Apendix

Two journey mapping sessions were held. The first at TU Delft with nine design students who have experience with traveling and checking bags. The second at KLM with six employees with background in customer experience and/or ground services.

In these sessions, participants were given booklets to fill out with information about themselves and their most recent flight experience. They also engaged in sharing and discussing their experiences before taking part in a brief ideation session to generate and evaluate ideas for improving the issues they identified.

The goal of these sessions was understand current customer journeys to look for trends in what passengers like and dislike about the current situation. Also to understand how different people's preferences and circumstances may impact their perception of the situation. Additionally, the journey mapping was done with the peak-end theory in mind. This exercise served to help identify current passenger feelings at the end of their journey and understand existing peak moments.

The first two pages of the booklet asked participants about themselves. Page one asked for basic information about name, age, and nationality, along with questions such as work/relaxation balance, and desire to be recognized that were meant to evaluate which demand space each participant most closely fit. The second page simply asked participants to describe what they would do with twenty minutes of free time.

These pages deliberately came before the introduction of details about the project goals and the journey mapping exercise. The goal was to have participants answer these questions independent of the context of air travel and baggage reclaim. However, the questions on the first page were meant to evaluate which of the three demand spaces each participant most closely fit, and the question about what they would do with twenty minutes of free time was asked with the average reclaim waiting time in mind. (participants were not made aware of this fact)

The journey mapping section of the booklet asked participants to recall their most recent experience retrieving checked baggage at the destination airport. It asked them to consider the whole experience from arrival at the gate to departure from the airport. This was done to give context for the situation in which the baggage collection takes place, taking into account their expectations, concerns, and thoughts during this process. To understand what factors influence the baggage reclaim experience.

After mapping their experience, participants were used to use provided stickers to rate each step of the journey as positive, neutral, or negative in terms of their emotions in that moment. This provides an overview of where peak moments during the journey are with the aim of identifying trends.

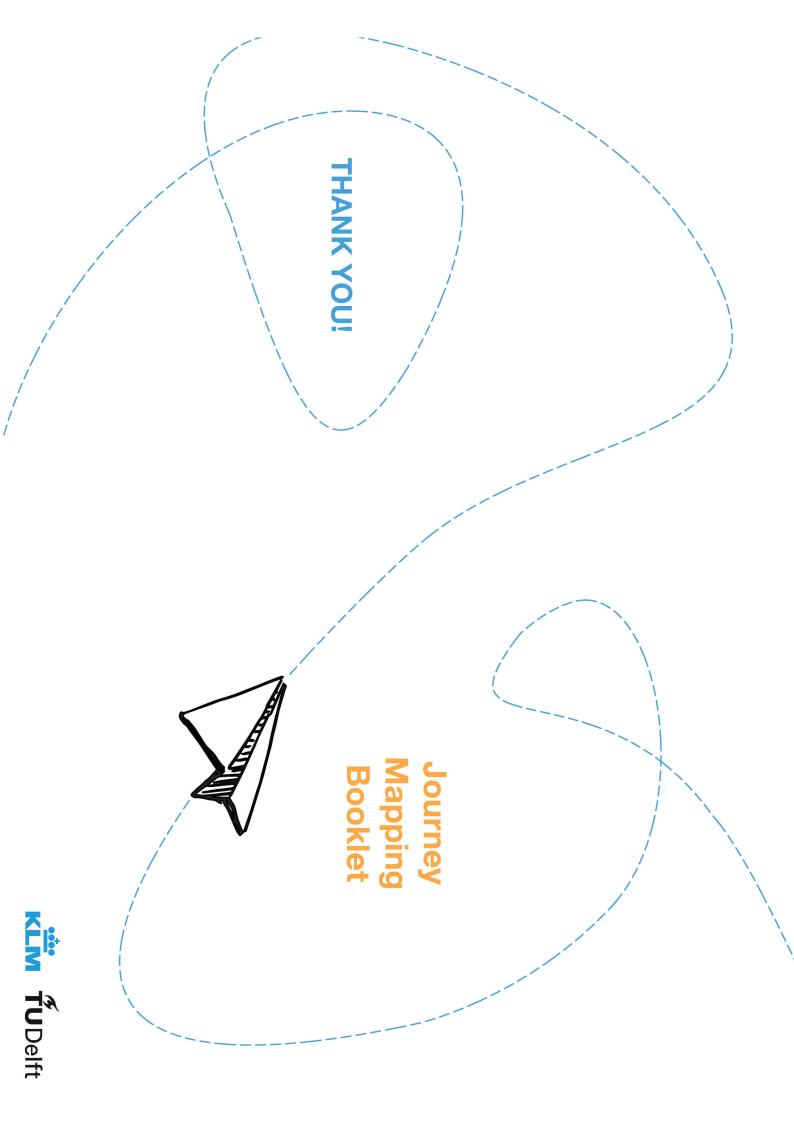
Next, participants were asked to describe the most pleasant and most unpleasant moments in their journey on post-its. First, each participant read their most pleasant moment to the group and discussed. These discussions lead to more in depth understanding of these moments and conversation about why these moments were prefered and helped identify trends trends in what moments participants most enjoyed and why these were their favorite moments. Then, participants each read their least favorite moment to the group and discussed in a similar manner. With the objective of again, gaining deeper insights and identifying trends in these pain points during the journey.

After discussing these positive and negative peak moments, participants were encouraged to brainstorm on ways to address the issues they identified. The group discussed concepts as I recorded them on post-its and displayed them on a poster. After 20 minutes of discussion, participants were asked to vote on their two favorite concepts. Using a blue sticker for their first choice and an orange sticker for their second favorite. Based on these votes, four top concepts were identified. The group then discussed why they thought these solutions were the most impactful to the customer experience. In addition to discussing solutions, the group debated different methods of implementation. For example, many participants agreed that information about the destination and onward journey was helpful to passengers. However, they had differing opinions as to if this should be done in person by an employee, through a mobile application, or through signage in the airport. As moderator, I encouraged discussion about the pros and cons of each method and the unique experience created by each of these different mediums.

The concept of having accurate data about bag location and expected arrival on belt was confirmed by both the interviews and creative sessions. Participants repeatedly said that more information made them feel more in control and allowed them to make choices about how they spent their time. However, some key concerns arose as well. For example, if a bag is short-shipped, participants agree that the airline should act proactively. However, they don't agree on when the passenger should be informed. One creative session participant mentioned telling the passenger right away, while onboard the flight. He mentioned approaching them with a plan of action for recovering the bag and offering a free on-board drink as small compensation. (an opportunity to turn an unfortunate situation into a positive experience) However, another participant pointed out that you never know how a passenger will react to this news. Some people become quite angry, and then you have the rest of the flight to deal with them in an enclosed space. In her experience, some passenger became unruly about bad news such as this and would be loud, disruptive and/or rude to staff. This could create a negative experience not only for the impacted passenger, but the people around him. She stressed the importance of timing the moment when the bad news is delivered. (and suggested it may not be on the plane)

For the journey mapping session conducted at TU Delft and KLM, workbooks were made for the participants to log their most recent baggage reclaim experiencing. The images on the following pages are the images from that workbook. The pages appear out of order here because the PDF was designed to be printed and folded in half.



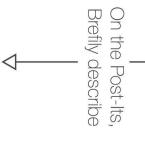


Tell Me About Yourself!

A few quick questions to get to know you

How is your? Work	Do you like feeling ☐ Not so much	Do you typically like to: feel in control relax and trust it:	Do you like to friends/family social media	Do you have ar (often busy anc ☐ Definitely!	Name: Age/Age Range: Nationality:
How is your work/relaxation balance? Work Middle	Do you like feeling acknowledged and/or rewarded? ☐ Not so much ☐ Sometimes ☐ Absolut	ou typically like to: feel in control relax and trust it will work out	Do you like to stay connected to friends/family/coworkers and/or social media/ news outlets?	Do you have an active lifestyle? (often busy and/or "on the go") ☐ Definitely! ☐ Somewhat	ige:
nce? Relaxation	l and/or rewarded? nes □Absolutely!	Ut .	□ Not so much□ Somewhat□ Always!	□ Not so much	

your journey △ moment in BEST



moment in your journey WORST

evaluate your journey Use these stickers to

represent the emotion felt in Place one sticker on each step of your journey to that moment. —



Green stickers: positive

emotions

Yellow stickers:

emotions neutral





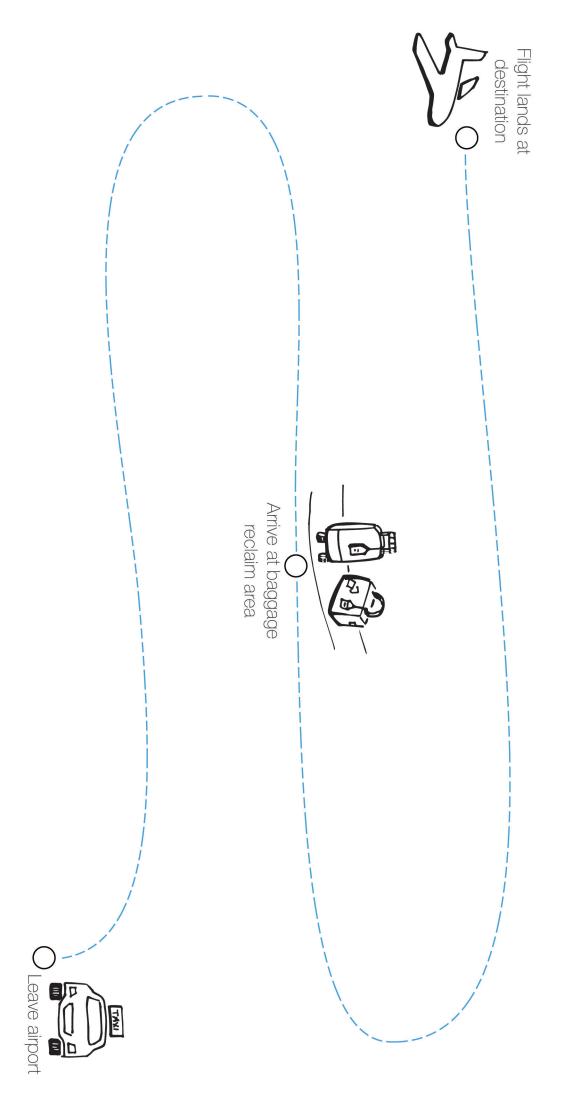
Red stickers: negative emotions

		If you had 20 extra minutes of free time, what would you do with it?

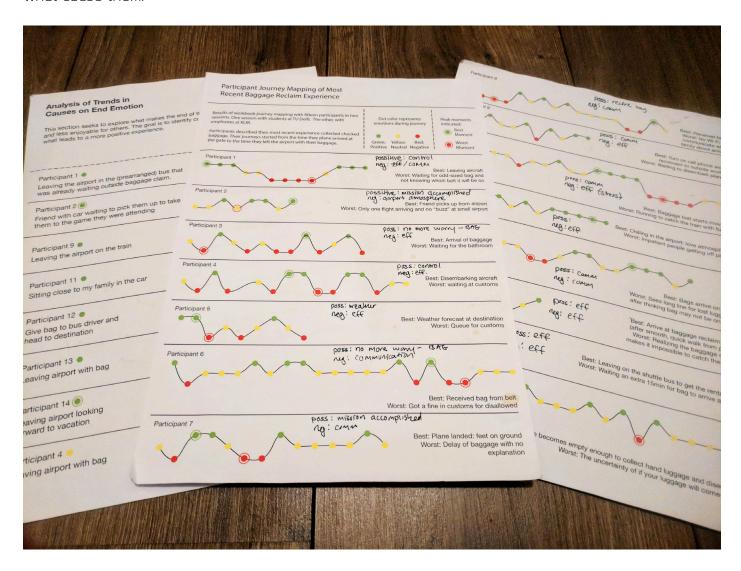
The Last Time You Checked Baggage:

to:	from:	You flew
		Reason for travel:
		Who were you traveling with?

Below: please describe the steps in your journey from arrival at destinaltion airport to the time you departed with your bag(s)



The following images were part of the analysis from the journey mapping sessions. With the peak-end theory in mind, the journeys mapped by participants were analyzed to see where the peak and end moments take place. In completing this analysis, I looked for trends in when these moments occur and what cause them.



Participant Journey Mapping of Most Recent Baggage Reclaim Experience

Results of workbook journey mapping with fifteen participants in two sessions. One session with students at TU Delft. The other, with employees at KLM.

Participants described their most recent experience collected checked baggage. Their journeys started from the time they plane arrived at the gate to the time they left the airport with their baggage.

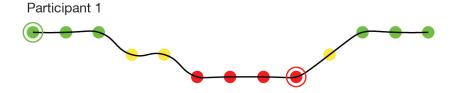
Dot color represents emotions during journey



Green: Yellow: Red: Positive Neutral Negative Peak moments indicated:







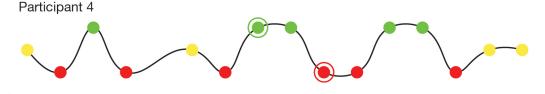
Best: Leaving aircraft Worst: Waiting for odd-sized bag and not knowing which belt it will be on



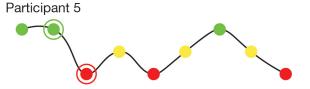
Best: Friend picks up from airport Worst: Only one flight arriving and no "buzz" at small airport



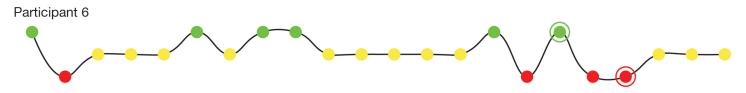
Best: Arrival of baggage Worst: Waiting for the bathroom



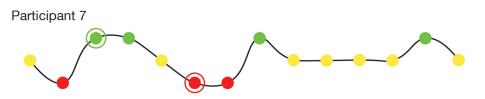
Best: Disembarking aircraft Worst: waiting at customs



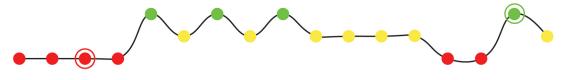
Best: Weather forecast at destination Worst: Queue for customs



Best: Received bag from belt Worst: Got a fine in customs for disallowed



Best: Plane landed: feet on ground Worst: Delay of baggage with no explanation



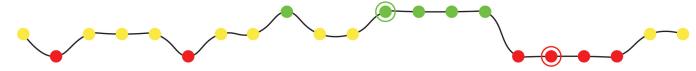
Best: Received bag Worst: No Wi-Fi to communicate with family about arrival

Participant 9



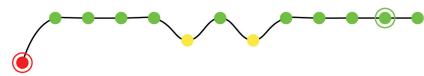
Best: Turn on cell phone and reconnect to outside world Worst: Waiting to disembark plane

Participant 10



Best: Baggage belt starts moving Worst: Running to catch the train with bags

Participant 11



Best: Chilling in the airport: love atmosphere Worst: Impatient people getting off plane

Participant 12



Best: Bags arrive on belt Worst: Sees long line for lost luggage after thinking bag may not be on belt

Participant 13



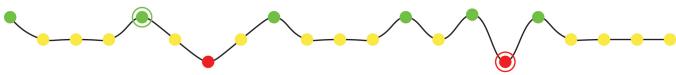
Best: Arrive at baggage reclaim area (after smooth, quick walk from plane Worst: Realizing the baggage delay makes it impossible to catch the train

Participant 14



Best: Leaving on the shuttle bus to get the rental car Worst: Waiting an extra 15min for bag to arrive at belt

Participant 15



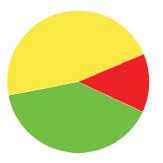
Best: Plane becomes empty enough to collect hand luggage and disembark Worst: The uncertainty of if your luggage will come or not

Analysis of Participant Journey Mapping Results

End of Journey

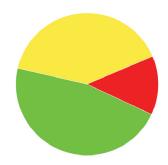
The first analysis evaluates the emotions at the end points of the journeys. Luckily, most journeys end in a positive emotion, but there is still room for improvement. Also, explored is the change between the initial and final emotions.

In 40% of cases, the emotion the passenger started with, is also the emotion the ended their journey with. In 33% of instances, passengers ended in a better emotional state than they began their journey in, and in 27% of cases, the emotional state the passenger ended the journey in was worse than when they began. This is the worst case scenario, and should be improved. To understand how to make these improvements, causes for the negative emotions at the end of the journey are explored.



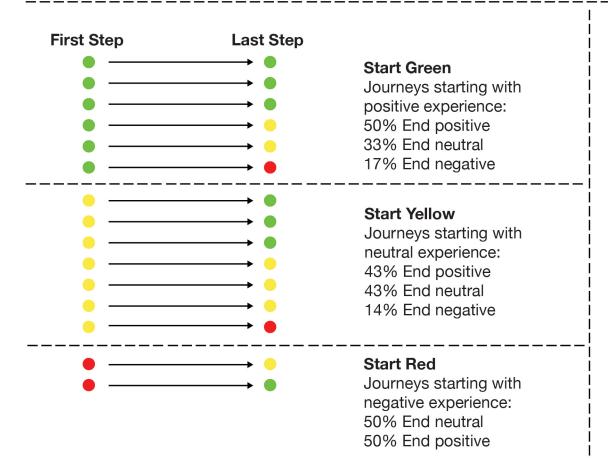
First Step in Journey:

Positive Emotion: 6 Neutral Emotion: 7 Negative Emotion: 2

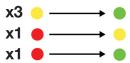


Last Step in Journey:

Positive Emotion: 7 Neutral Emotion: 6 Negative Emotion: 2



5/15 Journeys end **better** than they began



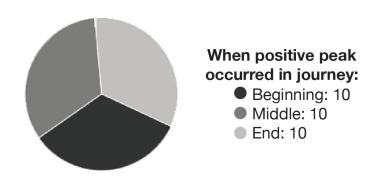
6/15 Journeys end the **same** as they began

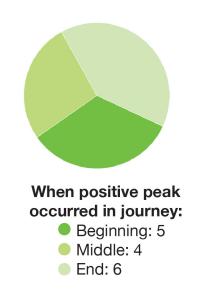


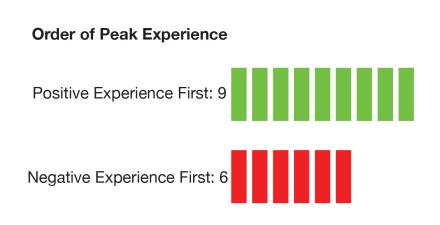
4/15 Journeys end **worse** as they started

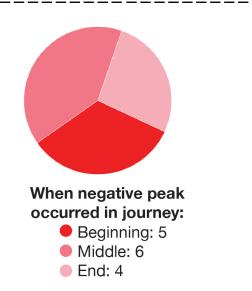


Peaks of Journey









From the analysis, we see that the peaks are spread evenly throughout the beginning, middle, and end of the journey with ten peaks in each. However, upon closer inspection, it can be observed that positive peaks occur more frequently at the end of the journey, whereas negative peaks are most common at the middle. This could indicate that many journeys end of a positive note, but analysis revealed that most passengers experienced the peak positive experience before the negative one. This is a potential issue because it is possible for a negative event to overshadow a positive one that took place before it.

When observing the cited causes of the peak moments, some trends can be observed. One mail theme is efficiency and access to information. Many positive experiences mentioned an efficient process and feeling prepared, while many negative experiences cited inefficient process and/or lack of clear information.

Peaks of Journey

The analysis focuses on the positive and negative peak moments in the passenger Participant 7 journeys. It seeks to understand trends in when and why the occur. These graphs track when the peak negative and positive moments happened during the Participant 8 journey: at the beginning, middle, or end negative positive peak peak Participant 9 beginning middle end Participant 10 Participant 1 Participant 2 Participant 11 Participant 3 Participant 12 Participant 4 Participant 13 Participant 5 Participant 14 Participant 6 Participant 15

Analysis of Trends in Causes on End Emotion

Leaving airport with bag

This section seeks to explore what makes the end of the journey enjoyable for some passengers, and less enjoyable for others. The goal is to identify common pain points as well as trends in what leads to a more positive experience.

Participant 1 Leaving the airport in the (prearranged) bus that Theme: Preparedness, Efficiency was already waiting outside baggage claim. Participant 2 (Friend with car waiting to pick them up to take Theme: Preparedness, Efficiency them to the game they were attending Participant 9 Theme: Efficiency, Mission Accomplished Leaving the airport on the train Participant 11 Sitting close to my family in the car Theme: Connected Participant 12 Give bag to bus driver and Theme: Efficiency head to destination Participant 13 Theme: Mission Accomplished Leaving airport with bag Participant 14 (Leaving airport looking **Theme:** Mission Accomplished forward to vacation Participant 4

Theme: Expected

Participant 6 Waiting for the train Theme: Efficiency Participant 7 Waiting for the train **Theme:** Efficiency Participant 8 Go through customs (not always sure **Theme:** Information what to do) and leave to catch train Participant 10 Waiting for the train **Theme:** Expected, Efficiency Participant 15 Arriving at train platform Theme: Expected Participant 3 Where should I go? Not sure Theme: Preparedness, Informahow to leave the airport tion Participant 5 Theme: Discomfort, Efficiency Waiting in the heat for a taxi

Luckily, most passengers already end their trip on a good note, and only a few end on negative experiences. From examining the data, it is clear that efficiency is a major factor in how passengers evaluate the experience. Those who reported positive emotions during the last step in their journey felt the process was efficient, they felt prepared, and some described feeling of accomplishing their mission by arriving at the destination. Participants who noted a neural experience typically but had everything go as expected and thus felt no strong feelings one way or the other. Those who described negative experiences had issues with lack of information or feeling prepared, or lacked effeminacy and the amenities to be comfortable.

Key take aways:

- 1) A lack of information and/or preparedness can lead to negative emotions.
- 2) Passengers who leave the airport feeling neutral often has things go as expected but lacked anything extras to leave them with a positive feeling.
- 3) Having the feeling of being prepared and enjoying a smooth, efficient process, leaves passengers with positive feelings of accomplishment.

Participants discussed what they liked and disliked about travel and these are some of the highlights

Dislike about travel:

- 1. Packing
- 2. Que at airport
- 3. Planning
- 4. Having a transfer flight/ layover
- 5. Delays
- 6. Being away from family
- 7. Wait time
- 8. Preparations
- 9. When expectations are not met
- 10. Waiting

Like about travel

- 1. Meeting new people
- 2. New culture
- 3. See new places
- 4. Meeting new people in different environments
- 5. Relaxing
- 6. Meeting new people
- 7. Being away from home
- 8. Reading about destination

Concepts for Improved Airport Arrival Experience

- 1. In Berlin, one participant had to wait for their bag, but information was provided in the arrival hall to help with next steps in the journey, such as public transit information. This resulted in the participant feeling their time was used more efficiently. They suggested that such a system be implemented in other airports, like Schiphol as well. (one blue sticker)
- 2. Info about public transport at belt
- 3. If you have a 30min wait, send the time relaxing at a spa or shopping
- 4. Participant reported being "stuck" with nothing to do after customs and suggested a small restaurant or bar be available
- 5. First bag on belt could be water bottles or other refreshment with a note saying that they were for the passengers
- 6. Something to welcome passengers to the airport/destination
- 7. Use wait time wisely to plan next steps of the journey
- 8. A person present with a trolley offering coffee/tea and information relevant to next steps of journey (three orange, and one blue sticker)
- 9. Map of the local area (one orange dot)
- 10. Information about the accommodation and public transport at the destination
- 11. Clear information about odd sized baggage
- 12. More staff for improved wait time/shorter lines
- 13. Employees could help call attention to information being displayed on screens and possibly offer more detail
- 14. Energizer or sports massage after long flights
- 15. Provide proper information to help passengers feel in control
- 16. Let passengers know in advance how long the wait for their baggage will be
- 17. Set expectations (wait time)
- 18. Something to change passenger state of mind (reduce stress)
- 19. Help passengers move as quickly as possible to the next step in their journey
- 20. Help passengers not feel lost upon arrival and don't know how to plan to next step
- 21. Something to relieve passenger anxiety
- 22. Be proactive if a bag is short-shipped

- 23. Wifi can offer lots of distractions to make wait time go faster
- 24. Provide accurate information about baggage arrival time (three blue dots)
- 25. Enable passengers to decide how to spend time
- 26. Offer option to pay for reduced wait time
- 27. Create a feeling of connection to destination environment (ex: portrait of Nelson Mandela at airport in South Africa)
- 28. Space to change clothes and freshen up
- 29. Create a lively and welcoming feeling upon arrival with interventions such as music
- 30. Announcements and signage in local language makes passengers feel connected to the destination environment
- 31. Camera on reclaim belt so you can see if your bag is on the belt or not
- 32. App to track where your bag is (one orange and one blue dot)
- 33. Enable passengers to make decisions on what to do with their time
- 34. Tell customs wait time in advance
- 35. Smooth arrival when traveling with children
- 36. Have something unexpected (may cause issues if this creates a precedent which is not upkept)
- 37. Time estimate for baggage arrival provided as soon as you exit plane
- 38. Take in flight entertainment with you (maybe you didn't finish your movie)
- 39. Always nice when someone offers you something
- 40. Tell passengers the belt number their bag will be at as soon as they exit the plane
- 41. Ticket and bag could communicate as a form of tracking device
- 42. In Japan, they put fake sushi on the belt between bags as a way to entertain passengers, maybe KLM could consider something like this
- 43. Play music to relieve stress
- 44. Offer things to refresh passengers after their flight such as toilet, food, water, candy, coffee, shower, fresh air

Business Traveler Interviews

Setup:

Interviewed six passengers, four of whom were very frequent fliers who traveled for work. The goal of these interviews was to get a more in depth understanding of the user experience. By having a one on one conversation I could ask more detailed questions about what they did and why and how they felt in certain moments. I choose to include passengers who fly frequently and are rewards program members because they fit the "Recharge in the Skies" and "Let me Work" KLM demand spaces. Additionally, these passengers who travel every week represent an extreme case, and often outlier cases can reveal interesting insights which are applicable to a broader audience as well.

These interviews were conducted either in person or on the phone (three of each) and lasted on average one hour. During the interview, passengers were asked some warm up questions which gave a bit of background on themselves, their traveling habits, and allowed me to evaluate which demand space they most closely met. Of course this can change a bit based on the purpose of their travel, but I sought to understand what their most frequent habits and concerns/priorities were and how these fit into the demand spaces. I determined that the two less frequent and more leasure travelers better fit the "A Good Start" demand space. Of the four frequent fliers who traveled for work, two best fit the "Let Me Work" demand space and two better fit the "Recharge in the Skies" profile.

After the introduction questions, I asked passengers to describe their most recent baggage reclaim experience. I asked where they were traveling to and from, what the purpose of the travel was, and who was traveling with them. As they were describing, I would ask question about why they made the decisions they did and how they felt during the different steps of their process. My goal was to understand what they valued and what caused discomfort and/or uncertainty. Because I had previously defined communication, efficiency, and acknowledgment as key focus areas asked on KLM research and passenger feedback from the Dapresy tools, I made sure these topics were covered. The four frequent fliers were members of airline loyalty programs and I asked them about their experience with the memberships and how they felt acknowledged. All passengers were asked questions to understand their perception of the efficiency of the process and where improvements can be made. Questions about communications were asked, not only about contact with the airline, but with other passengers, and anyone else passengers might like to be in contact with during their travel.

After the interviews, key insights and trends were explored. These insights were sorted by how they pertain the communication, efficiency, and acknowledgement. Additionally, insights that did not fit into these themes were identified for consideration in how to improve the overall passenger experience.

Business Traveler Interviews

Ouestions:

Passenger Background How often do you fly? Do percent of your travel is for work/personal? Do you tend to fly with a certain airline? Why or why not? Are you a member of a frequent flier loyalty program? Why or why not?

What distance flights do you typically take? (1/2)

What class do you typically fly? Why? (2)

How important is it to you that you feel acknowledged by the airline? -Personal attention (263)

Do you typically feel a need to stay connected - maybe phone/email to friends/ family/ coworkers... perhaps social media and/or news outlets? (3)

Do you have a fairly active lifestyle -tend to be busy? (3)

When you fly, do you like to feel in control, or do you relax and trust that the airline has everything covered? (1/3)

What airport facilities do you tend to use? (1/3)

During your time in the airport and plane, do you usually work, relax, or both? (1/2)

Your last flight with checked baggage: Where were you traveling to and from? What was the purpose of your travel? Who were you traveling with?

Tell me about your experience from the time you arrived at your destination airport, to the time you left the airport.

- -facilities used
- -pain points
- -how was information shared?
- -interact with other passenger at all?
- -feeling upon leaving airport

Reflecting on your experience What was your overall impression of the experience? What was the worst moment? What was the best moment?

Concept Development

Research uncovered a need for:

- -Clear Communication between passengers and KLM
- -Seamless process which maximizes use of downtime

Core App Features:

- 1) Baggage Tracking: Provides real-time information about baggage location through RFID bag tag tracking. With RFID, this information can be specific to each passenger's baggage.
- 2) Airport navigation & facilities: Makes passenger aware of what is available within the airport and how to find it.

Bonus Features:

Also provides information about local food, culture, and events as well as information to help plan on-ward journey. Over time, the app can learn customer preferences and make suggestions.

Approches:

Guided: The passenger is guided in a step by step process with a limited about of information displayed at one. This provides passengers with a limited amount of control over the information, but lowers the cognitive load, which may be an advantage in the airport setting, which can be a bit chaotic.

Pros: Lower cognitive load, guidance

Cons: Less flexibility

Open: This approach provides passenger with a higher level of information control, presenting an overview of information and allowing passengers to decide how to use it. Passengers are free to create their own plan and use the information as they see fit, but it places a higher cognitive load on passengers.

Pros: More flexibility

Cons: Higher cognitive load

Core Information provided by application:

Baggage Tracking: Real time information about whereabouts of passenger's baggage provided via RFID baggage tag.

Airport Facilities: Information about the facilities available in the airport such as bathrooms, restaurants, and shopping.

Airport Navigation: Guidance through the airport to find points of interest selected by the passenger such as the reclaim belt their baggage will arrive at.

Local Destination: Provides both practical and cultural information about the destination, such as information about the public transit system, hotels, and restaurants as well as information about local art, culture, and current events.

Information the app provides:

- -where the passenger's baggage is
- -when baggage is expected to arrive
- -what reclaim belt baggage will arrive at and how to get there
- -where bathrooms are and how to get to them
- -what restaurants are in/near the airport and how to get to them
- -what shops are in/near the airport and how to get to them
- -how to arrange transport from the airport (rental car, taxi, public transport, airport shuttle)
- -information about the local area (history, culture, current events)

Decide Where to Go Disembark Plane Arrive at Reclaim Wait for Bag Exit Airport Collect Bag reclaim, some choose to stop at the restroom, a store, passengers starting their baggage reclaim journey on This moment can be chaotic and stressful, resulting in moment of uncertainty as to how to get to their next If passengers are not well prepared, this can create a reclaim area. However it is now always clear at which destination, ended their journey on a negative note. Many passengers cite the moment when bags arrive passengers to arrive at the reclaim area early and Though many passengers go directly to baggage on the belt and/or when they see their bag as a Uncertainty about when bags will arrive, causes Passengers tend to follow airport signage to the belt and at what time their bag will arrive. then have nothing to do while waiting. or to contact friends/family/coworkers. highlight in their reclaim journey the wrong foot.

Step

Current Situation

Might it be possible to make this high point in the passenger journey even better?

when to arrive at reclaim area. It may also be possible to

Knowing when bag will arrive, passengers can choose

use this time to prepare them for their onward journey.

need it. They should be made aware of the belt number

and estimated arrival time in advance.

Provide passengers with accurate data at the time they

Ensure passengers know their options upon arrival so that all of their needs can be met, and they can choose

the best way to spend their time.

Enable passengers to use this time more effectively. It

Desired Intervention

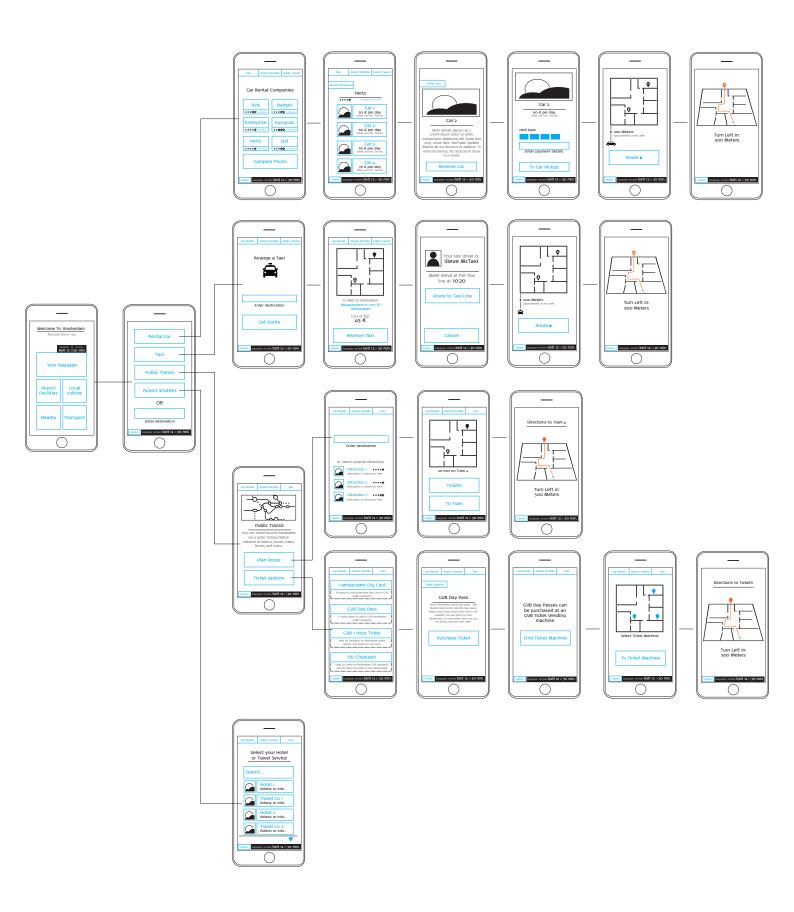
may be possible to already start preparing them for

their reclaim journey.

Ensure that passengers have reassurance to confidently leave the airport, prepared for their onward journey.

Wire-Frames

Wire-frames exploring how to share transportation information with passengers so that they can plan for their onward journey. This is something that many participants expressed interest in during the journey mapping and brainstorming session.



Wire-frames exploring in airport navigation and what passengers might like to do to freshen up after their flight







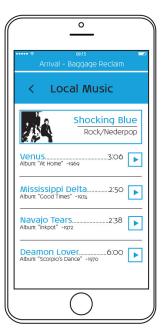




Wire-frames exploring how passengers can experience local culture through features like the ability to listen to local music. Participants voiced an interested in feeling connected to local culture.









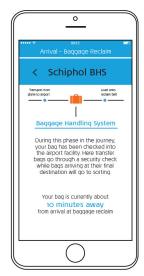
These wire-frames exploring how help passengers manage their time efficiently by providing them information such as estimated time of baggage arrival, where baggage is current located, and how long it will take them to walk to points of interest such as the reclaim area.



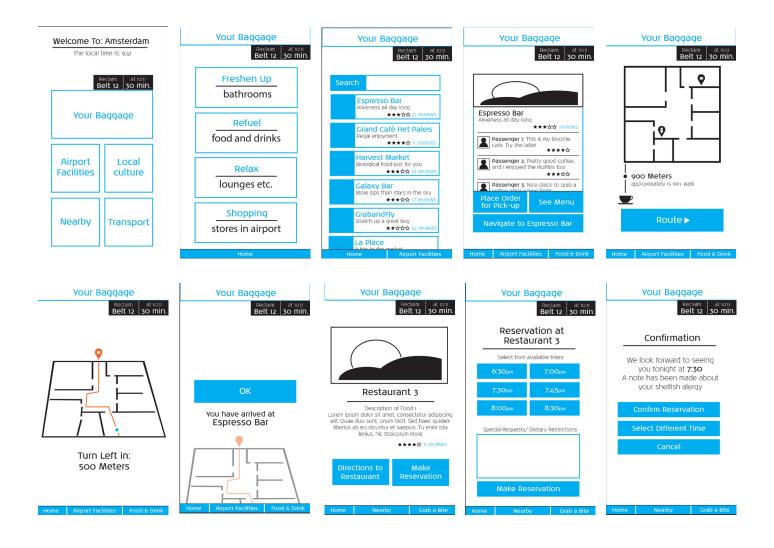








Wire-frames from Mocku-up A which was designed to give a clear overview so passengers can use the information to plan how to use their time well.



Wire-frames from Mocku-up B which was designed to be more guiding and reduce the cognitive load.









