



DEMENTIA FRIENDLY TRAVEL WALLET

AYELET LUSTGARTEN





Ayelet Lustgarten

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Project Description

The line of dementia friendly travel accessories focuses on the management of personal belongings while traveling, with a focus on the presentation and safe-keeping of travel documents such as the passport and boarding pass.

The Individual travel wallet is designed for people living with mild cognitive impairment and who may be traveling alone. The Caregiver wallet allows space for the documents of two travelers. Both wallets aim to reduce the stress of micro-interactions in the airport and to minimize the risk of items becoming misplaced.

The identification tag can be attached to either of the wallets and to any other personal belongings to visually link them together and to the traveler. They also help service providers identify and provide extra support to travelers with cognitive impairments.



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Phase One: User Experience & Related Research

Context

As an unfamiliar, busy, and confusing environment, commercial air travel is in many ways inaccessible to travelers with dementia and their caregivers. In 2016, 47 million people worldwide were living with dementia (World Alzheimer's Report 2016). People with disabilities make the fewest air travel trips compared to all other people (Sundling).

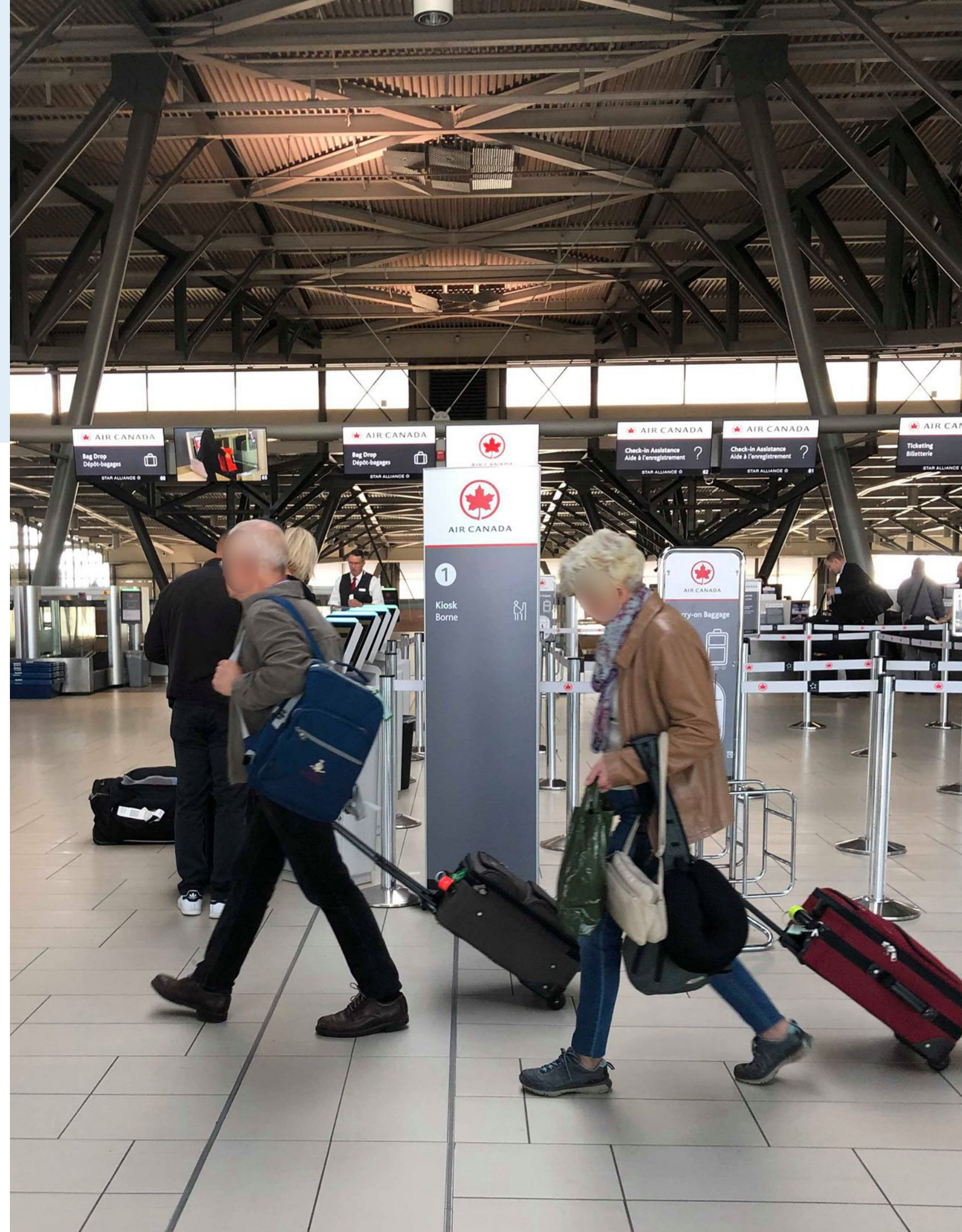
While efforts have been made to modify built environments to promote accessibility for physical disabilities, there has been comparatively little done for those with cognitive impairments (Sundling, 2015). Access to travel is important in facilitating social inclusion for people experiencing dementia.

Keeping track of all your belongings while moving through an airport can be tricky for anyone. For those with cognitive impairments or a caregiver traveling with them, this presents a more substantial challenge. Early signs of dementia include memory loss and the misplacement of items.

The safekeeping and presentation of valuable travel documents is a source of stress for many caregivers as they become responsible for twice the number of items.

Service providers are challenged with clearly identifying travelers with cognitive impairment, and therefore additional support is rarely provided.

Right
Figure 1
Observations in YOW



Scenarios

I used a scenario mapping exercise to help understand what people do, and what currently happens, based on primary and secondary research. The scenarios developed highlight some of the issues that occur along the way, and develop ideas that could create a more desirable user experience.

The column on the left describes the key people and stakeholders. The black text under each stage explains the key tasks that they will be undertaking. The blue text is a comment that I felt is important in each step. The pink text, is a question that I wanted to resolve, and the green text is a suggestion or idea.

After I completed this exercise, I used coloured post-it notes to indicate all interactions of the traveler with their personal belongings, specifically with their luggage, boarding pass, and passport. These interactions occur throughout all of the scenarios and in each stage of the air travel journey.

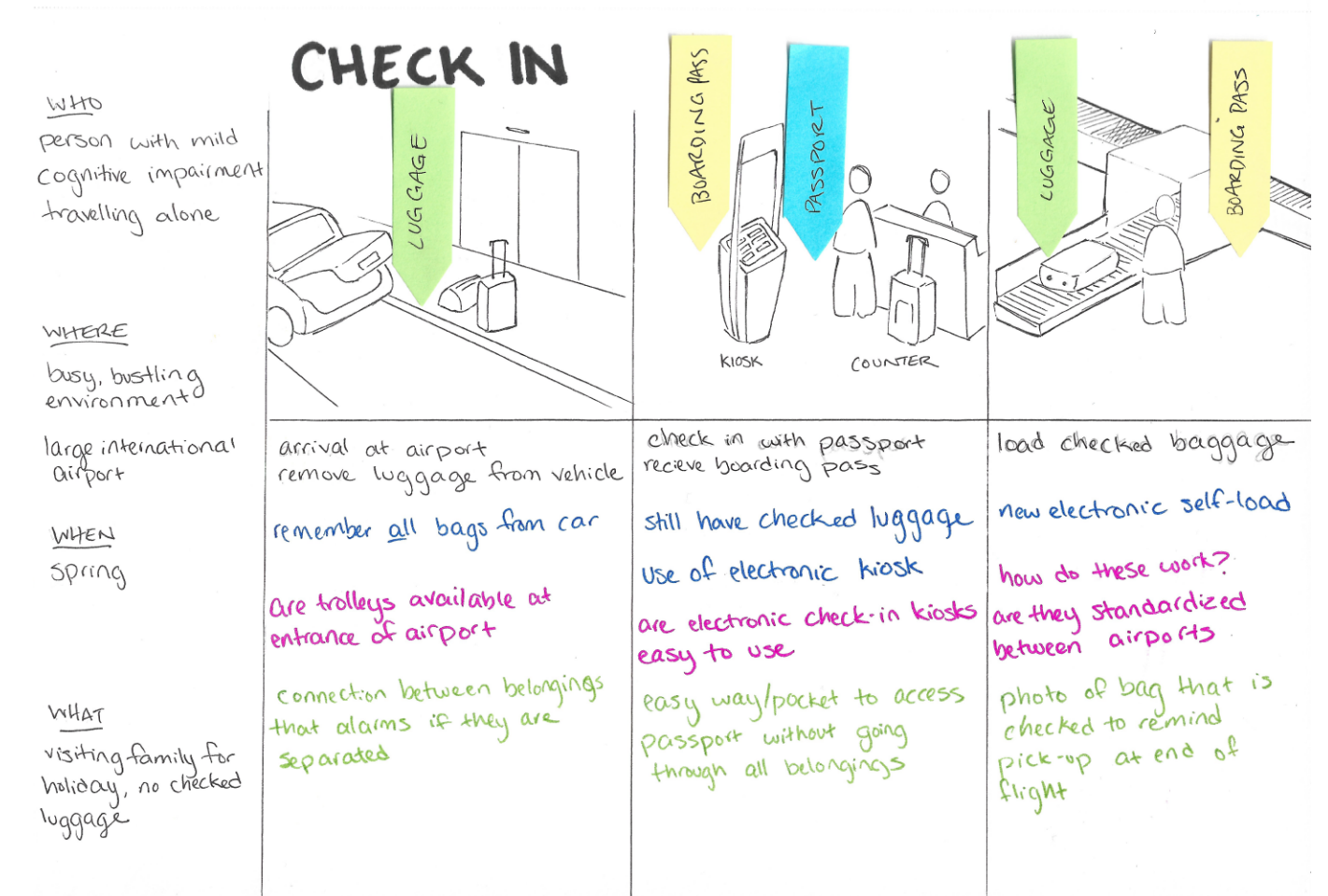
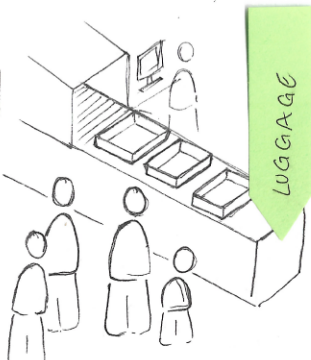
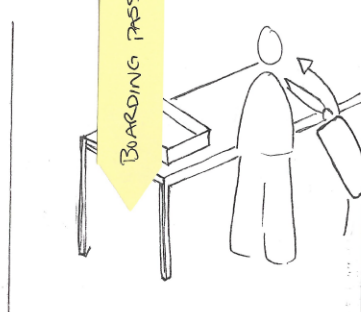
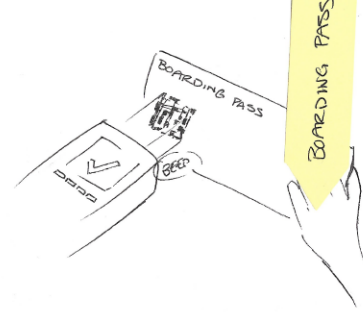


Figure 2
Scenario Exercise

SECURITY

WHO
person with cognitive impairment travelling with family companion

WHERE
small local airport



Scan boarding pass
boarding pass must be accessible

are there multiple security lines at large airports?

can boarding pass be easily accessible?
on outside of jacket?

multiple person boarding pass holder

put belongings in tray
Separate liquids
take off shoes, watch
scan boarding pass

many strict instructions to follow

are regulations the same across all airports?

are people above/below ages exempt from some rules?
ex. shoes off

colour used to link belongings after security

Collect all baggage
grab all personal items from bins (may be out of order)

do people often leave items behind at security?

are items often confiscated from people in this demographic?

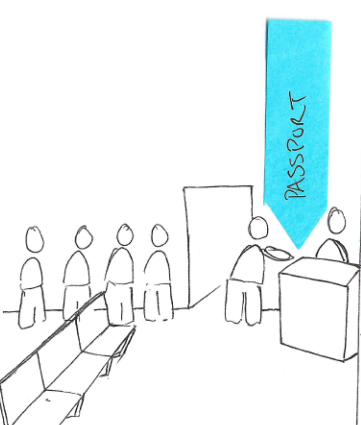
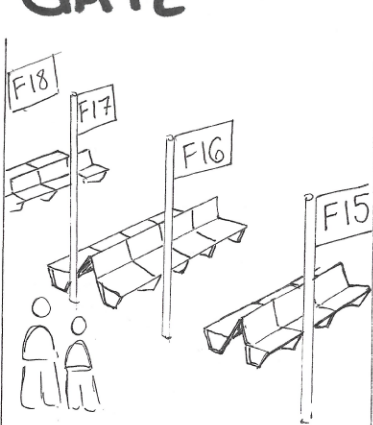
WHEN
winter season
cold and snowy

WHAT
travelling for leisure
vacation with family

GATE

WHO
Person living with mild cognitive impairment

WHERE
waiting to board in large international airport terminal



finding/walking to gate
very long walk to gate

are transport services easily available for long dist?

method of distinguishing gate from shopping areas of airport

waiting in line at gate
boarding pass must be accessible (+passport)

do people with cognitive impairment receive priority boarding?
is the line up process easy to understand?

passport must be accessible

waiting in tunnel
long wait time
temperature changes

can seating be available in tunnel?

can temperature be controlled?
chair in tunnel

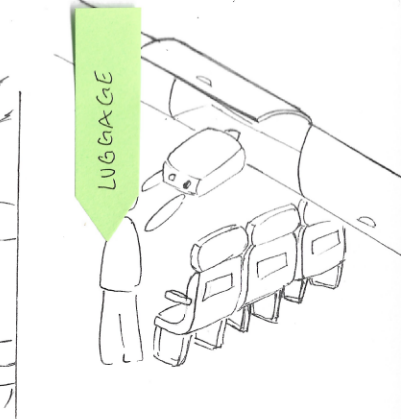
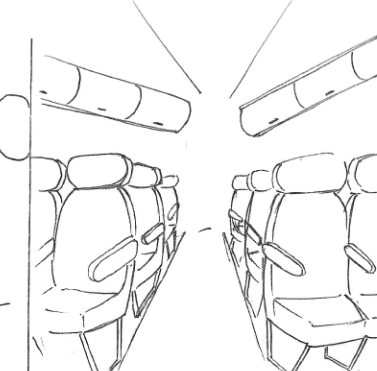
WHEN
holiday season
busy airports

WHAT
visiting friends for 1 week

BOARDING

WHO
person living with cognitive impairment
long trip - lots of luggage.

WHERE
International airport
on board aircraft



Show boarding pass to attendant
boarding pass must be accessible

can crew help people to their seats?

hands free access to boarding pass and luggage.

finding seat
rushed environment

are people embarrassed if someone is in the way of their seat?

WHEN
winter season

WHAT
moving for 5 months to warm environment

storing carry-on baggage
heavy bags to lift

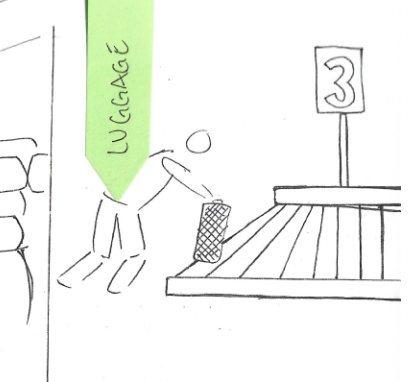
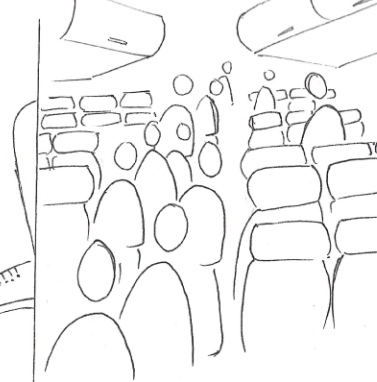
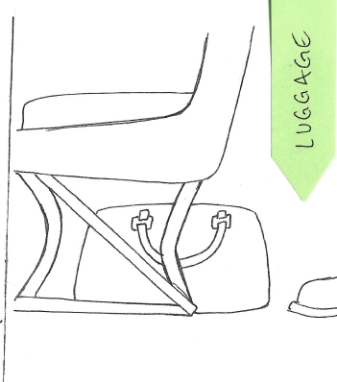
what do you do if you are unable to lift bag?
how do you remember where you put bag?

send reminders about location of bags when out of sight

DE-BOARDING

WHO
Couple travelling & husband has cognitive impairment

WHERE
Ski vacation with family - oversized baggage



gathering carry on baggage
items may be 'hidden' around seat area

how do you remember all of your items?
(purse, sweaters, documents, suitcase)

reminders/notification of stored baggage

waiting to deboard
crammed and impatient atmosphere

is it clear where to go next?

reminder to collect checked bags

WHEN
winter season

WHAT
long flights to destination
with layover

collecting checked baggage
lift heavy bag
determining suitcase from all the rest

how to find bag as they are constantly moving
indicating identifying bag tag that sends notification/alert

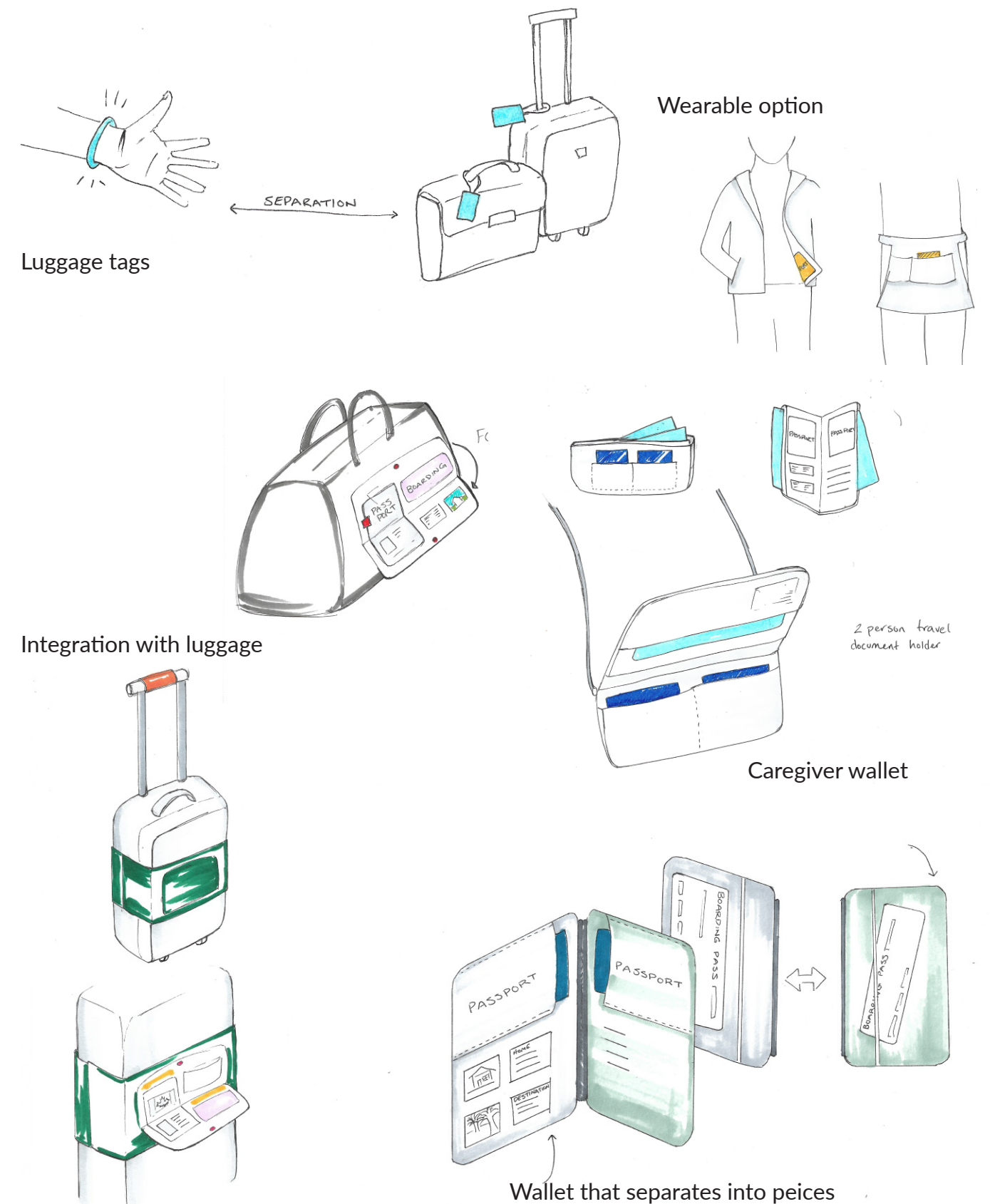
Phase Two: Ideation, Testing, & Evaluation

My focus in this project was regarding the management of personal belonging in the air travel journey. After many concept ideas, I chose to develop dementia friendly travel wallets to aid in this process. I used soft good models of the travel wallets to continue to iterate and receive feedback during the many opportunities for participatory research.

Insight from participants and industry partners regarding the acceptance and usability of the product was critical in guiding and evolving the design. Throughout this process I was also experimenting with sewing techniques and materials for the wallet.

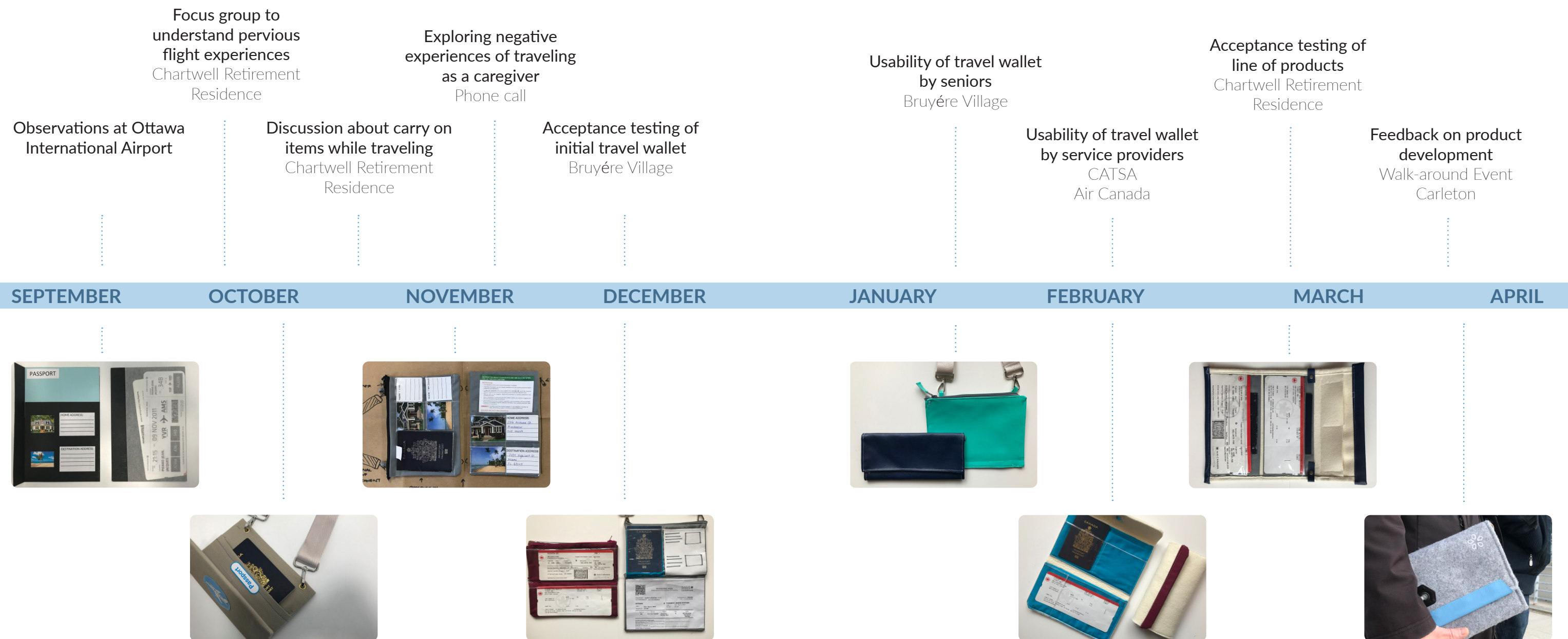
To record information from each testing exercise, I used my sketchbook to take notes and took photos when possible. It was important to document quotes from participants as well as their movements when interacting with the travel wallet.

Initial Ideation



Right
Figure 3
Ideation Sketches

Overview of Participatory Design Process



Overview of Prototype Development

Exploring Previous Travelling Experiences

Phone Call

I had the great opportunity for a phone interview with an experienced traveler as a caregiver to her husband who is living with dementia. She explained that critical thought must be given to whether the travel will be rewarding for the person with dementia; otherwise the stress and bother of the journey is not worth it. This emphasises to me the toll that travelling by air has on both parties. One of the anecdotes that she shared with me was on a trip where her husband left a suitcase at a bus stop. She suggested that travellers pack light so that the companion is able to carry everything themselves. On a seperate occasion her husband packed his passport into the checked luggage. Her coping stragety to manage the important documents is a jacket with large pockets so that the valuables are on her person at all times.

Observations at the Ottawa International Airport

As a group focusing on Commerical Air Travel and Cognitive Impairment, we conducted observational research in the public spaces of the Ottawa Internatinal Airport (Check-in, entrance to security, baggage claim).

In just these areas alone, there were countless interactions with luggage and personal items. Passports are required to be scanned by each traveler at check-in (mostly at electronic kiosks), and boarding passes are scanned by an officer at the entrance to security.

My daughter would definitely take my passport away from me

- Resident at Chartwell Retirement Residence



Chartwell Retirement Residence

In a discussion with seniors about carry on items and traveling, each individual recalled a different way of holding onto their travel documents. Some kept them in their purse, breifcase, or with the boarding pass tucked into the passport. However, when reflecting on a more recent travel experience with a companion (usually one of their adult children) they noted that the companion would hold onto their documents for them.

Bruyère Village Day Program

I had the opportunity to show the first prototype of a 'dementia friendly travel wallet' to a couple that are avid travelers. The wife, and caregiver, explained that the she is always responsible for handling all important items. She explained that even with her husband using a wearable product, she did not feel comfortable relying on him in a high stress scenario.

It's very hard to trust that they will manage everything. I have to hold onto everything

-Caregiver at Bruyère Village Day Program



Figure 4
Focus group at Chartwell Retirement Residence

Phase Three: Usability, Experience Impact, & Design Response

Acceptance Testing

Bruyère Village Day Program

During this phase of participatory research, I presented a concept for a modular travel wallet. A key feature of it was clear pockets for travelers to write their home and destination addresses, accompanied by photos. The responses to this feature were positive, and participants commented that, “this information is always important to have!”

Seniors are always saying, ‘it’s in my purse but I can’t find it’
- Caregiver at Bruyère Village Day Program



Figure 5
Testing at Bruyère Village

Card Sorting

I also asked the participants to order the belongings that they would prefer to have with their travel wallet using a card sorting exercise. I learned that although many of the components are important, there was no clear patterns between the participants responses, or specific reasoning for varying priorities.



Figure 6
Testing at Bruyère Village

Ergonomic Testing

Lastly, I asked both participants to test the use of a zipper in the product. The close ended zipper allowing access to a pocket in the wallet was easy for both participants to use. However, the zipper used to separate and reattach the two halves of the modular system was extremely difficult for both participants.



Figure 7
Testing at Bruyère Village



Figure 8
Fabric Prototypes

Usability by Service Providers

Ottawa International Airport CATSA

It was very informative to meet with the Service Manager at CATSA (Canadian Air Transportation Safety Authority).

She explained to me that CATSA is an organization that places a high value on customer service, and that they are looking for ways to assist travelers that may need more help. If the wallet was an indicator to staff that an individual has a cognitive impairment, they would be able to provide additional support.

I was able to walk through the YOW security for the United States as well as through the American Customs and show the soft good prototype to staff on duty. The responses to the concept were positive and I was able to take note of each place that the passport/boarding pass needed to be presented. The passport must be removed completely from the wallet; however, staff would be willing to assist in this process. The boarding pass could remain in the clear pocket as it is scannable through this material.

I also learned that certain medications may trigger the ETD (explosive trace detection) that is used for randomized additional screening. This could be a very confusing process, and therefore basic medical information should be accessible for staff at security. In addition to this, if the traveler is pulled aside for randomized additional screening, the personal information card would be very helpful for the officers conducting these extra tests.

**If I knew what the wallet meant,
I would help the traveler put the
passport back in the wallet**

- United States Customs Officer



Ottawa International Airport Air Canada

In my meeting with the Air Canada Manager of Station Operations and two co-workers, I used my soft good prototypes of the dementia friendly travel wallet to explain my idea and discuss how the wallet could be used by the airline to help travelers with cognitive impairments.

They emphasized the importance of emergency contact information so that the airline can reach the family or friends of the traveler, if needed. We also brainstormed various ways of including the passport so that it would not need to be removed from the wallet in order to use the self check-in kiosk. However, when examining the kiosks, it became clear that only the passport on its own will fit in the slot. It is also important to consider that electronic kiosks at other airports will vary.

It was extremely informative for me to share my ideas with staff from Air Canada, and learn that they see the value in the concept and that it would allow them to better aid their customers.

The personal information card in my prototype included space for very similar information included by Air Canada in their Unaccompanied minor envelope, which also includes a pocket for the travelers passport.

Acceptance Testing

Carefor Group at Carleton

It was very encouraging to meet with and hear positive feedback from people with early onset dementia. Each individual that I spoke with could understand the use of the travel wallet and how it could help them when traveling. However, consistently towards the end of the conversation they would explain that when traveling, their partner would hold onto their documents. This validated the need for the caregiver travel wallet as a part of this project.

I also discussed current tools for identification that they use including personal information 'business' cards, and medical alert bracelets. It was important to one individual that he can be identified as having an attendant and that they are linked to him.

If I were holding onto my own passport, my husband would be right behind me

I would buy one, you have everything right there to see

- Carefor group member



Figure 9
Unaccompanied Minor envelope and lanyard from Air Canada

Chartwell Retirement Residence

During this visit to Chartwell Retirement Residences, I was able to speak with a participant who was a part of our very first focus group in October. I brought my two product prototypes to discuss with the participant: the dementia friendly travel wallet and the caregiver travel wallet.

The participant immediately recognized that each product serves a very different target user. She preferred the size of the slimmer caregiver wallet; however, she pointed out that the larger size and strap would be beneficial for someone who needed additional help.

Maybe with something like this my children would let me fly!

- Resident at Chartwell Retirement Residence



Figure 10
Acceptance testing at Chartwell Retirement Residence



Walk-around Event

While not an official occasion for testing, the Fourth Year Studio Walk around provided a great opportunity to discuss the product concept and design with students of Industrial Design of other years. The fresh perspective from other designers generated creative ideas that I had not considered. It also served as a chance to speak with industry professionals for the first time since the initial concept presentation. This allowed them to comment further on specific details of the design.



Figure 11
Presentation at Fourth Year
Walk Around Event

Synthesis of Feedback

Need for line of products

There is a need for multiple wallets with differing functions and target users. The caregiver is likely to hold onto all important documents. There is also a situation in which an individual is traveling alone, or is capable of managing these items. The optional strap on the travel wallet was well received in acceptance testing interviews to aid in minimizing opportunity for loss.

Wallet as Identification

Speaking with service providers helped me to understand how the travel wallet could be used as an identification tool to allow staff to provide extra help to travelers with dementia.

Information Panel

The personal information card is helpful as a reminder to the traveler and also beneficial to the service providers. This feature was easily understood to be important and useful to all participants in the participatory design process. The key information that should be included is: contact information of pick-up and drop-off at the airport, home and destination addresses, and basic medical information.

Usability

The zipper to open the top pocket was accessible for the senior participants that tested it. However, outside of these tests, anecdotal feedback from classmates made it clear that even a zipper pocket may be difficult for people with low dexterity or arthritis. The pocket for the passport was consistently too small and this made it difficult to insert the passport quickly in the prototypes. Large pull tabs and simple mechanisms are necessary to make the wallet easy to use in a rushed situation.

Phase Four: Communicating the Final Design

Development of a Line of Products

The needs of each traveler and individual with dementia is unique, therefore there is no 'one size fits all' solution. The line of products, including the Individual wallet, the Caregiver wallet, the Identification tag, and the strap allow for travelers to use the products in whichever way best fit their needs.

For example, a couple traveling together may prefer to use the Caregiver wallet without the strap, and with the identification tag attached to the wallet. An individual with dementia traveling alone may prefer to use the Individual wallet with the strap, and with the identification tag on all of their belongings.

Materials



Vinyl

- bright colour
- not preferred by most people



Leather

- high quality product
- patina over time
- not environmentally sustainable



Felt

- sustainable
- durable
- unique and recognizable feel
- comforting and soft

I chose to use felt as the main material because of the unique texture. The traveler would instantly be able to distinguish the felt from other products and wallets in their bag if they are blindly reaching for it. The felt also provides a soft, comforting, and friendly feeling. The cool grey colour is neutral, and is not too bright for most people's aesthetic preferences.

The leather and blue polyurethane are used as accent colours, and provide extra enforcement to the felt. They also create an affordance for the opening of the wallet.

Optional Crossbody Strap



Figure 12
Analysis of bag straps

I chose to use a D-Ring and a matching swivel clip to allow for the optional attachment of the crossbody strap. Another option I tested was using a snap clip on the inside of the wallet that would hold the D-Ring in place. I found this option to be less secure, and the detail with the clip took up more space on the inside of the wallet.



Figure 13
Options for strap attachment



Figure 14
Detail view of strap attachment

Wallet Construction



Figure 15
Pinch grip of passport in pocket of Caregiver travel wallet



Figure 16
Placing and securing pockets onto the inner layer of felt for Caregiver wallet



Left
Figure 17
Earlier prototype to test the passport pocket and wallet of the Individual Wallet

Right
Figure 18
Process of sewing the rolled hem of the individual wallet and trimming the excess

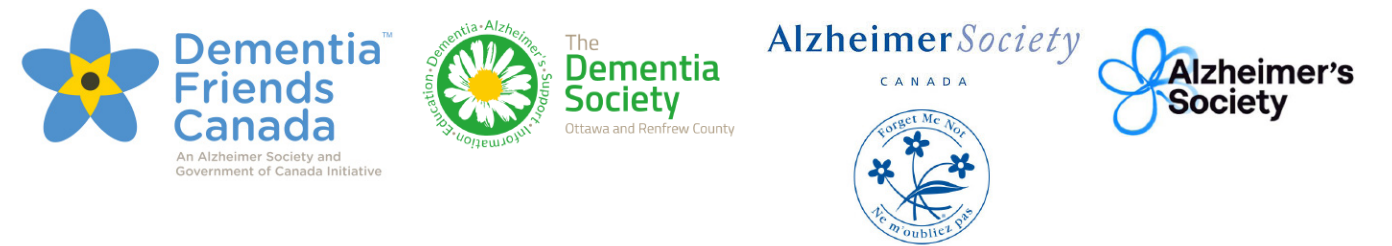


Figure 19
Magnets are added inbetween two layers of grey felt to remain hidden.
A piece of styrene plastic is added for rigidity

Branding & Logo Design

The branding of the wallet is important in creating a recognizable line of products to aid service providers in the airport with a method to identify travelers with cognitive impairments.

I took inspiration from Dementia Friends Canada, and many other organizations that use the symbol of the 'Forget me Not' flower in their branding. In my logo, the five teardrop shapes create an abstract form of the flower, and the blue colour is used as an accent colour on the individual wallet.



Development of the Identification Tag



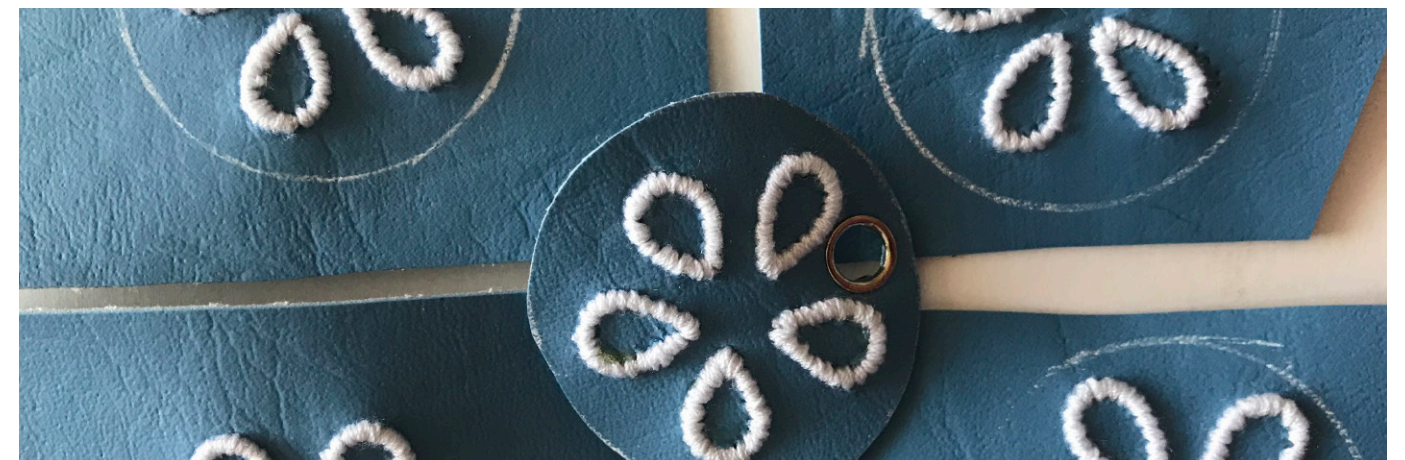
Figure 20
Iterations of embroidered logo



Figure 21
Iterations of embroidered logo



Figure 22
Iterations of Identification tag



Individual Wallet

The individual wallet is designed to increase independence of travelers with dementia. It could be used by an individual with mild cognitive decline that is traveling alone, or by an individual that is travelling with a caregiver.

The crossbody strap and identification tag can be attached if desired. The wallet features a personal information card, a passport pocket, and boarding pass pocket in clear vinyl so that they can be seen clearly when the wallet is opened.



Left:
Figure 23
Flat Lay of Individual Wallet

Right:
Figure 24
Individual Wallet Closed



Labelled Areas

The passport and boarding pass pockets in the individual wallet both feature embroidered labels. This text serves as an indication of where to place the items into the wallet.

The labels also create a visual cue when an item is missing from the wallet, and to remind the traveler to return the important documents.



Figure 25
Labels on passport and boarding pass pockets



Figure 26
Initial test of text embroidery

Personal Information Card

The personal information card is a key component of the individual wallet. Once filled out, it holds important personal information that will be useful to both the traveler and potentially service providers in the airport if the traveler requires assistance.

Important information to be included is drop-off and pick-up contacts, and home and destination addresses. The card also has space for photos of people or locations, as well as other notes about the trip such as duration or purpose.

The information cards would come as a pad of papers with the purchase of the wallet so that a new card can be easily written for each trip.



Figure 27
Early prototype of personal information card

<p>Where I am coming from:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Place photo here or additional notes</p>	<p>Where I am going:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Place photo here or additional notes</p>
<p>Who took me to the airport:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Place photo here or additional notes</p>	<p>Who is picking me up from the airport:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>Place photo here or additional notes</p>
<p>Notes: Make sure to add traveler's medications, some medications will set off the ETD (explosives trace detection) in security</p>	

Figure 28
Personal Information card template

Caregiver Wallet

The Caregiver wallet is designed to reduce stressful microinteractions in the airport as a result of presenting twice the number of documents.

Similarly to the Individual wallet, the crossbody strap and identification tag can be attached if desired. The wallet features two pockets for passports, and two clear pockets for boarding passes. The boarding passes can be presented quickly by opening the wallet and without the need to remove them from the pockets.



Left:
Figure 29
Flat Lay of Caregiver Wallet

Right:
Figure 30
Caregiver Wallet Closed



Identification Tag

The optional addition of the identification tag links all belongings, helping to keep track of them throughout the airport, especially in areas such as security.

The tag also serves as an indicator to service providers that a traveler is cognitively impaired and may require additional assistance.



Individual Wallet Caregiver Wallet Luggage Personal Item Wearable Clip

Above:
Figure 31
Identification Tag on belongings

Below:
Figure 32
Identification Tag



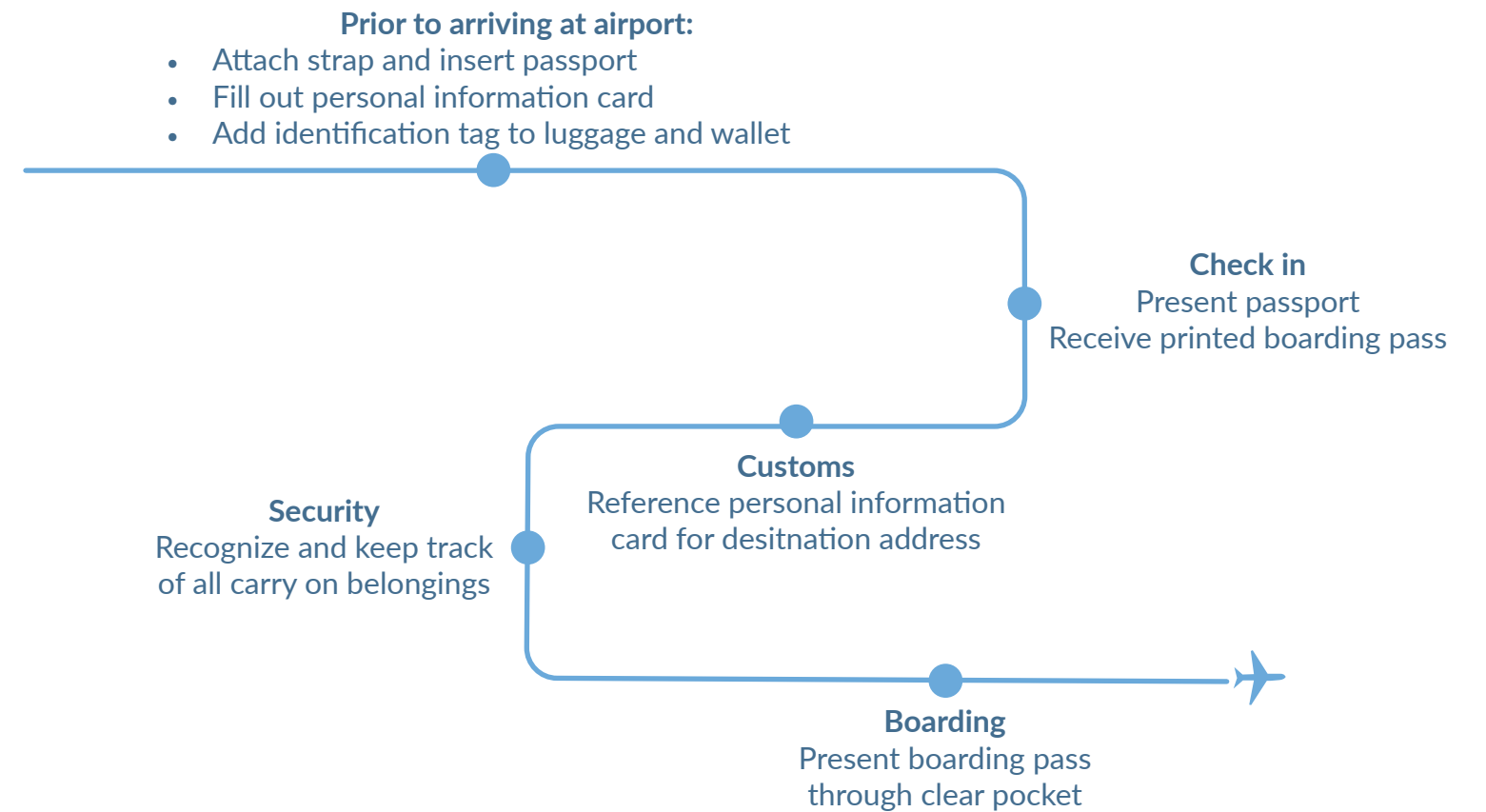
Example Use Scenario

The line of products can be used in multiple ways depending on the person's needs and wants. Depending on the stage of cognitive impairment and traveler comfort level, travelers can choose to use the caregiver or individual travel wallet.

Travelers can also choose if they wish to be identified by service providers in the airport and to include the tag on some or all of their belongings.

Both the identification tag and crossbody strap can be attached to either of the wallets.

Below is an example use scenario of the individual wallet used with the strap and the identification tags. It highlights a few of the stressful key interactions in the airport, and how the wallet would be an aid to the traveler.





Product Impact

This line of products impacts three key stakeholders in the commercial air travel process in different ways.

The Individual wallet promotes independence for travelers with mild cognitive impairments to be responsible for their own belongings, and potentially to travel on their own.

The caregiver wallet helps to reduce the stress of microinteractions with travel documents throughout the airport.

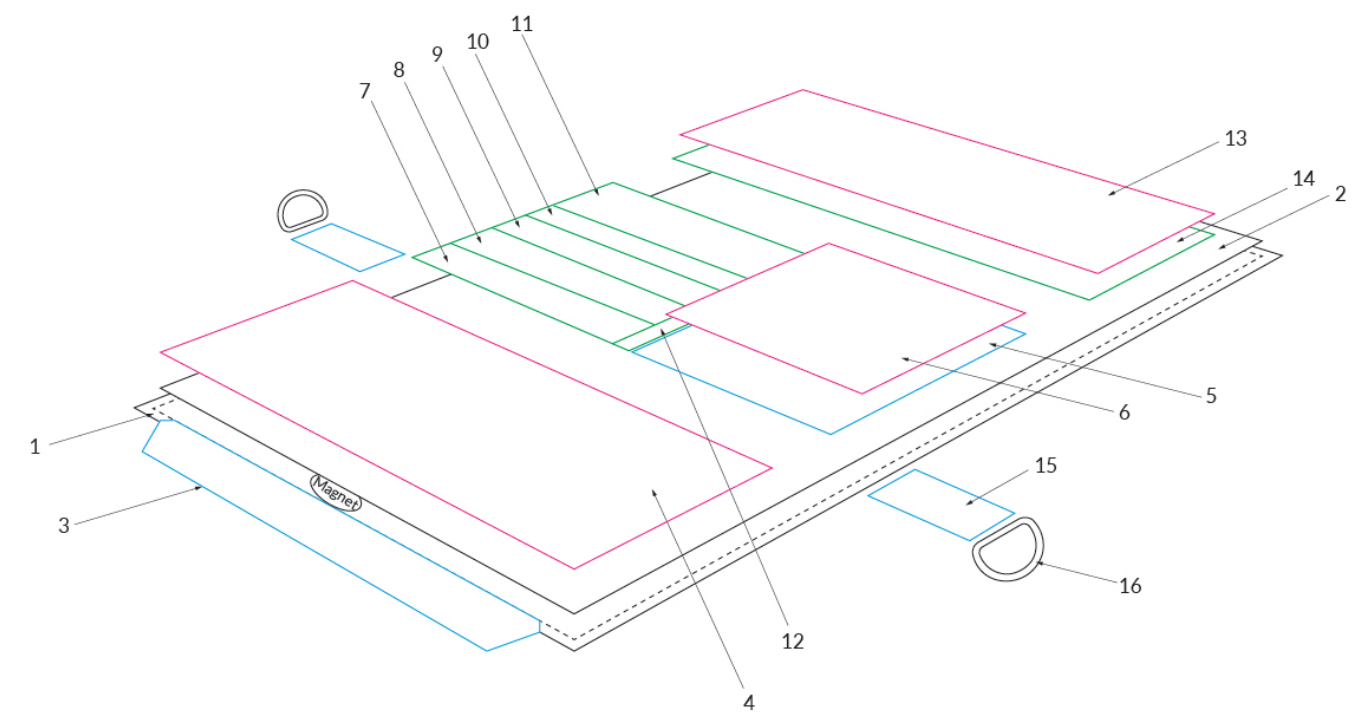
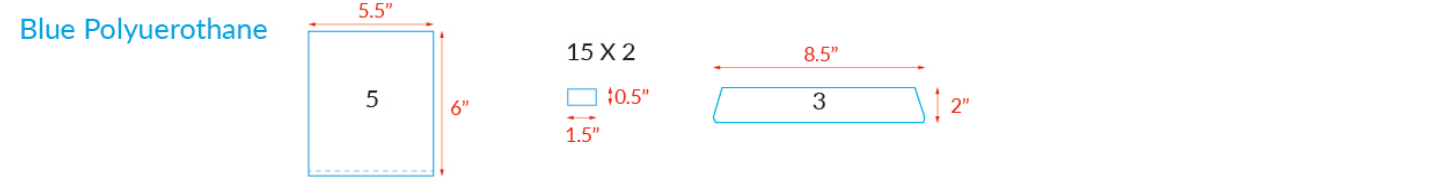
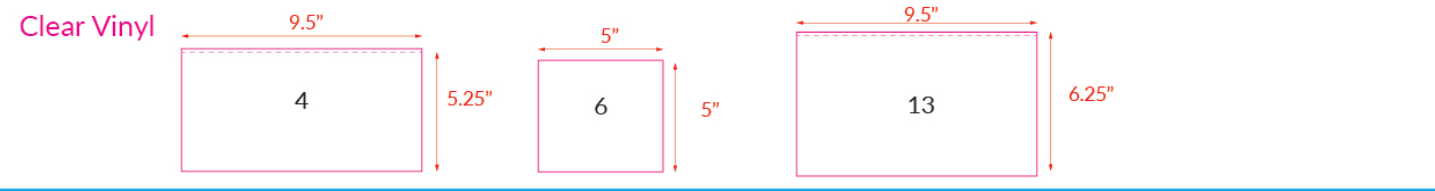
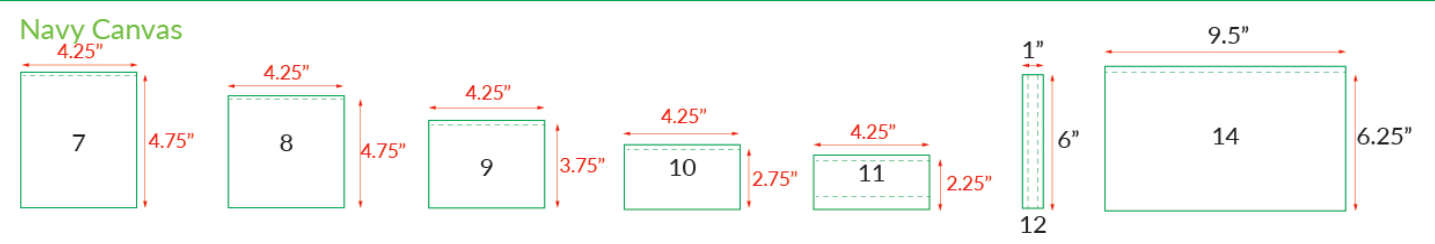
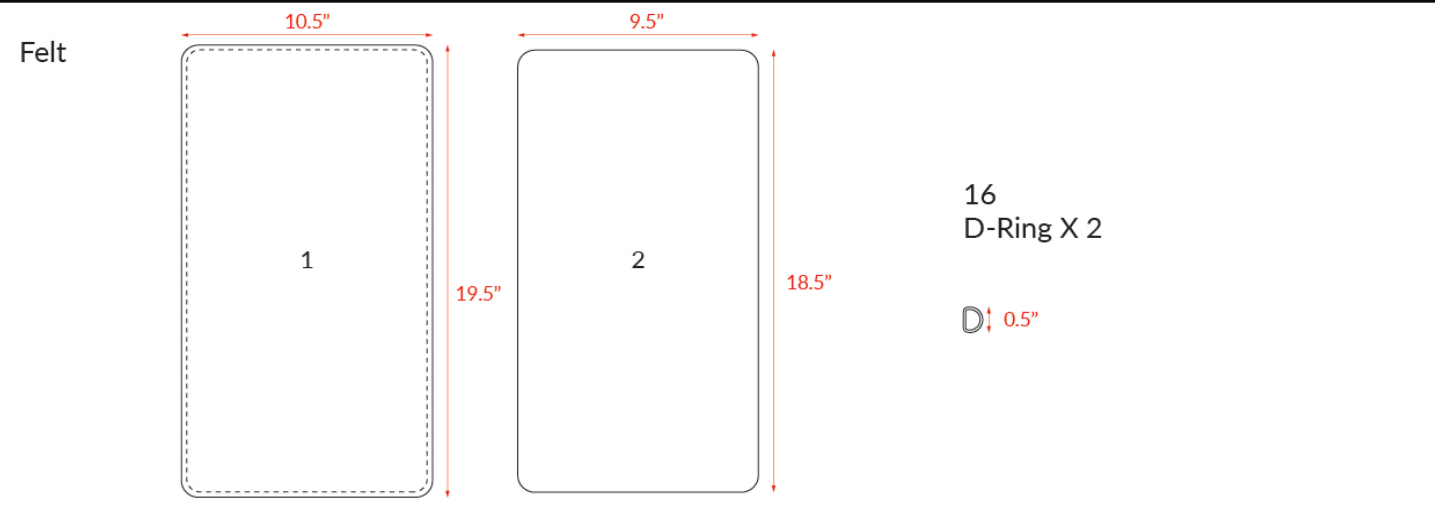
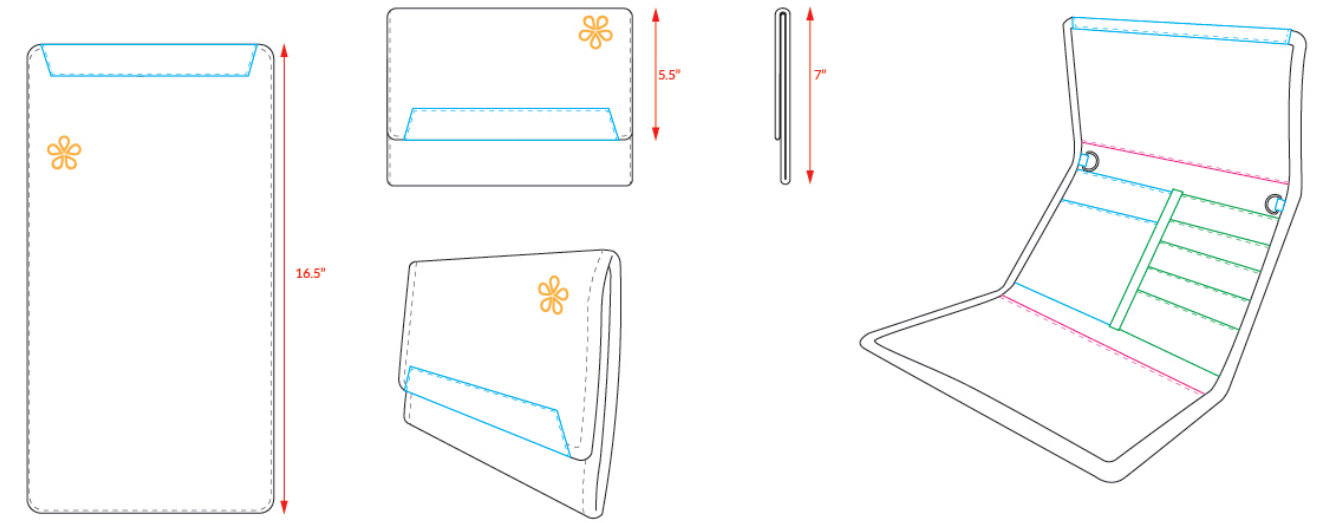
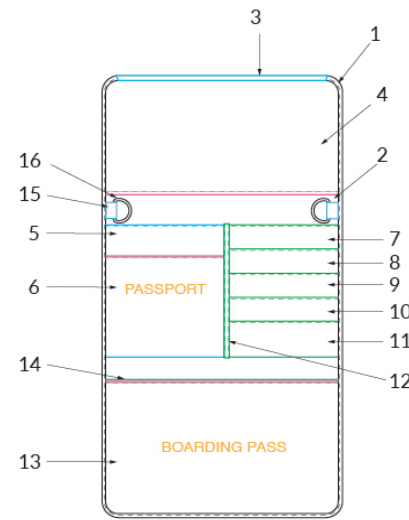
The identification tag is a method for individuals with dementia and their caregiver to receive additional help while traveling. It also helps airport personnel to identify and provide additional care to travelers that need it.

In addition to this, the creation of an aesthetically pleasing and non-clinical product represents people with dementia in the mainstream market.

Individual Wallet Pattern Drawing

Felt
 Navy Canvas
 Blue Polyurethane
 Clear Vinyl
 White embroidery

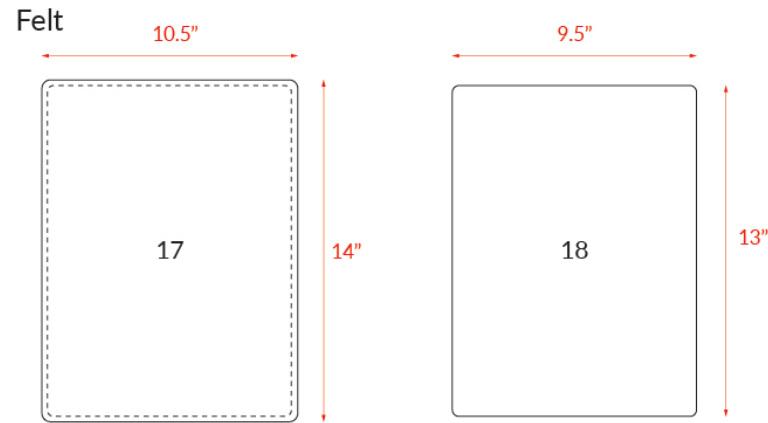
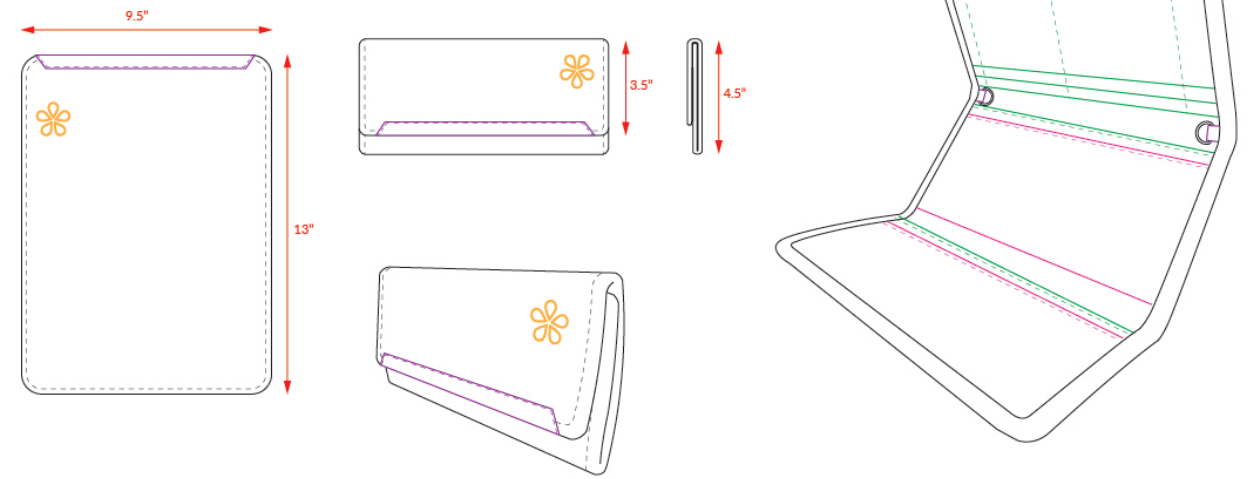
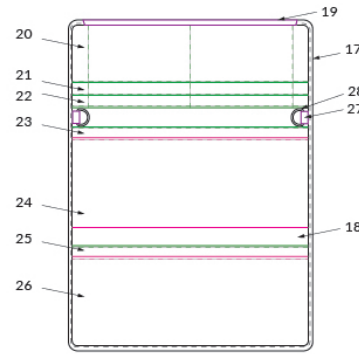
- 1) Outside felt (1/16" thickness)
- 2) Inside felt (1/8" thickness)
- 3) Polyurethane edge piece
- 4) Top vinyl pocket
- 5) Polyurethane detail
- 6) Middle vinyl pocket
- 7) Credit card pocket
- 8) Credit card pocket
- 9) Credit card pocket
- 10) Credit card pocket
- 11) Credit card pocket
- 12) Credit card pocket
- 13) Bottom vinyl pocket
- 14) Bottom canvas pocket
- 15) Loop for D-Ring
- 16) D-Ring



Caregiver Wallet

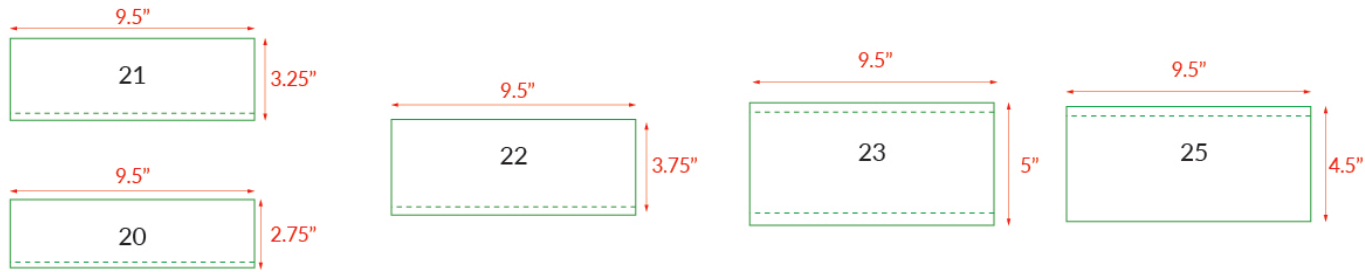
Felt
 Navy Canvas
 Leather
 Clear Vinyl
 White embroidery

- 17) Outside felt (1/16" thickness)
- 18) Inside felt (1/8" thickness)
- 19) Leather edge piece
- 20) Credit card pockets
- 21) Credit card pockets
- 22) Credit card pockets
- 23) Canvas pocket (top)
- 24) Vinyl pocket (top)
- 25) Canvas pocket (bottom)
- 26) Vinyl pocket (bottom)
- 27) D-Ring loops
- 28) D-Ring

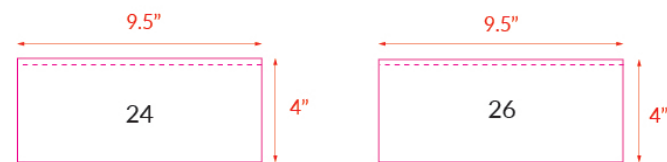


28
 D-Ring X 2
 D: 0.5"

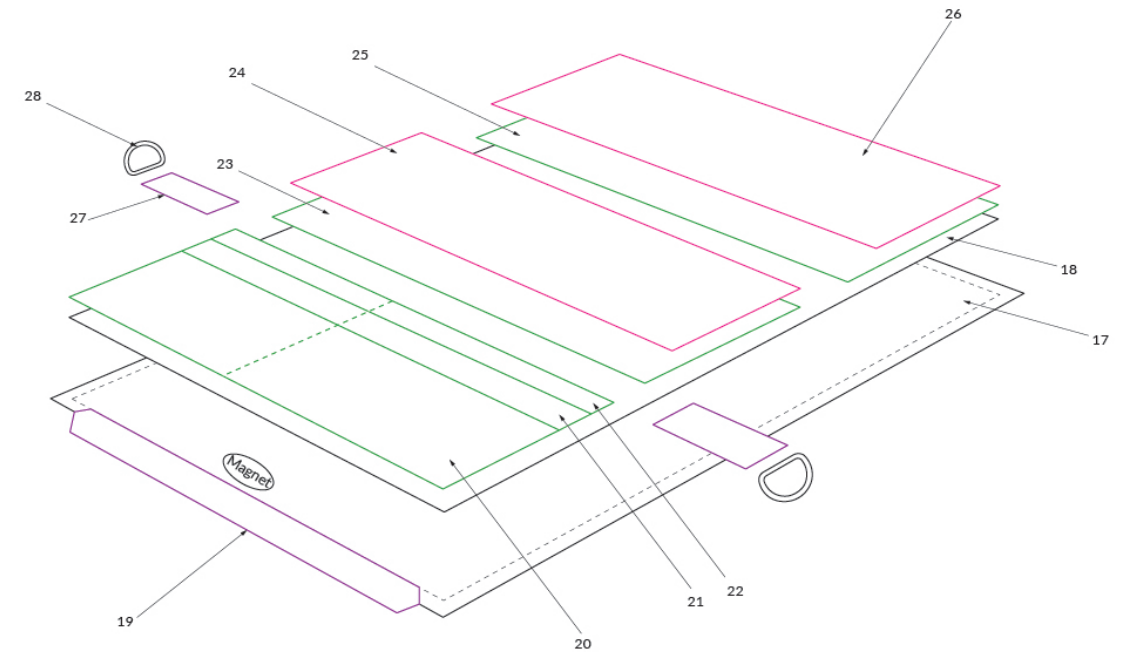
Navy Canvas



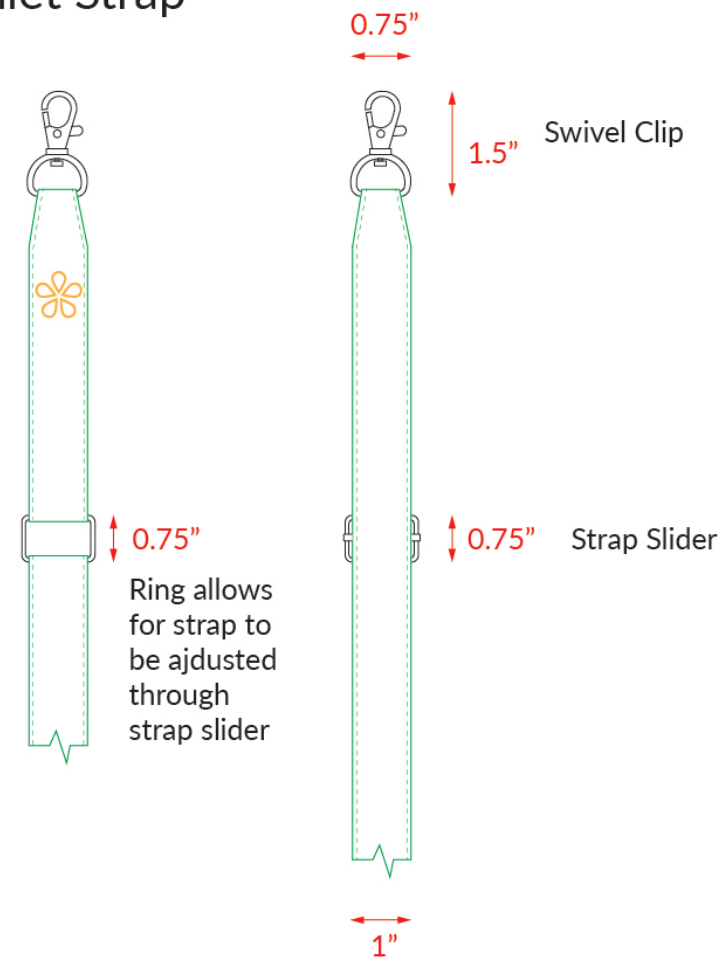
Clear Vinyl



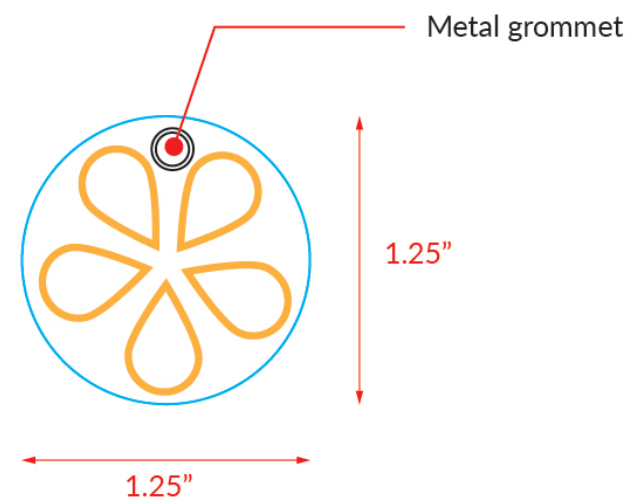
Leather



Wallet Strap



Identification Tag



References

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- Airlines and Airports are Providing Better Assistance to Passengers with Disabilities. (2019, August 2). AirGuide Business. Retrieved from https://link-gale-com.proxy.library.carleton.ca/apps/doc/A597684730/AONE?u=ocul_carleton&sid=AONE&xid=18447018
- Comas-Herrera, A., Knapp, M., Guerchet, M., Karagiannidou, M., & Prince, M. (n.d.). World Alzheimer Report 2016: Improving healthcare for people living with dementia. London.
- Sundling, C. (2015). Travel Behaviour Change in Older Travelers: Understanding Critical Reactions to Incidents Encountered in Public Transport. *International Journal of Environmental Research and Public Health*, 14741-14763.

Appendix

Card sorting results

Participant 1:

1. Passport
2. Home and destination address
3. Contact information of family
4. Cash
5. Boarding pass
6. Hotel information
7. Customs card
8. Credit card
9. Car rental

Participant 1:

1. Boarding pass
2. Passport
3. Customs card
4. Cash
5. Contact information of family
6. Hotel information
7. Credit card
8. Home and destination address

Participatory Research Table

APPENDIX

Details on Concept	Date	Where	Participants	What is being tested	Observation Code	Testing Code
Observations at check in and entrance to security	September 26 2016	YOW	N/A	Use of travel documents at check in and security	PMA	N/A
Discussion about air travel experiences	October 3 2019	Chartwell Retirement Residences	Focus group 5 participants	Perception of previous experiences	N/A	N/A
Focus group about carry on items	November 7 2019	Chartwell Retirement Residence	Focus group 5 participants	Discussion about valuable items and travel	CS	N/A
Shared experiences about travel	November 16 2019	Phone Interview	1 caregiver	Discussion about previous travel experiences	N/A	N/A
Initial dementia friendly travel wallet	November 21 2019	Bruyère Village	2 participants (Including 1 caregiver)	Acceptance of product for traveler	PDC	PP-SG
Functionality of travel wallet concept	January 24 2020	Bruyère Village	2 caregivers	Zipper, pockets	PDC CS	PP-SG
Usability by service providers	January 28 2020	YOW	CATSA, Security, Customs	Wallet as an indicator to staff	PDC TA	PP-SG
Passport Scanning at check-in kiosk	January 28 2020	YOW	3 Air Canada Staff	Acceptance of product by service providers	PDC TA	PP-SG
Acceptance of line of products	January 31 2020	Chartwell Retirement Residence	1 resident	Size, perceived value	PDC	PP-SG
Acceptance of line of products	February 7 2020	Walk around	Students, Industry Experts	Perception of product by public	PDC	PP-SG
Acceptance of dementia friendly travel wallet	February 11 2020	Walk around	Carefor Young Onset Dementia Group	Acceptance of product	PDC	PP-SG

PMA - Posture Movement Analysis

CS - Card Sorting

PDC - Presentation or Demonstration of Concepts

TA - Task Analysis

PP-SG - Physical Prototype - Soft Goods

Design Specification

USE AND OPERATION

Target Users

- Travelers with mild cognitive impairment, early stages of dementia
- Caregivers of people with cognitive impairment, dementia
- Service providers in the airport

Company or Stakeholders

- Security services (ex. CATSA)
- Customs officers
- Airline
- Airport staff
- Other travelers

Environment of Use

- Inside airport while traveling
- On board the aircraft
- Duration of travels

Description of Use

The products can be used independently or together to best fit the needs of the traveler.

Performance Requirements

The product aims to help travelers with dementia and their caregivers manage their personal belongings in three main ways:

- As a tool for identification for service providers
- As a tool for linking multiple belongings together
- To allow quick and easy access to present passport and boarding pass

Maintenance Requirements

- Durable over time for light use when traveling
- Easy to clean

Physical Ergonomic Requirements

- Pockets and openings should be easy to use with poor hand dexterity
- Pockets should allow clearance for passport and boarding pass
- Material of wallet should be unique to distinguish from other belongings
- Magnifying material to enlarge boarding pass text

Cognitive Ergonomic Requirements

- Passport and boarding pass should be clearly visible when wallet is opened
- Wallet should minimize the times object must be removed to reduce chances of misplacement
- Wallet should have strap to provide option of creating a wearable

TECHNICAL

Product Life Expectancy

This product should last the consumer at least 10 years, depending on the frequency of use. The materials should be resistant to wear over time.

Manufacturing Processes

The wallet should be made locally.

Size

- Dementia friendly wallet should allow space for an 8.5X11" paper folded in half
- The wallet should be small enough to fit in an average purse or briefcase
- The size should allow it to be a wearable through the use of a cross-body strap

Weight

- Wallet should be light to wear comfortably and heavy enough to notice its presence

Materials

Felt (1/8", and 1/16")	Leather and polyurethane for accents
Clear Vinyl	Hardware for strap
Navy Canvas	Magnets for closure

MARKETING

Competitors Products and Cost

Currently there is no competition for dementia friendly travel accessories. Travel wallets cost between \$20-\$100CAN depending on brand, quality, and materials.

Product Cost Target

The target cost is approximately \$50CAN and will vary depending on manufacturing processes and materials selected.

Packaging

Packaging of the product should be minimal to avoid waste. The point of purchase display should proudly advertise the dementia friendly design.

Aesthetics

The product should be desirable for anyone, with a sleek and minimal design. The product should not appear as a medical grade product.