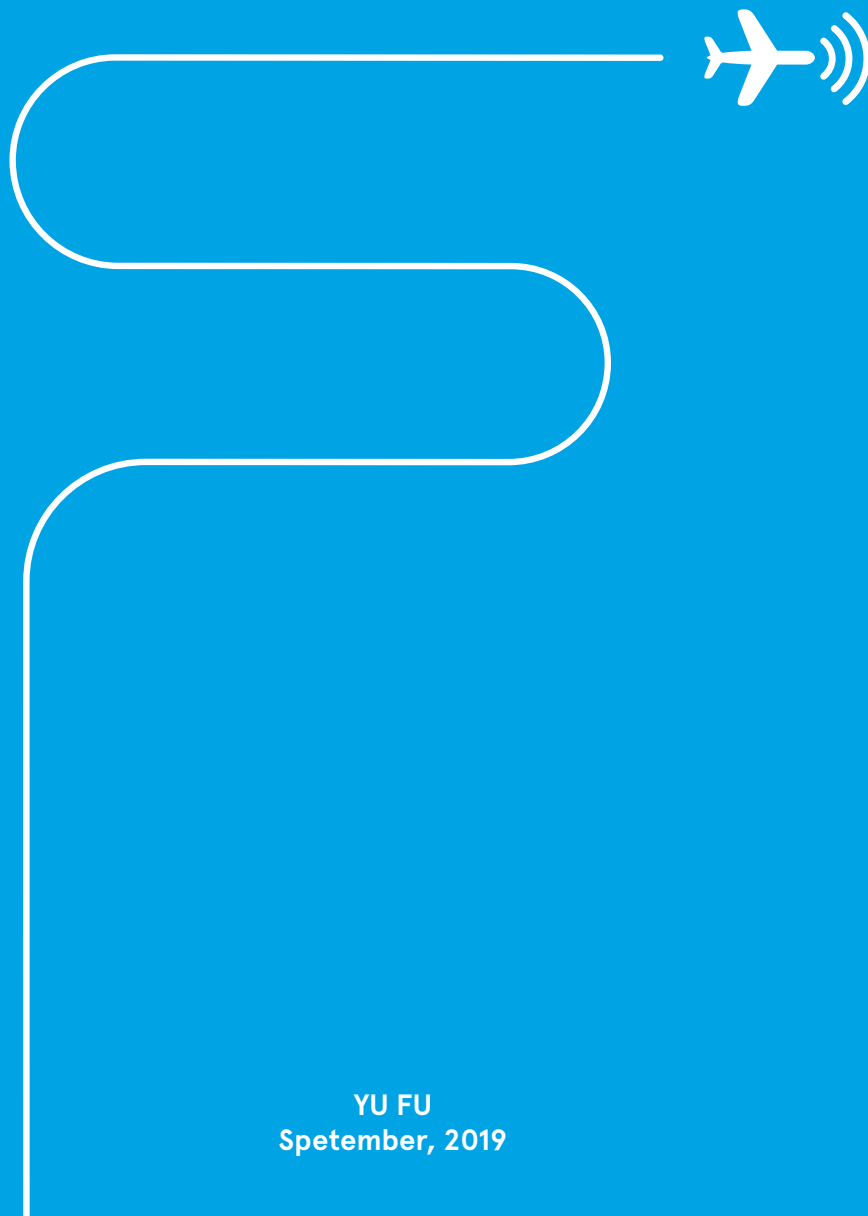


Appendix



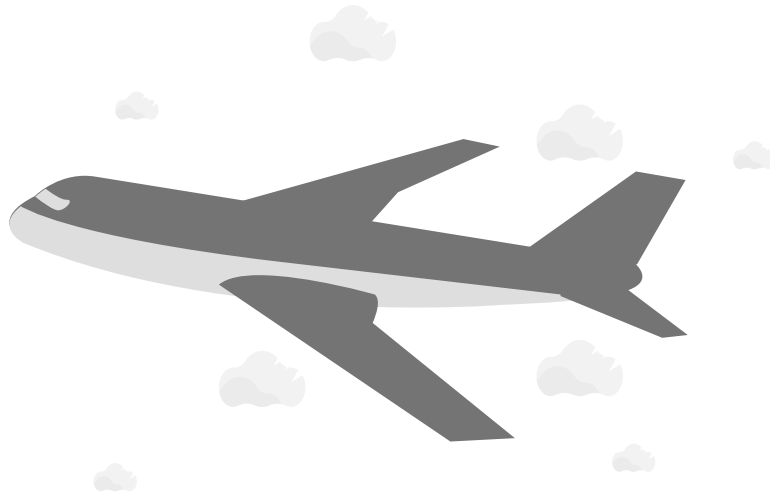
Appendix A. Competitor analysis

Competitor analysis

	Advantages	Disadvantages
Delta	<ul style="list-style-type: none"> + Movies available on personal devices + Show flight details information and map + Hotel and car rent service + Shopping + Book a flight + Check connected flight service + Miles service 	<ul style="list-style-type: none"> - Mobile version need an app to watch movies
Emirates	<ul style="list-style-type: none"> + Free 20 MB (with in 2 hours) + WIFI states 	<ul style="list-style-type: none"> - Only have wifi package purchase function
Air Canada	<ul style="list-style-type: none"> + Flight progress bar (time left) + Book a flight + Flight status + 5-days forecast + Order meals 	
Virgin America	<ul style="list-style-type: none"> + Flight info + Shopping (link to jet.com) 	
Virgin Atlantic	<ul style="list-style-type: none"> + Destination info + Airport info + Order drink + Destination guides for inspiration + 5-days forecast + Flight progress bar (time left) + Flight tips + Map 	
Southwest	<ul style="list-style-type: none"> + free live tv + Paid movie + Game + Flight progress bar (time left) + Destination info + Drinks intro (order not available yet) + Connecting light info + Map + Link to official website (book flight, hotel, car) 	
Alaska	<ul style="list-style-type: none"> + Map, flight tracker + Destination info + Internet coverage map + TV/Movies + Personal library + Order food and drink 	<ul style="list-style-type: none"> - No ancillaries

American Airline	<ul style="list-style-type: none"> + destination info (weather) + map (flight tracker) + Combine IFE with own device + Book flight + Flight status + Track you bags 	<ul style="list-style-type: none"> - No gate info - No airport info
Austrian	<ul style="list-style-type: none"> + destination info (weather) + Some tips + Austria knowledge + Left time + Travel inspiration + Restaurant info + Seat upgrade (next flight) + Hotel + Rent car 	
Ethiad	<ul style="list-style-type: none"> + Destination info (weather) + Left time + coverage map + Ebooks 	
Jet Airways	<ul style="list-style-type: none"> + Left time + Tv + Movie + Games + Music + Destination info (weather) + flight tracker (map) + Edujetter 	
Qatar Airways	<ul style="list-style-type: none"> + message notification + 30 min free wifi + Destination info (weather) 	
United	<ul style="list-style-type: none"> + Left time + Destination info (weather) + flight tracker (map) + switch devices + Free entertainments (movie) + 3rd party service (car rental, shopping, travel activities) 	
ANA	<ul style="list-style-type: none"> + flight info + weather at destination - news + flight time left + destination time - business info + art & culture info - technology info - sports info 	

Appendix B. Competitor analysis



IN-FLIGHT EXPERIENCE

Step 1: About you

We would like to know more about you!

Age:

Gender:

I travel times a year

For my last [Medium-Haul Flight (3-6 hours) or Long-Haul Flight (over 6hours)] experience, I traveled

from: to:

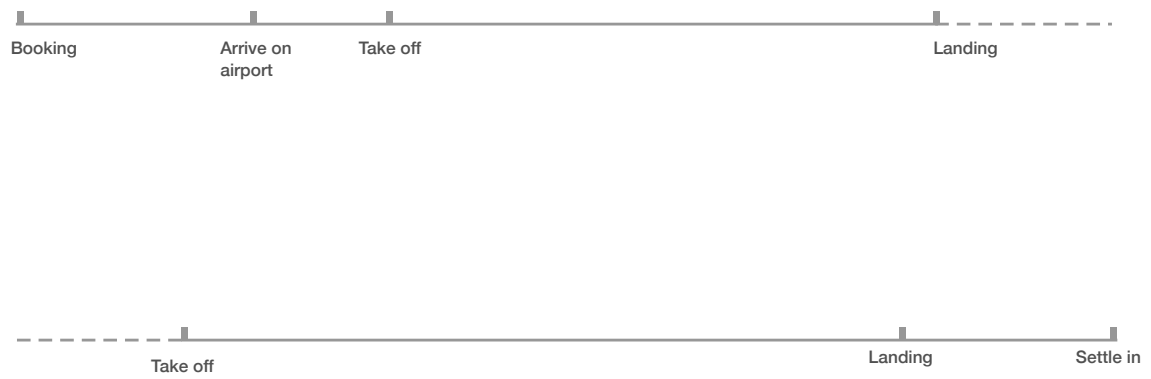
with:

It is a plane. (new, old, big, small, etc.)

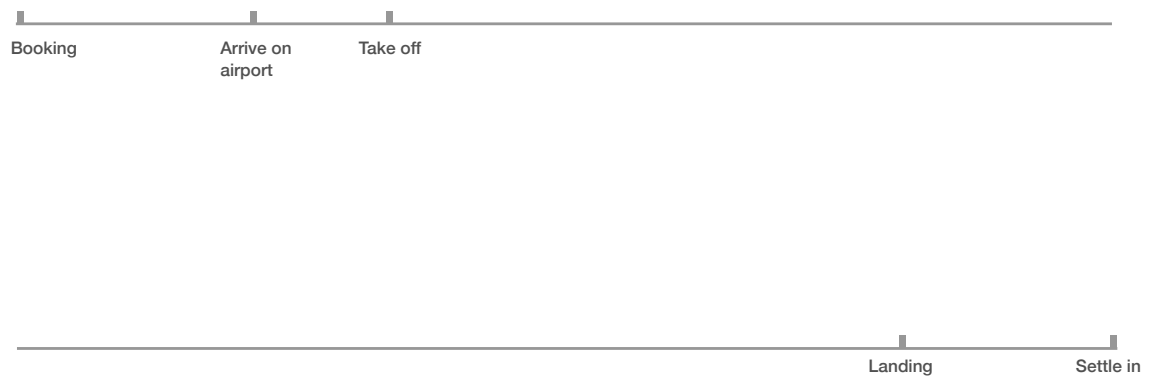
My aims of this trip:(have a meeting, travel, visit a friend, etc.)



With transfer



Or without transfer



Step 2: How is your experience?

Could you share some certain moments during this journey? You could use the stickers 😊 😞 to indicate your feelings in these moments. Please also write down the reason why you feel this way on that moment.

1 Please mark down some detail moments you have in your flight journey. The tags may help your remember some certain moments

2 Use the sticker to show you feeling at the moment. You can use multiple stickers to illustrate the degree of your feelings. 😊😊😊😊/😞😞

3 Write down the reason why you feel good/bad at this certain moment.



Step 3: Best and worst moments

After go through your flight journey, could you explain more about the moments you like and dislike the most?

Best I like this moment, because I feel.....

happy satisfaction hope relaxed

pride novelty or:

What happened?

Why do you feel this way?

Worst I don't like this moment, because I feel.....

frustration dissatisfaction boredom shame

contempt fear or:

What happened?

Why do you feel this way?

Step 4: Your ideal trip experience

You have reflected your last experience of flight trip. Could you also image what an ideal flight experience can be? What kind of service you would expect? At which moment and in what way?

Please feel free to write or draw down everything in your mind.

Step 5: Some questions

1. Have you use WIFI during your flight journey?
2. If so, when do your use it? and in which airline's flight?
3. And use the WIFI for what purpose?(Check emails, follow news, check social media, entertainment, etc.) with what device?
4. How do you feel about the current onboard portal? (people connect the wifi through the onboard portal website)
5. Besides purchasing the WIFI service, have you tried other services on the onboard portal? (rent a car, check flight info, etc.)
6. If so, when and why did you try them?

Appendix C. Online questionnaire

In-flight experience questionnaire

I would like to know more about your In-flight experience!

In this questionnaire, you will be asked several questions about your long-haul flight experience and WIFI usage on the plane. Filling in the questionnaire will take 10-15 minutes. The results are anonymous and will be used to support my graduation project. If you have any questions or feedbacks, feel free to send me messages.

Please don't forget to click the submit button.

Thank you very much!

Yu

***Required**

1. How old are you? *

2. What is your gender? *

Mark only one oval.

- Male
- Female
- Prefer not to answer

3. How often do you travel by plane? *

(like 4-5 times a year, etc.)

Skip to question 4.

How is your last long-haul flight experience?

Long-haul flight take over 6 hours

4. What was your origin? *

5. What was your destination? *

6. How did the airplane look like? *

(Like new, old, big, small, clean, etc.)

7. What was your aim of this trip? *

(Like having a meeting, traveling, visiting a friend, etc.)

Skip to question 8.

Best and worst moments

Could you explain more about the moments you like and dislike the most during this in-flight journey?

For the moment you like the most

8. What happened? *

9. How did you feel at this moment? *

(Like happy, satisfaction, hope, relaxed, pride, novelty, etc.)

10. Why did you feel this way? *

For the moment you dislike the most

11. What happened? *

12. How did you feel at this moment? *

(Like frustration, dissatisfaction, boredom, shame, contempt, fear, etc.)

13. Why did you feel this way? *

Skip to question 14.

WIFI usage

14. Have you ever used WIFI during your flight journey? *

For your general in-flight experiences, instead of the last experience
Mark only one oval.

Yes *Skip to question 16.*

No *Skip to question 15.*

WIFI usage

15. Why did you not use the WIFI on the plane?

(Like it was too expensive, I didn't need it, etc.)

Stop filling out this form.

WIFI usage

16. When did you use it during the in-flight journey? *

(Like after take-off, when I got bored, etc.)

17. In which airline's flight? *

18. For what purpose did you use WIFI during the flight? *

(Like checking emails, sending messages, following news, checking social media, entertainment, etc.)

19. With what device? *

(Like iPhone, iPad, etc.)

Skip to question 20.

Onboard portal

When people connect the WIFI on the airplane, this onboard portal website will pop out. People can choose different WIFI packages through this website.

20. How do you feel about the current onboard portal? *

Anything you like or dislike

21. Besides purchasing the WIFI service, have you tried other services on the onboard portal? *

(Like rent a car, check flight info, book tickets for travel activities, etc.)
Mark only one oval.

- Yes *Skip to question 22.*
- No *Skip to question 25.*

Onboard portal

When people connect the WIFI on the airplane, this onboard portal website will pop out. People can choose different WIFI packages through this website.

22. What services did you try? *

(Like rent a car, check flight info, book tickets for travel activities, etc.)

23. When did you try it? *

(Like when the plane was about to land, etc.)

24. Why did you try it? *

Stop filling out this form.

Onboard portal

When people connect the WIFI on the airplane, this onboard portal website will pop out. People can choose different WIFI packages through this website.

25. Why did you not use the onboard portal for other services? *

(Like it was too expensive, I didn't notice them, I didn't need them, etc.)

Appendix D. Interview questions

How is your last long-haul flight experience?

What was your origin?

What was your destination?

How did the airplane look like?

What was your aim of this trip?

What is your best moment during this flight trip? How did you feel at this moment? Why did you feel this way?

What is your worst moment during this flight trip? How did you feel at this moment? Why did you feel this way?

Have you ever used WIFI during your flight journey? Why do you try it? How do you feel about it?

How do you feel about the current onboard portal?

Besides purchasing the WIFI service, have you tried other services on the onboard portal? If so, why? If not, why not?

Appendix E. Detailed clusters

Personal travelers

Pre-flight experience					In-flight experience							
Booking	Preparing	Transporting	Waiting	On boarding	Settle down	Take off	Eating	Toilet	Sleeping	Entertaining	Other activities	Land
• Late booking	• Difficult Packing tasks	• Afraid of missing the flight	Long waiting time	Annoying complexed security check	Store luggage	Concerns of safety	lousy food	Crowed bathroom	Food vs. sleep	Not attractive entertainment on IFE	Narrow space of seat	Can
P5: too late to find cheap online tickets P10: spent a lot of time to find the suitable ticket P12: cannot book the cheap ticket since it is late	p1: had to arrange baggage for limited space P2: packing was boring and time-consuming, you need to check every thing	P1: in a hurry, and dropped the bag P12: worried if I can get here on time	P1: Too long line P6: 2h waiting	P12: a mess when pass the security check (so complicated and bothering)	P1: late boarding, no space to put baggage on top	P5: feel nervous, since it is the time most accident happens P17: I met heavy turbulence and I am little scared	P3: I don't like the food P20: the food was not tasty	P3: too narrow space, have too wait P8: too many people	P1: cannot sleep immediately because I don't want to miss the meal	P1: nothing interesting on the IFE P15: the movies are outdated	P1: seat is too narrow that I can't pick up my pillow	P4: IFE, close
		Bad feelings of surroundings	Look after the luggage		Problems of search seats		Missing food	Guilty of bothering others	Intermittent sleep	Noisy	stuck in the seat	Con
		P2: dirty shuttle bus	P6: tired, too much baggage		P5: find the wrong seat		P6: missed a meal because of sleeping	P10: I want to go to the toilet but my neighbor was sleeping P16: I have to bother my neighbor to get out	P5: always wake up and feel boring	P2: it is too noisy to watch a movie P3: when listen to the music, there is a child crying	P10: I sit for a long time and feel uncomfortable P20: I don't like the feeling of being binded	P5: since mos hap
		Problems of carrying luggage					Bad trash collecting service	Narrow space of seat	Narrow space of seat	Limited WIFI service	Uncomfortable temperature	
		P8: too much luggage to carry by train. Feel unsafe P12: too much luggage to carry					P11: after I finished my meal, it took too long for flight attendant to take back the waste. I cannot do anything when the tray table is full P14: I waited a long time before flight attendant take back the plate	P13: too limited space, it is hard to get out to the toilet	P7: uncomfortable, cannot have a good position P8: not so comfortable P9: uncomfortable sleep P13: cannot sleep well	P10: only 20M of free wifi	P10: I feel cold since the wind is blowing my head, and flight attendant cannot help	
									Noisy	Inconstant entertainment	cannot clean myself	
									P15: cannot sleep well since a baby was crying	P19: couldn't continue watching the content from the previous flight.	P11: I wanted to wash my face and take a shower, but I cannot	
Early booking			Happy activities to kill time		Empty space		Little surprise of food		Sleep on multiple seats	Attractive entertainment	Chance to Stretch body and walk around	A lit
P2: online booking early, cheap tickets P6: 6 months ahead, cheap tickets			P5: shopping, feel excited P8: play with my phone		P4: the plane is empty, so I chawed my seat to the middle		P1: happy that I was served with Swiss chocolate(little surprise) P2: Get "football" chocolate because of world cup		P4: lay on 3 seats P10: the seats next to me is empty, so I lay down P6: there was no man sitting next to me, so I lay down	P3: watch a good movie p4: good movie and games P8: it is nice to watch movies and play games P13: happy to use my device to watch movies	P1: stand up and walk around P9: it's nice to stretch my body P10: I fin ally can walk around after landing P11: I need to stretch my body	P1: there P2: the P5: P21 arriv
Order food beforehand					A little relief		Satisfying meal			Brought own entertainment	Chat with other passengers	Nice
P9: ordered a good meal					P13: it is nice to finally settle down		P2: nice yo have different kinds of fruit P13: got ice cream as dessert P21: I had some fruit			P13: happy to use my device to watch movies P19: play mobile games P19: use kindle to read books	P7: it is nice to talk with my neighbors, and get new friends P8: I chat with other passengers P22: I had a good conversation with the guy sit next to me	P12: over thro win
											Contact friends	
											P1: it is nice to chat with my friend through my phone	
											Nice view	
											P13: saw gorgeous dawn	

	Transferring				Post-flight experience		
Incident	Check baggage	Go to the waiting room	Waiting	On boarding	Waiting	Transporting	Settle in
cannot use facility	Worry about luggage	• Afraid of missing the flight	Bad waiting room		Wait luggage too long	Not easy to find local transport information	
cannot use and toilet	P8: I didn't know if I need to collect my luggage	P1: always worry about if I go to the right hall	P3: no seat when I was waiting		P8: spend too much time waiting the luggage	P13: confused to where to go	
cerns of safety		Cannot find the right way to the gate	Bordem				
feel nervous, it is the time at accident opens		P2: cannot find the right gate P8: cannot find the gate	P5: get bored later				
		Delay of previous flight	Exhausted				
		P8: the previous plane was delayed, I was in a hurry to go to the gate, I was afraid I can catch the next flight P12: afraid of late because the first flight was delayed	P13: feel exhausted since it is 4.00 am and need to wait 3 hours in the airport				
			Missed the connecting flight				
			P18: missed the connecting flight and have stay in the airport				
little relief			Happy activities to kill time		Luggage store service		A little relief
finally arrived finally get finally : finally ed!			P5: have fun shopping, eating and exploring at the beginning		P11: I stored my luggage and have dinner with my friends		P4: pretty smooth P5: home, sweet home
the view							
: excited to look the city ugh the dow							

Business travelers

Pre-flight experience					In-flight experience							
Booking	packing	Transporting	Waiting	On boarding	Settle down	Take off	Eating	Toilet	Sleeping	Entertaining	Other activities	Land
	• Difficult Packing tasks	• Afraid of missing the flight	Long waiting time (inefficient)	Annoying complexed security check		Concerns of safety	lousy food	Crowded bathroom	Narrow space of seat	Bad control of IFE	Hard to work on the plane	Con
	P12: anxiety about packing, making sure to bring everything needed.	P1: stressful and calculating the time	P3 - waiting time is too long P5: waiting is so inefficient	P12: I hated security check		P15: A little scared because of turbulence when climbing	P5, 6: food can be improved P9: The food was bad	P15: people blocked the aisle. P15: had to wait too long	P9: I hurt my neck no matter what type of pillow I bring P10: suffered from all kind of issues from being squeezed in a seat for 14, 15 hours	P9: The controls on the in flight system were sometimes lousy	P3: privacy was a concern P1: it was unsafe to open laptop p5: made font size small to protect privacy	P15: turb des
				Cannot choose food when check in				Unclean bathroom	Bad sleeping interfered working	Limited WIFI service		
				P14: vegetarian options not possible				P5: dirty bathroom	P10: this bit (sleep) typically interfered with that (working)	P14: Wifi cannot work		
									Intermittent sleep	Noisy		
									P11: wake up every hour	P14: nearby children were noisy, parents didn't stop them		
			Take a coffee break	• Had fast past	Have a good seat		Satisfying meal (fit preference)		Better seat for better sleep for next day's work	Brought own entertainment	Talk to other passengers	Get
			P4: had a cup of nice coffee P1: Relaxed and have coffee	P6: felt the pride of passing it efficiently P2: felt happy to past it quickly, though at the end we take off at the same time	P14: good seat with a lot of leg room in economy class		P14: vegetarian options were available as standard		P11: first class is to get a night's sleep for next days work	P2,6: carried a small book that can fit into the pocket P8: It was nice to use spotify (offline mode) P14: use iPad watch downloaded netflix	P2: talked to other business traveler is interesting	P7: to ge
			Found place to work								Enjoyable offline moment	
			P3: good to find a place with not too much people P7: less crowded place P5: found a cozy and private place to work								P7,8: offline moment, more efficient P4: offline moment to relax a little bit	
											Chance to Stretch body and walk around	
											P9: preferred LESS Products and Services and MORE physical space and comfort."	
											WIFI for work	
											P12: got the wifi pass for 2 hours, finished the work I have to get done	
											Work on the plane	
											P1: able to work on laptop	
											Nice view	
											P16: take a picture of sunrise	

When you are traveling as a tourist...

*Required

1. What is your name? *

2. How old are you? *

3. Nationality *

4. I am open to make friends with people I meet in my flight journey. *

Mark only one oval.

- Sure
 Not really

5. In my flight journey, I would rather... *

Mark only one oval.

- Put on the earphone and get less attention.
 Involve in an active atmosphere with people around.

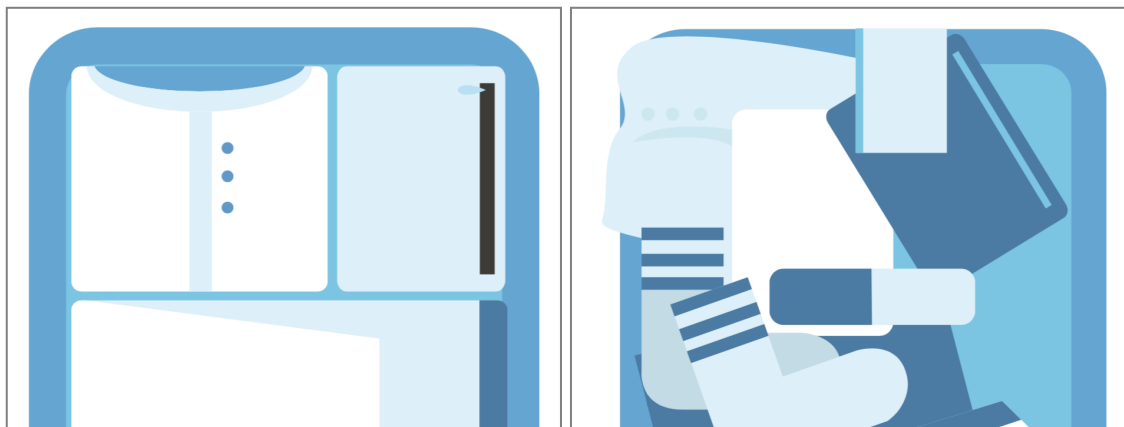
6. I feel good to start my trip when I have... *

Mark only one oval.

- A detailed plan about the trip
 A rough structure about the trip

7. The way I arrange my luggage is more close to... *

Mark only one oval.



A

B

8. **In air traveling, I think I am more close to...** *

Mark only one oval.

- A not that strict person
- A strict person

9. **Some people sitting around are talking loudly on the flight, I would...** *

Mark only one oval.

- Let it be
- Try to stop them

10. **If we offer a meal you haven't tried before, you would...** *

Mark only one oval.

- Try out the new meal
- Choose rather "safe" option

11. **I prefer a peaceful life, but if I have to choose, I would rather...** *

Mark only one oval.

- Have challenges every single day
- Repeat my daily routine

12. **In my flight journey, I tend to...** *

Mark only one oval.

- Worry about small stuff
- Feel confident

13. **When the flight is in a turbulence, your mindset is more close to...** *

Mark only one oval.

- I am afraid of crashing
- I wonder how the pilot flies

For question 4, 5. People who choose "Sure" and "Involve in an active atmosphere" will be recognized as high in extraversion. People who choose "Not really" and "Put on the earphone" will be recognized as low in extraversion. People who did not give a consistent answers will be identified as a semi-extraverted person.

For question 6,7. People who choose "A detailed plan about the trip" and "Organize" will be recognized as high in conscientiousness. People who choose "A rough structure about the trip" and "Mess" will be recognized as low in conscientiousness. People who did not give a consistent answers will be identified as a semi-conscientiousness person.

For question 8,9. People who choose "A not that strict person" and "Let it be" will be recognized as high in agreeableness. People who choose "A strict person" and "Try to stop them" will be recognized as low in agreeableness. People who did not give a consistent answers will be identified as a semi-agreeableness person.

For question 10, 11. People who choose "Try out the new meal" and "having challenges every single day"

will be recognized as high in openness. People who choose "Choose a rather safe option" and "repeating my daily routine" will be recognized as low in agreeableness. People who did not give a consistent answers will be identified as a semi- openness person.

For question 12, 13. People who choose "Worried about things" and "I am afraid of crashing" will be recognized as high in neuroticism. People who choose "Feel confident" and "Wonder how the pilot flies" will be recognized as low in neuroticism. People who did not give a consistent answers will be identified as a semi- neuroticism person.

Appendix G. The principle of personality-driven design

High openness to experience

“Creative stimulations bring me inspirations”

Concerns & Interests

Passengers with high openness are open to trying out new services and products. What is more, they are more open to the changes during their journey.

Needs

- New options
- Surprises
- Creativity

Interaction qualities

- explorative
- Inspired

low openness to experience

“Following previous steps makes me feel at ease.”

Concerns & Interests

Passengers low in openness tends to follow a routine. They don't like abstract ideas. When communicating with them, they prefer to get answers like “Yes” or “No,” rather than things in between.

Needs

- Routine

Interaction qualities

- concrete

High conscientiousness

“I should do things RIGHT !”

Concerns & Interests

High conscientiousness passengers tend to plan things ahead and strictly stick to their plan.

They want to do every step well. Doing things well is so important for them. Consequently, they tend to take every possible situation into account, spend time on details. What is more, they are expecting appreciation for their organizing, punctuality, and accuracy. They expect people around as diligent as they are while traveling.

Needs

- Acknowledged
- Predictable

Interaction qualities

- structured
- diligent
- transparent

Low conscientiousness

“Whatever, as long as I can catch up my flight.”

Concerns & Interests

Low conscientiousness passengers have the fewer struggle of doing every task perfectly. They prefer a more spontaneous way of interacting, don't want to be limited in a frame. Consequently, they took less time on making preparation. While flying, they are confident, but have a higher risk of running a bit late.

Needs

- Less but to the point information
- not being forced to change

Interaction qualities

- spontaneous
- respectful
- on demand

High extraversion

“I enjoy the feeling of being the center of attention”

Concerns & Interests

Extraverted passengers enjoy the feeling of being the center of attention. They are looking forward to meet new people in their flight journey.

Needs

Meet new people

Attention seeking

Interaction qualities

Lively

Passionate

Low extraversion

“I want to get things done without too much interpersonal communication”

Concerns & Interests

Introverted passengers may be too timid to express their request on the flight. For instance, ask for an extra meal.

Introverted passengers prefer more private ways of interacting, too much interpersonal communication makes them feel uncomfortable.

Needs

Self space

Interaction qualities

Private

Calm

High agreeableness

“Some sacrifices make me feel a bit uncomfortable, but I should help people who are in need.”

Concerns & Interests

While traveling, agreeable passengers anticipate the needs of others. They may give other people help and may even sacrifice for others at the expense of self. For instance, agree to change seat with others on the flight, even they feel uncomfortable with this request. In this situations, being acknowledged is important for them.

While flying, agreeable passengers see themselves as a member of a group. They want to be kind to staffs and other travelers.

Needs

Acknowledged

Enable to help others

Interaction qualities

Warm

Low agreeableness

“I don't want to be bothered by other people's problem/requests in my flight trip.”

Concerns & Interests

Low agreeableness passengers emphasize on the self-value in their flight journey. Stand up for their own interests is important for them. They don't want to be bothered by other people's problem. Their trip is the center of their focus.

Needs

Less disturbed by other people

Low neuroticism

“Everything gonna be alright”

Concerns & Interests

Passengers low in neuroticism are calmer compare to others when dealing with unexpected situations, both in problems and surprises.

Needs

Acknowledged

High neuroticism

“I feel more anxiety than others when unexpect situations happen.”

Concerns & Interests

Passengers with high neuroticism are more pessimistic about a delay or problems in their flight journey. Comforting is important for them while experiencing an unexpected situation.

Needs

Comforting

Accompany

Reassure

Interaction qualities

empathetic

Appendix H. Questionnaire for acceptance of ancillaries and the results

How much are you willing to try these services on the airplane?

When you were traveling as a tourist, and It is a long-haul flight (over 6 hours). All these services might be provided via Onboard Portal website. On this site, you are able to connect to WIFI and check other additional services.

In this questionnaire, there are 6 sections and you will be asked 15 questions about services provided on the plane. Filling in the questionnaire will take about 15 minutes. The results are anonymous and will be used to support my graduation project. If you have any questions or feedbacks, feel free to send me messages.

Please don't forget to click the submit button.

Thank you very much for your participating!

Yu

*Required

For the transfer experience

The aim of these services is helping you enjoy your transfer time

Please fill this section only when you have transfer experiences

1. When I am on the plane, I would like to check the shopping area on my transfer airport

Mark only one oval.

	1	2	3	4	5	
Not really	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I want it

2. If possible, please explain why you think so...

3. When I am on the plane, I would like to check the restaurants on my transfer airport

Mark only one oval.

	1	2	3	4	5	
Not really	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I want it

4. If possible, please explain why you think so...

5. When I am on the plane, I would like to pay for the lounge on the transfer airport to have a better environment to rest and eat

Mark only one oval.

	1	2	3	4	5	
Not really	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I want it

6. If possible, please explain why you think so...

For the post-flight experience

The aim of these services is helping you arrange transportation on your destination

7. When I am on the plane, I would like to rent a car for my trip *

Mark only one oval.

	1	2	3	4	5	
Not really	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I want it

8. If possible, please explain why you think so...

9. When I am on the plane, I would like to book a Taxi for my trip *

Mark only one oval.

	1	2	3	4	5	
Not really	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I want it

10. If possible, please explain why you think so...

11. When I am on the plane, I would like to buy intercity transportation (bus, train) tickets for my trip *

Mark only one oval.

	1	2	3	4	5	
Not really	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I want it

12. If possible, please explain why you think so...

13. When I am on the plane, I would like to buy urban traffic (bus, tram, metro) tickets (like 3-day tickets) for my trip *

Mark only one oval.

	1	2	3	4	5	
Not really	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I want it

14. If possible, please explain why you think so...

For the post-flight experience

The aim of these services is helping you settle down and have good meals

15. When I am on the plane, I would like to book restaurants on my destination *

Mark only one oval.

	1	2	3	4	5	
Not really	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I want it

16. If possible, please explain why you think so...

17. When I am on the plane, I would like to book hotels on my destination *

Mark only one oval.

	1	2	3	4	5	
Not really	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I want it

18. If possible, please explain why you think so...

19. When I am on the plane, I would like to buy a local phone card with data package for my trip *

Mark only one oval.

	1	2	3	4	5	
Not really	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I want it

20. If possible, please explain why you think so...

21. When I am on the plane, I would like to check the luggage storage spots near travel attractions *

Mark only one oval.

	1	2	3	4	5	
Not really	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I want it

22. If possible, please explain why you think so...

For the post-flight experience

The aim of these services is helping you enjoy your trip

23. When I am on the plane, I would like to check the post office/delivery service for sending gifts or postcards *

Mark only one oval.

	1	2	3	4	5	
Not really	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I want it

24. If possible, please explain why you think so...

25. When I am on the plane, I would like to book tickets of attractions on my destination *

Mark only one oval.

	1	2	3	4	5	
Not really	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I want it

26. If possible, please explain why you think so...

27. When I am on the plane, I would like to book guided tours hosted by local guides to experience local culture (like food tour, handcraft tour or biking tours) *

Mark only one oval.

	1	2	3	4	5	
Not really	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	I want it

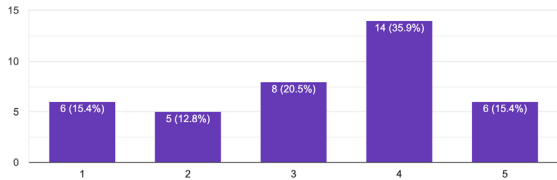
28. If possible, please explain why you think so...

Your recommendations

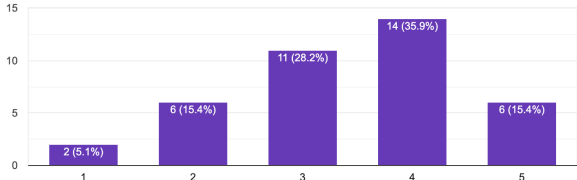
29. If you have more wanted services on the plane, feel free to write them down.

The results

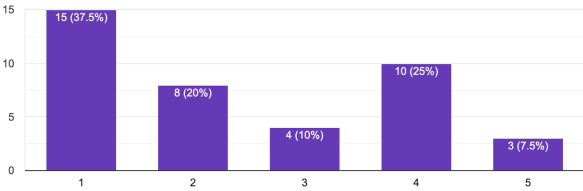
Shopping area



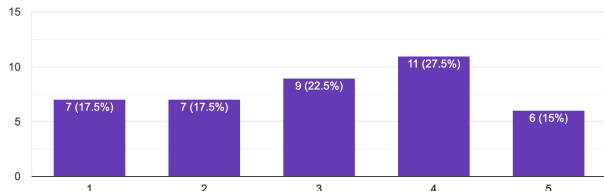
Airport Restaurant



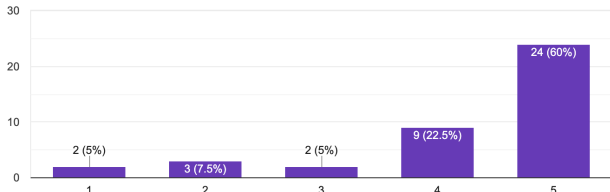
Car rental



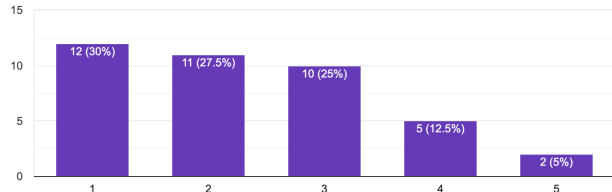
Taxi



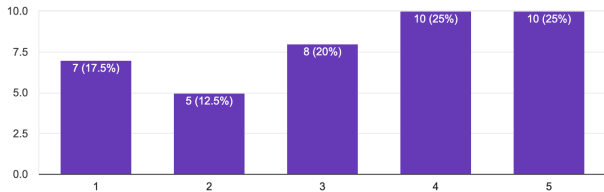
Urban



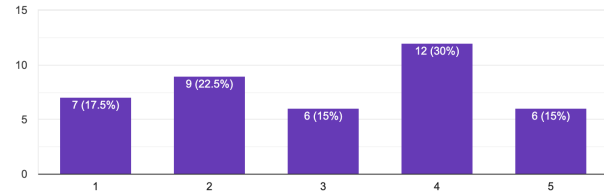
Destination Restaurant



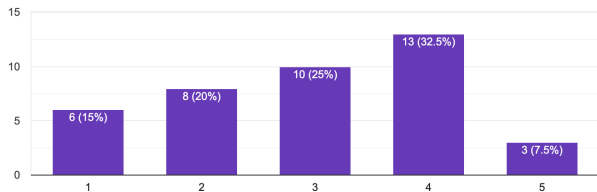
Phone card



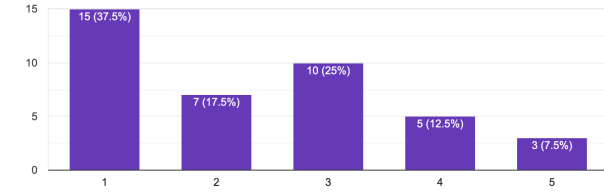
Luggage storage



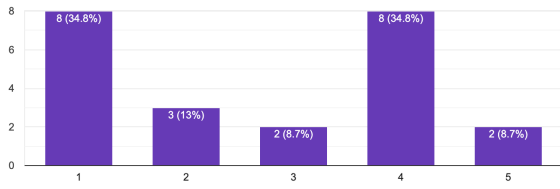
tickets of attractions



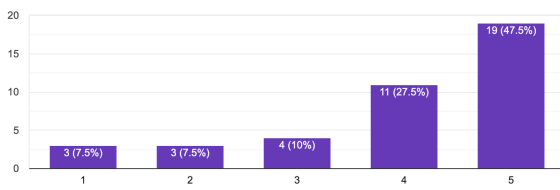
Guided tour



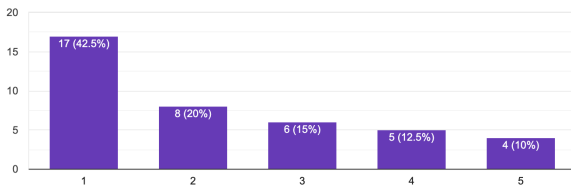
Lounge



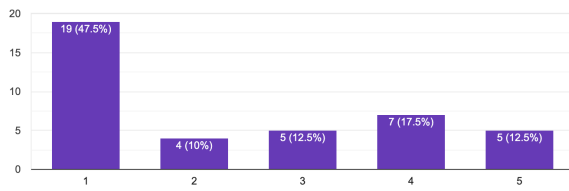
Intercity



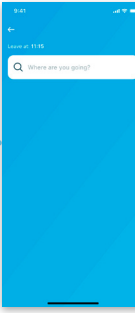
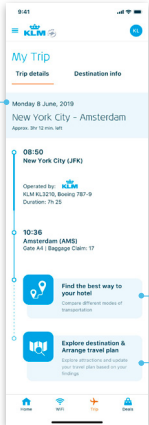
Hotel



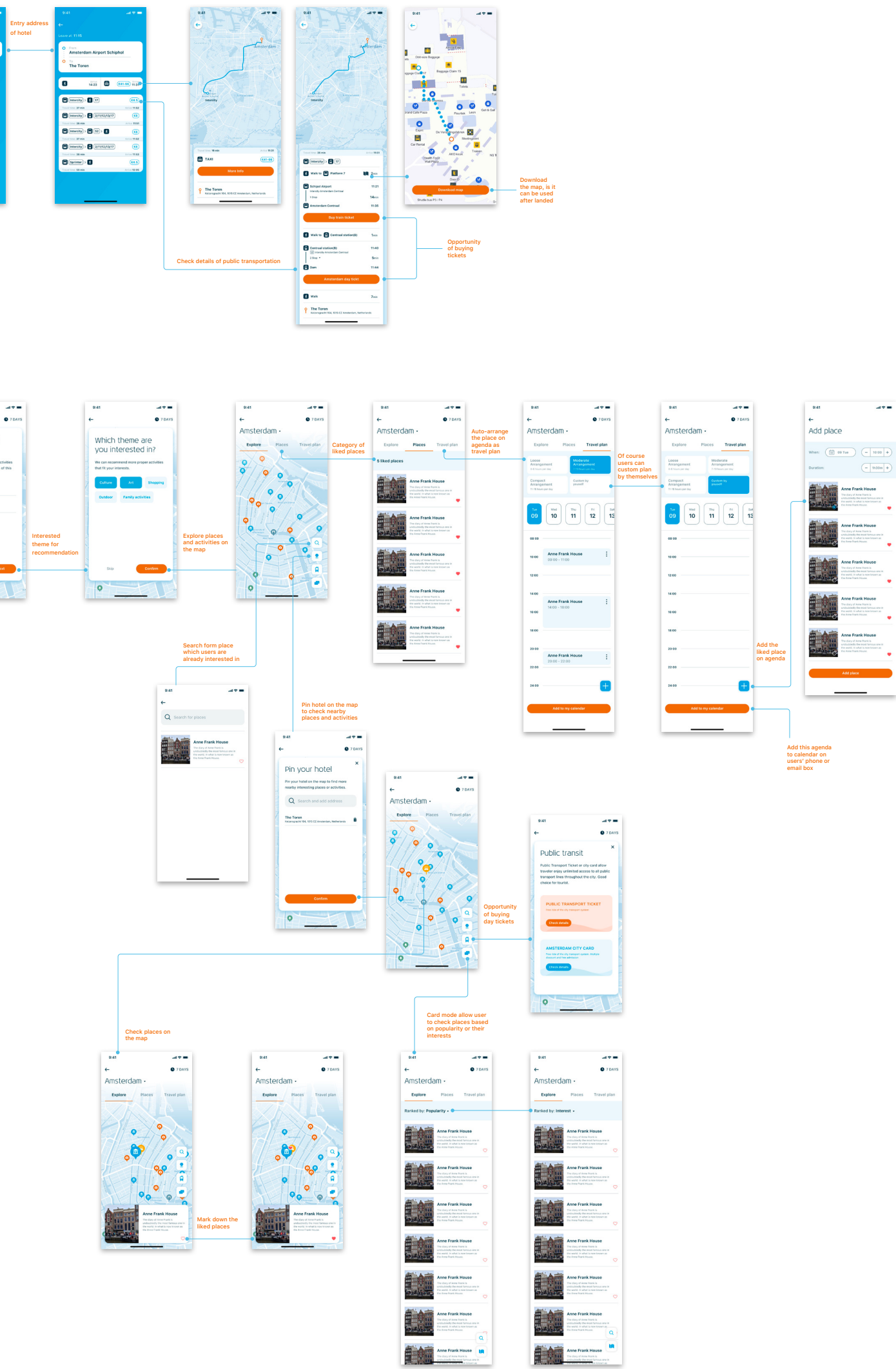
Post office



Appendix I. High fidelity Concept



Entry duration of the trip to recommend suitable place and activities

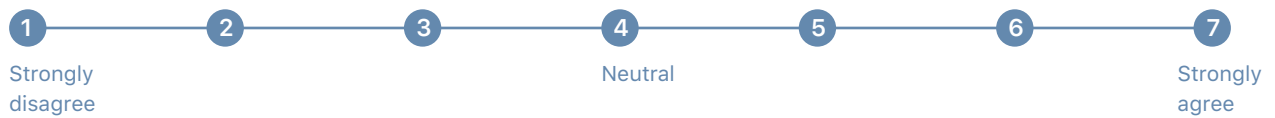


Appendix J. Questionnaire for customer evaluation

This service is convenient for my trip



The comparing function can help me find better mode of transportation to go to my residence



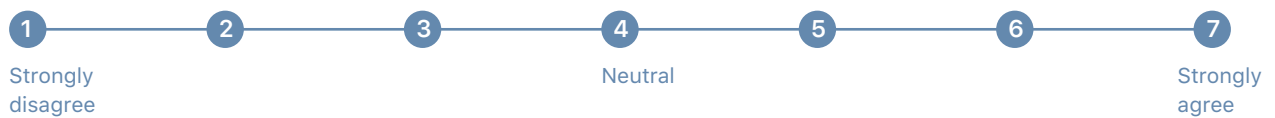
The booking bus/train tickets function is helpful for my travel preparation.



The function of guiding me to the right platform is helpful and reduce the hassle.



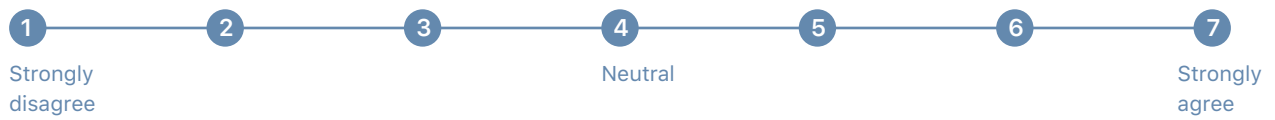
This function make Onboard portal more interesting



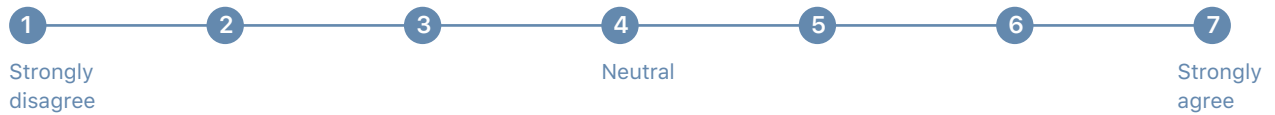
This service helps me prepare my trip better and I will try it again for my next trip



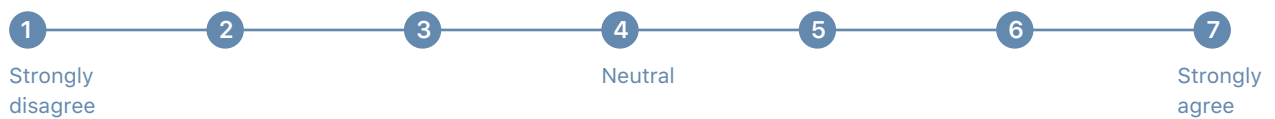
I will buy the bus/train tickets through this service



I will book TAXI through this service



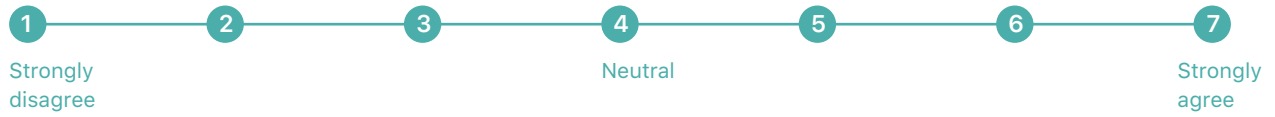
This service is helpful and relavant to me



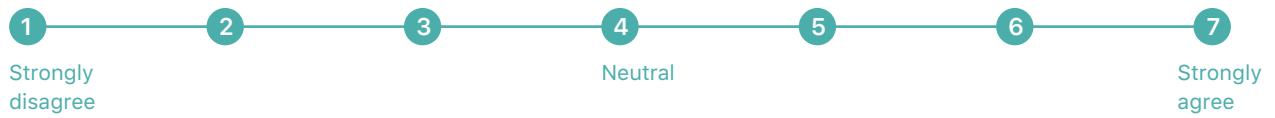
Age_____

I am from_____

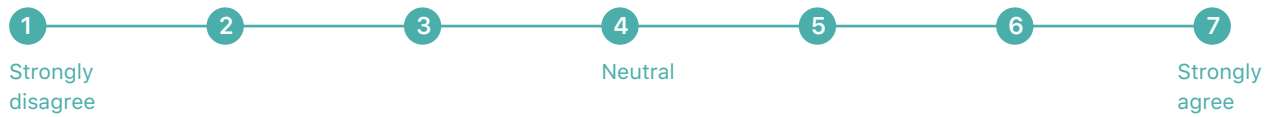
The function of searching for fun place and activities is interesting and helpful for my trip



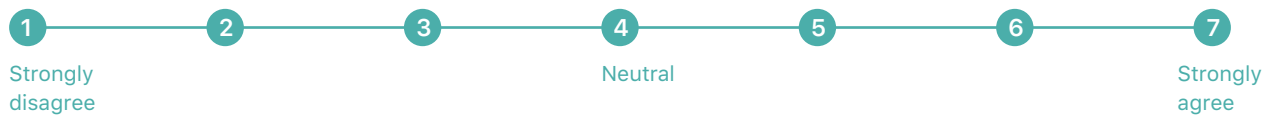
"Pin hotel" function is relevant to the trip and useful for me to explore my destination



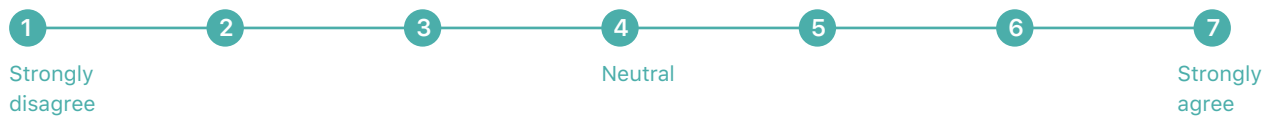
"Recommendations based on interests" is helpful for me to explore my destination



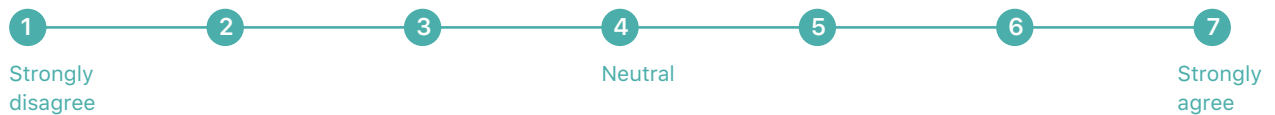
The function of booking activity/entrance ticket is convenient and helpful for my travel preparation



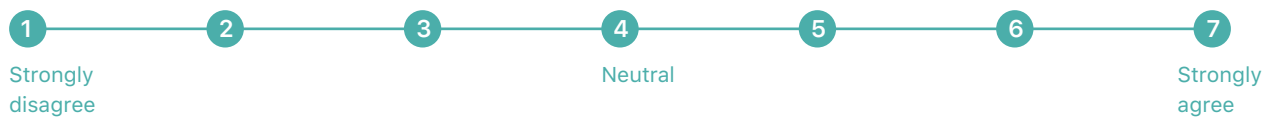
The function of buying day tickets/city cards is convenient and helpful for my travel preparation.



Arrange my travel plan is fun and give me a sense of achievement



This function make Onboard portal more interesting



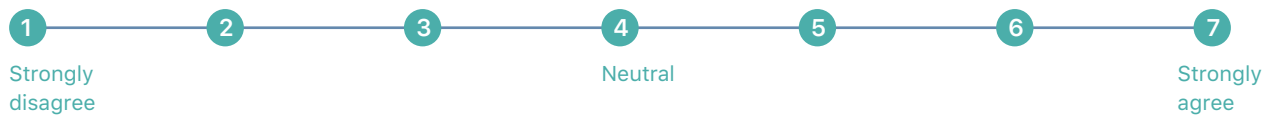
This service helps me prepare my trip better and I will try it again for my next trip



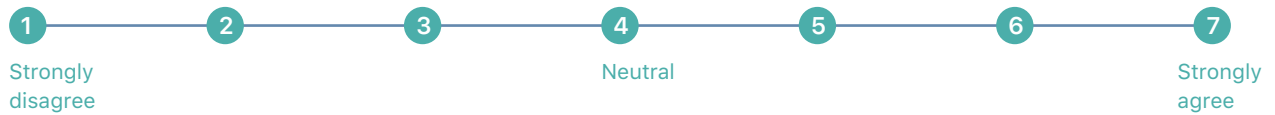
I will buy the day tickets/city cards through this service



I will book tickets of activities/entrance through this service



This service is helpful and relevant to me



Appendix K. Questionnaire to measure conscientiousness

When you are traveling as a tourist...

*Required

1. How old are you? *

2. Nationality *

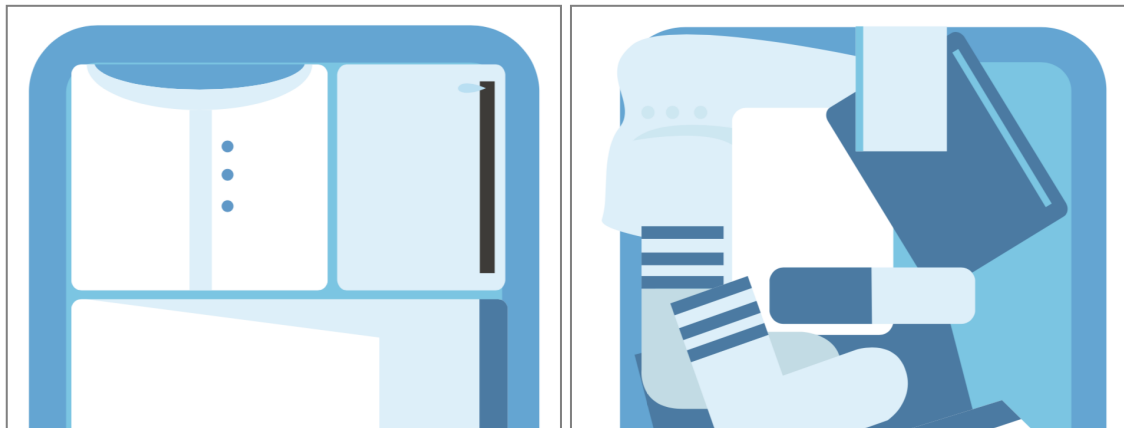
3. I feel good to start my trip when I have... *

Mark only one oval.

- A detailed plan about the trip
- A rough structure about the trip

4. The way I arrange my luggage is more close to... *

Mark only one oval.



A

B

5. I see myself as dependable, self-disciplined. *

Mark only one oval.

1 2 3 4 5 6 7

Disagree strongly Agree strongly

6. I see myself as disorganized, careless. *

Mark only one oval.

1 2 3 4 5 6 7

Disagree strongly Agree strongly

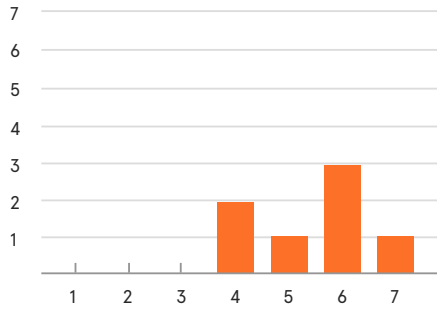
Appendix L. Test result of customer evaluation



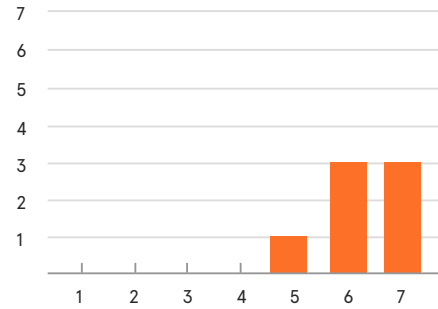
7 out of 19 participants scored high in conscientiousness.

Result of first step transportation guidance function

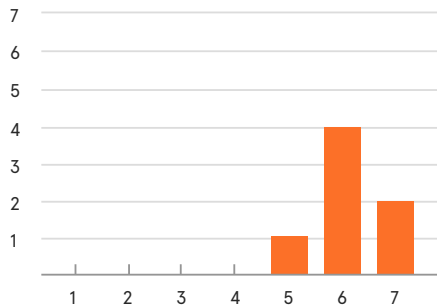
This service helps me prepare my trip better and I will try it again for my next trip.



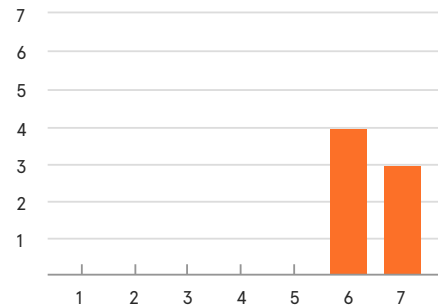
The booking bus/train tickets function is helpful for my travel preparation.



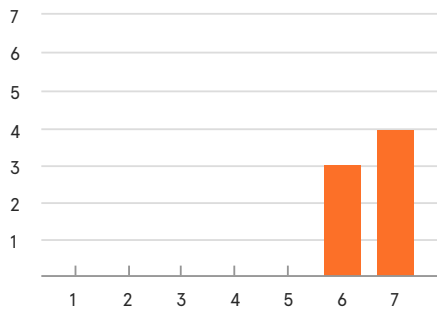
This service is convenient for my trip



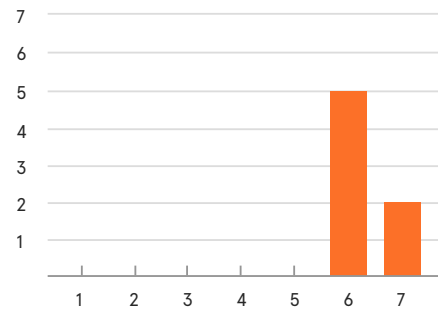
The function of guiding me to the right platform is helpful and reduce the hassle.



The comparing function can help me find better mode of transportation to go to my residence



This function make Onboard portal more interesting

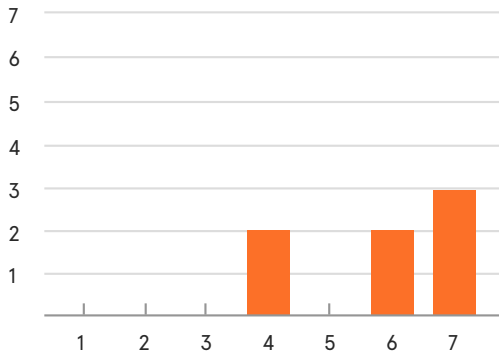




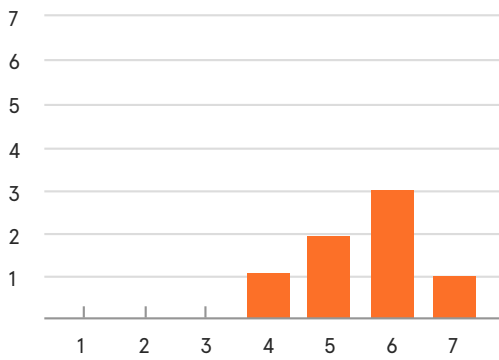
7 out of 19 participants scored high in conscientiousness.

Result of first step transportation guidance function

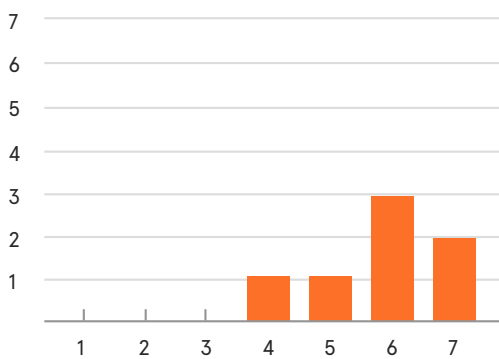
I will buy the bus/train tickets through this service



I will book TAXI through this service



This service is helpful and relevant to me

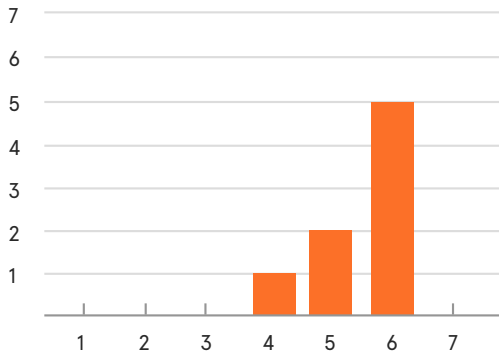




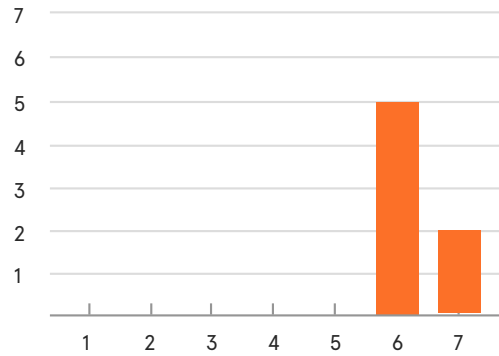
7 out of 19 participants scored high in conscientiousness.

Result of exploration and arrange travel plan

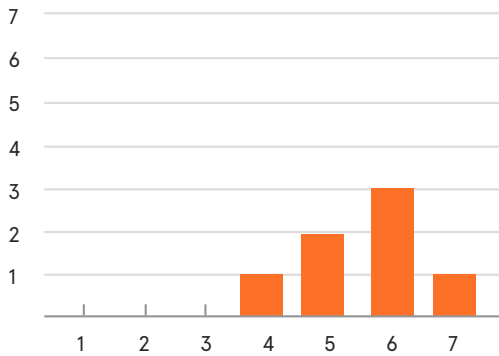
This service helps me prepare my trip better and I will try it again for my next trip



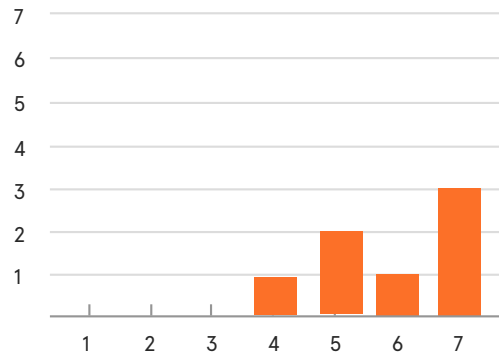
"Recommendations based on interests" is helpful for me to explore my destination



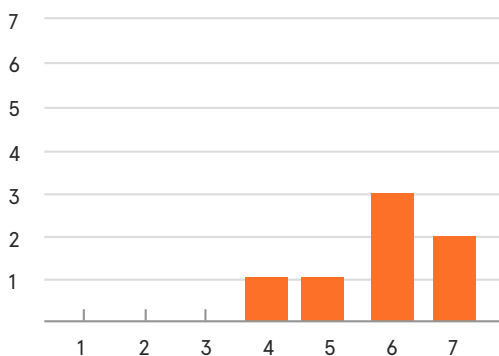
The function of searching for fun place and activities is interesting and helpful for my trip



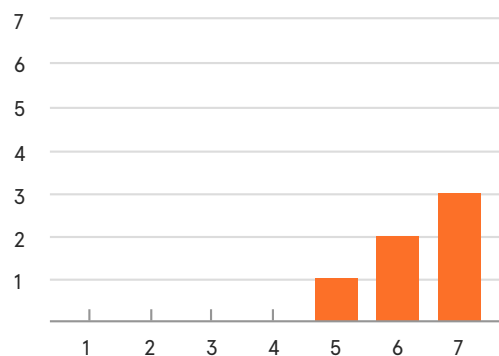
The function of booking activity/entrance ticket is convenient and helpful for my travel preparation.



"Pin hotel" function is relevant to the trip and useful for me to explore my destination



The function of buying day tickets/city cards is convenient and helpful for my travel preparation.

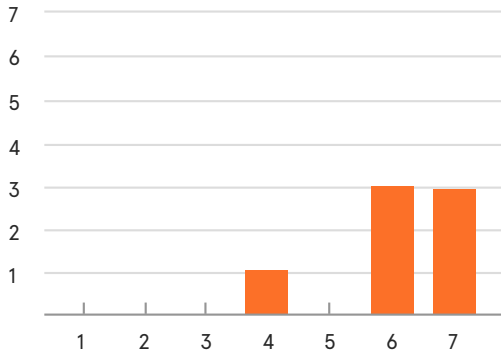




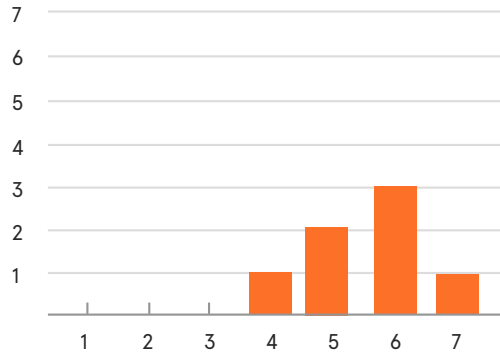
7 out of 19 participants scored high in conscientiousness.

Result of exploration and arrange travel plan

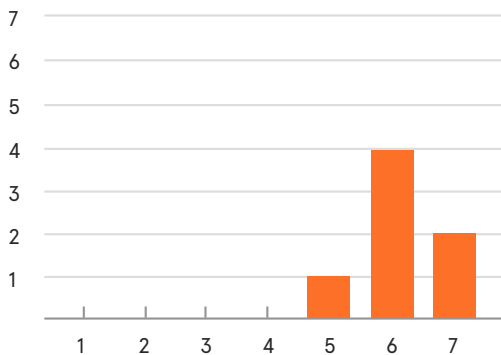
Arrange my travel plan is fun and give me a sense of achievement



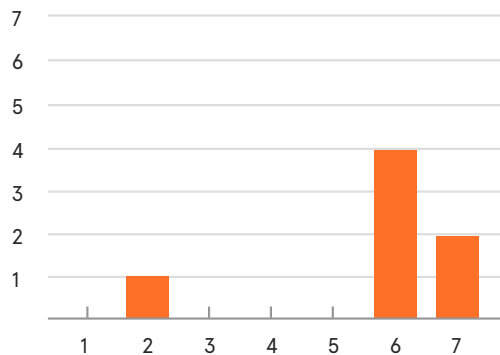
I will book tickets of activities/entrance through this service



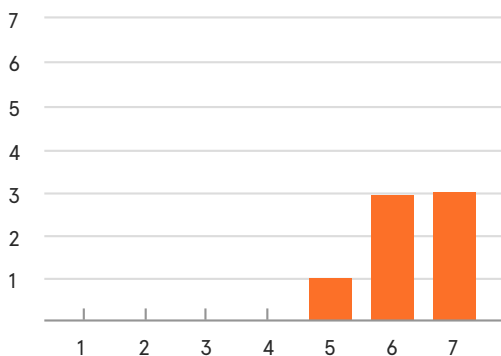
This function make Onboard portal more interesting



This service is helpful and relevant to me



I will buy the day tickets/city cards through this service

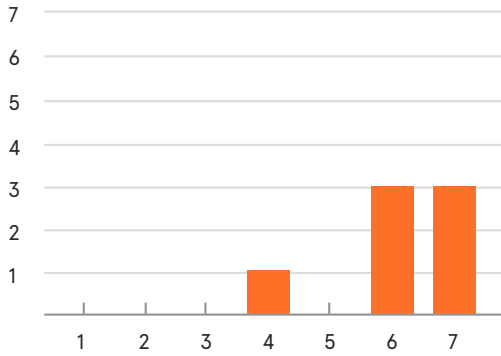




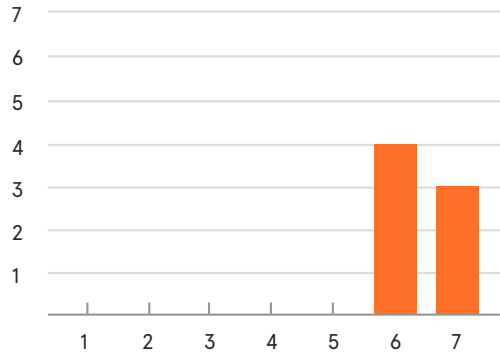
7 out of 19 participants scored medium in conscientiousness.

Result of first step transportation guidance function

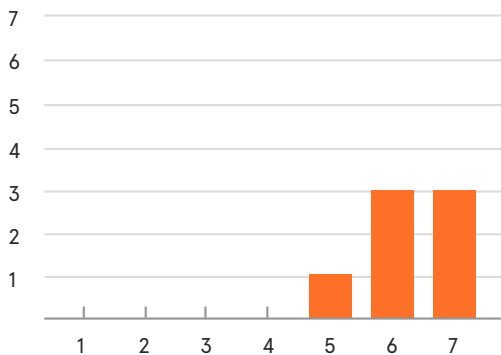
This service helps me prepare my trip better and I will try it again for my next trip.



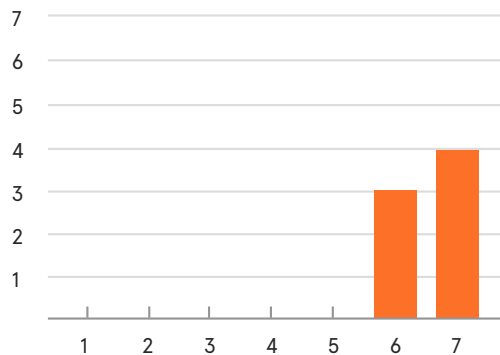
The booking bus/train tickets function is helpful for my travel preparation.



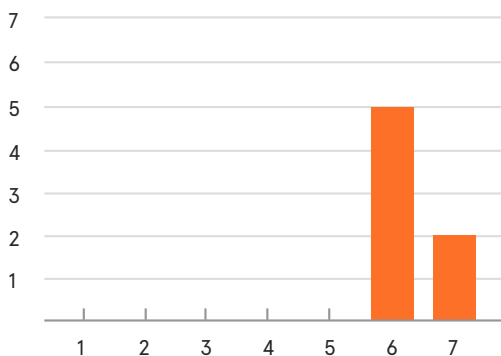
This service is convenient for my trip



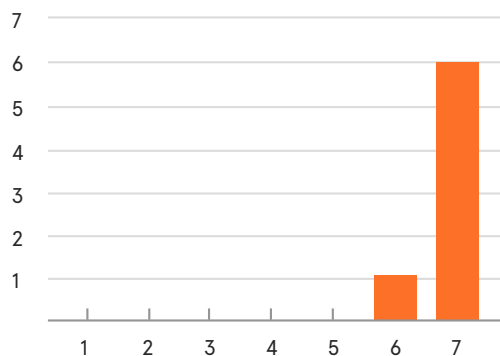
The function of guiding me to the right platform is helpful and reduce the hassle.



The comparing function can help me find better mode of transportation to go to my residence



This function make Onboard portal more interesting

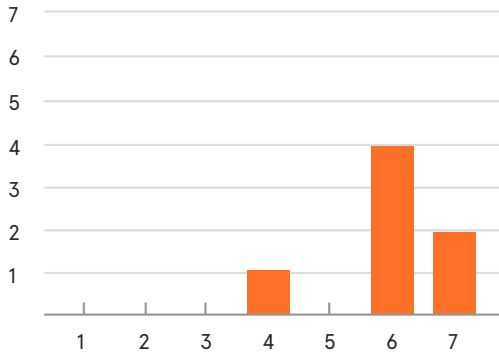




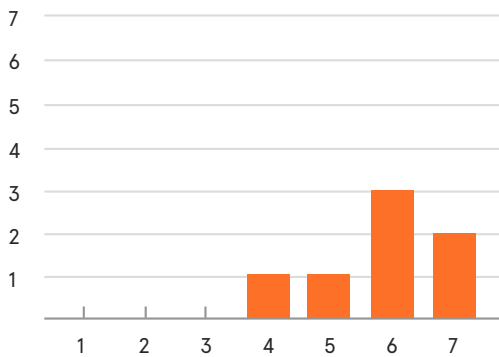
7 out of 19 participants scored medium in conscientiousness.

Result of first step transportation guidance function

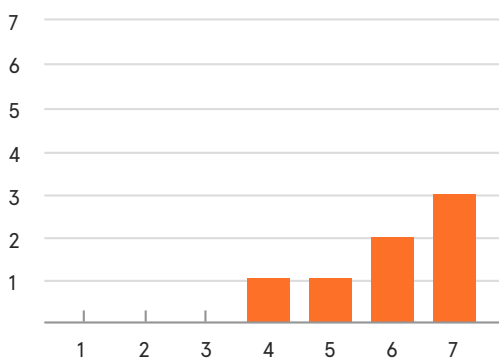
I will buy the bus/train tickets through this service



I will book TAXI through this service



This service is helpful and relevant to me

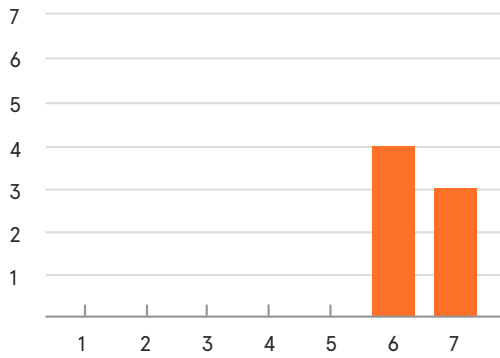




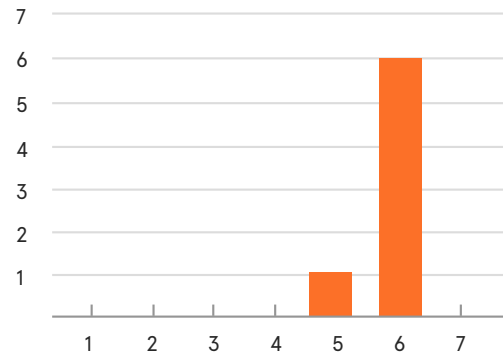
7 out of 19 participants scored medium in conscientiousness.

Result of exploration and arrange travel plan

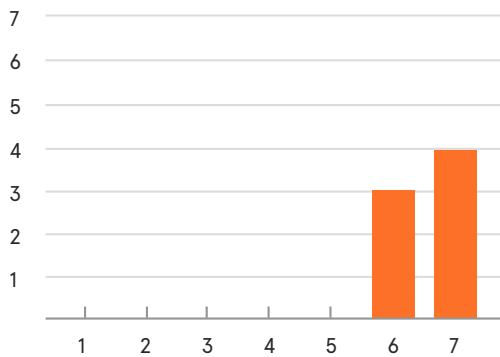
This service helps me prepare my trip better and I will try it again for my next trip



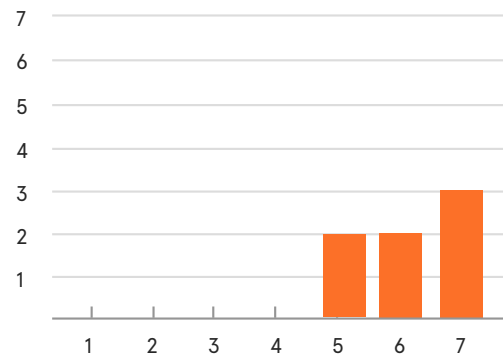
"Recommendations based on interests" is helpful for me to explore my destination



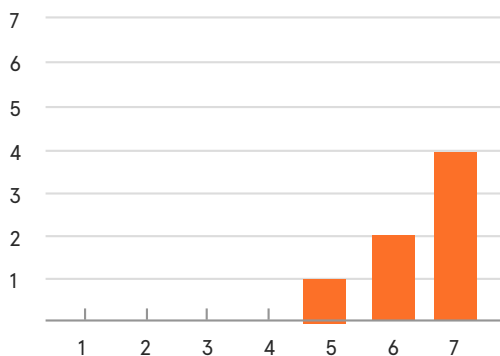
The function of searching for fun place and activities is interesting and helpful for my trip



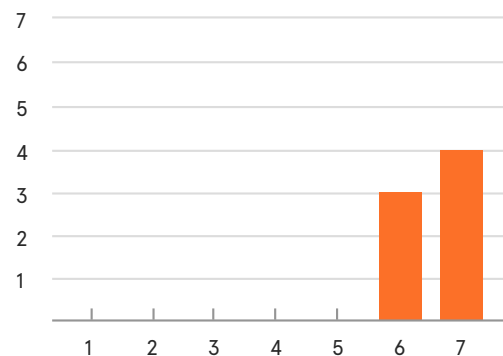
The function of booking activity/entrance ticket is convenient and helpful for my travel preparation.



"Pin hotel" function is relevant to the trip and useful for me to explore my destination



The function of buying day tickets/city cards is convenient and helpful for my travel preparation.

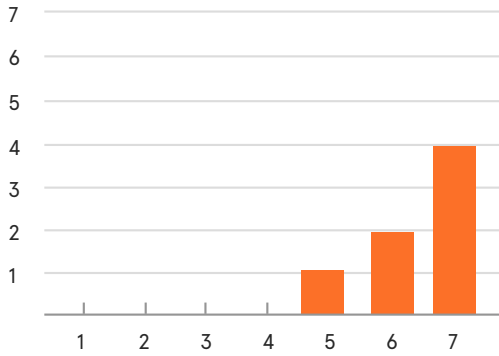




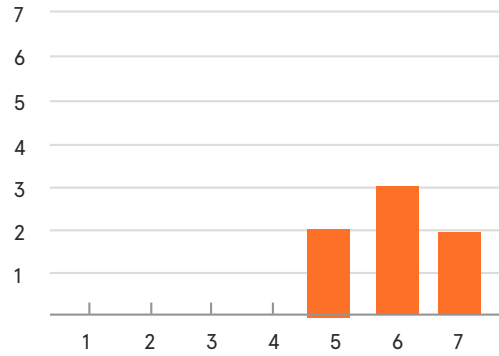
7 out of 19 participants scored medium in conscientiousness.

Result of exploration and arrange travel plan

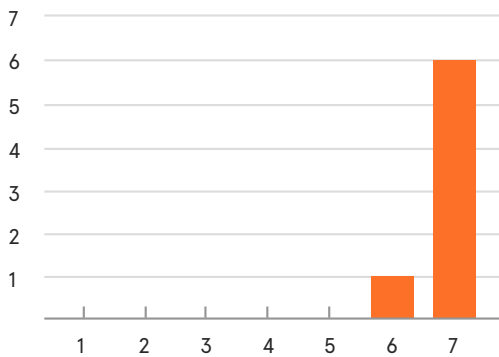
Arrange my travel plan is fun and give me a sense of achievement



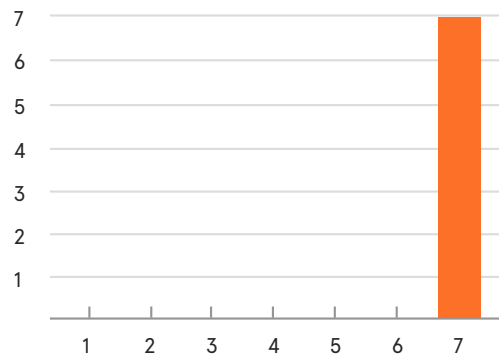
I will book tickets of activities/entrance through this service



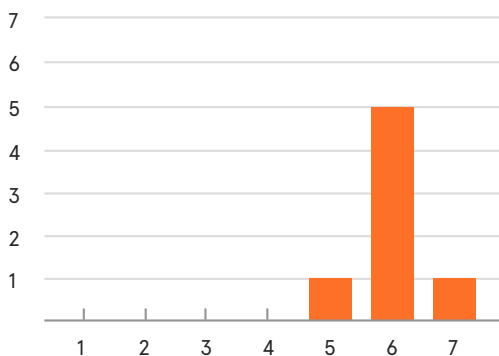
This function make Onboard portal more interesting



This service is helpful and relevant to me



I will buy the day tickets/city cards through this service

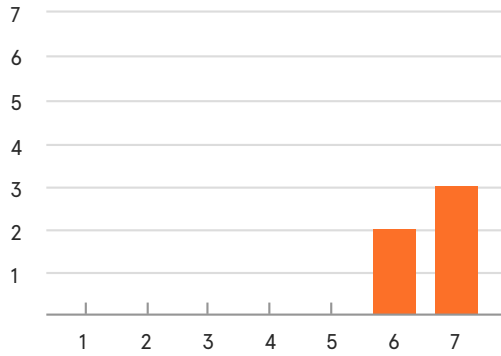




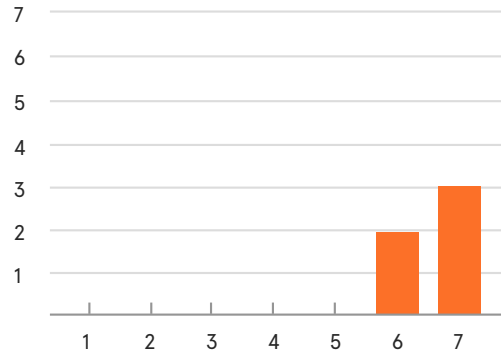
5 out of 19 participants scored medium in conscientiousness.

Result of first step transportation guidance function

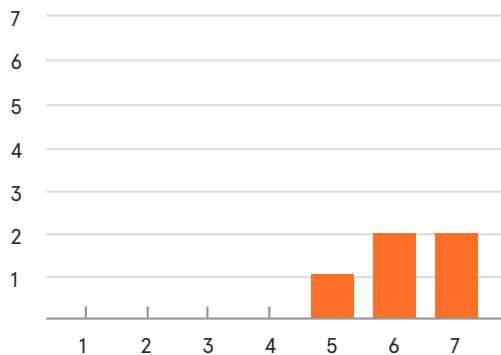
This service helps me prepare my trip better and I will try it again for my next trip.



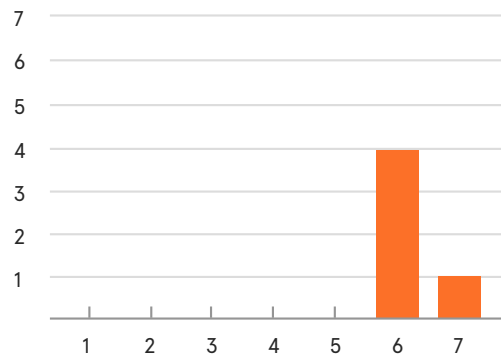
The booking bus/train tickets function is helpful for my travel preparation.



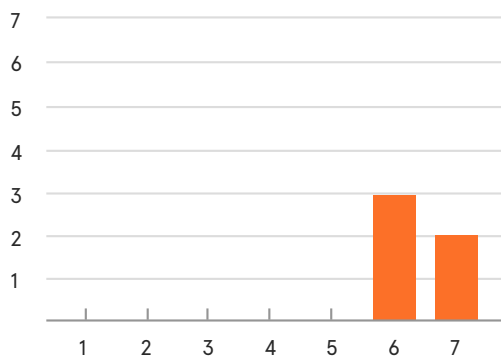
This service is convenient for my trip



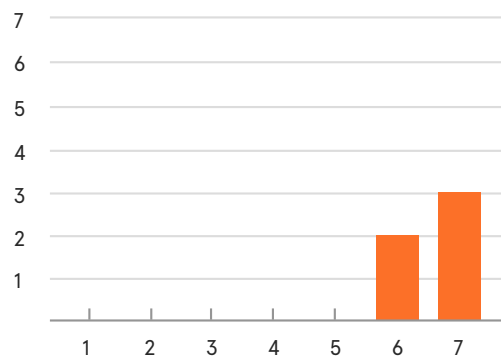
The function of guiding me to the right platform is helpful and reduce the hassle.



The comparing function can help me find better mode of transportation to go to my residence



This function make Onboard portal more interesting

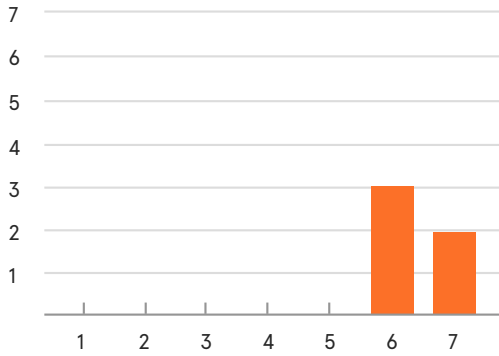




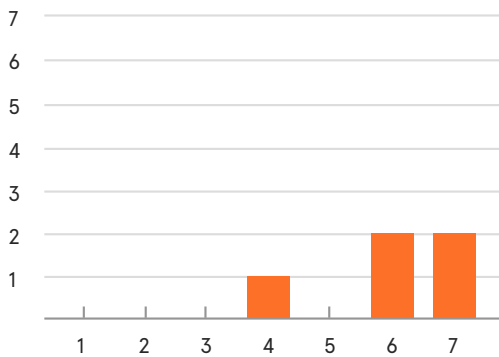
5 out of 19 participants scored medium in conscientiousness.

Result of first step transportation guidance function

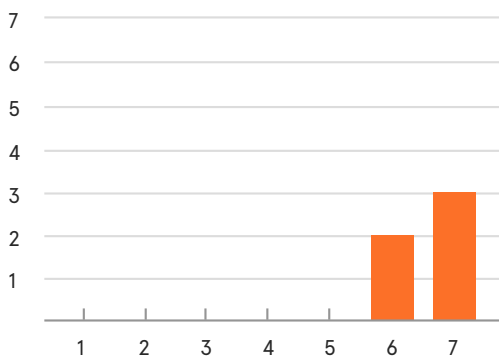
I will buy the bus/train tickets through this service



I will book TAXI through this service



This service is helpful and relevant to me

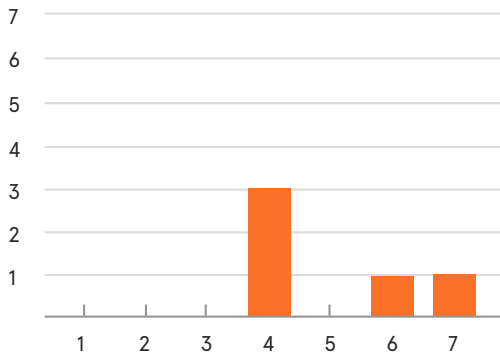




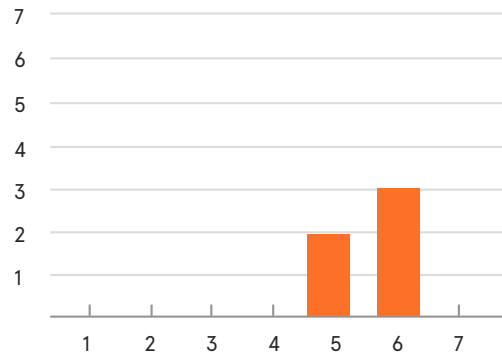
5 out of 19 participants scored medium in conscientiousness.

Result of exploration and arrange travel plan

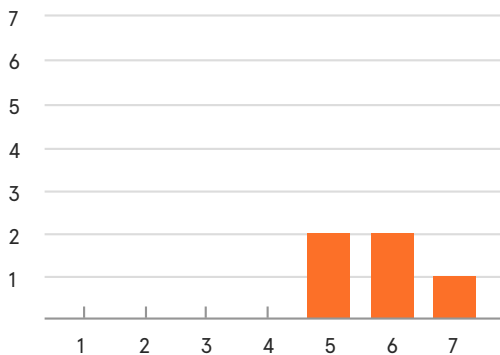
This service helps me prepare my trip better and I will try it again for my next trip



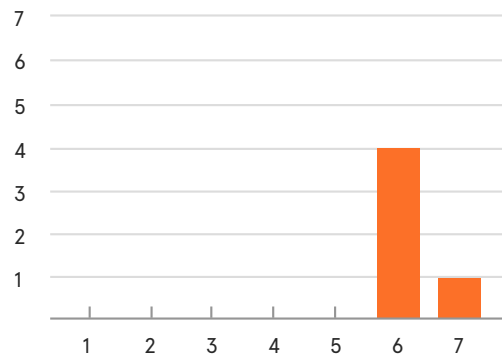
"Recommendations based on interests" is helpful for me to explore my destination



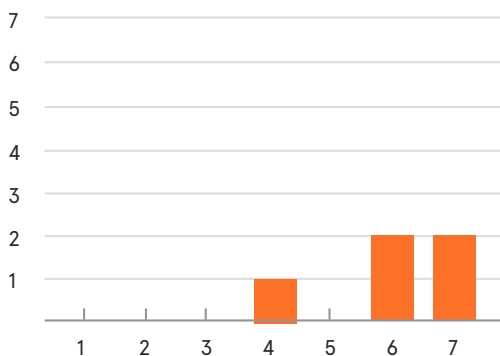
The function of searching for fun place and activities is interesting and helpful for my trip



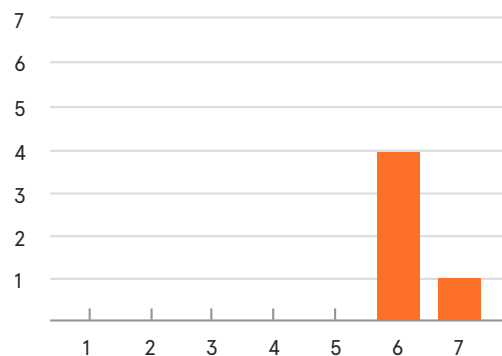
The function of booking activity/entrance ticket is convenient and helpful for my travel preparation.



"Pin hotel" function is relevant to the trip and useful for me to explore my destination



The function of buying day tickets/city cards is convenient and helpful for my travel preparation.

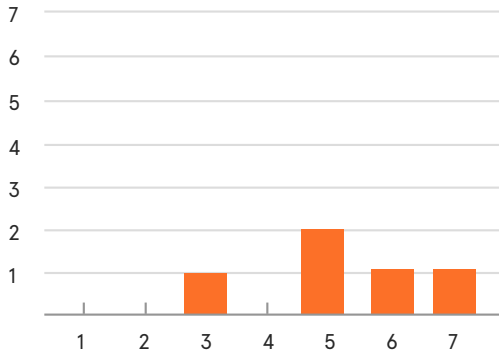




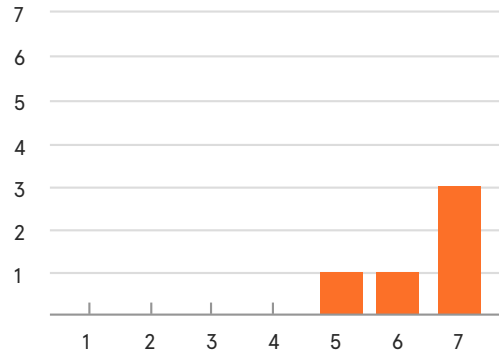
5 out of 19 participants scored medium in conscientiousness.

Result of exploration and arrange travel plan

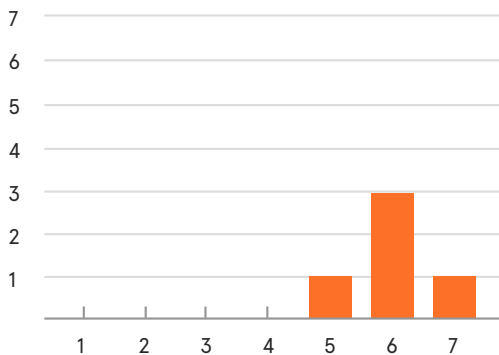
Arrange my travel plan is fun and give me a sense of achievement



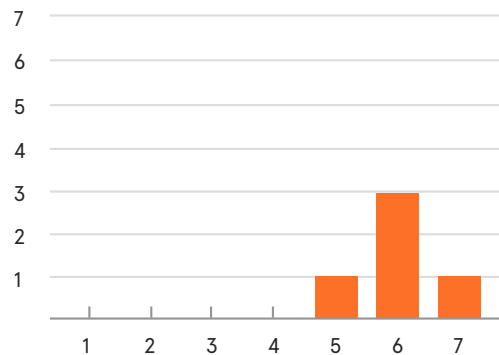
I will book tickets of activities/entrance through this service



This function make Onboard portal more interesting



This service is helpful and relevant to me



I will buy the day tickets/city cards through this service

