

# DECO2200

## Research Visual Report

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# Context and Problem Space

## Research Context

For this brief we looked at areas within the delivery service that could be used by an autonomous vehicle. At first this was enclosed to an 'apartment-people' context, but realised that a broader context of deliveries gives more insightful information for contextualising an autonomous vehicle within the experience.

## On AV (Autonomous Vehicle) Technology

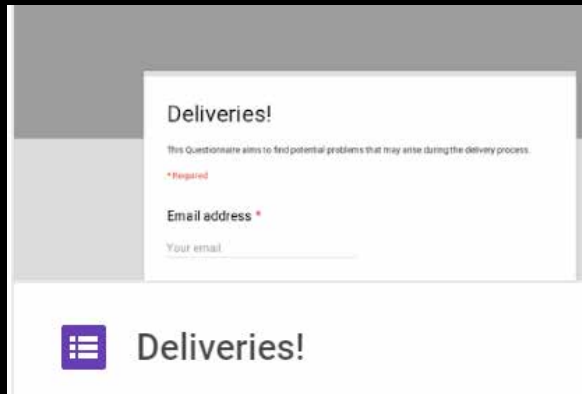
Autonomous vehicles are becoming an emerging technological advancement with plenty of potential. Although it is still an area that needs to be constantly tested and experimented upon, within the context of delivery there are multiple concepts and ideas that have been trialed by different companies. Examples such as the DRU (Domino's Robotic Unit) for autonomous pizza delivery on ground and Amazon Prime Air for small parcel delivery using autonomous drones are some vehicles that have been tested. The powerhouse of a company Google are also constantly extending limits of our AV technology and more than half a million miles of autonomous driving were logged on public roads (Anderson et. al, 2014). There is currently no common uses of autonomous vehicles in regular home delivery, but there is definitely technology out there waiting to be refined and innovated upon.



# Research Methods

## Online Questionnaire

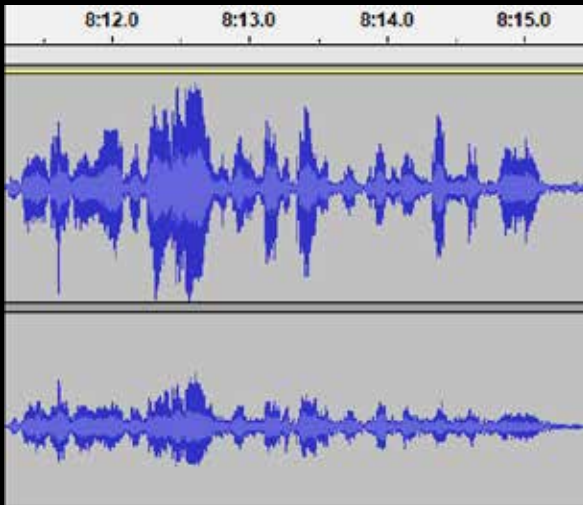
A short online questionnaire was primarily used to gather data. In a context such as perceptions of the delivery experience, which requires long range communications (internet, phone), reaching audiences far through social media platforms is most effective. Questionnaires was mainly used for a quantitative research approach, which helps solidify a problem space within the context, and opens up for more qualitative research methods.



The screenshot shows a web form titled "Deliveries!". Below the title is a subtitle: "This Questionnaire aims to find potential problems that may arise during the delivery process." There is a red asterisk and the word "Required" next to the "Email address" label. Below the label is a text input field with the placeholder text "Your email". At the bottom left of the form is a purple icon of three horizontal lines and the text "Deliveries!".

## Interviews

Interviews allow people to share more personal information as they recall the experience themselves. Anecdotal responses and discussions allow interviews to be a qualitative research method, and depending on the target group effectiveness can vary. I attempted to reach people that were close acquaintance with me, since they have the highest chance of sharing something deeper compared to those who are very close or people I don't know at all. The Interview structure was semi-casual, and was either done over the phone or in person. Interviews were recorded and most people chose to stay anonymous.



# Research Methods

## Affinity Diagramming

Being one of the most effective research analysis methods for bottom-up data analysis, affinity diagramming was used to understand the design problem within the problem space. It is most effective for interviews especially as I could pinpoint emotive words and particular sections of an interview that ultimately suggests how the person feels and what the frustration might be.

## Personas

Personas allow the research data and findings to be taken more practically within context. The characters created are typical stakeholders or potential users that are directly affected by the framed problem, and can in some way be impacted by the solution. Personas were created and will be used to help stick to the context of solving the design problem, and to analyse different perspectives when testing a design solution.

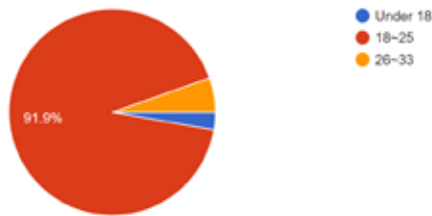
## Storyboarding

Storyboarding during the research and analysis stage allows us to visualise a hypothetical yet practical process of a problem. Through analysis and iterative design solutions storyboards can be used to clearly show where the impact of the solution is and how effectively it changes the experience.

# Research Findings

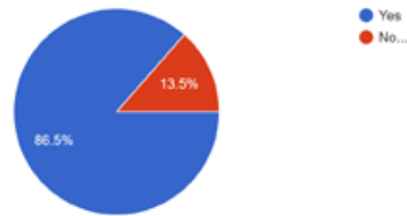
Age Range?

37 responses



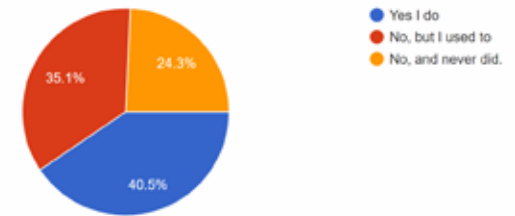
Have you ever requested a delivery to your premise?

37 responses



Do you live in an apartment/unit?

37 responses



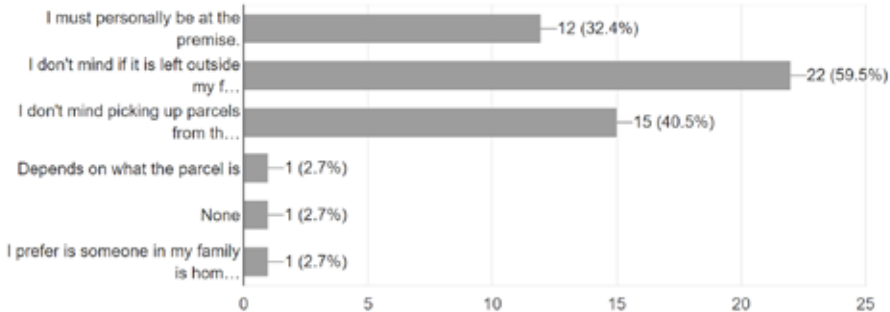
The first section of the questionnaire was focusing on identifying the context. For this particular questionnaire, it was sent out through social media on different groups and pages, and received 37 responses. Most respondents were within the 18~25 age range, and almost 3 in 4 respondents have at least once lived in an apartment. Just over 85% of the respondents have requested a delivery directly to their premise.

Looking at this data, I know that the following answers will be highly based on students or workers and also those who use the social media platform frequently (as this questionnaire was mostly sent out through social media platforms).

# Research Findings

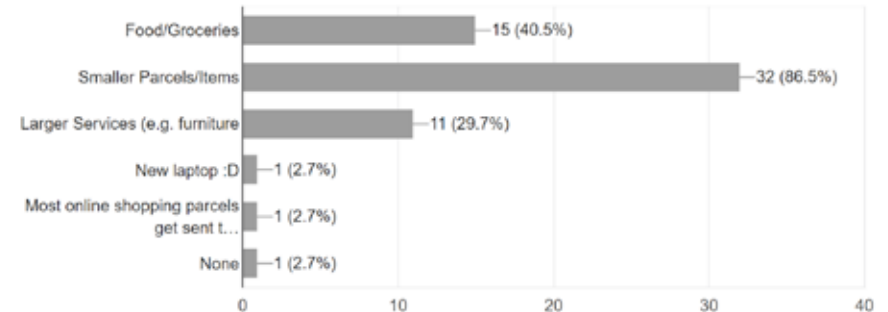
What are your preferences in receiving your delivery? Check all that apply.

37 responses



What kinds of items have you had delivered to your premise? Check all that apply.

37 responses



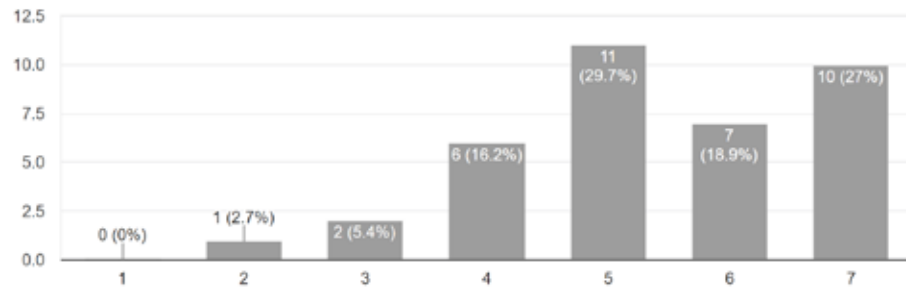
Only about a third of the respondents preferred being at the premise, with a mixed preference in having it in front of their premise and picking it up from the post office. 86.5% of the respondents have ordered smaller parcels, with larger services and foods (such as uber eats) stood far below the 50% mark.

12 of 13 respondents who checked foods/groceries also ordered smaller parcels. In fact, those who have had food delivered to their premise had an extremely high chance that they have experience with other delivery services. In addition, those who order larger services also have a 90% chance of having smaller parcel delivery experience. We can discern through this data that people prefer ordering smaller parcels and those that have ordered different services and food have experience with delivery in the first place.

# Research Findings

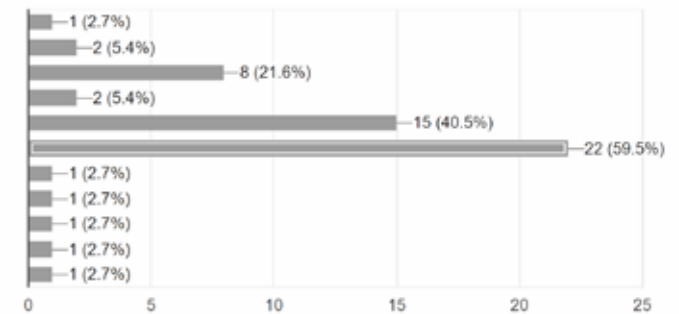
From your own experience, how would you rate the delivery service to your premise?

37 responses



From the following, check any frustrating events you have experienced.

37 responses



Surprisingly, when taking the questionnaire, more people responded to being satisfied with delivery services at the moment. 59.5% of the respondents agreed to having no problems, with problematic deliverymen issues at 40.5% and the parcel never arriving at 21.6%. This means that delivery services aren't necessarily the main issue, but something more internal about the specific experience within a section of the context.

This section of the data further proves that delivery services are actually not an issue, but is within a particularly different situation. The final question asked welcomed feedback for delivery services. From these responses, the most common ones were those that sought refined tracking, being notified and less of one's time and money gone into paying for the delivery or picking it up.

# Research Findings

## Interview Profile

Name: Ben\*

Age: 27

Occ: Full-time Student/Work

- Working hours same as post office opening hours
- Main problems are missing the deliveries and having to plan pick-up
- Prefers to save time and avoid weekend pick-ups

## Interview Profile

Name: Alex\*

Age: 23

Occ: Full-time Student/Part-time work

- Currently not living in an apartment
- Had a bad experience trying to pick up a parcel in the past
- Rather not collect it at the post office, and prefers home delivery



# Research Findings

## Interview Profile

Name: Paul

Age: 24

Occ: Part-time Student/Work

- Not a big fan of shopping, but finds online shopping alright
- Delivery service quality varies constantly to their apartment
- Deliveries often come during work hours when no one is home

## Interview Profile

Name: Sam\*

Age: 18

Occ: Full-time Student

- Frequent online shopper, depending on budget
- Has had negative experiences such as theft and deliveryman issues, but is still encouraged to order to apartment
- Considers some AV technology to be only beneficial to those higher up in the high-rise than the latter

# Research Findings

## Interview Profile

Name: Daniel

Age: 24

Occ: Full-time Work/Gap Sem

- Tech savvy
- Lives in very close proximity with post office; work is also very close to other stores
- Needs to pick up parcels from stores but orders online due to work proximity
- Suggests AV Technology will be difficult due to electronic issues

## Overall Interview Conclusion

Out of the 5 interviews a similar link (that is also found in the questionnaire) was how the delivery could not be picked up during the weekdays which leads to rescheduling of certain 'rest' days such as the weekend or a weekday off.

Bad experiences also don't seem to stop people from ordering things to the premise, and most of the interviewees seemed to expect such outcomes before buying online.

New and emerging technology, especially within the AV is hindered by trustworthiness and subtracting human error.

# Research Findings

## Affinity Diagramming

Gathering emotional and suggestive phrases from both the Interview and the Questionnaires, They were organised into specific themes in the form of 'I want to's which give phrase groups a certain goal or aim for the design solution.

Then when those are grouped or further elaborated upon, we receive certain features or elements extended from the 'wants' that needs to be achieved during the design phase.

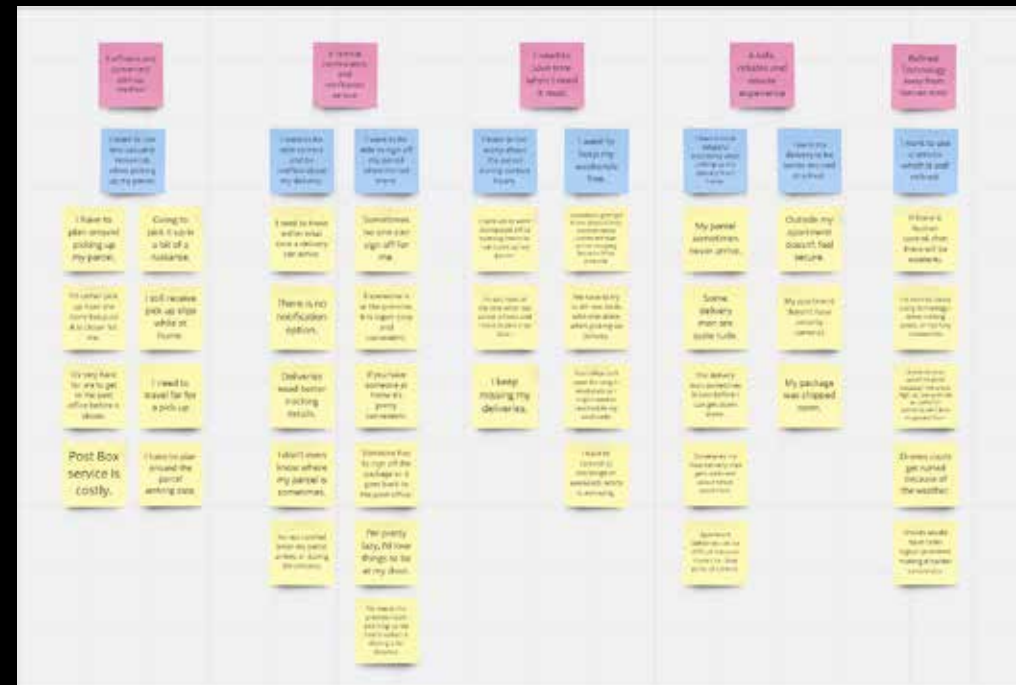
**These were the final themes/elements:**

- An efficient and convenient pick-up method
- A remote confirmation and notification service
- A necessity to save time for when needed the most
- A safe, reliable and secure experience

and for AV Technology (drones):

- Refined technology away from Human Error

Ultimately, we can see through the affinity diagram that the problem lies in the context of receiving the parcel, rather than the actual delivery process.



# Personas

Name: Sophie  
Age: 17  
Occupation: Student  
Gender: Female

Sophie is an 17 year-old student who is looking to finish her final year of high school. She lives far from public transport so in order to make the most of her time during school hours she does most of her work and study at a cafe or library local to her school. Her family owns a single car which her father uses to get to work, and her mother leaves for yoga classes on Mondays. In her spare time she enjoys online shopping for fashion and technology, and if she is excited about a certain item, she will buy on impulse.

Recently she has ordered a new pair of bluetooth earphones and received a single notification about tracking location a week ago. With the parcel stating five more business days for arrival, she patiently waits and goes about her week. However after a full day on Monday, Sophie comes home only to find a pick-up slip in her mail box without another notification, and is a little annoyed. The parcel shouldn't have been big but wouldn't have fit in the mail box.

The location and proximity between her house, the school and the post office is lengthy and highly inconvenient with public transport, and now she risks an extensive amount of her time on picking up the parcel on a different day.



# Personas

Name: Nick

Age: 20

Occupation: Student/Part-time

Gender: Male

Nick is a 20 year-old university student in his second year studying commerce. He is currently working part-time and living in an apartment with a flatmate. His day starts at 8 in the morning and finishes late around 6~7pm, and he takes weekends off. Nick values his time, especially his weekends as it is his only break from the busy week and usually plans out a small trip or decides on a sleep in. He isn't heavily interested in online shopping, but will do when something is necessary. His flatmate also revolves around a similar schedule so they are either at the premise together or the premise is empty.

Nick has bought a chair from overseas to get a better price value, and hopes to be in the premise by taking a day off. There were no notifications or tracking but just an estimated day. When the delivery comes luckily he is able to respond to the intercom, but realises as soon as he gets down from his apartment that the delivery man has already left the premise and dropped a pick-up slip in his mailbox. Nick is already annoyed but gets a little more frustrated when he considers the time and effort needed to drive to the post office, pick up the delivery and come back. Nick feels as if his time has been abused, and wishes for a service which would allow even heavier parcels to be better delivered to his premise.



# Personas

Name: Jason

Age: 27

Occupation: Full-time nurse

Gender: Male

Jason is currently a full-time nurse living in a small unit flat with his wife. They are both full-time workers with separate jobs and although they don't leave the premise together, they arrive back at the same time between 4~5pm. He enjoys online shopping with his wife and helping to buy different home appliances, which is what they are looking into these days with the change of season, and is necessary as some stores are way too far from their unit. Jason's times are a little more complicated and is called in for late night shifts, and needs some mornings to sleep in, whilst his wife has a more set schedule and routine.

They have paid for tracking services, and are waiting for a parcel to arrive very soon. Although they both don't mind picking up the parcel at a local post office, the tracking service is quite accurate and arrives whilst Jason is on his way to work. There is, unfortunately, no one to sign off the parcel and him and his wife have no choice to send it to the post office, even though the tracking was reliable. They will not be able to pick it up until the end of the week and they half-regret the decision of buying for an accurate tracking service.

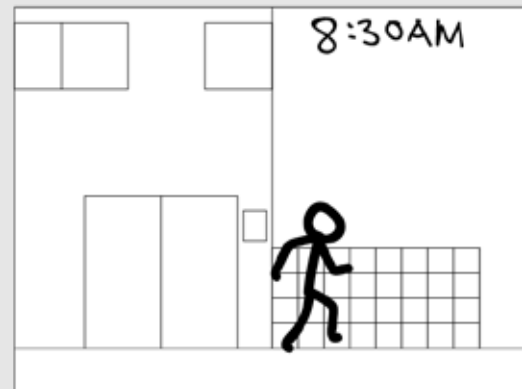
Jason and his wife wishes for a remote way to sign off the delivery, which would save a lot of time and money.



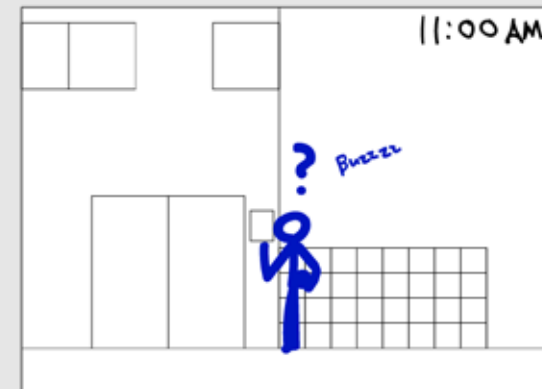
# Storyboard



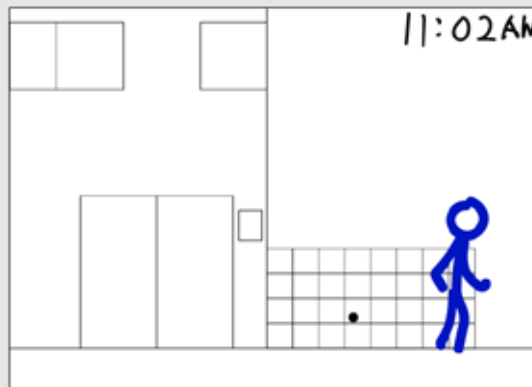
The Online order is placed through.



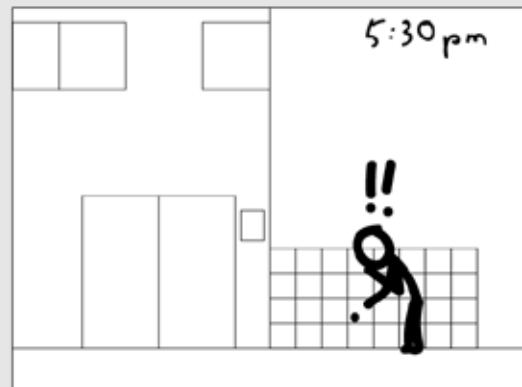
Busy during the day. goes to uni/work, 9 ~5.



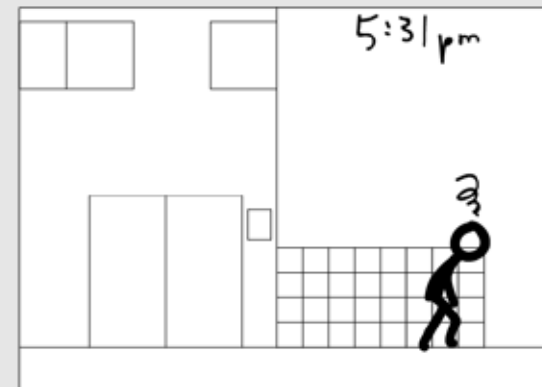
Delivery man comes and rings the intercom.



No one at the premise, so he leaves a 'we missed you' pick-up slip.



Comes back later when post office is closed, only to find the slip.



Has to replan another day to pick up the delivery from the post office.

# Reflection and Next Steps



After analysing the research data and making sense of the findings, I have drawn some conclusions that are highly based on the data. Firstly, the data significantly shows that the problem space is directed at the point of contact between the deliverer and the premise. In addition to this, the target audience will generally be for a younger demographic, but should cater effectively to anyone. Finally, the utility of AV technology isn't currently refined nor frequent in daily life and therefore there's a miscommunication and untrustworthiness to future technology.

These identities and elements should be considered before moving on to the design process.



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# Appendix

Timestamp	Age Range?	Do you live in an apartme	Have you ever requested	What kinds of items have you had delivered to your premise? Check all that apply.
8/16/2018 17:12:18	18~25	No, but I used to	No...	Food/Groceries, Smaller Parcels/Items
8/16/2018 17:13:04	18~25	No, and never did.	Yes	Smaller Parcels/Items
8/16/2018 17:13:27	18~25	No, but I used to	Yes	Food/Groceries, Smaller Parcels/Items, Larger Services (e.g. furniture
8/16/2018 17:15:57	18~25	No, but I used to	Yes	Food/Groceries, Smaller Parcels/Items, Larger Services (e.g. furniture
8/16/2018 17:16:09	18~25	No, but I used to	Yes	Food/Groceries, Smaller Parcels/Items
8/16/2018 17:29:35	18~25	No, and never did.	Yes	Food/Groceries
8/16/2018 17:30:29	18~25	Yes I do	Yes	Smaller Parcels/Items
8/16/2018 17:30:38	18~25	Yes I do	Yes	Food/Groceries, Smaller Parcels/Items
8/16/2018 17:33:07	18~25	Yes I do	Yes	Larger Services (e.g. furniture
8/16/2018 17:35:54	18~25	No, but I used to	Yes	Smaller Parcels/Items, Larger Services (e.g. furniture
8/16/2018 17:48:15	18~25	No, but I used to	Yes	Smaller Parcels/Items, New laptop :D
8/16/2018 17:55:00	18~25	Yes I do	Yes	Smaller Parcels/Items, Larger Services (e.g. furniture
8/16/2018 18:23:32	18~25	Yes I do	Yes	Food/Groceries, Smaller Parcels/Items
8/16/2018 18:24:27	18~25	No, but I used to	Yes	Food/Groceries, Smaller Parcels/Items
8/16/2018 18:37:12	18~25	Yes I do	Yes	Smaller Parcels/Items
8/16/2018 18:47:52	18~25	No, and never did.	Yes	Smaller Parcels/Items
8/16/2018 19:12:44	26~33	No, but I used to	Yes	Smaller Parcels/Items
8/16/2018 19:29:08	18~25	No, and never did.	Yes	Smaller Parcels/Items
8/16/2018 20:23:38	18~25	No, but I used to	Yes	Food/Groceries, Smaller Parcels/Items
8/16/2018 20:57:44	18~25	No, but I used to	Yes	Smaller Parcels/Items, Larger Services (e.g. furniture
8/16/2018 21:00:34	18~25	Yes I do	No...	Most online shopping parcels get sent to my local post office
8/16/2018 22:02:08	18~25	Yes I do	Yes	Smaller Parcels/Items
8/16/2018 22:36:11	18~25	Yes I do	Yes	Food/Groceries, Smaller Parcels/Items, Larger Services (e.g. furniture
8/18/2018 16:50:09	18~25	No, and never did.	Yes	Smaller Parcels/Items, Larger Services (e.g. furniture
8/18/2018 17:57:57	18~25	Yes I do	No...	Smaller Parcels/Items
8/19/2018 12:32:21	26~33	No, but I used to	Yes	Food/Groceries, Smaller Parcels/Items
8/19/2018 12:32:43	18~25	No, and never did.	No...	Smaller Parcels/Items
8/19/2018 15:00:34	18~25	Yes I do	Yes	Food/Groceries, Smaller Parcels/Items
8/19/2018 20:01:46	18~25	No, and never did.	Yes	Smaller Parcels/Items, Larger Services (e.g. furniture
8/19/2018 20:02:08	18~25	Yes I do	Yes	Smaller Parcels/Items
8/19/2018 20:02:09	18~25	No, but I used to	Yes	Smaller Parcels/Items
8/19/2018 20:03:51	18~25	Yes I do	Yes	Food/Groceries, Smaller Parcels/Items, Larger Services (e.g. furniture
8/20/2018 17:55:22	18~25	Yes I do	Yes	Food/Groceries
8/20/2018 19:57:25	Under 18	Yes I do	No...	None
8/21/2018 13:58:58	18~25	No, and never did.	Yes	Smaller Parcels/Items
8/21/2018 15:45:02	18~25	No, but I used to	Yes	Food/Groceries, Smaller Parcels/Items
8/21/2018 16:46:11	18~25	No, and never did.	Yes	Smaller Parcels/Items, Larger Services (e.g. furniture

From the following, check any frustrating events you have experienced.	What are your preferences in receiving your delivery? Check all that apply.
I accidentally took someone else's Delivery., My Parcel never arrived., I had no problems...	I don't mind if it is left outside my flat/door., I don't mind picking up parcels from the post office.
The Delivery was crushed from the box., I was home all day but still received a 'we missed you' slip., I had no problems...	I must personally be at the premise., I don't mind if it is left outside my flat/door.
I had no problems...	I must personally be at the premise.
I had no problems...	I don't mind if it is left outside my flat/door., I don't mind picking up parcels from the post office.
I had no problems...	I don't mind if it is left outside my flat/door.
I had no problems...	I must personally be at the premise.
I accidentally took someone else's Delivery., I was home all day but still received a 'we missed you' slip.	I must personally be at the premise.
I had no problems...	I don't mind picking up parcels from the post office.
My Parcel never arrived.	I must personally be at the premise.
My Parcel never arrived.	I don't mind if it is left outside my flat/door.
I was home all day but still received a 'we missed you' slip.	I don't mind picking up parcels from the post office.
I was home all day but still received a 'we missed you' slip.	I don't mind if it is left outside my flat/door.
I had no problems...	I don't mind if it is left outside my flat/door., I don't mind picking up parcels from the post office.
I had no problems...	I don't mind if it is left outside my flat/door., I don't mind picking up parcels from the post office.
I was home all day but still received a 'we missed you' slip.	I don't mind picking up parcels from the post office.
I had no problems...	I don't mind if it is left outside my flat/door.
I had no problems...	I don't mind if it is left outside my flat/door.
I was home all day but still received a 'we missed you' slip., I had no problems...	I don't mind if it is left outside my flat/door.
I had no problems...	I must personally be at the premise., I don't mind if it is left outside my flat/door.
Someone took my Delivery., My Parcel never arrived., I was home all day but still received a 'we missed you' slip.	I don't mind picking up parcels from the post office.
I had no problems...	I don't mind picking up parcels from the post office.
I was home all day but still received a 'we missed you' slip.	I don't mind if it is left outside my flat/door.
I had no problems...	I don't mind if it is left outside my flat/door.
I had no problems...	Depends on what the parcel is
My Parcel never arrived., The Delivery was crushed from the box., I was home all day but still received a 'we missed you' slip.	I must personally be at the premise., I don't mind if it is left outside my flat/door., I don't mind picking up parcels from the post office.
I was home all day but still received a 'we missed you' slip.	I don't mind if it is left outside my flat/door.
I was home all day but still received a 'we missed you' slip., Late arrival	I don't mind if it is left outside my flat/door., I don't mind picking up parcels from the post office.
I was home all day but still received a 'we missed you' slip.	I don't mind picking up parcels from the post office.
I had no problems...	I must personally be at the premise., I don't mind if it is left outside my flat/door.
I had no problems...	I must personally be at the premise., I don't mind picking up parcels from the post office.
I had no problems...	I must personally be at the premise.
My Parcel never arrived., I was home all day but still received a 'we missed you' slip.	I don't mind if it is left outside my flat/door.
I had no problems...	I don't mind picking up parcels from the post office.
I had no problems..., None	None
My Parcel never arrived., I was home all day but still received a 'we missed you' slip., The delivery came late	I must personally be at the premise., I don't mind if it is left outside my flat/door.
I had no problems...	I don't mind if it is left outside my flat/door., I don't mind picking up parcels from the post office.
My Parcel never arrived., I was home all day but still received a 'we missed you' slip., I don't know exactly when it will arrive	I must personally be at the premise., I don't mind if it is left outside my flat/door., I prefer is someone in my family is home to receive

From your own experience	From your experience, what do you think is missing?	Email Address						
	2 Check the address first							
	5 More accurate delivery dates							
	7 Not that i know of							
	5 none							
	6							
	4 Cost							
	4 speed							
	5							
	5 More tracking details							
	5							
	5							
	5 They should always ring the door bell to check if anyone is home before leaving the 'we missed you' slip							
	7							
	6							
	6 Faster times, more accessible hours, and more effort to actually contact you if they miss you							
	7 It would be nice if the delivery time would be shorter without paying more for express. Sometimes express takes a long time too.							
	7 Instant text message notification / or notification that the parcel will arrive soon so you know the delivery man is coming							
	7 Better accuracy in delivery time. I.e a four hour window when the package will be delivered							
	4 Providing an approximate time of delivery							
	3							
	3 Mobile text or sms alert							
	4							
	7 Would be great if I never had to go to the post office to pick up a delivery.							
	5							
	5							
	6							
	4 Dunno							
	7 United Facilities which may store the parcels eg. Auspost is great example, until the seller uses toll or fast carrier. Then, if I'm not present at home during delivery, I need to travel far away for a pickup							
	6							
	5 n/a							
	7 Nothing much							
	7 Have a leave outside the door option always available							
	6 Having the choice to decide which time delivery should happen							
	4 Care and speed							
	5							
	7 You get like two updates on where your package is, the first is that it may or may not even exist and the second is that it's been delivered. Like where is my package I want to knowwww							
	6 Letting the customer know a time frame when the package will arrive - this is a big one for me because I really don't like having to go to the Post Office to collect, because avoiding that is sort of the point of getting it delivered							

Interview Transcript:

Me: Alright Hello.

Interviewee: Hello.

Me: How are you today?

Interviewee: I'm doing reasonably well.

Me: Alright. Well, can you introduce yourself?

Interviewee: So, I'm Ben, I'm... old, I'm twenty-seven, and I... uh... work and I'm also doing uni as well, and I'm Australian and live in Sydney.

Me: Nice. Are you living in an apartment right now?

Interviewee: Uh so I spend at the moment about fifty-percent of my time living in an apartment, and um, I've lived in an apartment full time um... I guess for about 5 years, so about maybe a year ago, yeah, that's when I moved out of the apartment.

Me: Oh ok. Can I ask you why you moved out?

Interviewee: Ahh so, it had more to do with uni and work and stuff like that.

Me: Ah I see I see. Are you a big online shopper?

Interviewee: Depends how you define big, but I have bought a considerable amount of stuff over my lifetime online.

Me: And with online shopping, what kinds of things you do you look for?

Interviewee: Anything from clothes, shoes, but I've also bought other things like books... they're probably the main things.

Me: What do you think is the difference between buying online and just going to a physical store?

Interviewee: I think shopping online is way more convenient, super easy, kind of, I feel like you have a bigger range often, it's like browsing. Where sometimes when you go in the store, and you look online, and you go to the store to try to find it you can't find it or they don't have it in stock at that particular store whereas if you buy online that's not really an issue. So it's just way more convenient and I'm quite busy with work and uni and like other times I've been working full time you just often don't have time or when it is the weekend, the last thing you want to do is just like you go and like shopping the whole time. You want to enjoy the weekend or catch up on sleep or stuff like that, so online shopping is super convenient from that point of view.

Me: Oh I see. Do you have any recent deliveries?

Interviewee: Yeah, I've had a little bit of clothes and had a book delivered as well.

Me: If you are out a lot, are you still there to pick them up?

Interviewee: Most of the time no, so most of the time even though it's convenient buying them online sometimes it's more of a hassle because uh you being able to get it is difficult so often when you choose it to get delivered it might be like 3-5 days business days we will get it delivered to you, but most of the time I'm not at home so often they'll just put the slip in like hey you missed your delivery and I have to go to the post office but it's only open 8:30 to 5:30 so when I'm at work or when travelling to and from work I can't actually pick it up either. SO the only real chance is to go out to the post office on say like

the weekend to pick up my delivery. So Despite it being convenient, like buying something online and actually getting it delivered could be quite a hassle.

Me: Are you far from the post office?

Interviewee: Ok not really to be honest, just like a 10 minute drive, but uh, it's just I think on weekends the post office isn't open that often like the time frame is different than during the week, so it's just if you plan something on the weekend you have to go to the post office during a particular time and that could stuff up your plans and if you want to have a sleep in it's a pain.

Me: That's so true though. I was thinking what if you order something small and you wait an entire week and you have only one chance to pick it up, so how would you feel waiting so long for something small?

Interviewee: Yeah I remember there was this jumper I really wanted and it arrived the Monday or Tuesday but I ended up picking it up on Saturday or Sunday, and I think they only hold it in the post office for a certain amount before they send it back, so you kind of, it is an issue because you have to plan around that. So even though the whole idea is to make it more convenient, getting it delivered sometimes you could end up going to the shops and get it immediately instead of waiting for the delivery.

Me: Are they allowed to leave the parcel in front of the apartment?

Interviewee: Nah, they can't just because, no, it could get taken and it's too exposed so basically like the door to our apartment complex is like just near the street, so anyone walking by could just see the parcels and anyone in the apartment block could take it to their apartment.

Me: Have you had any problems with your deliveries?

Interviewee: So most of the problem I've had are missing the deliveries, they're the main ones for me.

Me: What about the quality of the product?

Interviewee: That's a good question. I don't think so. One time, I don't know if this is directly related but I bought shoes, but it was faulty so I had to resend it back, so I couldn't just take it to a store, so I had to wait to send out a new pair. So even though that was convenient initially, it took longer to get a pair of shoes that were actually not faulty.

Me: Was that process tedious?

Interviewee: I mean ok to be fair they'd obviously thought through the process and made it easier on their end, so I was able to return it free of charge and gave me what I needed to send it back from the post office.

Me: Going back to the apartment, are you currently living by yourself?

Interviewee: Uh, no... No.

Me: If there's someone else at your premise, could they pick it up?

Interviewee: Yeah, that makes it super easy and convenient, but there has been sometimes where I have been at home to pick stuff up. SO it's definitely happened, it's just not the majority of the case.

Me: Do you have a certain preference in picking up the delivery?

Interviewee: Not really, I'm usually not super fussy... Unless... I've had food delivered which is a little bit different... to the apartment

Me: Oh?

Interviewee: It may have taken a long time because the apartment is big and them finding the right part of your apartment, and you're like, 'where's my food?' and like yeah that persons been lost and obviously trying to engage with the whole apartment.

Me: Yeah definitely. Food delivery is a big thing. Have you ever had the thought that because you live in an apartment something just never will be delivered directly to your apartment?

Interviewee: Umm, yeah, I think there's definitely that element of being aware of it not being easier than a house. There's a clear point of contact and its two different street sides so it is much easier for those who are in a house.

Me: I see. Well thank you for your time.

Interviewee: My Pleasure.



Interview Transcript

Me: Alright. Hello. Can you quickly introduce yourself?

Interviewee: My name is Alex, I'm 23, student, working part-time from Singapore but I live in Sydney now.

Me: Ok. Have you lived in an apartment?

Interviewee: Yes I have. Back in Singapore, sort of like a condominium kind of like community, sort of like an apartment complex.

Me: Well, have you done any online shopping? Or are you an online shopper yourself?

Interviewee: I wouldn't say I do a lot of it, I would if I need to buy books... I bought a phone once and a portable charger, that's about it. I don't shop for clothes or anything.

Me: Do you get those items delivered to your door?

Interviewee: I usually never pick things up, I'm pretty lazy, so ideally I'd love things to be at my door. So far I never encountered a situation where I had to pick up anything.

Me: Have you had any recent deliveries? Can you tell me about that experience?

Interviewee: Yes, but it was in a house. The difference about house and apartment is that when I'm not at home they drop it off at my front yard if it's a house but if it's an apartment they have to buzz in and someone needs to sign off for the package, or else someone needs to collect it at some collection point.

Me: When you're in your house, and a delivery comes to your door, are you personally ok with the delivery being left in front of your premise?

Interviewee: Yeah because I live in a relatively safe neighbourhood so not too worried about someone coming to my front yard and taking my stuff. The guy drops it off somewhere people can't really see when you walk past, and I prefer it because I'm usually not at home, and I don't want to go and collect it myself, so I'm ok with that.

Me: Are you usually not at home?

Interviewee: Yeah because I'm either at work or at uni. I leave at like 9 or 10 and usually get home at 6 or later than 6.

Me: What about apartments where you have to buzz in and you're not there?

Interviewee: For me, someone was at home thankfully to sign off for me, so that was ok, but there was this one time when nobody was home and I had to schedule a time for him to deliver it to the apartment and it almost got to the point where I had to pick it up myself because no one could sign off for me.

Me: Do those kind of experiences still encourage online shopping?

Interviewee: Yeah I would just because some things you have to buy online like those online shop and there's no physical store so there's no choice and if you have someone at home it's pretty convenient.

Me: I see. Well thank you for your time.

Interviewee: No worries.

## Interview Transcript

Me: Hi. Can you introduce yourself?

Interviewee: Hi my name is Sam, and I'm 18 years old and I'm Chinese, and I currently am studying at uni and live in an apartment.

Me: Are you a big online shopper?

Interviewee: I browse a lot, but I buy depending on... How much is in my account.

Me: Of course.

Interviewee: But yeah I'd say I bought quite frequently, I'd say, twice a month?

Me: What kind of things do you look for online?

Interviewee: Clothing, accessories, just random stuff. Just last week I got a chair, a gaming chair delivered to my house. Well it wasn't actually delivered, they just put a card in the postbox because no one was home.

Me: Did you have to pick it up from the post office or the actual store to pick it up?

Interviewee: I pick it up from post office. I think it was sent from overseas.

Me: Oh it was from overseas? How long did that take?

Interviewee: About two and a half weeks for normal post.

Me: Did you find any problems with that?

Interviewee: Not really I guess. Waiting was just as usual. I guess not really a problem but it came earlier than the estimated time, so not really much of a problem. But when I got the box there it had some holes in it caused by incorrect packaging with the chair inside where sharp parts were poking out, but the post office was nice enough to tape it back. SO that was good.

Me: How far is the post office where you pick the things up?

Interviewee: well this was special. I live in Chatswood, and where I had to pick it up I had to go to St Leonards, so I had to go there with my dad, and he drove.

Me: Ah I see. Usually people do get smaller parcels but-

Interviewee: Ah yeah that reminds me I got a smaller parcel. It came on a different day, and it was the wire that connects the usb to the usbc. But when we found out it arrived in our mailbox I went to get it, but the package was chipped open and nothing was inside it. So I had to contact the sender saying 'hey, I received your package but the content was missing with an already ripped open because it was in an envelope and ripped in a corner' so I was wandering how to fix and he said he can give me a refund and order another one. The other one hasn't come yet.

Me: Ok. It seems like when you order small things it comes into your mailbox, and when you get something big it's going to your premise and then to a post office.

Interviewee: If I'm home then I always get it delivered and picked up.

Me: What's your preferences in picking up deliveries?

Interviewee: For me personal preference it would be at home where I don't need to physically go to a post office to pick it up.

Me: Have you received a lot of 'we missed you' slips?

Interviewee: Not really, I'm home most of the time. But I remember it was my brother who ordered a gundam, and I was home myself but all they did was ring the bell and I guess it took around 5 seconds or so to reach the ground floor but not even 5 seconds, the guy left the building and I guess that was a bad experience. They had no patience as delivery person, so from that my brother went to pick up his parcels.

Me: That's so interesting. You have so many stories. Are you still encouraged to online shop?

Interviewee: Yeah I guess because there's still a limit to what I can get physically. Like the gaming chair it had all the physical attributes I wanted, and would have been four times as more expensive as getting it overseas.

Me: Wow that is a lot cheaper. Do you have any feedback to give to people who deliver parcels?

Interviewee: Yeah. Have more patience, like if you're having a bad day don't let other people have a bad day.

Me: Aren't there security cameras?

Interviewee: No, my apartment doesn't have them because of 'security reasons'. There are balconies that are pretty open near the mail box area.

Me: I see. So I am looking into future autonomous vehicles, and was wondering, what if things were able to be delivered to your apartment, to your balcony?

Interviewee: Yeah that would be cool. Right now I live in the 5<sup>th</sup> floor and that'd be really good but it wouldn't be as useful for someone who lives on the first floor, or it would be more dangerous.

Me: Do you think online shopping is better for houses?

Interviewee: From my experience, apartments are better for delivery. Back when I was in Adelaide at a house they would still leave it at the front door rather than leaving the slip, and I think they assume that it is safer in a private property but it might get stolen.

Me: Ah I see. Well thanks for the interview.

Interviewee: ok. Thanks.

## Interview Transcript

Me: Ok. So, Can you introduce yourself?

Interviewee: Um, I'm Daniel, and I'm twenty-four years old, and I work at retail.

Me: Do you study?

Interviewee: Not at the moment, but I go back to study next year.

Me: Alright. Are you an online shopping guy? What kind of things do you look for?

Interviewee: Yep, technologies, things like cameras, games, electronics... yeah.

Me: Have you recently shopped for those products?

Interviewee: The recent thing I bought wasn't actually any of those.

Me: Do you think it's worth buying it online? Or would you rather go to a store?

Interviewee: I'd rather buy it online, but I'd rather pick it up from the store.

Me: Oh? Why is that?

Interviewee: It's because I work near the city, and when I shop they have physical stores in the city so I can pick up before or after work.

Me: What about deliveries to your house?

Interviewee: The thing is because I work, the time I finish is when the post office closes, so it's very hard for me to get to the post office to collect.

Me: Is there anything you can do to have the parcel be dropped off at your place?

Interviewee: No. You have to go to post office to collect it. But if it's small, they drop it off at our mail box.

Me: Were you ever at your house when you had a delivery?

Interviewee: Yes, but not often. Barely.

Me: Why is that?

Interviewee: It's because I'm working and I come in at about 7 o'clock.

Me: Do you think that's a big issue?

Interviewee: Personally it's not a problem because I still work at city and I can pick it up. If I didn't work at the city then I'll just have the post box service and I'll pick it up there.

Me: You said previously that you look for technology. Do you look for them from overseas?

Interviewee: At the moment yes, I look at a lot of American ones.

Me: Are you far from a post office to pick up?

Interviewee: No. I can walk there in 5 minutes.

Me: Have you had any problems with other people's parcels or your parcels coming in?

Interviewee: No. I haven't been in any delivery problems. Only thing I can think of is when I had no time for two weeks so post office just sent back the delivery that I should have collected.

Me: Oh? Tell me about that.

Interviewee: Well my mum ordered vitamins, but no one at home was available for whole two weeks and they gave us notice but we couldn't go due to work and uni, and they had to send back the item they got, and we had to go all the way to the hills area to collect it there.

Me: So I know you are interested in technologies, and I myself am looking into autonomous vehicles like self-driving cars and drones. Would you be interested in using a service like a drone to have your parcel delivered at your balcony?

Interviewee: Yeah, I would, but I can think of some problems that it could create as well.

Me: What kind of problems?

Interviewee: Well first there are radio interference, and because it's a unit there are a lot of balcony, and near the building there are a lot of radio interferences, and because I personally have a drone I found it really hard to connect with the drone. Also the drone doesn't know the weather so if it is out in the open then it gets ruined.

Me: What if there was an area very close to your unit where you had your personal storage for drone pickup?

Interviewee: I know a lot of people have the post box service where I live where they get parcel pickup after-hours. But for me it's costly and not as efficient. In terms of delivery I think there are tracking system which help the drones and robots.

Me: What do you think of the tracking system right now?

Interviewee: It's very vague. But at the same time if it's too precise it would cost a lot of money.

Me: Right. Do you have anything to say about the way we could be using drones in the future?

Interviewee: I think so I actually watched a documentary on Netflix or something, that said if there are any human error involved, then it would fail, so for example, if all the cars were self-driving, then it would be fine, but if a human was to drive it, then it wouldn't be safe and would lead to accidents. So it's the problem of human error.

Me: Ah I see. Well thank you for the interview.

Interviewee: No problems.

## Interview Transcript

Me: Hi, can you introduce yourself?

Interviewee: My name's Paul, I'm a 24 year old... man I guess, I'm currently finishing up a medical degree and currently live with my wife in a small apartment.

Me: Are you an online shopper yourself?

Interviewee: I guess so. I do take part in online shopping, I wouldn't say it happens as often as my wife, but because she is on websites and online shopping more frequently, I can say I do have some experience in that area. So short answer to your question yes but not intensively.

Me: What kind of things do you look for in online shopping?

Interviewee: Mostly I guess are clothes, shoes... I guess they are the main things I look for online. Sometimes home appliances and things, but for those I find that for those things it's better to get direct closure for or to see what it's like and test it out as well.

Me: Do you prefer online shopping compared to just a shopping centre?

Interviewee: Yeah I guess I do. I'm, not a big fan of shopping in general, and I'm actually not that bigger fan of things like fashion anyway, and so I don't find that much joy in physically going out to shop because that process is eliminated in online shopping. If there's a drawback to it, which there is, it's that I can't try the stuff I buy online. But apart from that I definitely prefer online shopping over the other.

Me: When you do receive those deliveries, what's the process of delivery in your context?

Interviewee: I think it varies quite a lot depending on where I actually shop. And so, because there are different couriers and different companies that deliver in different ways and there is an individual factor to it, like the delivery man, sometimes they do a very good job and sometimes a very poor job. So it varies quite a lot. Generally speaking they ring the bell, and if we are home we come outside to collect it, which is a little bit of a nuisance but you know whatever. And if we are not home then they put one of those 'we missed you slip' cards and we have to go and pick it up. The only real issue with that is that during working hours we might not be available, so during the weekdays it is quite annoying if we miss it so we have to commit to a morning or weekends when it's like really busy so yeah it's pretty annoying. But there are varying experiences, there have been some guys that ring and come all the way to our house, they take the lift up, and yeah that makes it definitely a lot more convenient for us, or sometimes they ring the intercom outside the apartment and tell us to come down to pick up the delivery.

Me: Has anyone rang the doorbell and left the slip?

Interviewee: Yes I think there was a time that did happen. I was tutoring at home and I felt like I couldn't leave home, he rang the doorbell and I asked if he could come up and he rudely said no, and told me that he was sending it back to the post office. And he just left. So yeah I guess that wasn't great.

Me: Are you far from the pick up?

Interviewee: Nah. I guess even by walking it's just 15 minutes, because it's all in a shopping centre, we often go when we have other things as well like grocery shopping, so we kill two birds with one stone.

Me: Have you ever experienced your parcel being sent back because it took too long?

Interviewee: Yeah I don't think we've gotten to that stage yet, but I heard that that happened to me a long time ago when I wasn't living in this situation.

Me: Do you find it frustrating when you have to go down or have to pick it up at the actual post office?

Interviewee: Yeah I think it's not frustrating in terms of 'I'm so annoyed' but it's just an extra nuisance because the whole point of online shopping is to eliminate that process of picking it up, but if you have to pick it up anyway, then it destroys the pro of online shopping. Like if we had uber eats and they were like we can't deliver it to your house can you pick it up? Then it's like 'oh what's the point of uber-eats if we have to pick it up anyway?'. And so that's sort of I guess the attitude I have towards it. In terms of how frustrating I think it's no different to physically going out to shop.

Me: Oh, so you like it for the convenience.

Interviewee: Yeah I guess. But I'm, limited by the system in that if I can't pick it up at a particular time which I don't even know what time that is, then I need to go physically pick it up.

Me: Do you think you have a specific preference of how your deliveries are delivered?

Interviewee: Yeah I guess when it comes to apartments, there are some times when we ask them to leave it at the door, and there are times when they done that. But I guess it only makes sense to do that for things that aren't really valuable, for example if I ordered my newly-bought iPhone X and drop it off at the front door, it doesn't feel that secure. Other than that I don't really mind people dropping little things at the front door.

Me: Hypothetically what I am looking at are vehicles and artificial intelligence that are autonomous, like self-driving cars. So What I was thinking about was having self-driving vehicles that drop the parcel off at your balcony. Would you use a service like this?

Interviewee: I think it would be.. My trust would be limited to how much I know about it, and seeing experiences about it. Like my first immediate thought was that because there's no person watching or controlling it, It's hard for me to communicate but if I'm trying to put it simply,. For example security, I wouldn't know.

Me: Ah I see. Well thank you for your time.

Interviewee: No worries. My pleasure.