

# Refining the Elysian E9X Cabin Concept

## Appendix



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# Appendix A

## User test form – Floorcontainer concept

### User test - Floorcontainer concept

#### General:

##### What is your gender?

- Man
- Woman
- Non-binary
- I prefer not to say

##### What is your age?

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65+

##### What is your height?

- <150 cm
- 150-159 cm
- 160-169 cm
- 170-179 cm
- 180-189 cm
- 190-199 cm
- > 200 cm

##### How often do you exercise per week on average

- Never
- Sometimes, but not regularly
- 1 x per week
- 2 x per week
- 3 x per week
- 4 x per week
- 5 x per week
- 6 x per week
- 7 x per week

##### How often do you fly per year?

- Never
- Rarely
- 1-2 times a year
- 3-5 times a year
- 6+ times a year

#### Stop here before the test

##### Non-directed test

Instructions:

Take the bag onto the plane and sit in one of the two designated seats. Do what you think is appropriate on this plane before the flight can begin.

 Be careful, the platform is slightly raised off the ground, watch your step.

##### On a scale of 1 to 10:

What did you think of the legroom?

#### The concept:

The idea is that you can place your suitcase in the compartment in front of you, eliminating the need for overhead bins → resulting in a more spacious cabin.



Was it clear to you what you had to do? Yes/No

How comfortable did you find this way of storing luggage?

Why did/didn't you find it comfortable/clear? 

#### 2nd test:

Say out loud what you are thinking and doing as you re-enter the cabin and put away your bag.

Which of the 3 distances do you prefer and why?

Which of the handles do you like better and why?

Which of the corner slides do you like better?

How comfortable do you find this system? On a scale of 1 to 10, and why?

How hygienic do you find this system? On a scale of 1 to 10, and why?

Do you have any further comments?

# Appendix B

## Depest-analysis: Demographic

### World population growth

In 2025, the global population exceeds 8 billion people (Population Matters, 2024). With roughly 83 million people being added to the world's population every year, the upward trend in population size is expected to continue, even assuming that fertility levels will continue to decline (United Nations, n.d.). Resulting in a world population around 10 billion in the year of 2065. This rapid growth is likely to place increasing pressure on infrastructure and mobility, among other things.

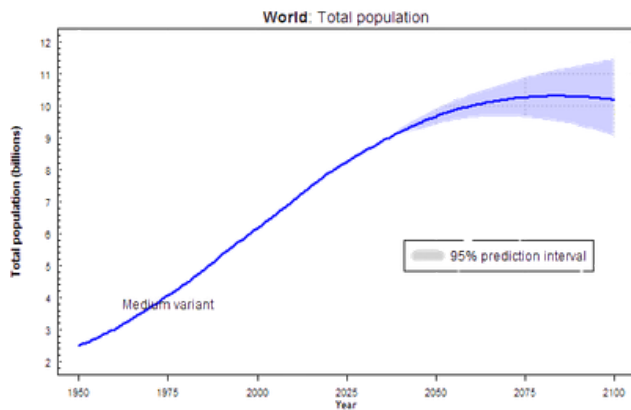


Figure: Total population of the world (World Population Prospects, n.d.)

### Ageing population

Due to declining fertility levels and people living longer, the percentage of elderly people in the population is increasing. This is referred to as aging and has a major impact on the aviation industry: diversity in body types is increasing, which can greatly influence design criteria such as accessibility and comfort.

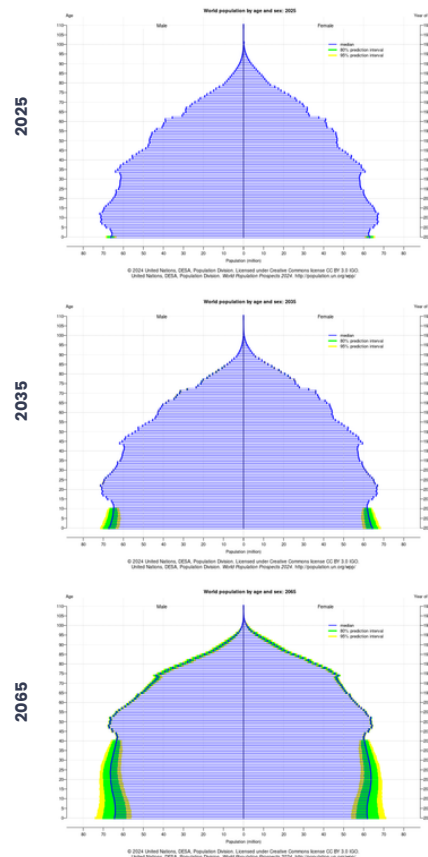
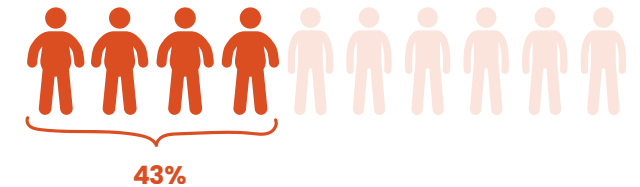


Figure: World population by age (World Population Prospects, n.d.)

### Growing overweight and obesity

“In 2022, 43% of adults aged 18 years and over were overweight and 16% were living with obesity.” (World Health Organization: WHO, 2025). “Assuming the continuation of historical trends, by 2050, we forecast that the total number of adults living with overweight and obesity will reach 3.80 billion over half of the likely global adult population at that time.” (GBD 2021 Adult BMI Collaborators, 2025).

2022:



2050:



Figure: Increasing bodyweight worldwide

# Appendix B

## Depest-analysis: Economic

### Economic growth in developing countries

The economy of the African region is growing by an average of 4.2% in 2025, while Asia is expected to grow by 4.5% (International Monetary Fund, n.d.). This expansion is driving exponential growth in the aviation industry across these regions. In Africa, air traffic is forecast to increase by approximately 6.0% annually, while South Asia and Southeast Asia are expected to experience even higher growth rates of around 7.0% per year (Boeing – Commercial Market Outlook, n.d.).

AFRICA										1,205	1,680	6.0%
CHINA										9,000	9,755	5.3%
EURASIA										8,910	10,680	3.1%
LATIN AMERICA										2,365	3,020	4.3%
MIDDLE EAST										2,950	3,475	4.4%
NORTH AMERICA										8,680	10,475	2.8%
NORTHEAST ASIA										1,515	1,635	2.4%
OCEANIA										3,800	3,895	3.0%
SOUTH ASIA										3,290	2,295	7.0%
SOUTHEAST ASIA										4,885	5,100	7.0%

Figure: Aviation growth in different regions (Boeing – Commercial Market Outlook, n.d.)

### Market for aerospace composites is growing

The strong growth in demand for lightweight composites for aviation may lead to higher material costs and competition for raw materials (Kaye, 2025). This makes material selection even more important from an economic perspective.

### Rising ticket prices due to sustainability costs

Traditional aviation is trying to reduce emissions, but this is expensive and will affect ticket prices (Granatstein & Ng, 2021). This price increase may influence who will be able to fly in the future.

# Appendix B

## Depest-analysis: Social-cultural

### Rise of Weight Loss Medicine

The GLP-1 weight loss drug market has grown by 300% between 2020 and 2023 (Aziz, 2024). This includes, for example, the drug Ozempic, which reduces users' desire to eat by 20–30%. This could have a major impact on the average body type in the future, but there is still little clarity about the long-term health impacts of these drugs (VML Intelligence, 2025).



Figure: Ozempic medicine (What Happens to Your Body on Ozempic?, n.d.)

While the increasing use of weight-loss medications may lead to a decline in average body weight over time, the long-term effects remain uncertain. Adoption is likely to vary significantly across regions, especially in countries where rising prosperity is only now contributing to higher obesity rates. Any projections should therefore be interpreted with caution.

### Godlike journeys & gen alpha vacations

Epic journeys and complex itineraries that offer learning, discovery, adventure, and self-actualization were once the preserve of the 1%. Now they are on the calendar for affluent families as parents seek to educate and entertain kids on vacation (VML Intelligence, 2025). Hilton's "2025 Trends Report" found that 70% of global respondents who travel with their children pick their vacation destination based on their kids' needs and interests. The majority (63%) also let their kids pick where they dine, while 56% choose hotels based on youth programming options. It is no longer enough to cater to the needs of the parents—travel brands need to very specifically meet gen alpha's demands (VML Intelligence, 2025)..

Airlines are increasingly expected to provide a smoother and more family-friendly travel experience. As societal focus on child comfort and well-being grows, passengers may anticipate better accommodation for young travellers, as well as a more coherent and enjoyable overall cabin experience.

### Individualism

People are increasingly focusing on themselves (Ipsos, 2024). Factors such as AI and algorithms that create personalized experiences, exponential technologies that reduce required work, and on-demand learning further accelerate this trend (Olsen, 2021). As a result, the number of solo travellers is expected to grow. Improving the solo travel experience will require enhanced connectivity, community support, better safety measures, and more personalized services (Scoot, n.d.). Since 2010, the share of people living alone has also risen in 26 out of 30 high-income countries (The Economist, 2025).

### Artful stays

As the intersection of art and hospitality deepens, leading hotels and travel experience providers are redefining what it means to provide a memorable stay. Brands are moving beyond standard luxury to collaborate with artists, transforming spaces into immersive, art-filled environments that engage guests on an emotional and sensory level. Artful stays reflects a broader shift in the hospitality industry toward more personalized and emotionally resonant experiences. By partnering with artists and pushing the boundaries of design, these hotels and travel experiences meet the growing desire among travelers for unique, meaningful stays (VML Intelligence, 2025).



Figure: Hotel lobby designed by HIMACS solid surface (Admin, 2024)

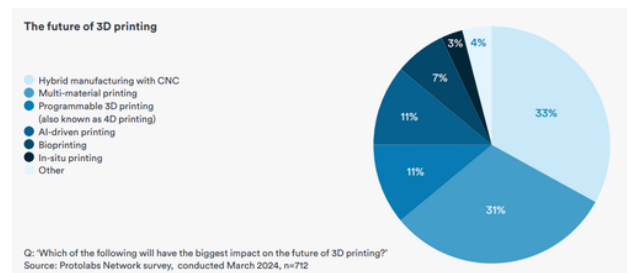
As consumers are surrounded by more refined, design-driven environments in everyday life, such as modern cars, hotels, retail spaces, and public transport, they may begin to expect similarly attractive and thoughtfully designed interiors in aircraft cabins. This trend raises the bar for visual quality, ambience, and material expression in aviation.

# Appendix B

## Depest-analysis: Technological

### 3D printing developments

The market size of 3D-printing is \$28.07 billion in 2024 and expected to grow reach \$57.1 billion by the end of 2028. Because of that growth, the industry is investing in creating different ways of using 3D-printing and using different (new) materials, from elasticity to conductivity, biocompatibility, and reduced UV sensitivity and metal. (3D printing trend report, Protolabs Network, n.d.).



**Figure:** The future of 3D printing (3D printing trend report, Protolabs Network, n.d.)

### Development of materials

NASA has developed a new 3D-printed oxide-dispersion-strengthened (ODS) metal alloy that can withstand temperatures above 2,000°F, offering significantly improved strength and durability for aerospace components (ASME, Eight New Materials That Could Impact Manufacturing, n.d.).

Researchers at the University of California created an ultralight metallic microlattice made of 99.99% air, with nanoscale hollow tubes that make it extremely lightweight yet strong and resistant to heat, pressure, and vibration (ASME, Eight New Materials That Could Impact Manufacturing, n.d.).

### High-speed rail

High-speed trains are likely to offer lower prices, shorter door-to-door travel times, and more space per passenger than airplanes for short distances in the future (ALG, 2024). This will force the aviation industry to improve cabin comfort and the overall experience in order to remain competitive.

## Ecological

### Repair, Reuse, Reduce, Recycle

The Dutch economy must be completely circular by 2050 in order to halt climate change (Repair, Reuse, Reduce, Recycle: Deze 4 Experts Helpen De Circulaire Economie Te Realiseren, n.d.). More and more companies are focusing on creating products that are easier to repair, recycle, or reuse, partly because EU legislation requires this of the market (Circular Economy: Definition, Importance, and Benefits | Topics | European Parliament, n.d.).

## Political/legal

### Political uncertainty surrounding climate policy

An ambitious implementation of the European Green Deal could contribute to increasing the EU's long-term resilience, security, and prosperity. The stakes are high, and so are the social, economic, and geopolitical challenges. In addition, rising radical right populism could further complicate the continuous ambition and implementation of the Fit for 55 and European Green Deal ("The European Green Deal in the Face of Rising Radical Right-wing Populism," 2024).

# Appendix C

## Aviation industry trends analysis

### Aviation's 2050 goal

The aviation sector has set a goal for 2050: to achieve a net-zero CO2 emissions from global operations in 2050, aligning with the objectives of the Paris Agreement (enviro.aero, 2021). The aviation sector includes airlines, airports, air-navigation service providers and manufacturers and net-zero means reducing the amount of CO2 produced and compensating the amount that cannot be reduced.

### Different classes

Although fewer First Class seats are being sold, new classes are emerging. Airlines are increasing their mid-range class. Emirates announced plans to re-vamp some of its airplanes to include more premium economy seats. This suggests that more travelers are shifting to the middle of the market (VML Intelligence, 2025). Some airlines now operate up to four classes. "Some industries, even aviation itself, have evolved business models that are very user-centric." (Pelanda, 2018).

### Growth in demand for single-aisle airplanes

Boeing expects a significant growth in single-aisle airplanes that are operating in 2044.

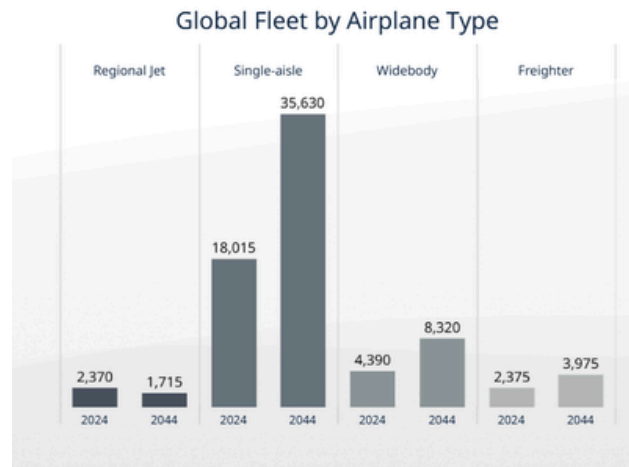


Figure: Global Fleet by Airplane Type (Boeing – Commercial Market Outlook, n.d.)

### Windowless aircrafts

In the same study, envisioned in figure 15 there is a concept for a "biopolymer membrane", which allows to turn opaque or transparent on command, making regular windows unnecessary. At the same time these new structures, both of the seat and the fuselage, are much lighter and therefore more fuel efficient when it comes to economic aspects (The Economist, 2015). For the lack of windows, A3 has installed a "windowless technology", which are OLED screens in the walls of each module (CNN Money, 2016). (Pelanda, 2018).

# Appendix C

## Aviation industry trends analysis

### **Cabin OK initiative**

Carry-on baggage requirements are not the same across all airlines. The IATA (International Air Transport Association) wanted to make this clearer and easier for passengers with an initiative called Cabin OK. It included guidelines for carry-on bags to ensure that every passenger could fit a carry-on in the overhead bins (Ramakrishnan & MeenaR, 2015):

21.5 inches x 13.5 inches x 7.5 inches = 54.61 cm x 34.29 cm x 19.05 cm

However, the initiative was paused after:

“Our focus is on providing travelers with an option that would lead to a simplified and better experience. While many welcomed the Cabin OK initiative, significant concerns were expressed in North America.” “Today we are pausing the rollout and launching a comprehensive reassessment of the Cabin OK program with plans to further engage program participants, the rest of our members, and other key stakeholders,” said Tom Windmuller, senior vice president Airport, Passenger, Cargo and Security (APCS), IATA.

However, several airlines had already expressed their intention to join the initiative: Avianca, Azul, Caribbean, Cathay Pacific, China Eastern, China Southern, Emirates, Lufthansa, and Qatar Airways, and according to Windmuller, 30 other airlines were likely to follow. Air Canada and WestJet stated they would stick to their current carry-on policies.

That same year, Boeing introduced the “space bins” that could fit enough luggage without reducing its size.

While the benefits of a widespread carry-on shrinkage are still debatable, there is one side effect that is not: every 5.5 pounds reduced on an airplane is equivalent to one ton less carbon emissions per year (Ku, 2015) .

# Appendix D

## Evolving passenger expectations

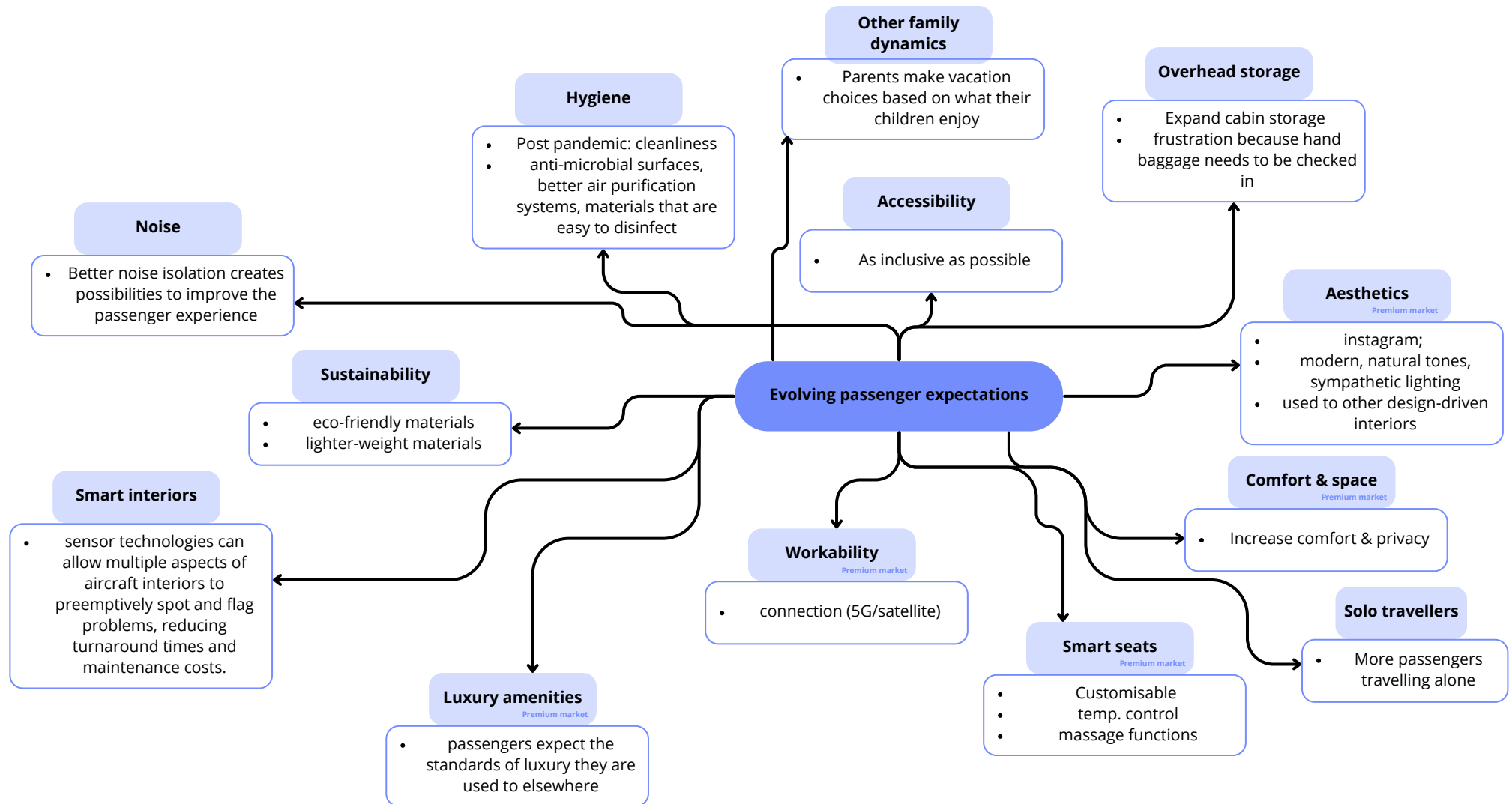


Figure: Evolving passenger expectations based on trend analysis and KPMG research (KPMG & KPMG International Limited, 2025)

# Appendix E

## Interview set-up cabin crew

### Interview with Cabin Crew Semi-structured Interviews

**Target group:** Cabin crew

**Goal:** To gain insights into experiences, problems, and frustrations related to the cabin interior, with a focus on luggage storage.

**Duration:** 60-90 minutes

#### Introduction

- Thank you for participating.
- What is this for?
- The interview will be recorded.
- Any objections before we start?

#### Background

Key Questions:

- Can you tell me about your experience as a flight attendant? How long have you been flying?
- What does a typical flight look like for you, in terms of your duties?

Probes:

- What are the most stressful moments for you?
- How do you experience the boarding process?

#### Luggage Bins & Usage

Key Questions:

- Can you describe how passengers typically interact with the luggage bins during boarding?
- What problems or mistakes do you often see?
- Can you recall a specific incident when something went wrong?

Probes:

- What exactly did the passengers do wrong?
- How did you or your colleagues respond?
- What were the consequences (e.g., delays, safety risks, passenger frustration)?

#### Safety & Incidents

Key Questions:

- Have you ever experienced luggage falling from a bin or any accidents related to luggage storage?
- How often does this happen?

Probes:

- What makes it dangerous?
- How was it handled?

#### Frustrations & Annoyances

Key Questions:

- What do you find annoying or frustrating about the current cabin interior?
- Are there aspects that make your job more difficult?

Probes:

- Are these recurring issues?
- How do these problems affect your workday or interactions with passengers?

#### Future & Improvements

Key Questions:

- If you could redesign the cabin, what would you change first?
- How would you envision the ideal luggage bin?
- Have you ever seen a better solution at another airline?

Probes:

- Why did that solution work better?
- How would it help you or the passengers?

#### Evaluating Floorcontainer concept

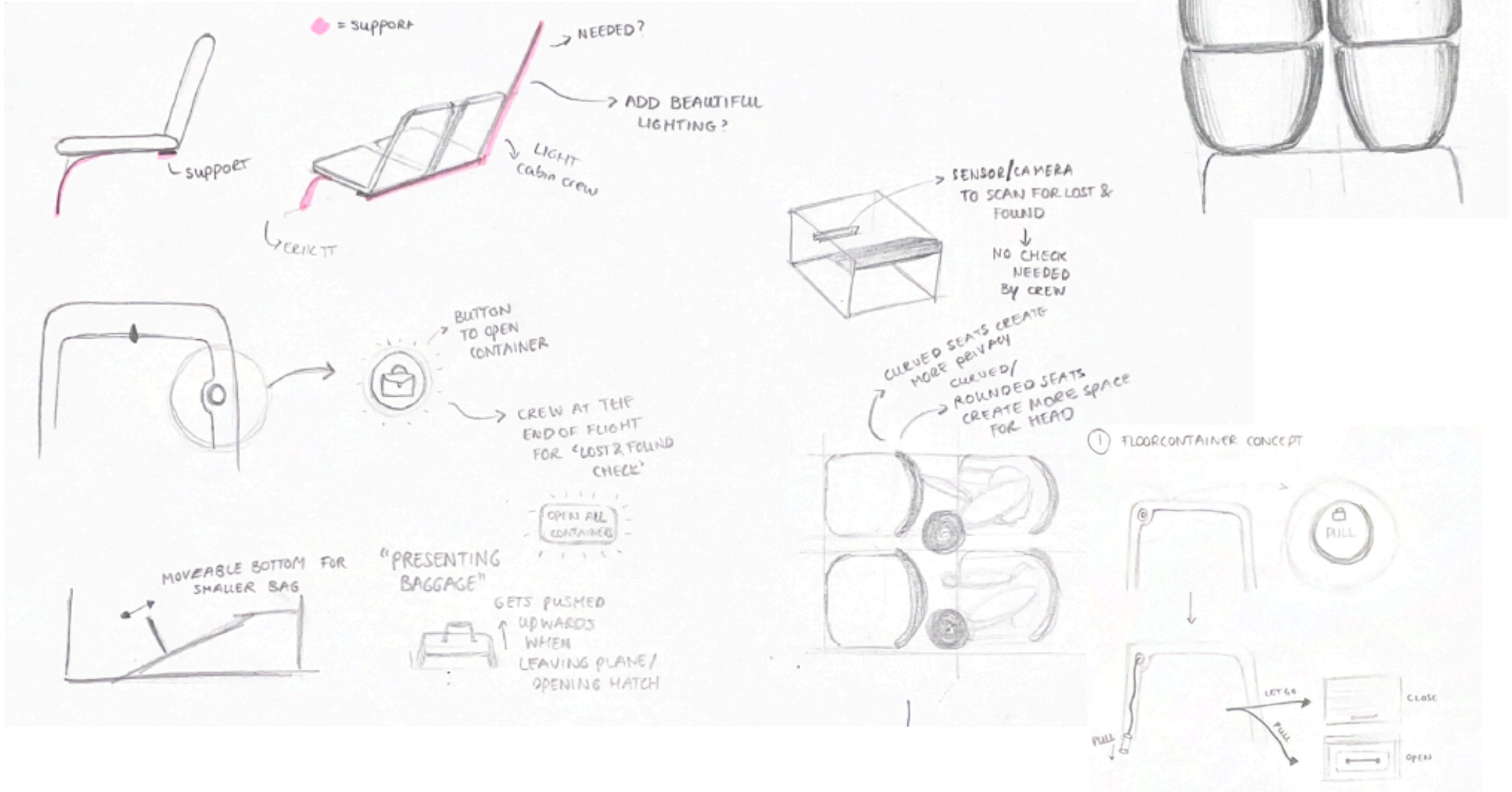
- Show concept & explain
- What do you think? Positively & Negatively

#### Closing

- Is there anything I haven't asked that you think is important to share?
- Thank you for your time and input.

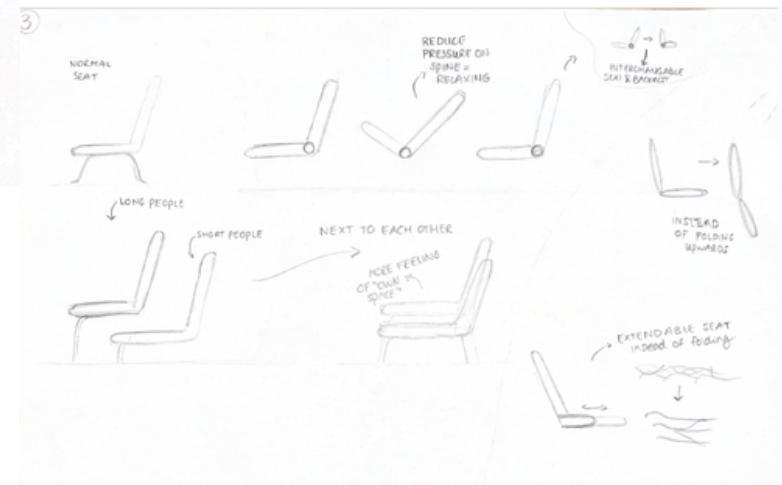
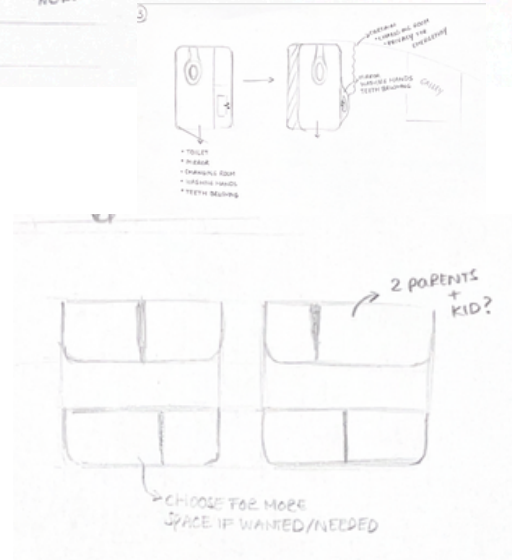
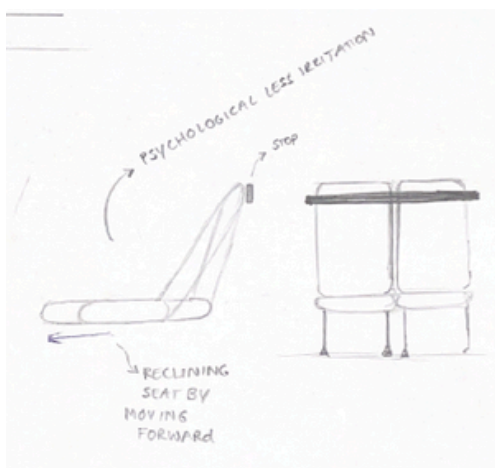
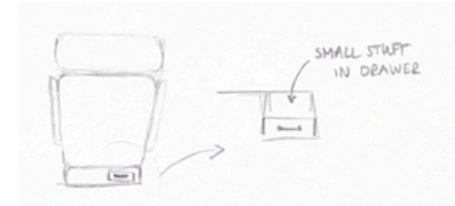
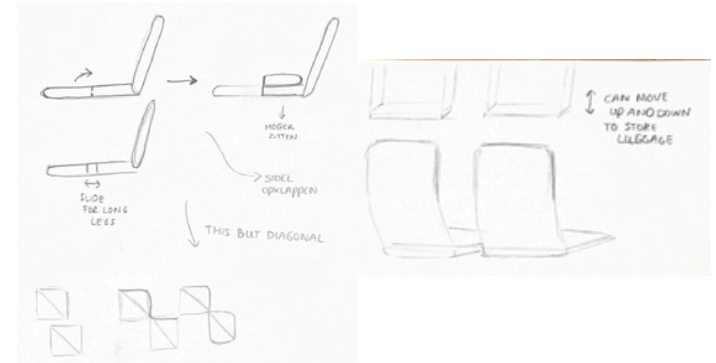
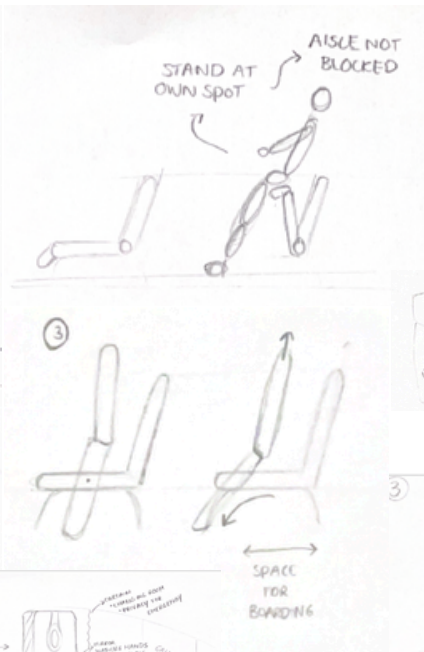
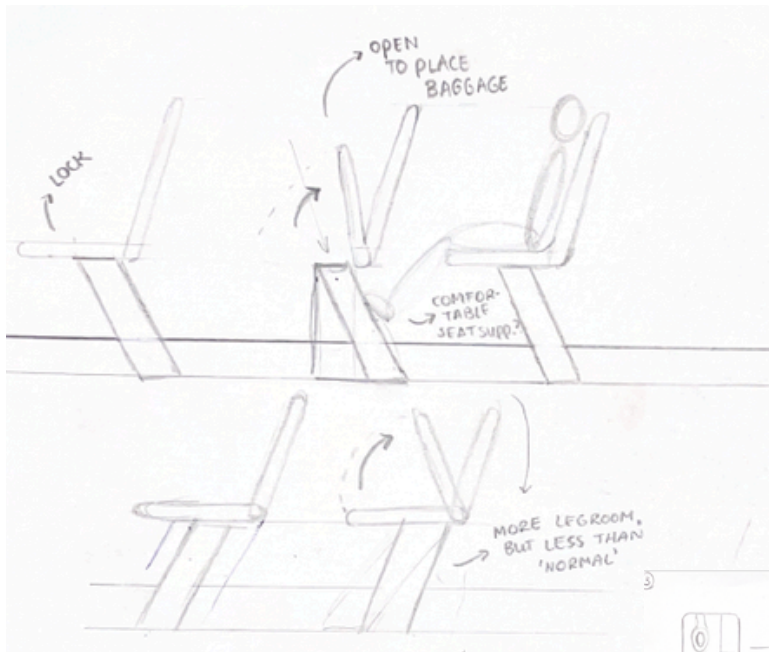
# Appendix F

## Ideation, direction 1



# Appendix F

## Ideation, direction 2 & 3





# Appendix H

Low-key prototyping for functionality



# Appendix I

## Research comfort – Rebel Aero seat

A study was conducted on the comfort of the Rebel Aero seat in different seat pitches. The study highlights aspects that had either a significant or minimal impact on a comfortable experience.

It is noted that the following aspects were rarely mentioned (so they are considered positive) and will not be adjusted in the console concept:

- Seat width

The aspects that generally hindered a comfortable experience and may potentially be adjusted are:

- My neighbor's elbow (staggered seat configuration, so slightly different)
- My neighbor's legs (staggered seat configuration, so slightly different)
- Hardness of my seat
- Backrest angle of my seat

What are the main obstacles restricting your comfort experience? (multiple answers possible)

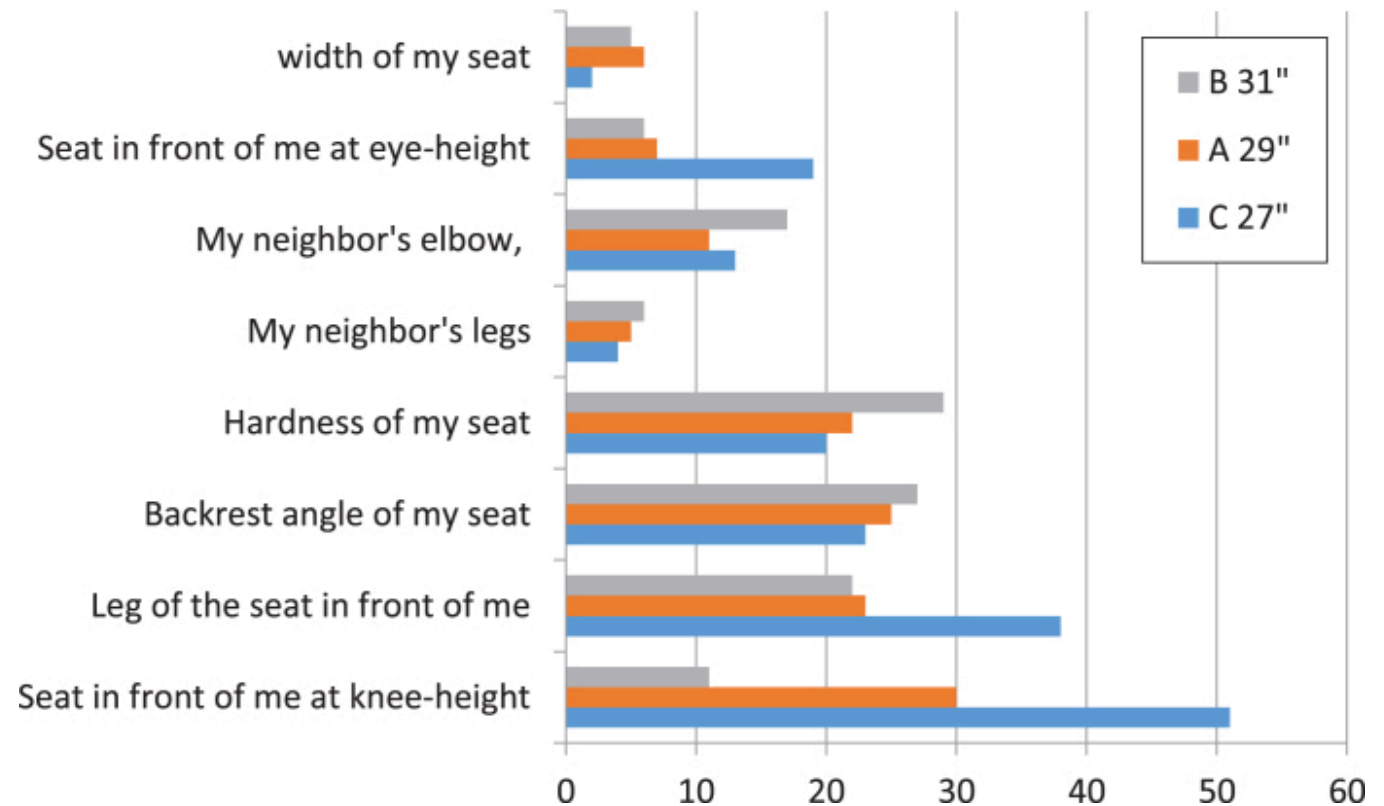


Figure: Comfort research rebel seat (Liu et al, 2020)

# Appendix J

## Suitcases

### Market dynamics of airlines on luggage manufacturers

Companies that sell suitcases and bags are responding to the requirements of airlines. More and more airlines are charging for carry-on luggage in the cabin, and the only item you can bring for free in the cabin is a small piece of hand luggage around 40 x 30 x 15 cm or 40 x 30 x 20 cm.

The market has responded by selling suitcases and bags with exactly these dimensions:



**Figure:** Underseat Trolley FRENKY (40 x 30 x 20 cm)



**Figure:** Narbonne 3.0 extra small (40 x 30 x 20 cm)



**Figure:** Handbagage tas (40 x 30 x 15 cm)

At the same time, it is very inconvenient to introduce requirements for which the passenger cannot get any suitcase. It is important to take this into account. For this, it is checked whether there are already suitcases with the dimensions: 20 x 35 x 55 cm.

This turns out to be the case:



**Figure:** Decent Tourister Cabin Trolley (55 x 35 x 20 cm)



**Figure :** Redoliz Essentials (55 x 35 x 20 cm)

For Nomad class:



**Figure:** Jeans Blauw kleine koffer (40 x 30 x 20 cm)

For the Nomad Class, it is currently more difficult to find a hardcase suitcase that meets the exact dimensions, although there are many other bags that fit within these sizes.



**Figure:** Eastpak Carry-pack (53 x 29 x 21 cm)

# Appendix K

## User test form – seat pitch test

### Testen evacuatie/toilet



### Lengte & schoenmaat

	Lichaamslengte	Schoenmaat
Testpersoon 1		
Testpersoon 2		
Testpersoon 3		
Testpersoon 4		
Testpersoon 5		

### Testen evacuatie/toilet

#### Tijd (opstaan tot volledig in het gangpad)

	Zonder box	32"	33"	34"	35"	35.5"
Testpersoon 1						
Testpersoon 2						
Testpersoon 3						
Testpersoon 4						
Testpersoon 5						

#### Comfort cijfer

	Zonder box	32"	33"	34"	35"	35.5"
Testpersoon 1						
Testpersoon 2						
Testpersoon 3						
Testpersoon 4						
Testpersoon 5						

# Appendix L

## Construction Aircraft

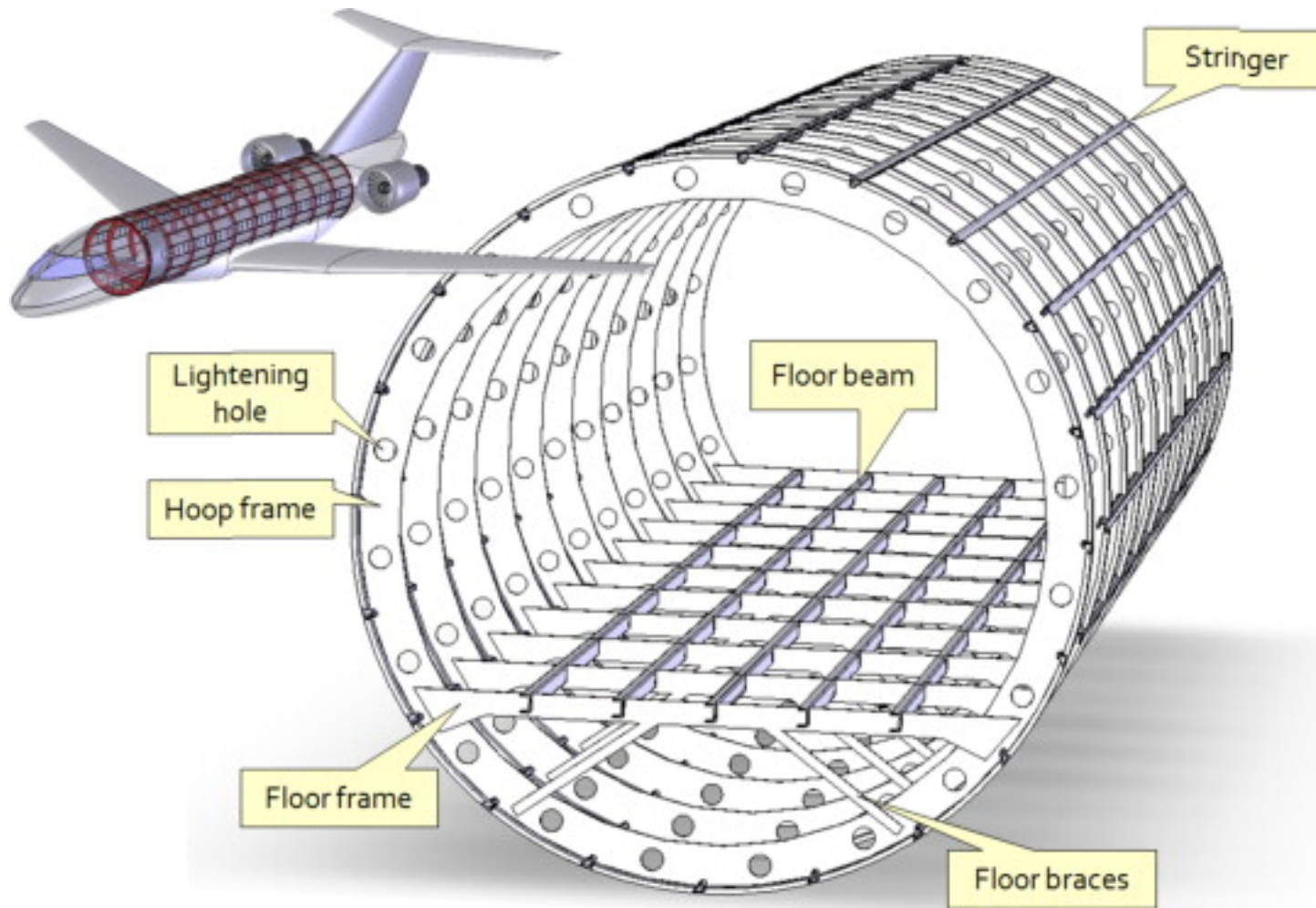
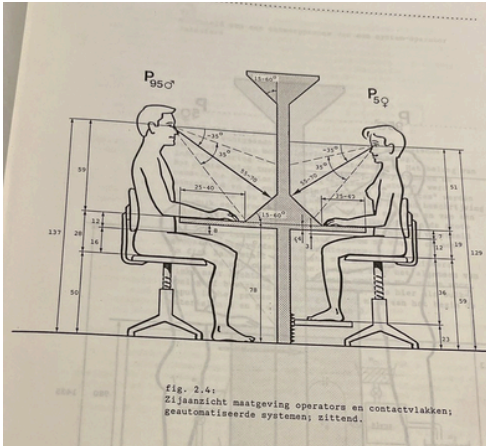


Figure: Aircraft construction (Chatterjee & Bhowmik, 2019)

# Appendix L

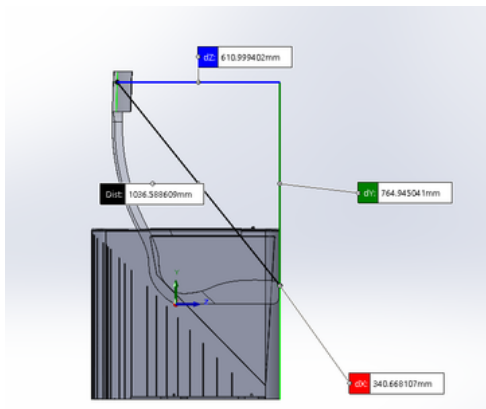
## Placement of screen

The angle at which a person comfortably looks at a screen was derived from ergonomic studies.



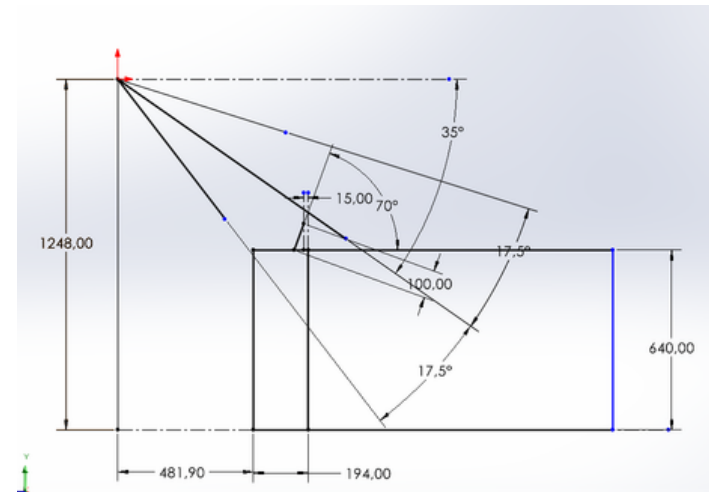
**Figure:** Side view measurements of operators and contact surfaces, seated (Buurman et al., 1989).

Back of the headrest to the front of the console + space between the box.

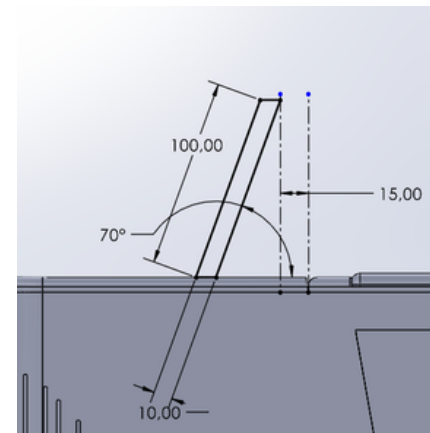


**Figure:** Side view measurements of back of headrest to front of console

And then the average head thickness = p5:  
 165, p95: 205 =  $185/5 \times 4$  (the eyes are approximately at 4/5 of the side of the head), = 148 from the headrest.



**Figure:** Side view dimensions of determining the screen orientation



**Figure:** Final dimensions of the screen

# Appendix M

## Visual Quality scan framework design language 1,2,3

1

**Serene Flow**  
Calm & Careless

2

**Structural Confidence**  
Adventurous & Fearless

3

**Warm future**  
Honest & Friendly

1 Serene Flow Calm & Careless		2 Structural Confidence Adventurous & Fearless		3 Warm future Honest & Friendly	
<p><b>Material combination</b></p> <ul style="list-style-type: none"> <li>• Matte polymers</li> <li>• Light wood</li> <li>• Soft textiles</li> <li>• Focus on refined, premium materials</li> <li>• Seamless transition - soft to hard materials</li> </ul>	<p><b>Form composition</b></p> <ul style="list-style-type: none"> <li>• Continuous surfaces with large radi</li> <li>• Gentle, rounded forms, minimal interruptions</li> </ul>	<p><b>Material combination</b></p> <ul style="list-style-type: none"> <li>• High material contrast</li> <li>• Metal</li> <li>• Technical polymers</li> <li>• Dark wood</li> <li>• Carbon-look accents</li> </ul>	<p><b>Form composition</b></p> <ul style="list-style-type: none"> <li>• Visible segmentation</li> <li>• Clear transitions</li> <li>• Readable structure</li> </ul>	<p><b>Material combination</b></p> <ul style="list-style-type: none"> <li>• Polymer and textile combinations</li> <li>• Familiar and understandable materials</li> <li>• No high-tech look</li> </ul>	<p><b>Form composition</b></p> <ul style="list-style-type: none"> <li>• Clear, simple volumes</li> <li>• Lightly rounded shapes</li> <li>• Visible logical structure</li> </ul>
<p><b>Texture</b></p> <ul style="list-style-type: none"> <li>• Subtle textures</li> <li>• Soft &amp; tactile (chill om aan te raken)</li> <li>• Refined</li> </ul>	<p><b>Detailing</b></p> <ul style="list-style-type: none"> <li>• Flush seams - seamless integration</li> <li>• Details that enhance the overall elegance</li> </ul>	<p><b>Texture</b></p> <ul style="list-style-type: none"> <li>• Functional textures</li> <li>• Distinct transitions</li> <li>• Coarser textures</li> </ul>	<p><b>Detailing</b></p> <ul style="list-style-type: none"> <li>• Visible edges</li> <li>• Expressive lines</li> <li>• Functional details on display</li> </ul>	<p><b>Texture</b></p> <ul style="list-style-type: none"> <li>• Visible but calm textures</li> <li>• Warm and inviting feel</li> </ul>	<p><b>Detailing</b></p> <ul style="list-style-type: none"> <li>• Simple visible details</li> <li>• No hidden Complexity</li> <li>• "What you see is what you get"</li> <li>• Fun</li> <li>• Rounded</li> </ul>
<p><b>Color treatment</b></p> <ul style="list-style-type: none"> <li>• Calm and peaceful color palette</li> <li>• Neutral base tones</li> <li>• Ton-sur-ton variations</li> <li>• Maximum of one soft accent colour</li> </ul>	<p><b>Rhythm</b></p> <ul style="list-style-type: none"> <li>• Gentle, flowing design rhythm</li> <li>• Soft transitions between elements</li> <li>• Visual harmony that guides the eye through the space</li> </ul>	<p><b>Color treatment</b></p> <ul style="list-style-type: none"> <li>• Neutral base</li> <li>• Contrasting functional accents</li> <li>• Color for orientation</li> <li>• Dark, but not too dark</li> </ul>	<p><b>Rhythm</b></p> <ul style="list-style-type: none"> <li>• Modular rhythm</li> <li>• Faster repetition</li> <li>• Technical patterns</li> </ul>	<p><b>Color treatment</b></p> <ul style="list-style-type: none"> <li>• Warm neutral colors</li> <li>• Slightly more color than in DLI</li> <li>• No strong contrasts, but not fluent</li> </ul>	<p><b>Rhythm</b></p> <ul style="list-style-type: none"> <li>• Regular</li> <li>• Human rhythm</li> <li>• Repetition supports recognition</li> <li>• Consistent Design that feels reliable</li> </ul>

Figure: Visual Quality Scan framework per design language

# Appendix M

## Visual Quality scan framework design language 4

4

### Electric serenity

#### Material combination

- Lightweight composites
- Soft-touch textiles on contact areas.
- Subtle metallic accents (brushed, not glossy)
- Premium

#### Form composition

- Clear and readable structure
- Smooth, slightly rounded edges
- Balanced segmentation
- Reduced visual mass compared to DL2

#### Texture

- Refined functional textures
- Subtle contrast between technical and textile materials
- No coarse or overly industrial finishes

#### Detailing

- Visible but refined edges
- Functional details
- Expressive lines softened
- Clean, precise finishing
- Luxurious

#### Color treatment

- Light neutral base
- Slightly warm
- Electric-inspired accent tones

#### Rhythm

- Modular rhythm
- Regularly repetition

# Appendix M

## Moodboard design language 4

# Electric Serenity

Confident, Warm, Sustainable

Expressive lines  
softened

Regularly  
repetition

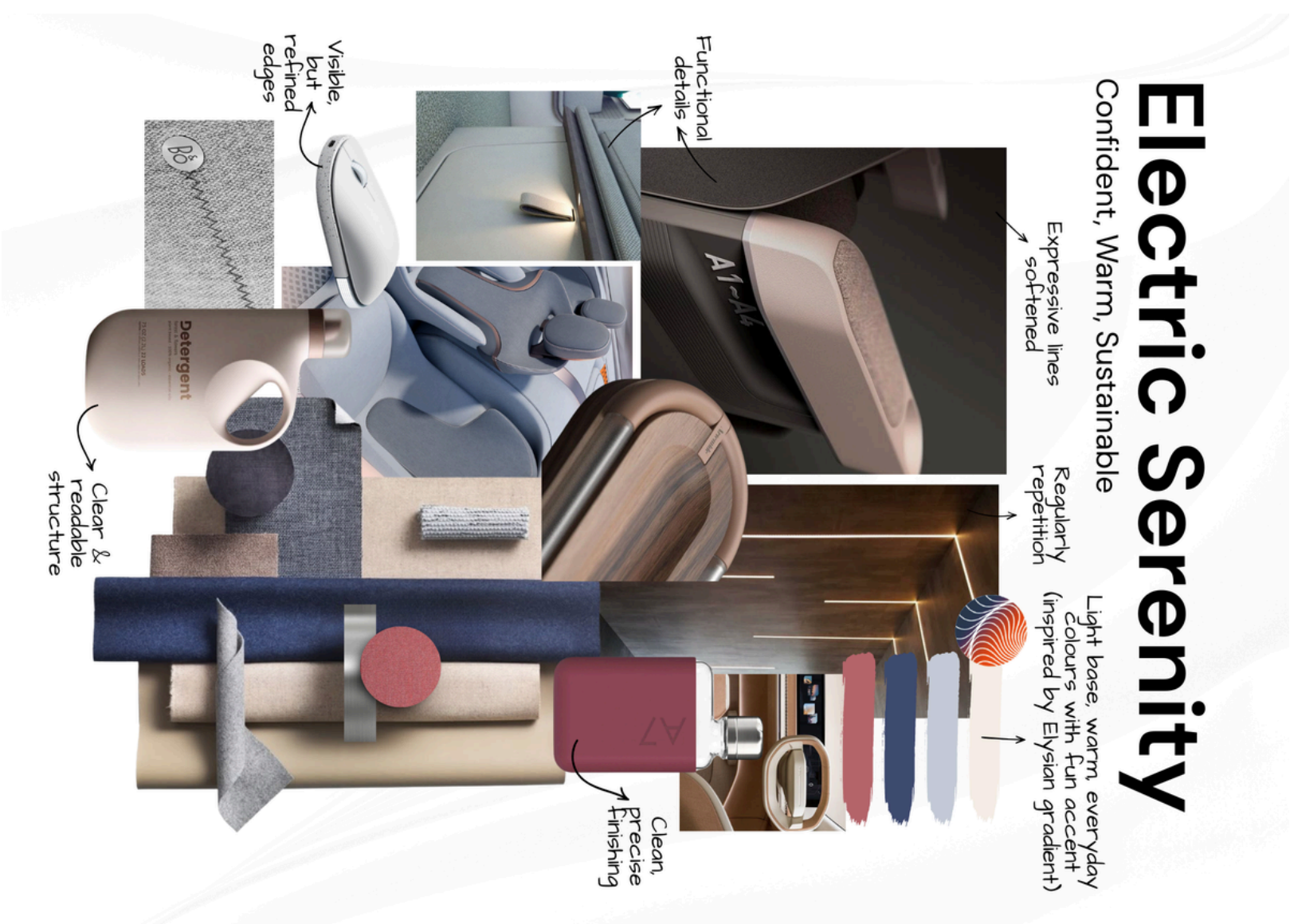
Light base, warm, everyday  
colours with fun accent  
(inspired by Elysian gradient)

Functional  
details

Visible,  
but  
refined  
edges

Clean,  
Precise  
finishing

Clear &  
readable  
structure



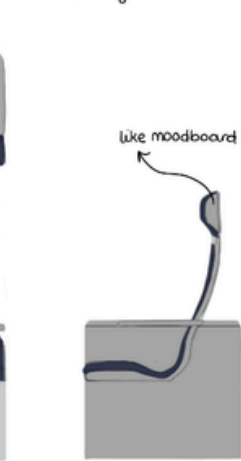
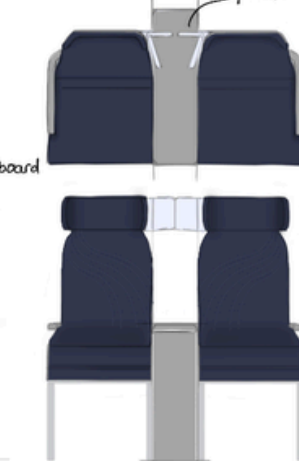
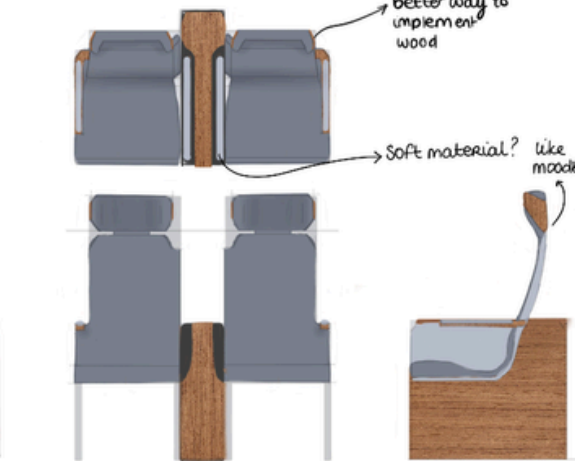
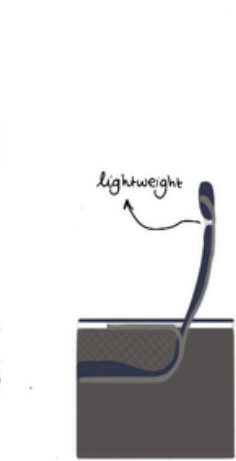
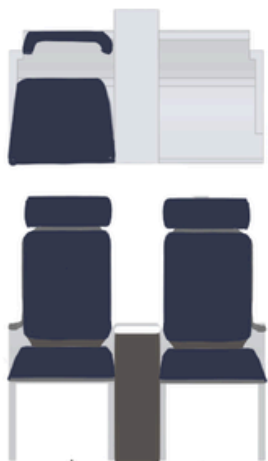
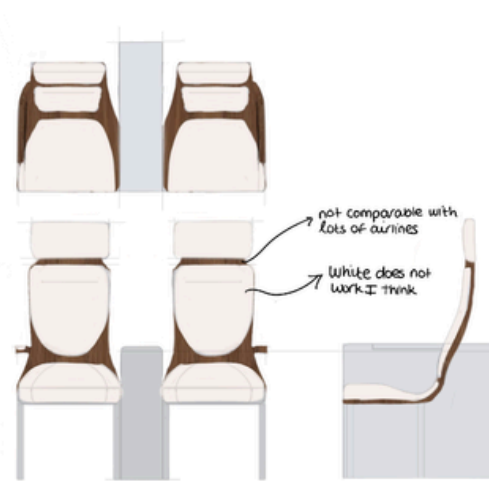
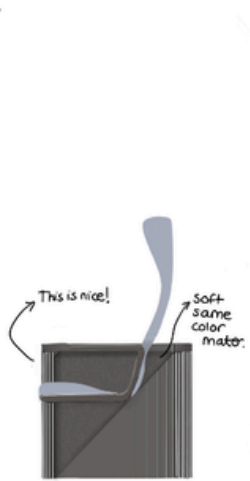
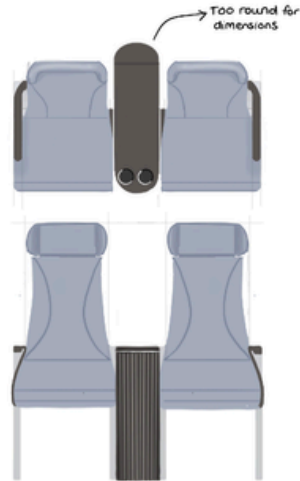
# Appendix M

## Moodboard sketching



# Appendix M

## Moodboard inspired sketching



# Appendix N

## User test for evaluating SkyConsole

Case: Suitcase/Backpack

### User test - Skyconsole concept

#### General:

##### What is your gender?

- Male
- Female
- Non-binary
- I prefer not to say

##### What is your age?

- 18-24
- 25-34
- 35-44
- 45-54
- 55-64
- 65+

##### What is your height?

- <150 cm
- 150-159 cm
- 160-169 cm
- 170-179 cm
- 180-189 cm
- 190-199 cm
- > 200 cm

#### Fill in up to here

#### Non-directed test

Instructions:

Take the bag with you on the plane and sit in one of the two designated seats. Do what you think is required on this plane before the flight can begin.

#### On a scale of 1 to 10:

How clear was it to you what you had to do?

Why did you find it clear or not?



##### How often do you exercise on average per week?

- Never.
- Sometimes, but not regularly.
- 1 x per week
- 2 x per week
- 3 x per week
- 4 x per week
- 5 x per week
- 6 x per week
- 7 x per week

##### Do you have experience placing cases in overhead bins?

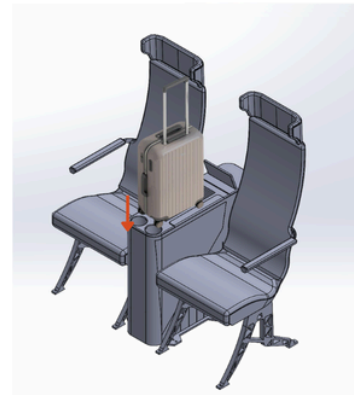
- Yes
- No

##### How often do you take flights per year?

- Never
- Rarely
- 1-2 times a year
- 3-5 times a year
- 6+ times a year

#### The concept:

The idea is that you can place your suitcase in the compartment next to you, eliminating the need for overhead bins, resulting in a cabin that feels more spacious.



#### 2nd Test:

Say out loud what you are thinking and doing as you re-enter the cabin and stow your bag.

How comfortable did you find this way of storing luggage compared to the overhead bins (that is considered a 5) on a scale of 1 to 10?

Why did you find it comfortable/not comfortable/clear?

How comfortable do you find working with this system? From 1 to 10 and why?

How hygienic do you find this system? From 1 to 10 and why?

Do you have any further comments?

# Appendix O

## Set-up evaluation interview cabin crew

### Interview with Cabin Crew - SkyConsole evaluation

#### Semi-structured Interviews

**Target group:** Cabin crew

**Goal:** The purpose of this interview is to gain insight into how the SkyConsole Concept would function in practice from the perspective of the cabin crew.

#### Introduction

- Thank you for participating.
- What is this for?
- The interview will be recorded.
- Any objections before we start?

#### Introduction of the concept

##### ***Explain how the concept works***

What is your first impression of this concept?

- Do you currently have questions about how the system works?
- What immediately stands out to you as positive?
- What immediately stands out to you as a potential problem or negative point?

#### Workflow of the system

*Show the workflow visual here and walk through it together.*

- Are there things you would run into in this process with the SkyConsole concept?

*Potentially propose additional functionalities that might be useful for the mentioned problems and evaluate them.*

#### Operational feasibility

- Do you think cabin crew will need to help passengers more or less with this than with the current overhead bins?
- Do you think passengers would understand this system themselves?
- Would this affect the speed of boarding?

#### Workload and ergonomics

- Do you think this system would reduce the physical strain on cabin crew compared to overhead luggage?
- Does this concept perhaps create new physical actions that could be difficult?
- Do you think it will become physically more comfortable or more difficult for cabin crew?

#### Additional functionalities

##### ***Show other additional functionalities and evaluate:***

- Do these extra functionalities seem useful for cabin crew?
- Do you think these features actually help during boarding or service?
- Are there any features that you consider redundant or less relevant?

#### Comparison with the current situation

- What do you think would improve?
- What might become worse or more difficult?

#### Closing

- Is there anything else we haven't discussed that you think is important to include in the design?
- Thank you for your time and input.

