastly, because there might be older information available or interstate information, it must be made clear to the user the relevance of this information, so they are reading the correct updates.
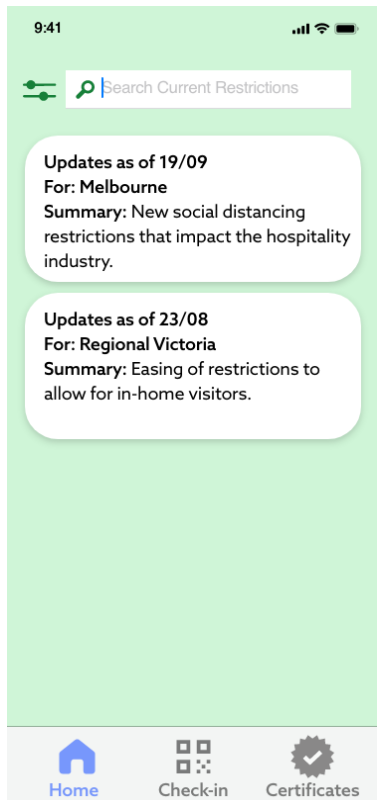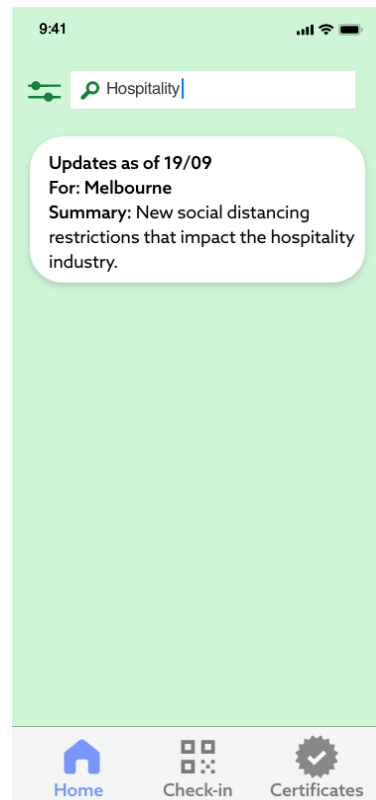
**Prototype**
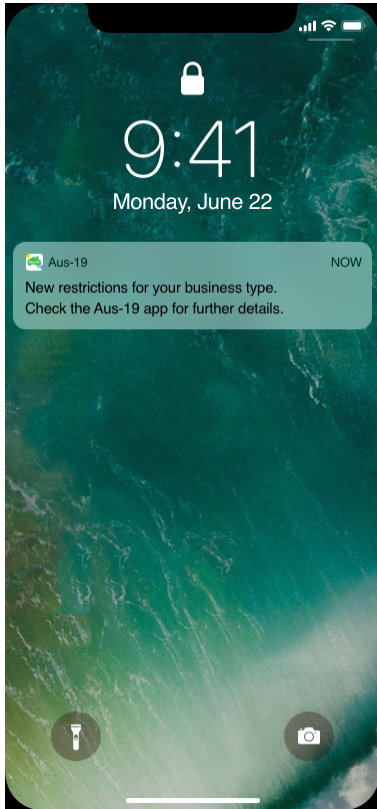


*Screen One: Notification System.*
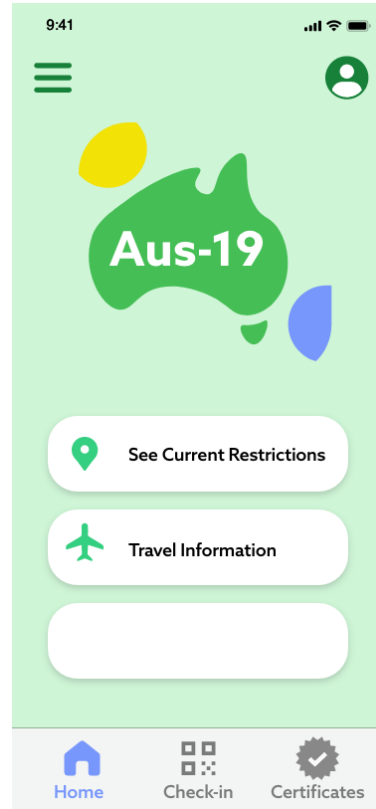


*Screen Two: Holistic app design.*



*Screen Three: Update search screen.*



*Screen Four: Search or Filter updates.*

## DESIGN IDEA 5 - STATISTICS
## Design by Vaishali

The current government websites have all the Covid-19 information presented without consideration of the possible mental health effects that some of the data might have on the individual. Additionally, the layout can make it difficult for people to find relevant information for their location unless searched for specifically.

This prototype is focused on the appropriate delivery of the Covid-19 related data and information. It's aim is to create a common platform for information to assist people like Mark (P1) , James (P2), and Anna (P6) who get their information from different sources. When opened, this app will show the world statistics and ask you to enter the location (country and then state) and time that the user may be interested in. With this information, it displays the statistics accordingly. These settings, in order to keep flexibility, can be edited or removed later on. This allows for ease in changing the filters without having to navigate through different sites. To add more visual information, the circle around the statistics changes to the colour on the bar graph it is associated with. This is done by seeing the statistic number and where it is placed on the graph from the past seven days. Such a visual aspect allows people to discern if the new cases are better or worse compared to the average of the previous seven days.

## Prototype
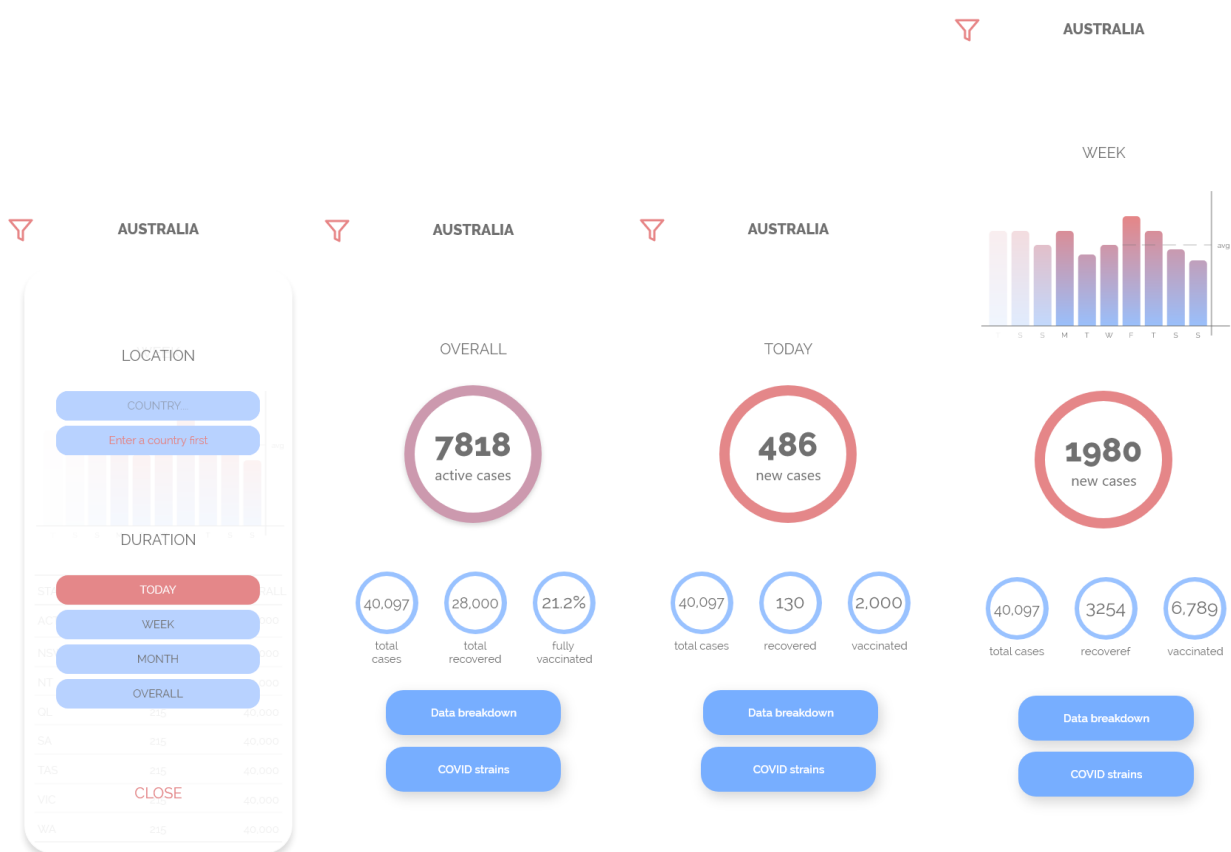


*Screen One: Filter page.*    *Screen Two, Three and Four: Filtered Australian information with time filters today and week respectively.*
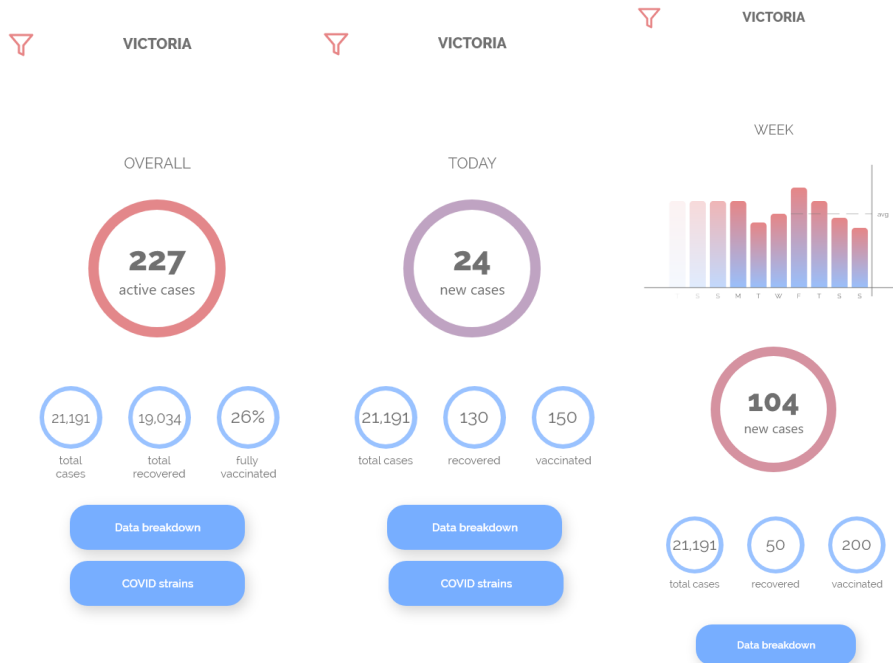
*Screen Five, Six and Seven: Filtered Victorian information with time filters overall, today and week respectively.*

Data related to more sensitive subjects like deaths and hospitalisations is hidden under data breakdown. For additional protection, they are collapsed and only shown if clicked on.
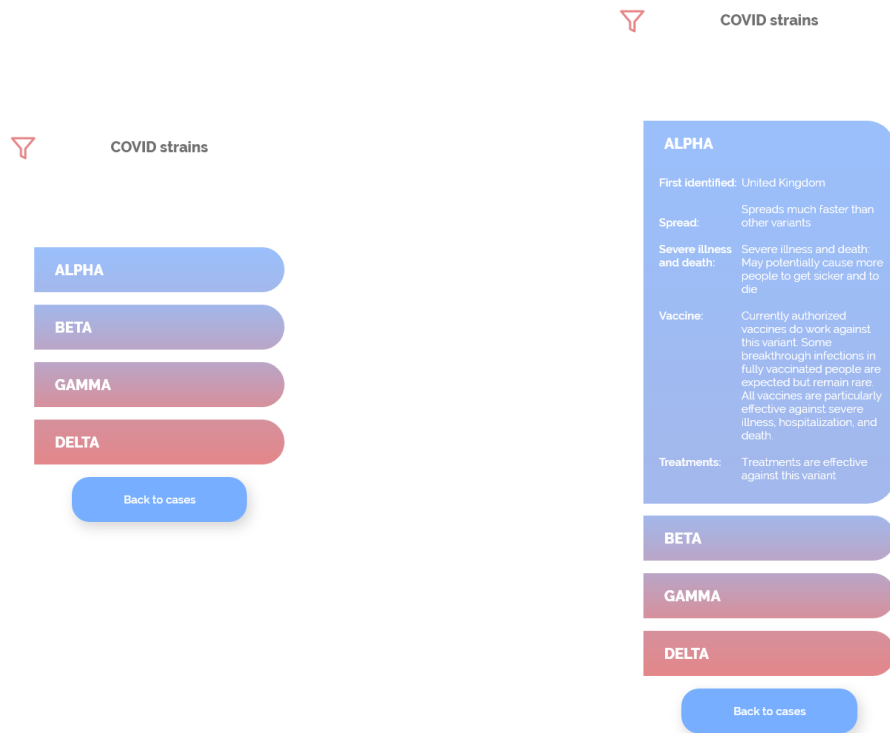
**Prototype**
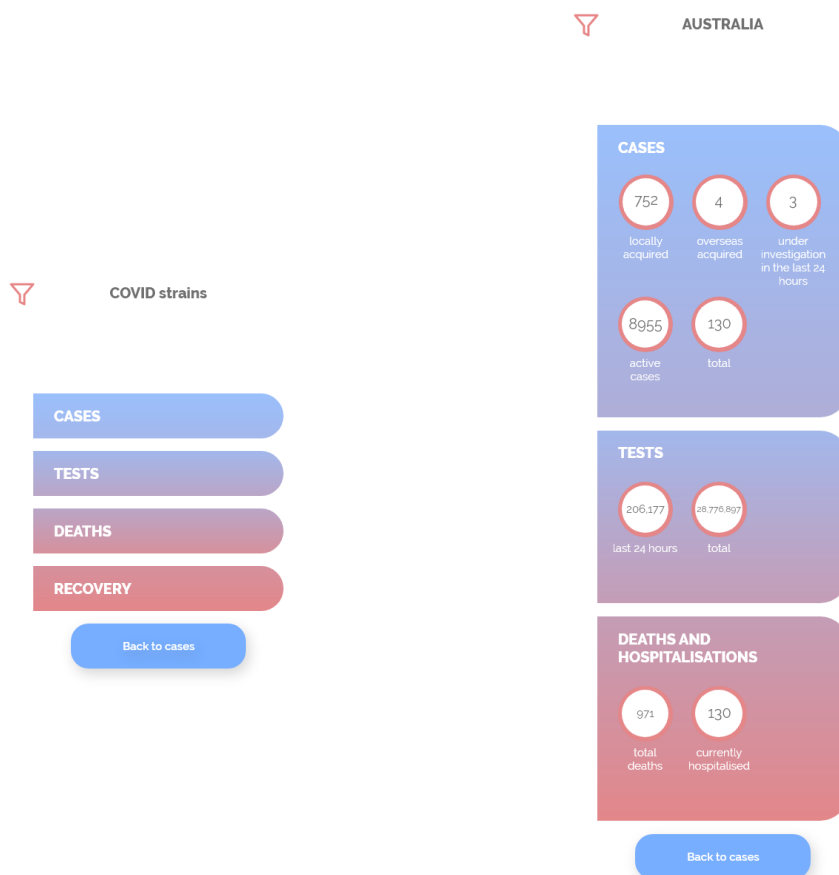


*Screen Eight: Collapsed data breakdown*    *Screen nine: Expanded data breakdown*

Additionally, the app also shows information regarding the COVID-19 strains available. This information includes where it is first identified, the speed of spread, possibility of severe illnesses and deaths, effectivity of vaccines, and its treatments. In light of the new Lambda strain being resistant to Pfizer, information about vaccines and vaccinations can be useful to show how effective the vaccines are. There is also a lot of confusion about the benefits and harmfulness of each vaccine. Different groups with various opinions use this confusion to leverage their values on other people.

**Prototype**



*Screen Ten: collapsed Covid strain information     Screen eleven: expanded Covid strain information*

It is important to keep in mind that there are current limits to what the prototype can achieve. The Covid-19 information provided by the government is dynamic and ever changing in nature. This is since all the data is accumulated from the different states and territories. As a result, the shown numbers may be less or more than the actual numbers as more cases are investigated (Australian Government: Department of Health, 2021). There is a possibility that the statistics shown may still need filtering based on what statistic is preferred, according to what users are interested in (eg: business-related).

## DESIGN IDEA 6 - MENTAL HEALTH
## Design by Manami

This prototype is focused on a feature that allows for people to reach out for mental help support in times of uncertainty. Its aim is to support those who are struggling with isolation, anxiety going back into COVID normal after months of isolation, lack of motivation etc. due to COVID-19 and government restrictions such as lockdown. People can put in how they're feeling, and it aims to suggest different forms of support. It's meant to have a similar function as BeyondBlue and other mental health support systems but more relative to COVID-19.

Critique: Mental health is a very large field of study and requires a tremendous number of resources to appropriately guide people through their situations. Situations for some may also be partially impacted by COVID-19 but not fully, therefore it may be a challenge to create an interface of mental health support exclusively relating to COVID-19. The development of the app may require professional help in the field.
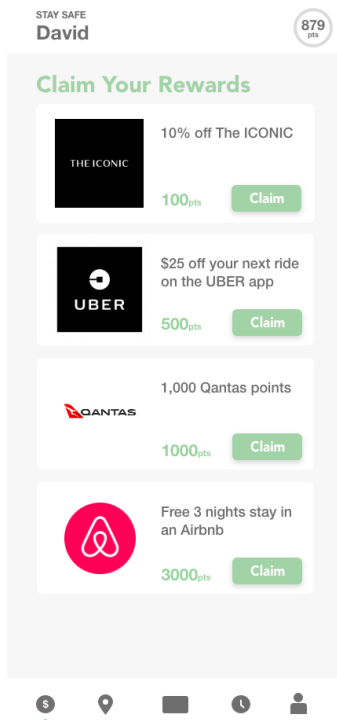
## Prototype
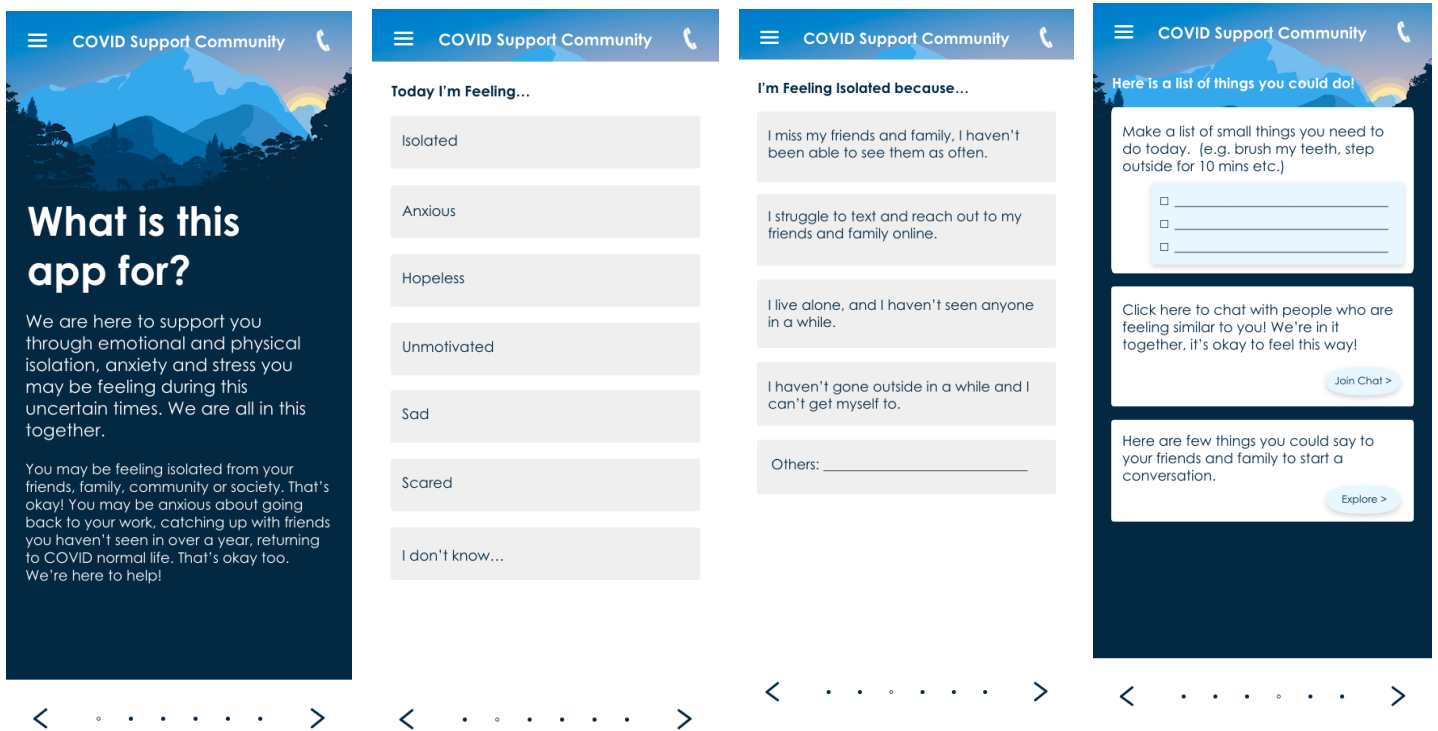


Screen One: About page.    Screen Two: Mood Checker    Screen Three: Emotion Explainer    Screen Four: Activities.

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## DESIGN IDEA 7 - CHECK IN REWARDS
### Design by Manami

Check-in Rewards is an application where an individual can collect points for checking into venues, as a positive incentive for people to sign in persistently. Some people are cautious about checking into venues as they do not believe it's a necessary step for COVID tracing, some worry that they may receive a notification that they've been at an exposure site when they do not want to self-isolate or some worry about the government tracking their locations. By developing an application that allows individuals to collect points every time they check-in to a venue or a location, we can create a positive incentive for people to consistently and frequently check-in. This allows for smoother and more effective contact tracing in case of an COVID-19 outbreak. Each venue or location has a certain number of points one can collect, and the application adds all the points collected from the individual's check-in history. Everyone has their own barcode and their "card" which can be scanned when they want to claim their rewards using their collected points. This app also allows you to see the individual's check-ins from that day or previous days, as well as exposure sites that can be filtered with tier 1, 2, 3 or near me.
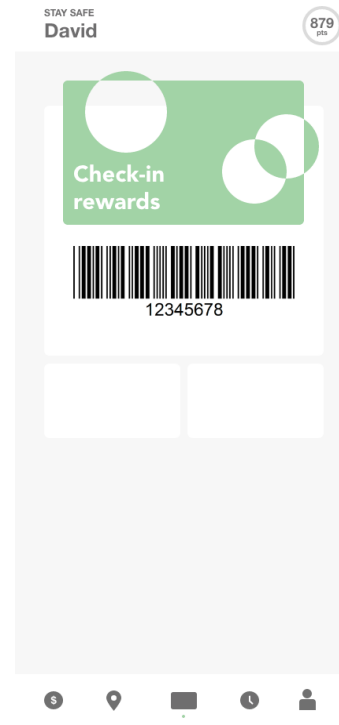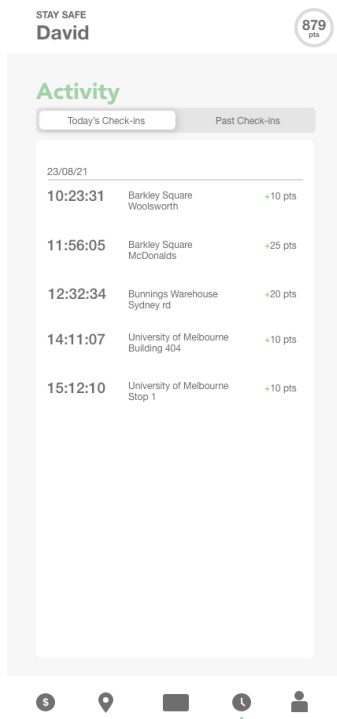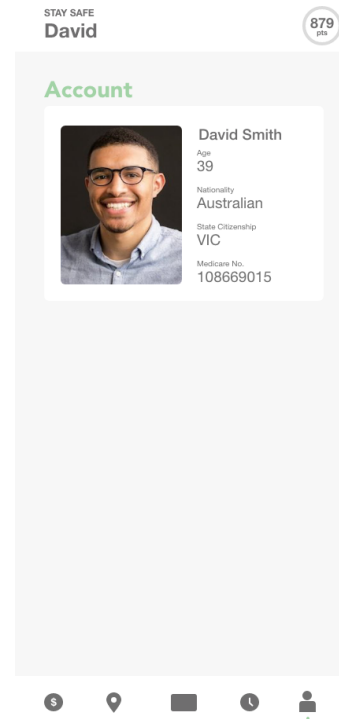
# Prototype



*Screen One: Rewards.*
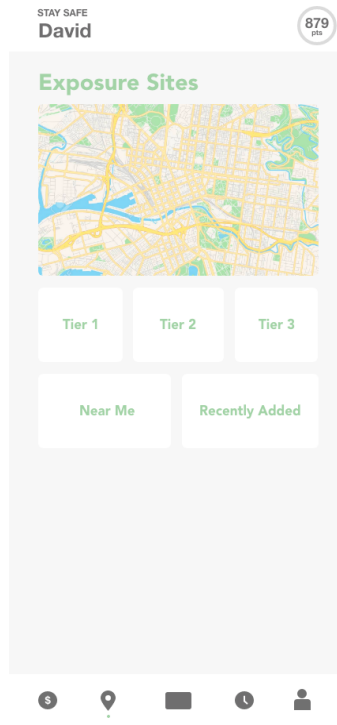


*Screen Two: Exposure sites.*



*Screen Three: Virtual rewards card.*



*Screen Four: Check in locations.*



*Screen Five: Account details.*

# PROTOTYPE INTERVIEWS

Four prototype interviews were conducted between the 25th – 26th of August 2021. It was conducted as a semi-structured cursory interview that allowed for quick feedback from selected stakeholders [see Appendix 2 for interview procedure]. This is an important stage in the development process as "direct contact between users and the design team throughout the development lifecycle" is essential (Spool, Chisnell, & Rubin 2008, Chapter 1). Each interview took around 10 minutes. The qualitative data from these interviews was collected and analysed to help us narrow down the top three design ideas.

## INTERVIEWEE MATRIX

| Interviewee number | Pseudonym | Stakeholder category | Interviewer |
|---|---|---|---|
| 1 | Mark | Business *Hospitality* | Sam Turner |
| 3 | Rose | Business *Retail* | Nicola Toomey |
| 7 | Sarah | Government *Community Services* | Sam Turner |
| 8 | Alex | Education *University student* | Nicola Toomey |

# PROTOTYPE INTERVIEWEE P1 AND P7

## Information

**Mark & Sarah (P1, P7) - Conducted as an informal group discussion.**

| | |
|---|---|
| **Participant number and pseudonym** | P1 - Mark (alias) |
| **What is their stakeholder role?** | Business - Hospitality |
| **Completed PLS** | Yes |
| **Completed Consent form** | Yes |
| **Interviewed by** | Sam Turner |

| | |
|---|---|
| **Participant number and pseudonym** | P7 - Sarah (alias) |
| **What is their stakeholder role?** | Government - Community Services |
| **Completed PLS** | Yes |
| **Completed Consent form** | Yes |
| **Interviewed by** | Sam Turner |

## Interview Transcript

### Design idea 1. Covid Passport. (Rank 2)
- I like it because it's necessary or at least it will be. I think it's really smart planning ahead.
- I would use it if it meant that I could get back to normal, sure. But how do you think you would do it?
- (Mark) Yeah, I would but it would help if the government would support it.

### Design idea 2. Check-in history.
- Uhm I mean I'm not sure when I'd use it, but I like how it compares your locations with hotspots automatically.
- I think I'd just like it to alert me if I've been to a hotspot.

**Design idea 3. E-tag system. (Rank 1)**
- (Sarah) Oh I like it! So will it be like a tag thing that's automatic or like a myki where you tap in and out. (Mark) yeah because that's a problem, we always sign into places, but we don't sign out.
- I'm at peak laziness so this idea is the best so far because it takes no effort.
- It would be hard if everyone would have to go out and get new technology (for venues) so it depends.

**Design idea 4. Communication. (Rank 3)**
- (Mark) Yeah this would be super useful from a business point of view if it saves me going through an 80-page pdf. It would be useful to have all the information in one spot.
- (Sarah) I mean can't you do this already? (Mark) No, we must log into the website and go through all the information. (Sarah) Oh I just let the news give me the information.

**Design idea 5. Statistics.**
- I mean it's good to have but I don't think it's necessary to have this much information, knowing about the exposure sites is the most necessary thing.

**Design idea 6. Mental health.**
- So would it be like an online community because I don't know if connecting to other people who're depressed would help.
- These apps in theory can work but they fall down in practice - would it connect you to lifeline? Wouldn't it just be like the Headspace app?

**Design idea 7. Check-in rewards.**
- I mean I like that you're the one in control of what information they have - it's less like they're tracking you.
- (Sarah) If I had to sign up for it, I wouldn't use it. It's like a Woolies card, I used to use it and then realised that I never earned enough points and now I can't be bothered using it. I just sign in because it's the right thing to do but I just do it the quickest way possible.

# PROTOTYPE INTERVIEWEE P3

## Information

| | |
|---|---|
| **Participant number and pseudonym** | P3 - Rose (alias) |
| **What is their stakeholder role?** | Business - Retail |
| **Completed PLS** | Yes |
| **Completed Consent form** | Yes |
| **Interviewed by** | Nicola Toomey |

## Interview Transcript

### Design idea 1. Covid Passport. (Rank 3)

It is a good idea; I especially like the QR code so I can be certain about their vaccination status. This could be particularly useful in my workplace to ensure customers can verify their vaccination status. It would make me feel safer.

### Design idea 2. Check-in history.

This would help me to have all my check-ins and exposure sites in the same place. As I said in my previous interview, the current Service Victoria QR code check-in system does not efficiently notify people if they have been present at an exposure site. This will help me look up previous check-ins so I can be confident I haven't visited an exposure.

### Design idea 3. E-tag system. (Rank 1)

I like this app idea as it is less involved than the current QR checking in system. I would feel less impacted by Covid-19 in my daily life. It would also reduce the time spent by me and my colleagues asking and helping people check-in. I am worried that not everyone would be open to downloading it.

### Design idea 4. Communication. (Rank 2)

I like this app because it will help me stay informed. I wouldn't use the check-in scanner as I just use my camera app. It provides a clear message surrounding the current restrictions and is more organised compared to government websites. But honestly, I probably wouldn't download this app as I get my news from Twitter.

### Design idea 5. Statistics.

I like the concept of this app, but it wouldn't be that useful to me on its own. It could be a subsection of another app. It wouldn't be that useful at university or at my workplace.

### Design idea 6. Mental health.

I think mental health is an important issue that should be addressed. I think if someone is struggling with mental health issues due to Covid-19 they would be unlikely to download this app. It should be rebranded as a more general metal health app.

**Design idea 7. Check-in rewards.**

I think this app would be redundant if the e-tag system is implemented. I don't think it would motivate people to. This could create excessive movement as people could go to various places on a single day to receive rewards.

**PROTOTYPE INTERVIEWEE P8**

**Information**

| Participant number and pseudonym | P8 - Alex (alias) |
|---|---|
| What is their stakeholder role? | Citizen - Student |
| Completed PLS | Yes |
| Completed Consent form | Yes |
| Interviewed by | Nicola Toomey |

**Interview Transcript**

**Design idea 1. Covid Passport. (Rank 3)**
- Yes, I think this app would be really useful. I am worried if strangers might have Covid-19 so if I can check other people's vaccination status it will bring me a sense of security. I would like this to be implemented at my workplace so the restaurant can be more confident to be Covid-safe for both staff and customers.

**Design idea 2. Check-in history. (Rank 2)**
- Yes, this is helpful. How you can see the check-in history is important, because sometimes I forget where and when I have been. I like the visual design of the app.

**Design idea 3. E-tag system. (Rank 1)**
- I think this will be very helpful for face-ID users. I get annoyed when I have to type a passcode to open my phone because we are required to wear face masks. So, it would be great if it checks me in automatically. I also like visual design.

**Design idea 4. Communication.**
- When the restrictions change, I have to read the summary online from various sources. So if i can clearly see it in one app it will save time.

**Design idea 5. Statistics.**
- I don't have a TV so I have to use my computer to check the daily statistics so if i have an app it would be useful.

**Design idea 6. Mental health.**

- I haven't really struggled with mental health during the lockdowns, but I have seen my friends struggle with feeling isolated. But I think there are already apps that can help with this.


**Design idea 7. Check-in rewards.**

- This doesn't really motivate me to travel. During the pandemic I want to travel as little as possible. I don't think it is a good idea to reward people for checking in which requires them to travel.

# PROTOTYPE INTERVIEW RESULTS

| Participant | Rank 1 | Rank 2 | Rank 3 |
|---|---|---|---|
| **P1 - Mark** | E-tag system | Covid passport | Communication |
| **P2 - Rose** | E-tag system | Communication | Covid passport |
| **P7 - Sarah** | E-tag system | Covid passport | Communication |
| **P8 - Alex** | E-tag system | Check-in history | Covid passport |

Below is a summary of the strengths and weaknesses for the top three design ideas that have been identified:

1. **E-tag system**

   **Strengths:**
   - Useful for face ID users as they do not have to pull their mask down to check in.
   - Nice visual design.
   - Workplaces can confidently be more Covid-safe for both staff and customers.
   - People will feel less impacted by Covid-19 in their daily life as it is automatic.
   - Low effort compared to QR codes.
   - Helps track both signing in and out.

   **Weaknesses:**
   - Not everyone will be willing to download the app.
   - It would be hard if everyone would have to go out and get new technology and install it.

2. **Covid passport**

   **Strengths:**
   - Brings a sense of security.
   - Smart planning ahead towards Covid normal.

   **Weaknesses:**
   - Might not be supported by the public if it is not backed by the government.

3. **Communication**

   **Strengths:**
   - Saves time as information is in one place.
   - l helps people stay informed and organised.

   **Weaknesses:**
   - People may not download the app and keep getting information from the sources they are currently using.

# CONCLUSION

In the next stage of development, we aim to finish prototype testing in order to evaluate the functionality and utility of each idea shown in the report. With the feedback and discussions regarding the focus of the application, we aim to narrow each component down into a focused concept by drawing on the strengths and weaknesses of each idea. With the conclusion of the prototype interviews we will narrow our research and focus on developing a primary function.

We have conducted 4 prototype interviews so far and from those interviews the top three design ideas have been identified as:

1. E-tag system
2. Covid passport
3. Communication

The e-tag system has been ranked as the most useful design idea by all the interviewees thus far. Many strengths have been identified with this idea. One of its strengths, if implemented, is that people will feel less impacted by Covid-19 in their daily life compared to the current QR code check-in system. This is important because it comes close to solving the paradox where the government is requiring record keeping for all visitors to workplaces, but citizens do not want to be impacted by Covid-19 in their daily lives. It will also help track the exact times a person checks in and out of a location making the data more accurate. However, it will be difficult to implement as a new technology will need to be installed into all check-in locations and the public will have to be willing to download a new app.

Covid passport app was ranked second in the prototype interviews. It is appealing to the interviewees because it brings a sense of security as we move to Covid normal. However, it has been mentioned that it might not be supported by the public if it is not backed by the government.

Finally, the communication app came in third place. Interviewees liked how it will save them time looking for information as it is all in one place. It will help people stay informed and organised. One of the downsides that has been highlighted is people could keep getting information from the sources they are currently using. Therefore, the app would not be used as much as expected.

These are the three design ideas that we will look more closely at in the next stage of development. However, after conducting three or four more prototype interviews we will have a richer understanding of the strengths and weaknesses of each design. It is likely that we will move towards a different direction.

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# APPENDIX

## Appendix 1: Interview procedure

## Pre-interview checklist

1. **Send the interviewee the invitation to participate in the interview.**

2. **Has the participant filled out the PLS form that was included in the invitation?**
Yes / No

3. **Has the participant filled out the consent form that was included in the invitation?**
Yes / No

4. **If the participants has filled the required documents, proceed to schedule the interview**

5. **Make sure audio recording devices are working properly**

6. **Do you have note taking materials in case the participant does not consent to audio recordings?**

## Interview start

*Begin audio recording*

## Introduction

Hello, thank you for taking the time to participate in this interview. I am [Name], a University of Melbourne student and I will be interviewing you today.

The purpose of this interview is to help us design a Covid passport application that hopes to ease communication during the pandemic and the transition to a covid normal. This particular project is for a university assignment that requires us to design an interactive technology. This interview should take about 20-30 minutes and covers questions about your experience as a person/professional living in a world with Covid. This will help us understand as well as inform the design and functionality of the Covid passport App that we plan to create.

I would also like to remind you that the audio of this interview is being recorded and kept as a reference later on for research. Your information will be kept fully anonymous and will not be shared with anyone beyond this project. If at any point you feel uncomfortable with continuing, please let me know and we can wrap up the interview. Can you confirm that you have read the consent form and that you are comfortable with starting the interview. Feel free to ask questions if you feel confused at any point. Shall we begin?

*Provide the interviewee with the consent form*

I will now provide you with a consent form. I can confirm that all information that you provide will be used anonymously and will not be shared with anyone beyond this project. Can you please read the form and confirm that you give permission for the audio of this interview to be recorded?

*Does the participant consent to audio recording, If no please stop recording and use the answer sheet to hand write the participants answers*

Yes / No


**Questions begin**

| Participant number and pseudonym | |
|---|---|
| **What is their stakeholder role?** | |
| **What skills, knowledge and experience do they bring in this role?** | |
| **Completed PLS** | |
| **Completed Consent form** | Yes / No |
| **Interviewed by** | Yes / No |


**General questions**

(1) **How have you been impacted by Covid-19?**
Eg. Caused a loss in profit / Changed capacity / working from home.

(2) **What technologies or techniques do you currently use to manage Covid-19?**
Eg. Many hospitality venues  have taken up signing in on entry or remote ordering services.

(3) **Do you think those technologies/techniques are working well at the moment?**
*You can ask them if there are any examples of specific incidents that illustrate their point*

(4) **Is there anything that you can think of to improve these technologies/techniques to manage Covid-19?**
*You can ask them if there are any examples of specific incidents that illustrate their point*


*Please choose appropriate questions for the interviewee from the following list below*

**Information**

(1) **How do you collect information about Covid-19? From which sources? Which one is your main source?**

(2) **Is it reliable?**

(3) **Is it easy to access?**

(4) **What do you think could be done to improve this service?**


**Contact tracing**

   (1) **How effective is it right now?**

   (2) **How many people sign-in digitally? How many not? How many no attempts?**

   (3) **Do you have any ideas on how contact tracing could be improved?**

## CovidApp

   (1) **Do you use the current CovidApp / Service Victoria? If so, what for?**

   (2) **Did they know that you can book appointments? Entry Permits ect.**

## Covid Passport

   (1) **How viable is the idea of a vaccination passport to you?**

   (2) **What are its main benefits?**

   (3) **What are its main disadvantages?**

   (4) **Would this be something that you could see being implemented?**

## Final questions

   (1) **What changes would you like to see as we move into a Covid normal future?**

   (2) **What are you most excited to get back to?**

   (3) **Any last thoughts.**

## Conclusion

Thanks again for partaking in our interview. This will be invaluable in helping us with our research. Here is my email if you have any questions regarding this study.

*Provide the interviewee with your student email*

## Appendix 2: Prototype interview procedure

| | |
|---|---|
| **Participant number and pseudonym** | |
| **What is their stakeholder role?** | |
| **Completed PLS** | Yes/No |
| **Completed Consent form** | Yes/No |
| **Interviewed by** | |

**Introduction**

Hello, thank you for taking the time to participate in this interview. I am [Name], a University of Melbourne student and I will be interviewing you today.

We are designing a technology to help people deal with Covid-19. Over the past five weeks our group has come up with seven unique design directions for this technology. The purpose of this interview is to help us decide which idea we should develop further.

I would also like to remind you that the audio of this interview is being recorded and kept as a reference later on for research. Your information will be kept fully anonymous and will not be shared with anyone beyond this project. If at any point you feel uncomfortable with continuing, please let me know and we can wrap up the interview. Can you confirm that you have read the consent form and that you are comfortable with starting the interview. Feel free to ask questions if you feel confused at any point. Shall we begin?

*Provide the interviewee with the consent form*

I will now provide you with a consent form. I can confirm that all information that you provide will be used anonymously and will not be shared with anyone beyond this project. Can you please read the form and confirm that you give permission for the audio of this interview to be recorded?

*Does the participant consent to audio recording, If no please stop recording and use the answer sheet to hand write the participants answers*

*After each prototype has been shown and explained, ask the interviewee the following questions:*

1) **What do you like about this app?**

2) **Would you use it in your daily life? Would it be helpful?**

3) **Could you see this technology be implemented in your workplace/university? (Ask if applicable)**

This concept delivers easier contact tracing methods.It uploads all scanned QR check in codes and compares users locations with current Victorian Hotspots. It will determine if a location they have visited was a potential hotspot and will allow for faster contact tracing.

This Covid passport concept is a way for an individual to display their personal information relating to COVID-19 when required. This digital ID contains personal information, their medicare number and vaccination information. It also contains any current exemptions.

Checked In is an app that aims to make checking in as simple and effective as possible.
Each person and check-in location has its own unique ID number. Whenever a person enters a venue, an e-tag system will automatically check them in. This system offers an alternative to the current QR system.

Aus-19 is an application or feature that is focused on the quick delivery of government official updates, be these new restrictions,easings or border closures or easing. The functionality can then be further increased by adding features such as filtering by business type and location. The user can then sign up for notifications that will update whenever changes are made.

This prototype creates a consistent platform where people can acquire most information and data needed. Users can input the location and time period of interest and can change these settings later on. The colour of the statistics change according to the degree of severity compared to the week's average.

**Final questions:**

1. **Which app did you like the most and why?**

2. **Ask them to rank the apps 1-3, 1 being most useful and 3 being least useful.**

3. **Any further comments?**


**Conclusion**

Thanks again for partaking in our interview. This will be invaluable in helping us with our research. Here is my email if you have any questions regarding this study.

*Provide the interviewee with your student email*

**Meeting Minutes:**

PRESENT: Manami Fujikawa, Nicola Toomey, Paris Eckert, Sam Turner, Vaishali Nair

# AGENDA

➔ Establish means of communication
➔ Establish extra interview timings if needed (Monday: 11:30am, Wednesdays (as seen fit))

# ASSIGNED TASKS

| Who | When | What |
|---|---|---|
| *MANAMI FUJIKAWA* | 18 July 2021 | Brainstorm 10 ideas |
| *NICOLA TOOMEY* | 18 July 2021 | Brainstorm 10 ideas |
| *PARIS ECKERT* | 18 July 2021 | Brainstorm 10 ideas |
| *SAM TURNER* | 18 July 2021 | Brainstorm 10 ideas |
| *VAISHALI NAIR* | 18 July 2021 | Brainstorm 10 ideas |

NEXT MEETING: 28th July 2021

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PRESENT: Manami Fujikawa, Nicola Toomey, Paris Eckert, Sam Turner, Vaishali Nair

# AGENDA

➔ Establish means of communication
➔ Establish extra interview timings if needed (Monday: 11:30am, Wednesdays (as seen fit))

# ASSIGNED TASKS

| Who | When | What |
|---|---|---|
| *MANAMI FUJIKAWA* | 2 Aug 2021 | Research COVID passport idea, situation-of-use |
| *NICOLA TOOMEY* | | |
| *PARIS ECKERT* | 2 Aug 2021 | Research plant idea, situation-of-use |
| *SAM TURNER* | 2 Aug 2021 | Research food idea, situation-of-use |
| *VAISHALI NAIR* | 2 Aug 2021 | Research sustainability idea, situation-of-use |

NEXT MEETING: ~~1st August 2021~~  2nd August 2021

PRESENT: Manami Fujikawa, Nicola Toomey, Paris Eckert, Sam Turner, Vaishali Nair

# AGENDA

➔ Look a researched idea
➔ Pick a topic to carry out
➔ Assign tasks to prep for interviews and report
➔ Get started on documents

# ASSIGNED TASKS

| Who | When | What |
|---|---|---|
| MANAMI FUJIKAWA | 20 Aug 2021 | Rich picture drawing |
| NICOLA TOOMEY | 20 Aug 2021 | Interview Script + questionnaire |
| PARIS ECKERT | 20 Aug 2021 | Situation-of-use |
| SAM TURNER | 20 Aug 2021 | Background research |
| VAISHALI NAIR | 20 Aug 2021 | Stakeholders table, assist with interview script |

NEXT MEETING: 4th August 2021

PRESENT: Manami Fujikawa, Nicola Toomey, Paris Eckert, Sam Turner, Vaishali Nair

# AGENDA

➔ Look through interview questions and clear confusions

# ASSIGNED TASKS

| Who | When | What |
|---|---|---|
| *MANAMI FUJIKAWA* | 11 Aug 2021 | Interview and upload documents |
| *NICOLA TOOMEY* | 11 Aug 2021 | Interview and upload documents |
| *PARIS ECKERT* | 11 Aug 2021 | Interview and upload documents |
| *SAM TURNER* | 11 Aug 2021 | Interview and upload documents |
| *VAISHALI NAIR* | 11 Aug 2021 | Interview and upload documents |

NEXT MEETING: 9th August 2021

PRESENT: Manami Fujikawa, Nicola Toomey, Paris Eckert, Sam Turner, Vaishali Nair

# AGENDA

- ➜ Discuss interview findings
- ➜ Point out interview themes

# ASSIGNED TASKS

| Who | When | What |
|---:|---|---|
| *MANAMI FUJIKAWA* | 16 Aug 2021 | Upload interview documents, COVID profile prototype |
| *NICOLA TOOMEY* | 16 Aug 2021 | Upload interview documents, set up report, check in prototype |
| *PARIS ECKERT* | 16 Aug 2021 | Upload interview documents, contact tracing (hotspots) prototype |
| *SAM TURNER* | 16 Aug 2021 | Upload interview documents, restrictions and news prototype |
| *VAISHALI NAIR* | 16 Aug 2021 | Upload interview documents, data and statistics prototype |

NEXT MEETING: 16th August 2021

PRESENT: Manami Fujikawa, Nicola Toomey, Paris Eckert, Sam Turner, Vaishali Nair

# AGENDA

- ➔ Check in on prototypes
- ➔ Begin report
- ➔ Organise roles for presentation

# ASSIGNED TASKS

| Who | When | What |
|---|---|---|
| *MANAMI FUJIKAWA* | 18 Aug 2021 | COVID profile prototype |
| *NICOLA TOOMEY* | 18 Aug 2021 | Check in prototype |
| *PARIS ECKERT* | 18 Aug 2021 | Contact tracing prototype |
| *SAM TURNER* | 18 Aug 2021 | Restriction and news prototype |
| *VAISHALI NAIR* | 18 Aug 2021 | Stakeholder table, data and statistics prototype |

NEXT MEETING: 18th August 2021

PRESENT: Manami Fujikawa, Nicola Toomey, Paris Eckert, Sam Turner, Vaishali Nair

# AGENDA

➔ Confirm presentation roles
➔ Look through prototypes and breakdown any further requirements

# ASSIGNED TASKS

| Who | When | What |
|---|---|---|
| *MANAMI FUJIKAWA* | 21 Aug 2021 | Refine prototypes, presentation script, voicing |
| *NICOLA TOOMEY* | 21 Aug 2021 | Refine prototypes, presentation visuals |
| *PARIS ECKERT* | 21 Aug 2021 | Refine prototypes, presentation script |
| *SAM TURNER* | 21 Aug 2021 | Refine prototypes, presentation visuals, voicing |
| *VAISHALI NAIR* | 21 Aug 2021 | Refine prototypes, presentation editing, stakeholders |

NEXT MEETING: 21st August 2021

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PRESENT: Manami Fujikawa, Nicola Toomey, Paris Eckert, Sam Turner, Vaishali Nair

# AGENDA

➔  Have a think about the possible questions and directions regarding presentation

# ASSIGNED TASKS

| Who | When | What |
| --- | --- | --- |
| *MANAMI FUJIKAWA* | 27 Aug 2021 | Work on report |
| *NICOLA TOOMEY* | 27 Aug 2021 | Work on report |
| *PARIS ECKERT* | 27 Aug 2021 | Work on report |
| *SAM TURNER* | 27 Aug 2021 | Work on report |
| *VAISHALI NAIR* | 27 Aug 2021 | Work on report |

NEXT MEETING: 30th August 2021