

CALMING COCOON / MOBILE BABY BASSINET

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Problem Statement

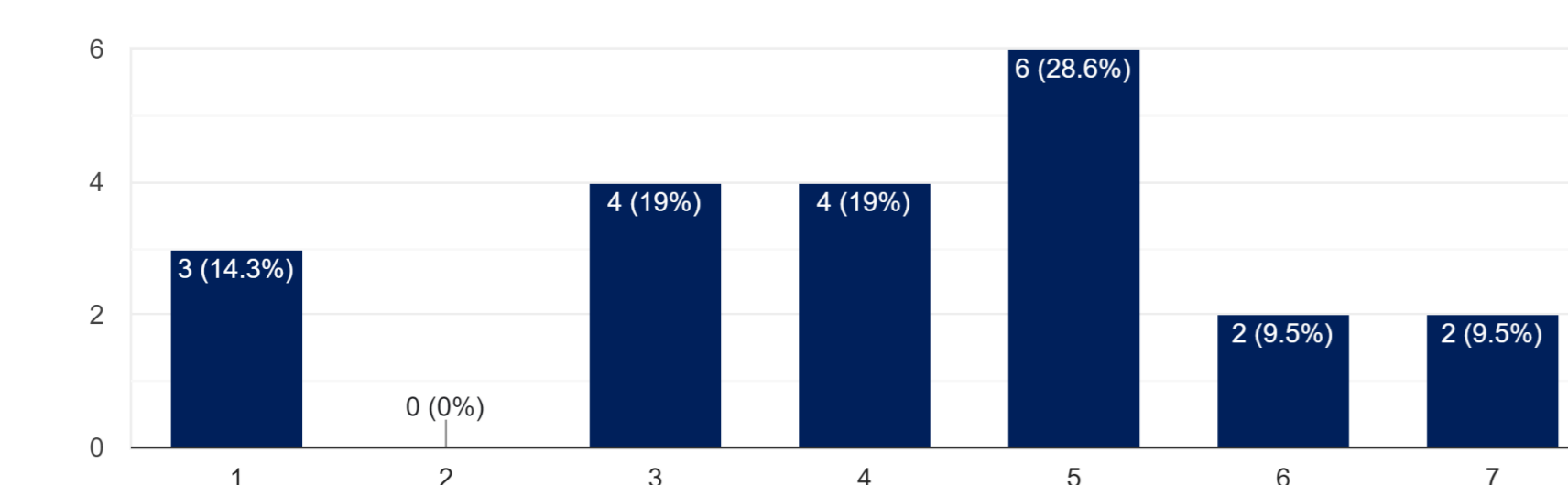
- Babies are placed in wall-mounted bassinets during flights (except takeoff/landing).
- Current setup has limitations for parents and cabin infrastructure.

Purpose

Development of a concept for a Mobile Baby Bassinet that can be positioned variably throughout the cabin. Eliminate the need for fixed inserts at cabin monument walls. Enhance passenger wellbeing and comfort when using baby bassinets.

User Need Collection and Assessment

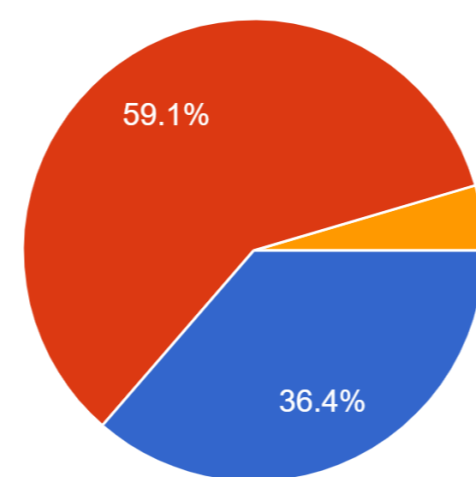
How comfortable did you find the baby bassinet for your child? (1 means least comfortable, 7 means most comfortable)
21 responses



Identified Needs and Problems

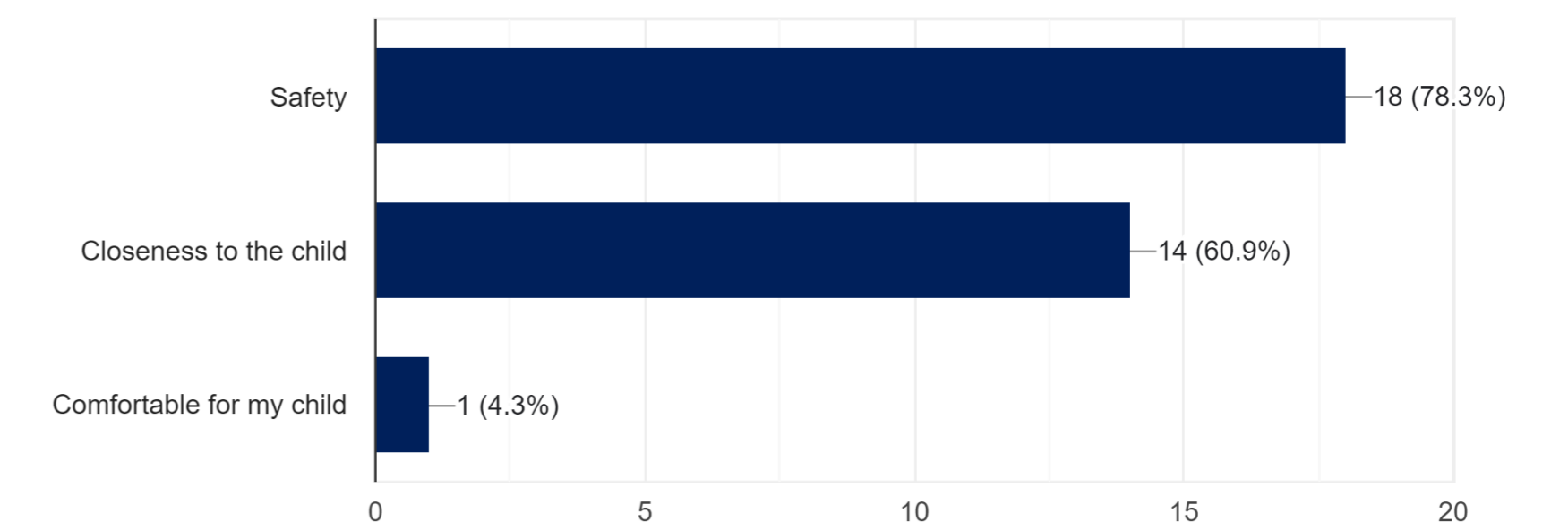
- Safety
- Closeness to the child
- Comfort for the child
- Hygiene problems
- Set up too high and too difficult

Did you have any safety concerns during the flight or concerning the bassinet?
22 responses



- Yes
- No
- Whether baby will fall during take off, landing or on accidents?

What aspects of the baby bassinet were particularly important to you when using it?
23 responses



Potential Improvements

- Height adjustability
- Durability
- Safety belt
- Storage basket underneath for essentials
- Vibration to sooth the baby

Concept Design and Assessment

1. The "Hammock Concept" is a design where the fabric is securely attached to the ceiling using two ropes, and it is reinforced with two buttons on the front seat for added durability.

2. The baby bassinet can be securely attached using four points, two in its own seat and two in the front seat, positioned above the passengers, with the option to connect to the corner points or the grip. The bars, made of aluminum, can also be adjusted for curved shapes instead of straight.

3. This new design resembles the second one but stays closer to the parent instead of hanging from the ceiling, allowing for easier visibility of the baby and simplifying safety measures.

4. The Movable Stand, designed for versatile use in aircraft cabins, serves as a portable support system for baby bassinets. With features like easy installation, 360° rotation, Bluetooth connectivity, and adjustable height, it enhances convenience and safety for passengers and cabin crew, improving the travel experience for families with young children.

5. The design combines rail and scissor mechanisms, positioned under the front seat. It extends outward via rails and is pulled upward with a vertical scissor mechanism to form a basket shape. A cushioned clothing cover is attached, creating a comfortable space for the baby.

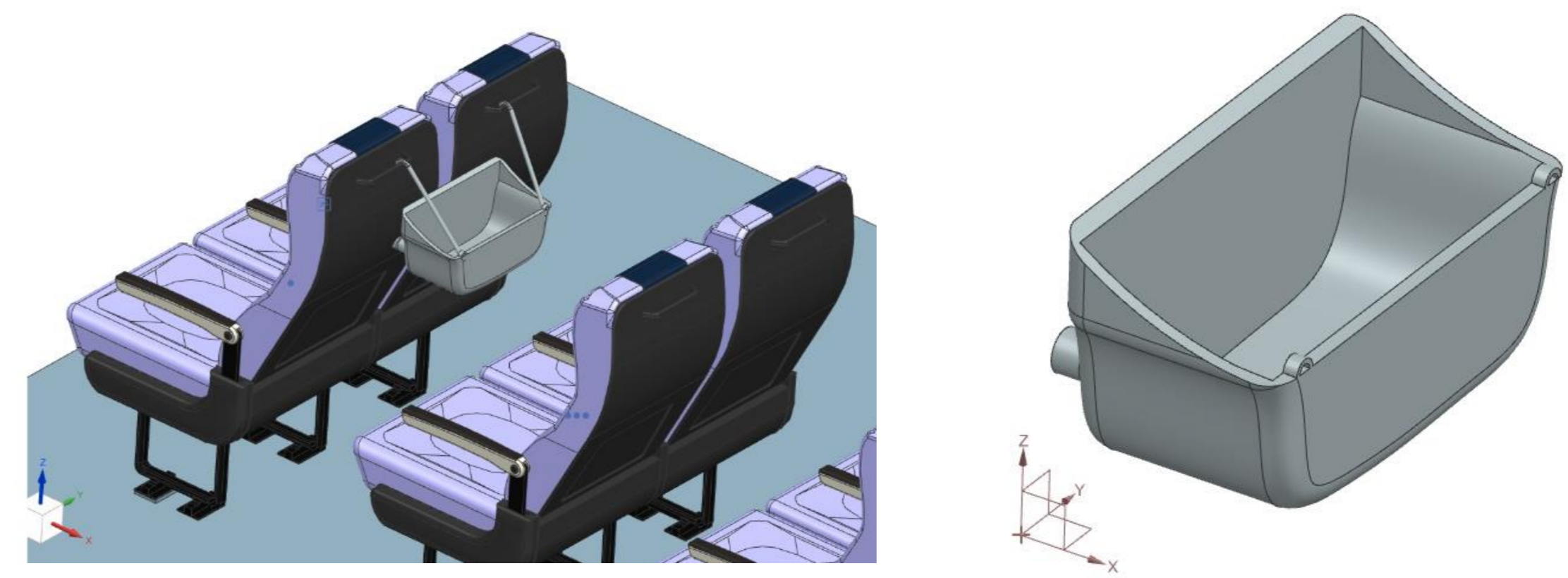
| Design | Safety | Closeness | Comfort | Durability | Storage | Rocking | Weight | Flexibility in cabin | Sum |
|--------|--------|-----------|---------|------------|---------|---------|--------|----------------------|-----|
| 1 | 4 | 5 | 3 | 3 | 2 | 5 | 5 | 2 | 29 |
| 2 | 1 | 3 | 4 | 4 | 2 | 2 | 3 | 4 | 23 |
| 3 | 3 | 5 | 3 | 3 | 2 | 5 | 5 | 5 | 31 |
| 4 | 1 | 4 | 4 | 4 | 1 | 1 | 1 | 4 | 20 |
| 5 | 3 | 4 | 3 | 4 | 1 | 2 | 2 | 4 | 23 |

New Design Proposal Comparison with Old Solution



Old Baby Bassinet

- During the flight (except takeoff/landing), babies were laid in baby bassinets, which were mounted to cabin walls.
- They had fixed positions in the cabin, serving as fixed seats for parents.
- The number of parents with babies was restricted.
- Cabin walls had to be equipped with special interfaces due to inefficient load paths.



New Proposed Baby Bassinet Solution

- Babies can now use bassinets attached to parent's seats, removing the need for fixed cabin positions.
- Parents have flexible seating options with the new bassinet design, eliminating the requirement for specific seating areas.
- Restrictions on the number of parents with babies are eased, as each seat can potentially accommodate a bassinet.
- Special interfaces on cabin walls are no longer necessary, simplifying installation and increasing efficiency.