A user centric Cabin Design using the Design Thinking approach

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Introduction
The method
Empathize
Define
Ideate
- HorizonUAM -

- Introduction -

- German Aerospace Center project
- Cooperation between multiple institutes
- Vehicle and Cabin design by Institute for System Architectures in Aeronautics (Hamburg)

- First cabin design team at German Aerospace Center
- Acceptance of the idea
- Needs and desires of potential users
DESIGN THINKING

- EMPATHIZE
- DEFINE
- IDEATE
- PROTOTYPE
- ASSESS
EMPATHIZE

- German population
- Online questionnaire
- Division by age and residence
- Disney method
- Focus group
- Acceptance of airtaxi
- Existing public transport preferences
"Imagine you would design the Airtaxi Cabin of the Future…"

"…What would it look like? What’s important for you?"
<table>
<thead>
<tr>
<th>Age Group</th>
<th>Region</th>
<th>Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-40 years</td>
<td>Urban area</td>
<td>High-tech</td>
</tr>
<tr>
<td>40-65 years</td>
<td>Rural area</td>
<td>Privacy, comfort</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Individualisation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inclusion</td>
</tr>
</tbody>
</table>
Define

**Clara Meyer**
- **Gender:** F
- **Age:** 19
- **Job:** Student
- **Marital Status:** Single
- **Income:** 800€
- **Residence:** Berlin

**USE CASE:** Intracity:
- Always on the move in the city
- Connectivity important
- Visiting friends, traveling with an UAM for the sake of experience

** DEMOGRAPHIC DATA**
- Global Clans
- Cultural Purist
- Solo Socializer
- Ethical Traveler

**Greta Herrmann**
- **Gender:** F
- **Age:** 62
- **Job:** Teacher
- **Marital Status:** Married with children
- **Income:** 3000€
- **Residence:** Minden bei Hann.

**USE CASE:** Sub Urban:
- Lives in a village, works in the city
- Airport Shuttle
- Visiting the kids and grandkids
- Intercity:
- Trains very comfortable, but unreliable, not a guaranteed seat, too stressful

** DEMOGRAPHIC DATA**
- Active Seniors
- Global Clans
- Simplicity Searchers
- Sceptic Generation

**Tim Klaussen**
- **Gender:** M
- **Age:** 35
- **Job:** Real estate agent
- **Marital Status:** Married with children
- **Income:** 4000€
- **Residence:** Trittau (Village)

**USE CASE:** Sub Urban:
- From home to different cities nearby
- Airport Shuttle:
- Holiday with family or seldom business trips

** DEMOGRAPHICISCHE DATEN**
- Individualist
- Nomadic Business Woman
- Social Capital Seekers
- Cosmopolitan Commuters
Define

- **Intra-City**
  - <50 km
  - On demand

- **Airport Shuttle**
  - 50-100 km
  - Timetable

- **Sub-Urban**
  - 50-100 km
  - On demand

- **Inter-City**
  - >100 km
  - On demand
SEATS

Type A: Sportscar Seat
Type B: Autonomous Car Seat style
Type C: Aircraft Premium Business Class Seat
Type D: Futuristic Car Seat
Type E: Aircraft First Class Seat
FURTHER IDEAS

Safety & Privacy

Luggage storage

Seat Positions and arrangements
Passenger acceptance survey from July 21-Sept 21 (Germany)

- Focus on Seats, Comfort, Experience, Safety and Privacy
- Evaluation of first ideas

Feel free to participate:
- Digital & Physical Prototyping
- Fully detailed cabin concept designs

- Assessment via VR and physical testing
- Testing for emotion, feeling, comfort, experience and safety
THE TEAM

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