
Phase 1

Class of 2023

2-2021

Callicore

Cole Miller

Thomas Jefferson University, cole.miller@students.jefferson.edu

Galen Ogg

Thomas Jefferson University, galen.ogg@students.jefferson.edu

Jasmine Phun

Thomas Jefferson University, jasmine.phun@students.jefferson.edu

Yajnesh Vedanaparti

Thomas Jefferson University, yajnesh.vedanaparti@students.jefferson.edu

Morgan Hutchinson, MD

Thomas Jefferson University, morgan.hutchinson@jefferson.edu

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80,000
Hip
Dysplasia

4,000
Femur
fractures





Seat gaps

Neck hyperflexion

Chest compression

Zielinski J, Oliver G, Sybesma J, Walter N, Atkinson P. Casting technique and restraint choice influence child safety during transport of body casted children subjected to a simulated frontal MVA. J Trauma. 2009 Jun;66(6):1653-65.



Point of View

User

Parents of
children in SPICA
casts

Need

Transport children
home from the
hospital

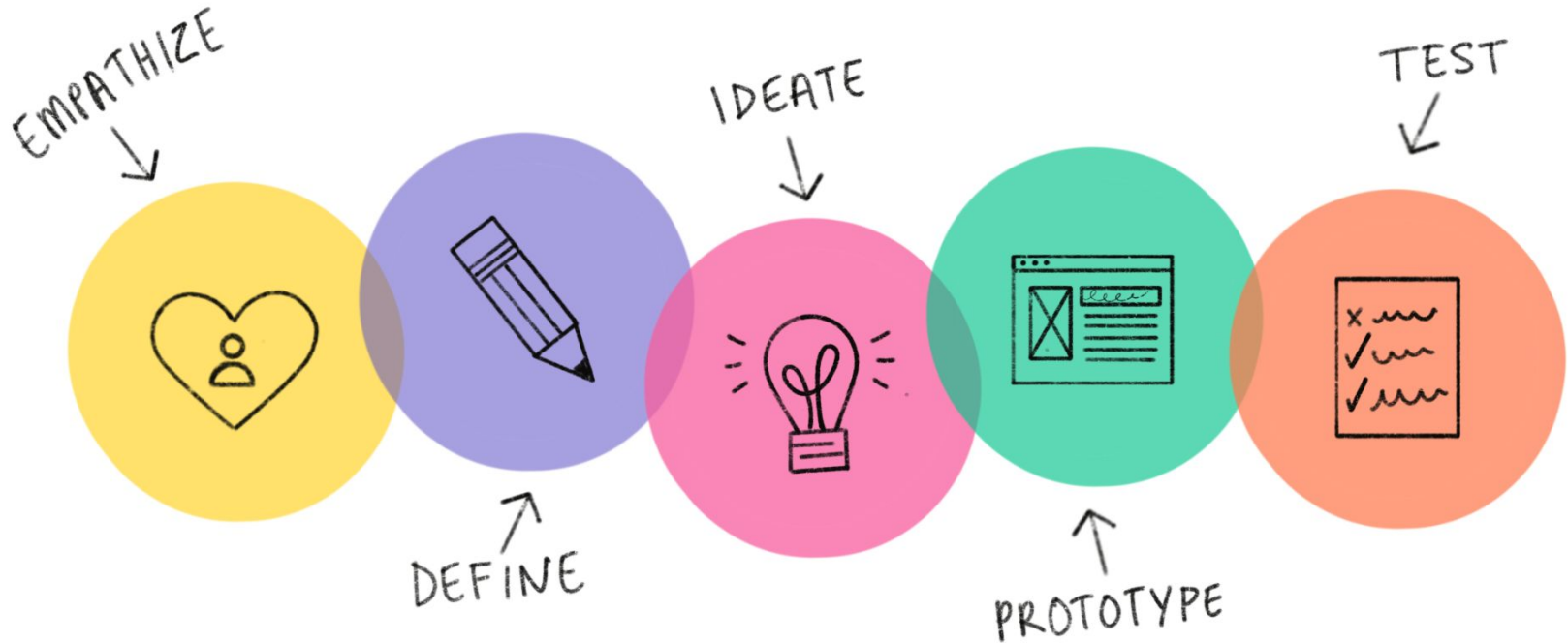
Insight

Safely
Comfortably
Affordably
Sanitarily

HOW MIGHT WE ...

transport children in SPICA casts in a *safe, comfortable, and convenient* manner so that the parents can feel more at ease.

Methods/Results: The Design Process

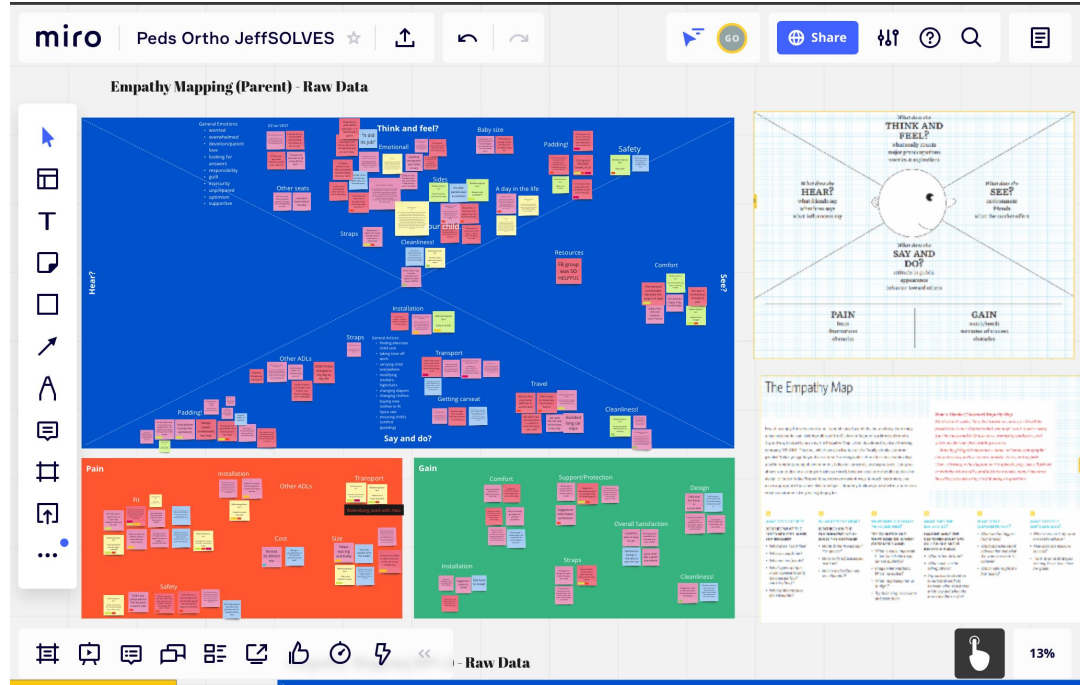


Methods: Empathize

Semi-structured
video interviews

12 parents

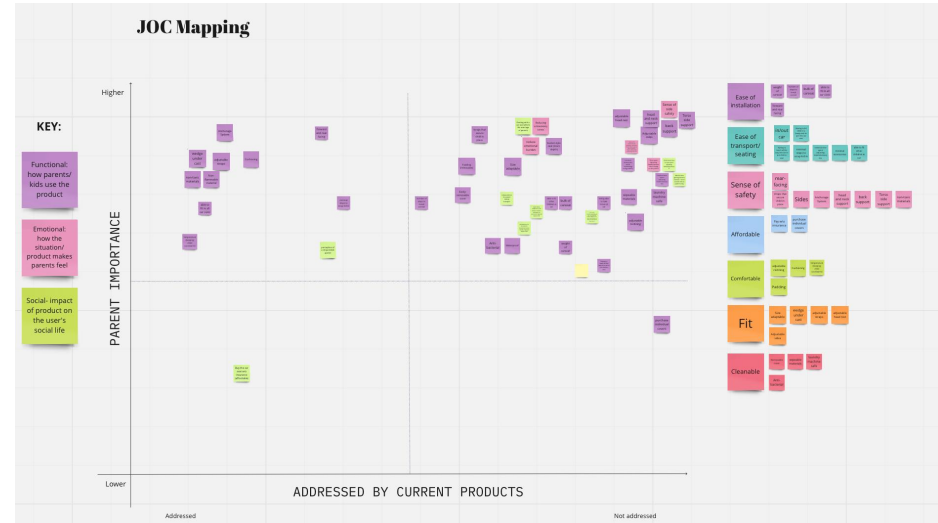
6 Injury Prevention
Coordinators



Methods: Define

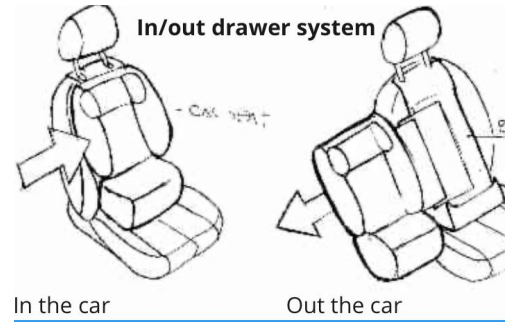
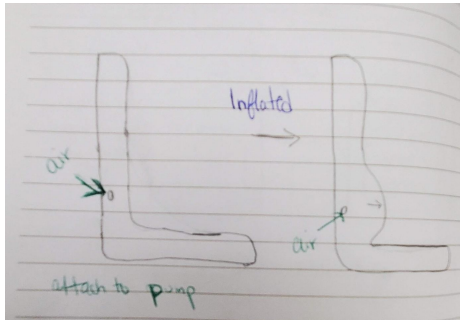
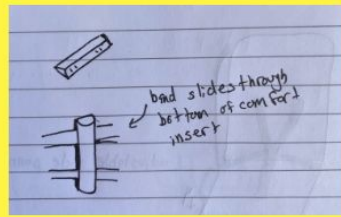
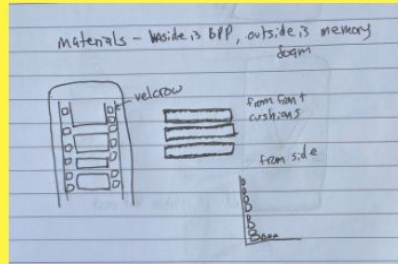
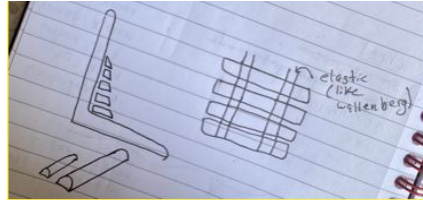
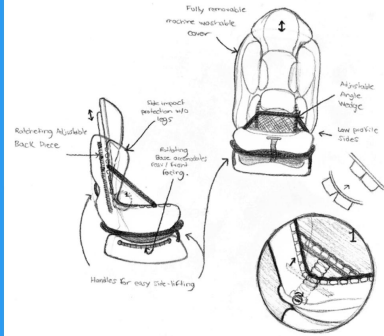
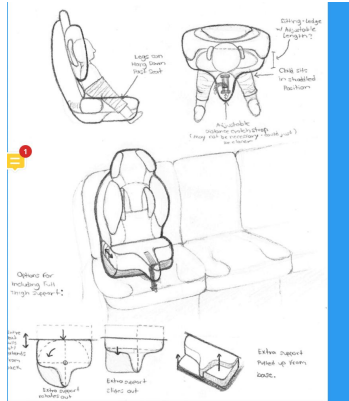


Concept definition



Concept prioritization

Methods: Ideate



Adaptability

Methods: Prototype and Test





Adaptable

Expanding headrest accommodates for children between 6 months to 5 years



Wing Support

Wings allow for side impact protection without sacrificing fit, comfort, or ease of getting child into car seat.

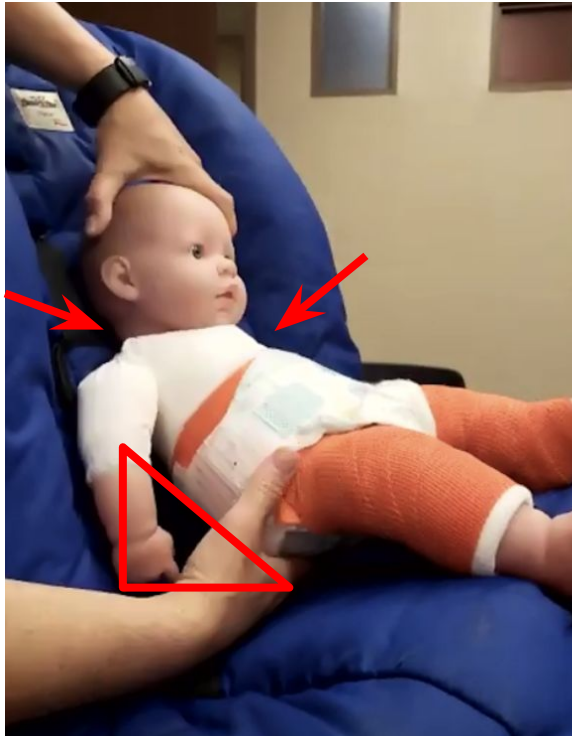
Pommel Seat

Our pommel seat is our unique feature that fits the Callicore to the child, and not the other way around.



britax

Current gold standard?



Callicore

Prototype testing

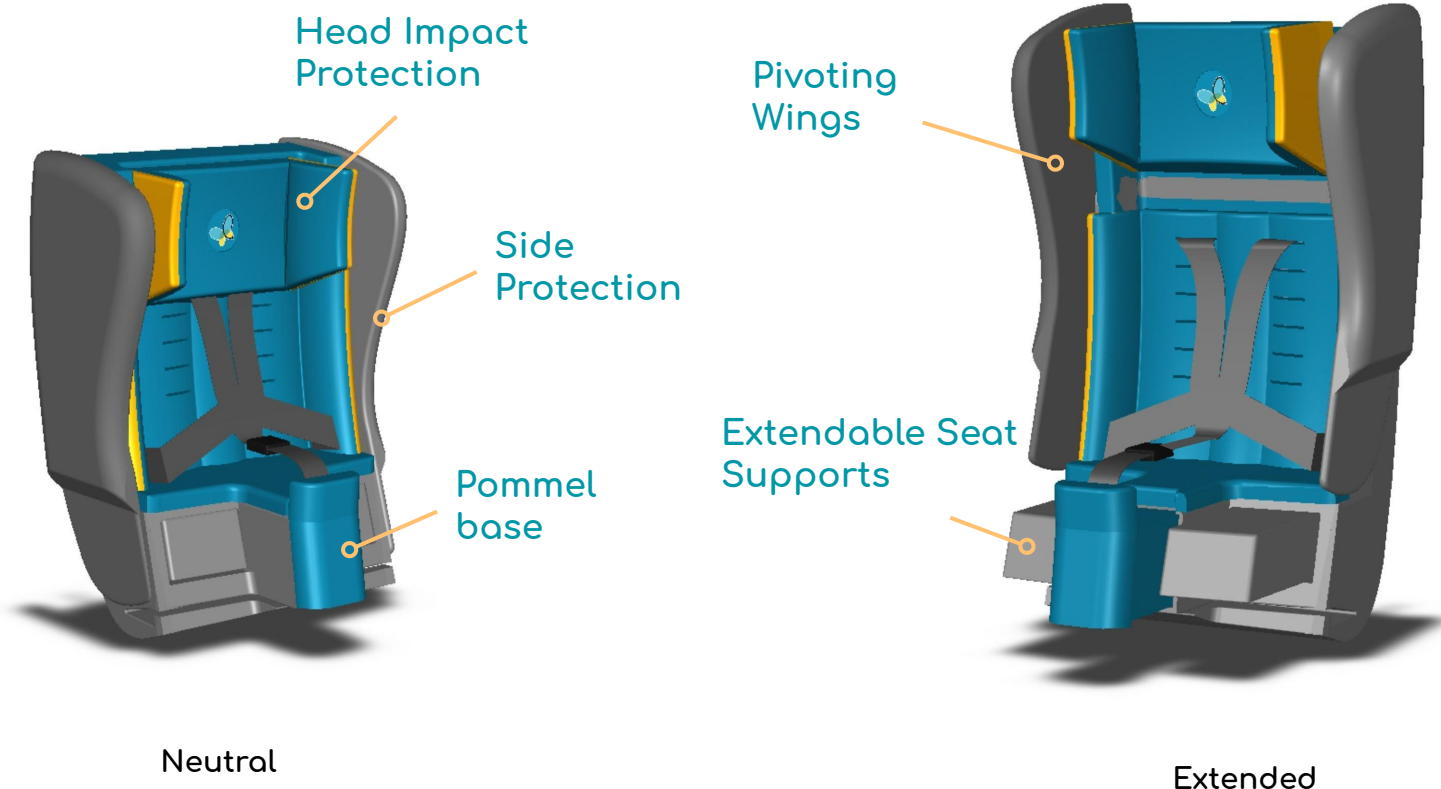




Testing the Adjustable leg supports...



Features



Neutral

Extended

