Product Development

A Design Process

Dear iPhone 6 users: Welcome to 2012!

iPhone 6
(released 9/2014)
4.7-inch screen
750p resolution
NFC payments
Notification actions
Widgets
3rd-party keyboards
Typing suggestions
Cross-app communication
Cloud photo backup
Battery stats

Nexus 4
(released 11/2012)
4.7-inch screen
760p resolution
NFC payments
Notification actions
Widgets
3rd-party keyboards
Typing suggestions
Cross-app communication
Cloud photo backup
Battery stats

Enjoy your "new" device!

In 2016, you guys will love: Wireless charging, water resistance, IR blasters, multi-user support, selectable default apps, split-screen apps, app installs from a browser, and virtual buttons!

If you need help with your iPhone's new features, just ask an Android user. We've had this stuff for years.

iPhone 6

The Sign of Design.
With You in mind.

DESIGN

7 C's

1. CAUSE

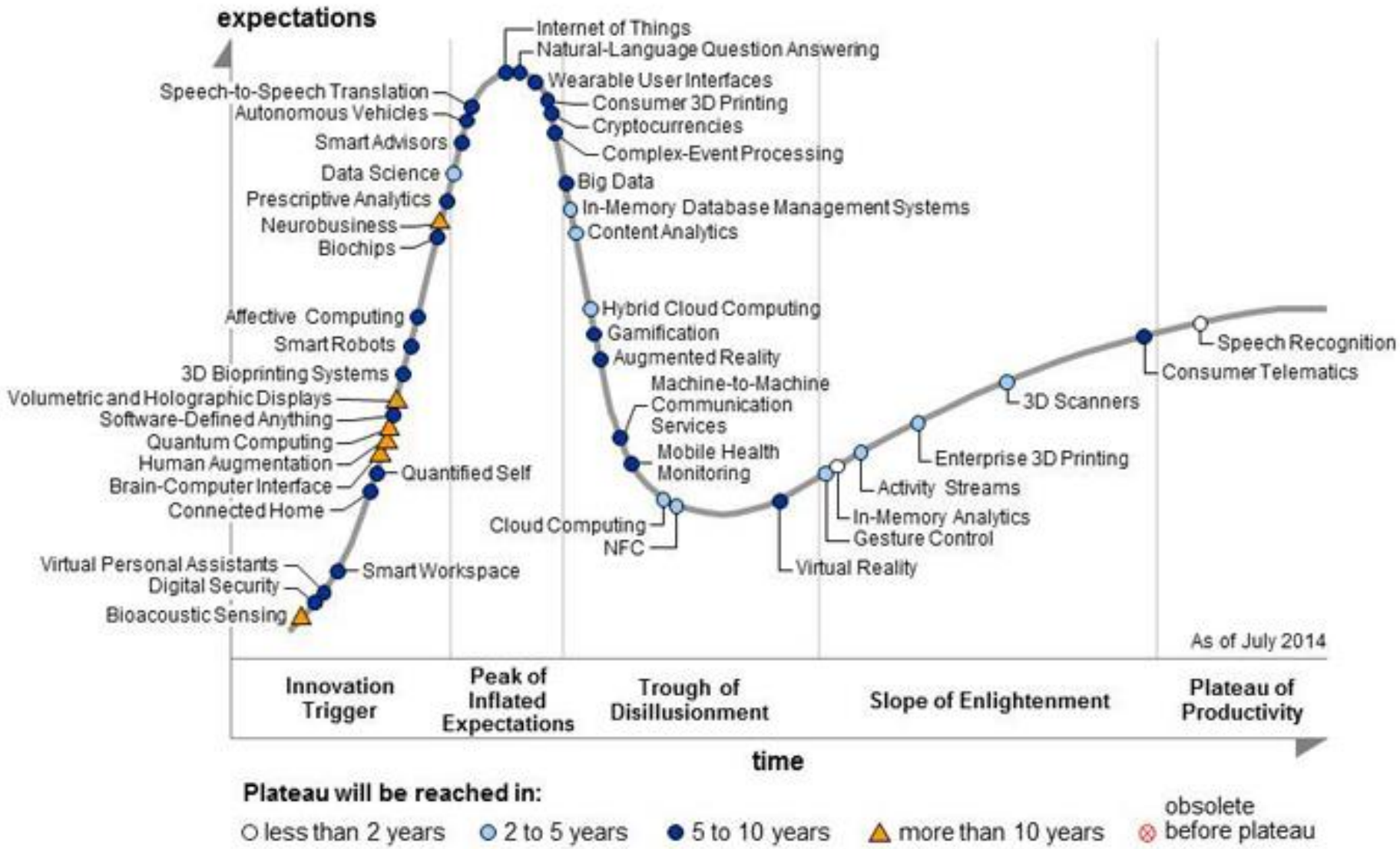
The concern to solve a problem

- Need
- Area of work

2. CONTEXT

Understanding the user and the scenario

- User study
- Market study
- Latest trends
- Future Predictions



GARTNER'S CURVE

3. COMPREHENSION

Arriving at design insights

- Opportunities
- Feasibility
- Constraints

4. CHECK

A clear plan of action

- Parallel product study
- Blue-print
- Timeline

5. CONCEPTION

Creating multiple ideas and combining them to general concepts

Given a magic paint, which vanishes anything that you paint it on, list any 3 creative uses with the paint

Given a magic paint, which vanishes anything that you paint it on, list any 3 creative uses with the paint

- Paint the extra limb
- Cops – to investigate
- Flying bike

- Creative ideas
- Brainstorming
- Mind maps
- Ergonomics

6. CRAFTING

Making mock-ups, functional prototypes and final pilot production

Functional Prototypes

Mechanical Engineering
- Concept Engineering through CAD models
- Material and Process research
- Analysis, Verification and Validation through softwares like ANSYS

Embedded Engineering
- Firmware and Hardware Design
- UI Programming
- Algorithm and Logic Development
- Schematic and PCB Layout
- Testing and Debugging

Prototype
- Design Verification
- Assembly and Fitment Check

Final Pilot Production

Manufacturing Support
- Vendor and Supplier Qualification
- Vendor Coordination

Product Testing
- Safety test
- Performance test
- Evaluation test
- Durability test

Aesthetics and Branding
- Communicate through strategic Visual cues like videos, etc
- Add final detailing's
- Product Packaging Design
- Engage audience with animation and graphics

7. CONNECTION

Connecting with the user with the solution provided

Go Patent your Invention

CASE STUDY

Mobility India campus, Bangalore

Mobility India

- NGO in Bangalore
- Rehabilitation Centre

DESIGN OPPORTUNITIES

- One-hand driven wheel chair for amputees
- Design of child growth development aids
- Re-design of orthotic knee joints
- Enhanced aesthetic prosthetic leg for humans
- Leg divider for treadmills
- Pelvic support for gait training
- Hemiplegic hand splints
- Lamination room Layout design
- Wall mounted toilet commode
- Prosthetic leg for four legged animals
- Creating a mobile app for monitoring the patient improvement
- Design of a knee joint based on stress analysis
- Space design for preservation of moulds
- Session on future technology
- Prosthetic knee joint
- Threadmill divider
- An app for hostel count
- Wall mounted CDF lapboard
- Knee joint breakage solution
- New design for crutches

Existing model of special chair

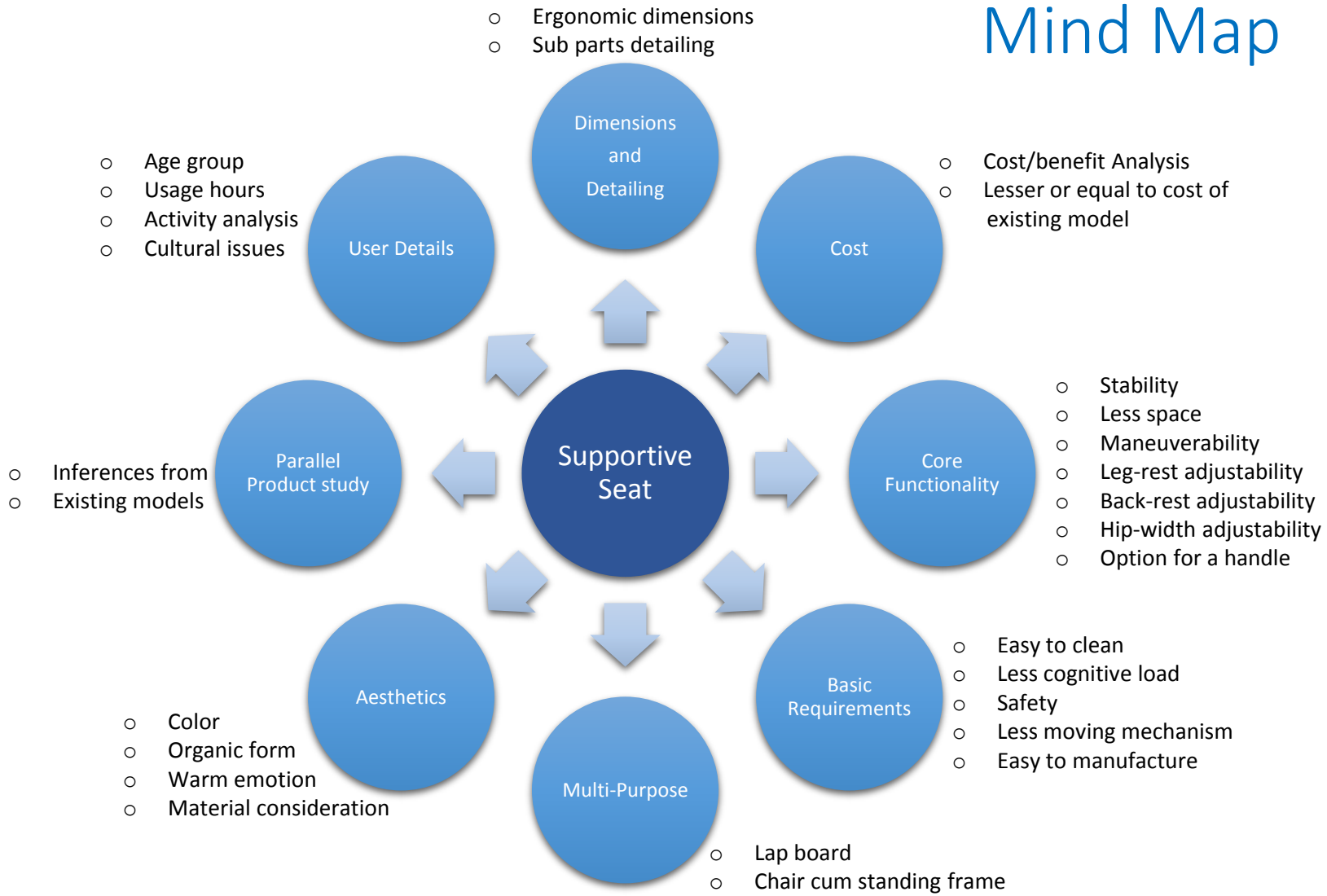
Existing model of standing frame

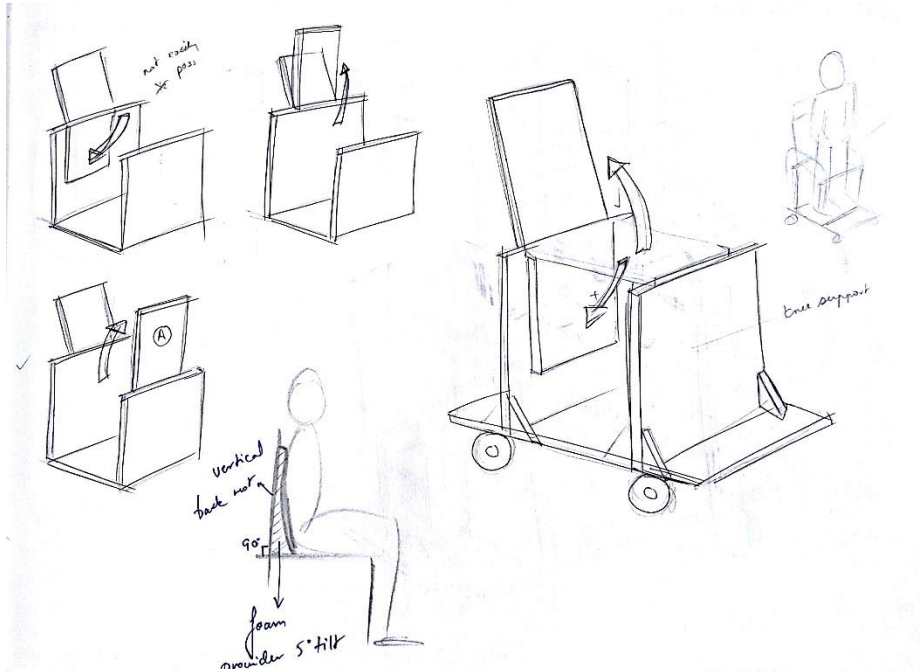
₹3500

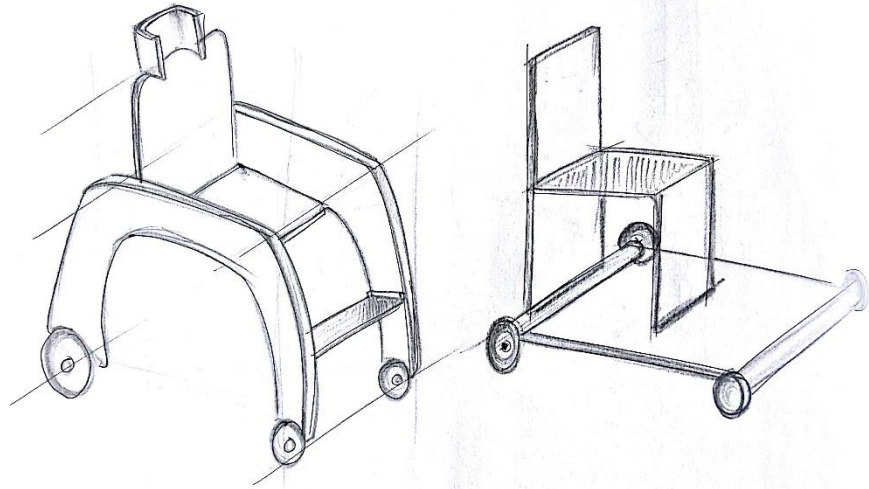
₹3000

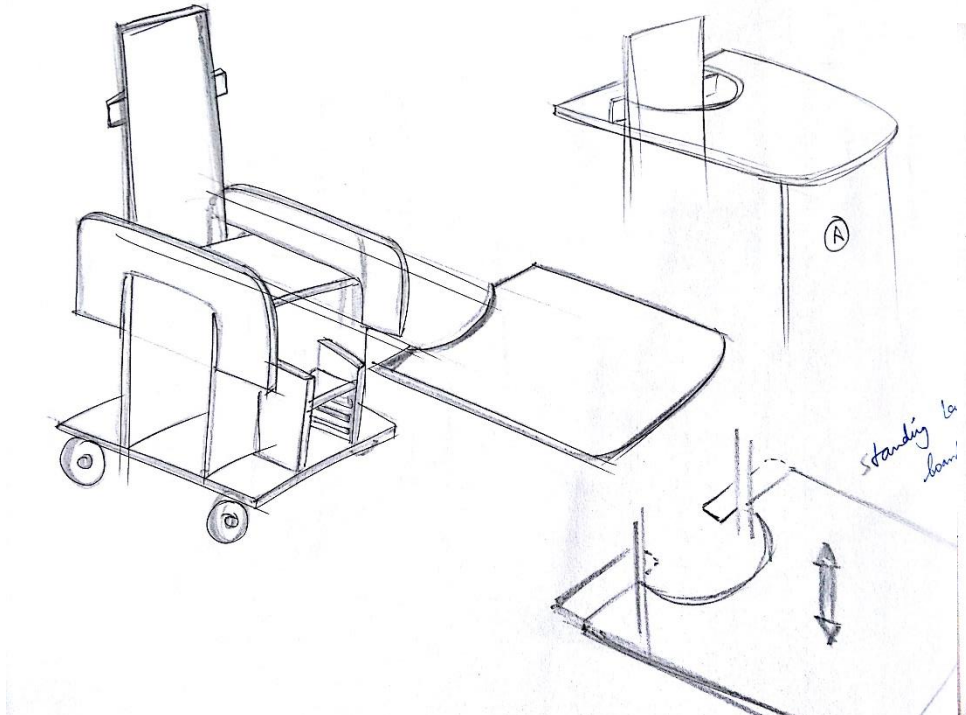
Occupies more space

Mind Map


Supportive Seat
Dimensions and Detailing
Ergonomic dimensions
Sub parts detailing
User Details
Age group
Usage hours
Activity analysis
Cultural issues
Cost
Cost/benefit Analysis
Lesser or equal to cost of existing model
Parallel Product study
Inferences from
Existing models
Core Functionality
Stability
Less space
Maneuverability
Leg-rest adjustability
Back-rest adjustability
Hip-width adjustability
Option for a handle
Aesthetics
Color
Organic form
Warm emotion
Material consideration
Basic Requirements
Easy to clean
Less cognitive load
Safety
Less moving mechanism
Easy to manufacture
Multi-Purpose
Lap board
Chair cum standing frame







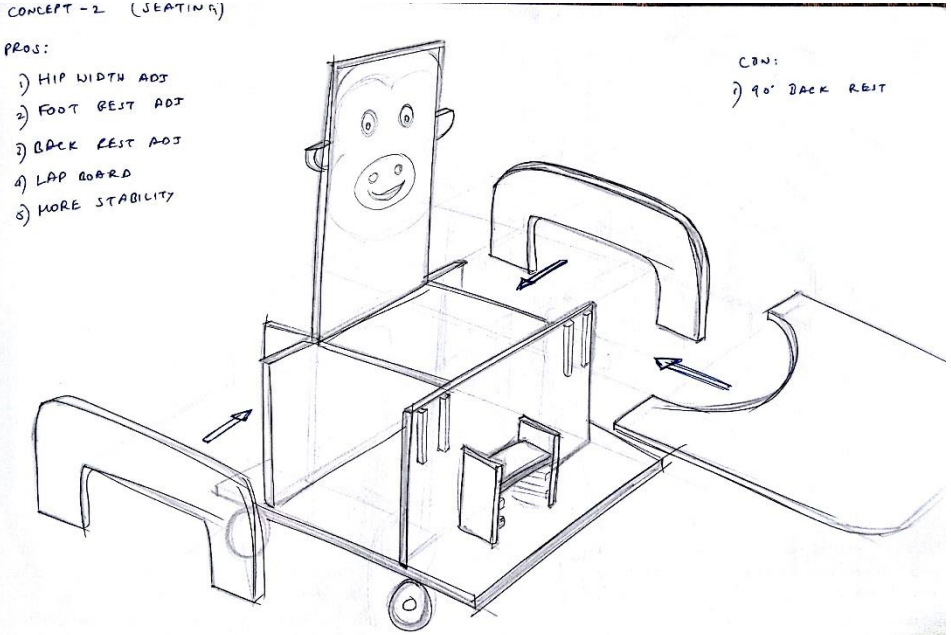
CONCEPT - 2 (SEATING)

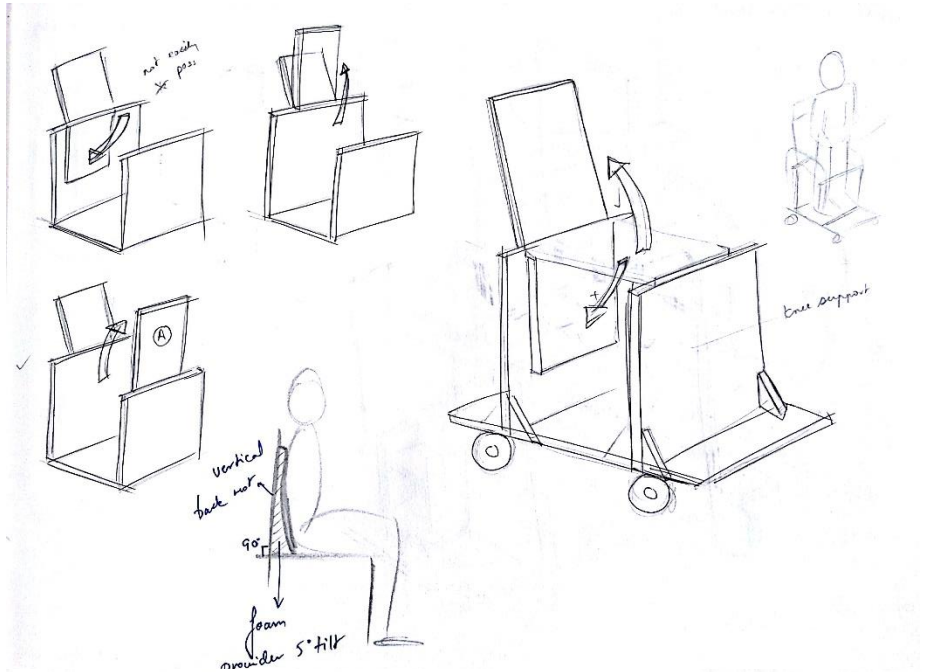
PROS:

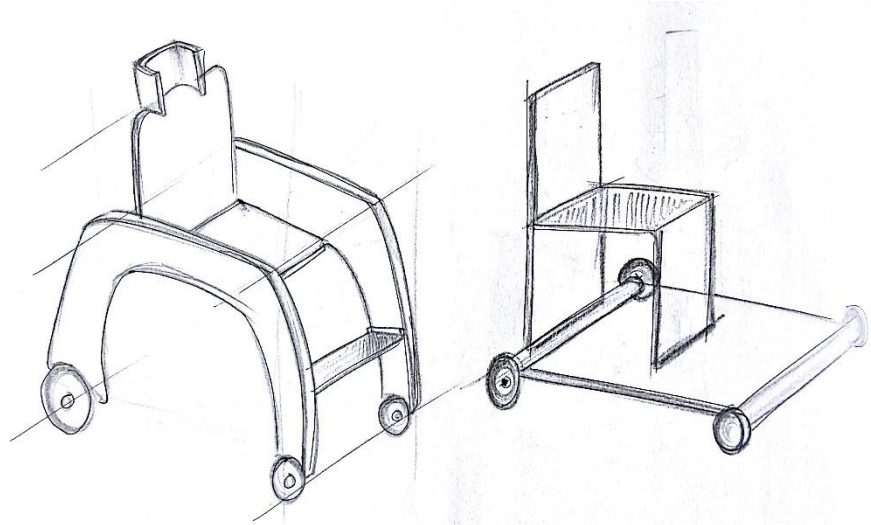
1) HIP WIDTH ADJ
2) FOOT REST ADJ
3) BACK REST ADJ
4) LAP BOARD
5) MORE STABILITY

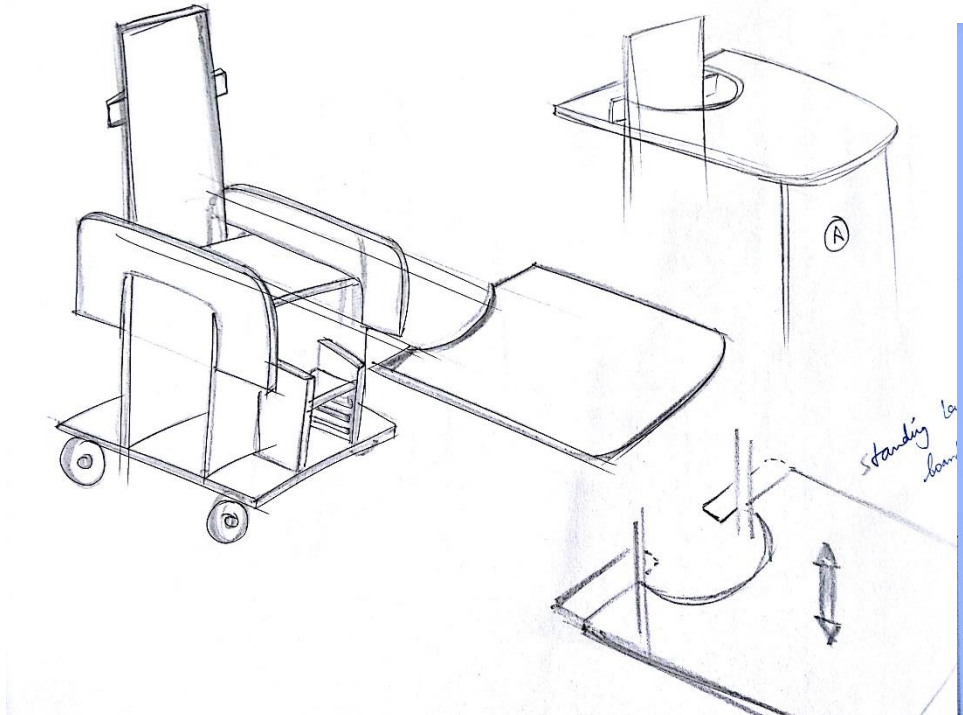
CON:

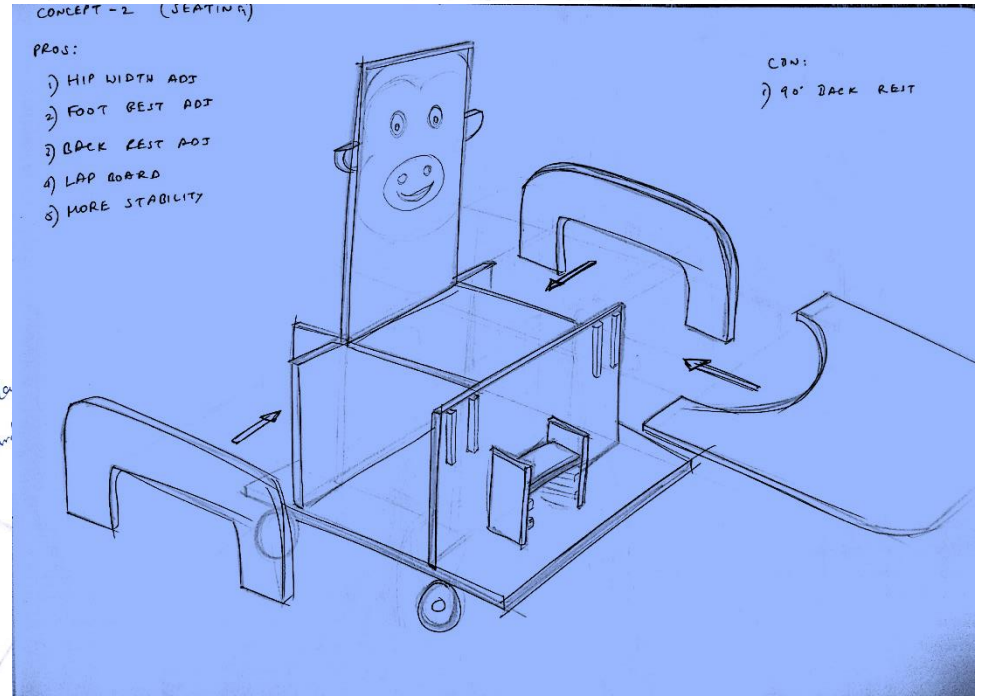
1) 90° BACK REST




vertical
back rest
90°
foam
shoulder 5° tilt






CONCEPT - 2 (SEATING)
PROS:
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3) BACK REST ADJ
4) LAP BOARD
5) MORE STABILITY
CON:
1) 90° BACK REST

A low cost device for children with cerebral palsy

Chair Cum Standing Frame

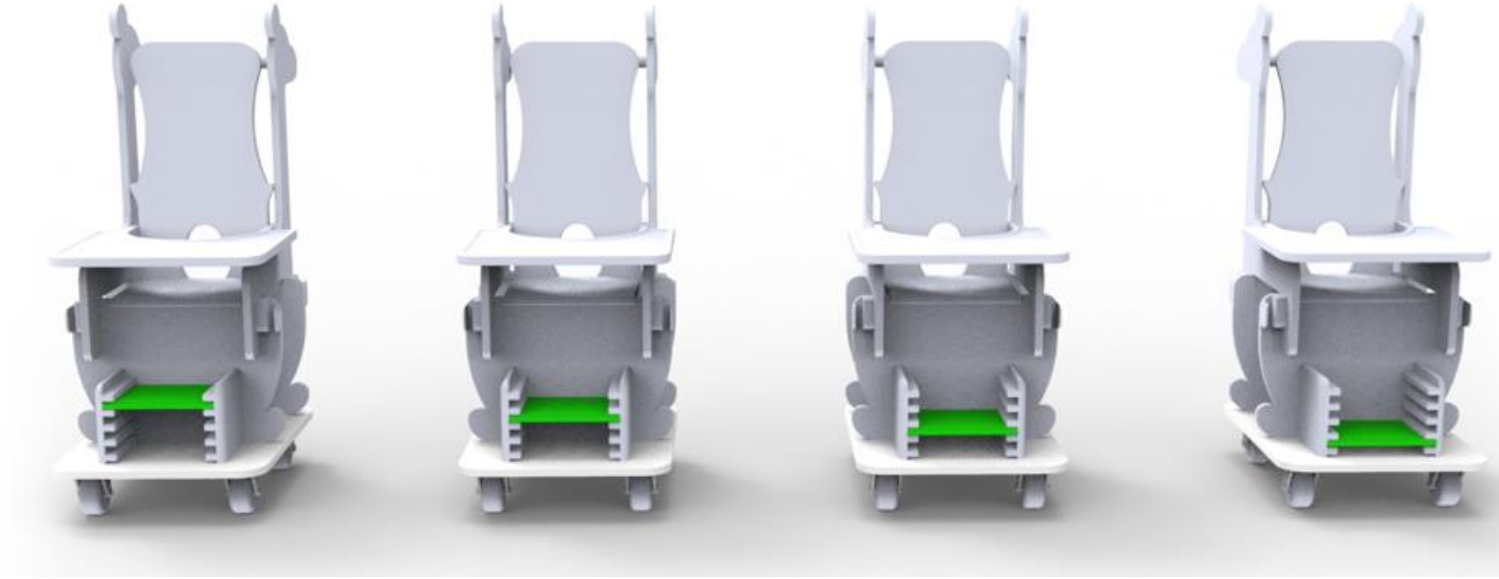
In-built Handle

Adjustable options

Hip width

Back rest

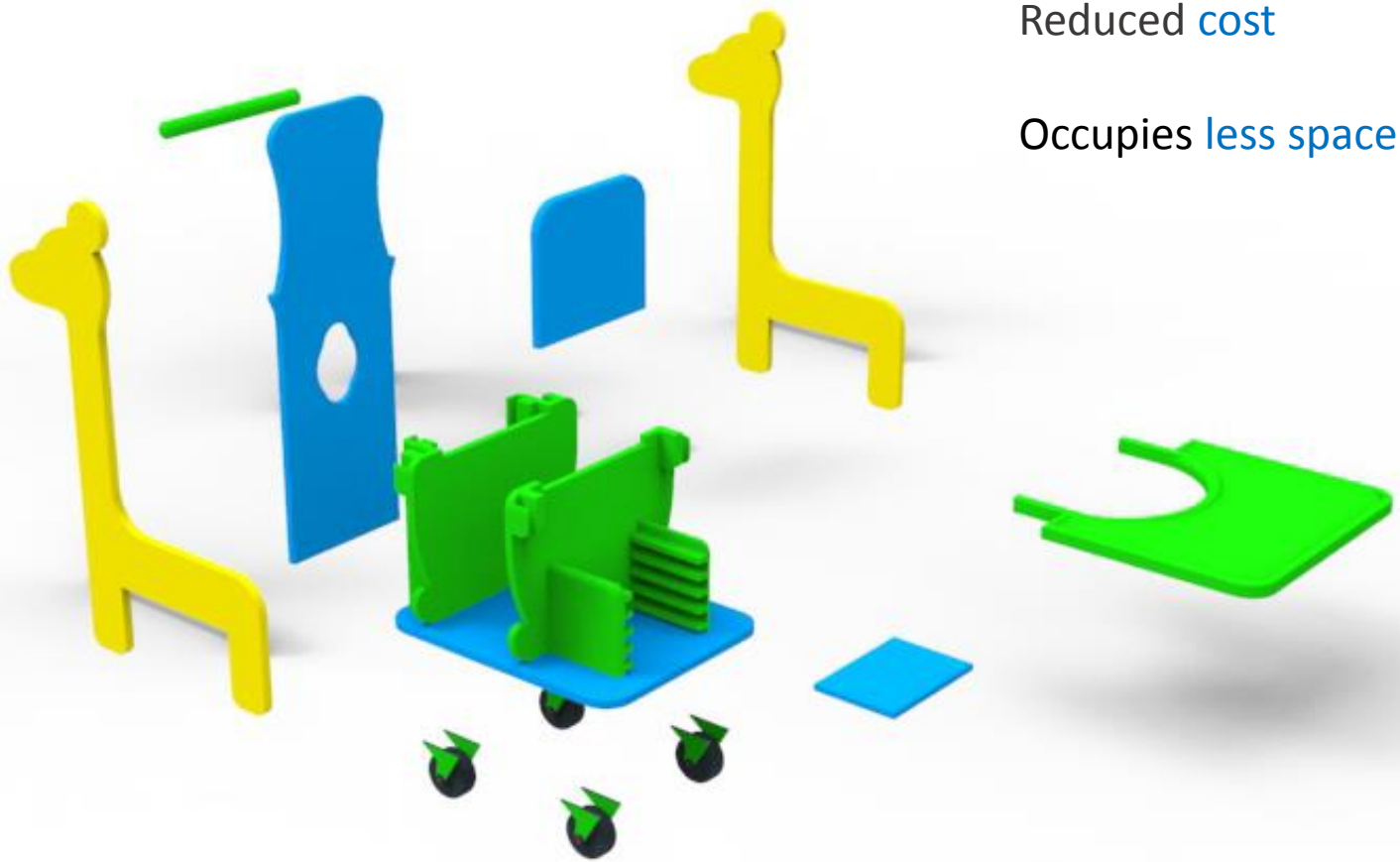
Foot rest



Minimal use of material

Reduced cost

Occupies less space




Making prototype

Testing of Prototype

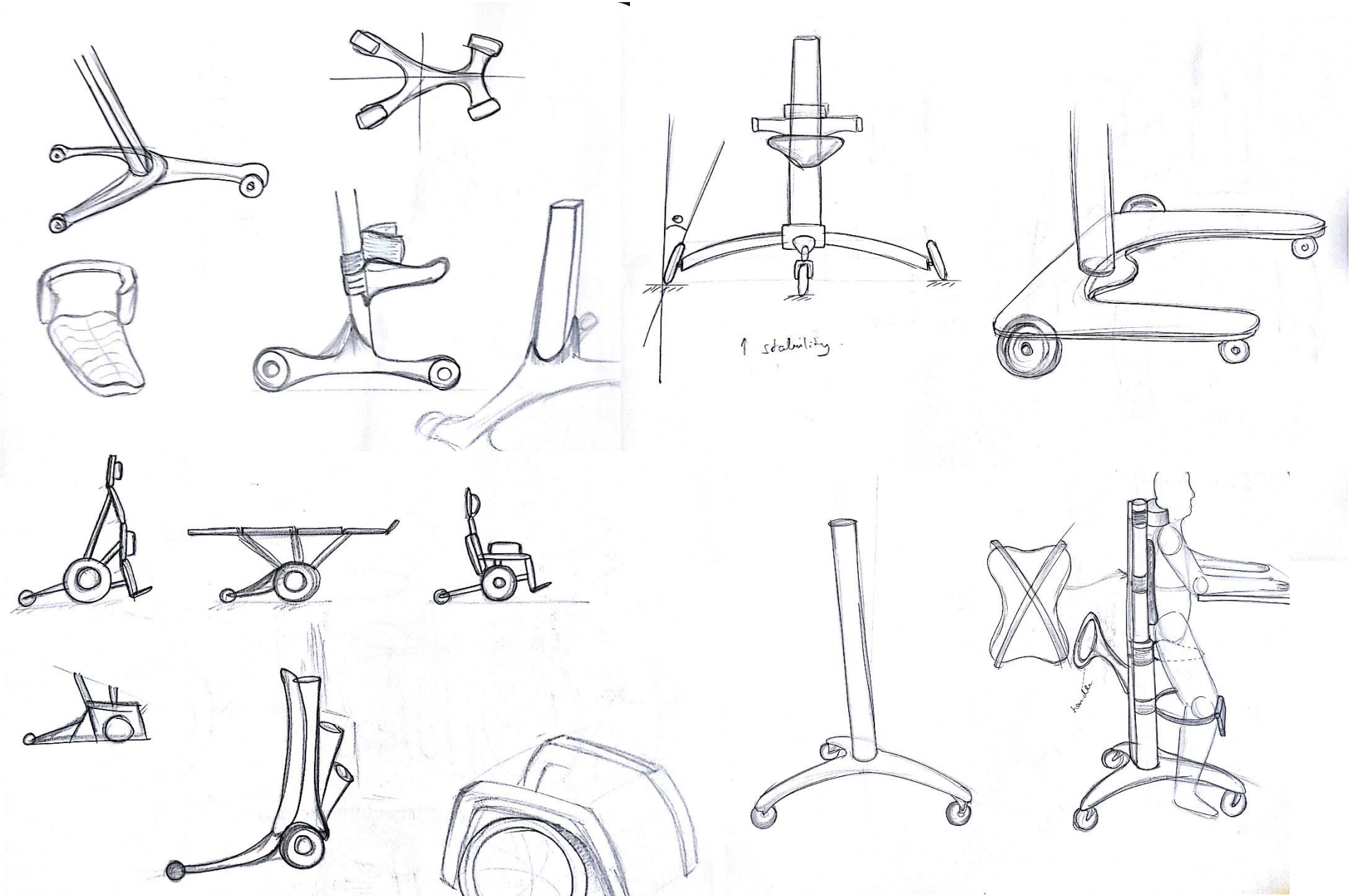
New Design

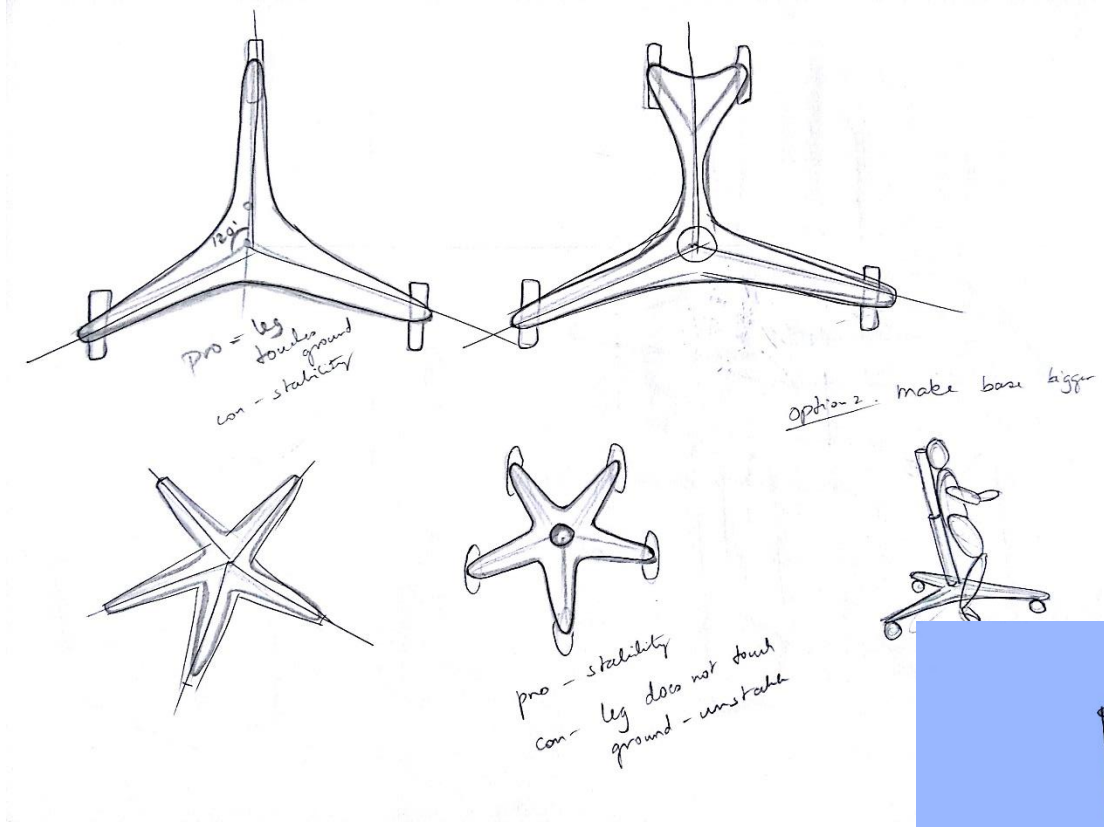
Exiting model

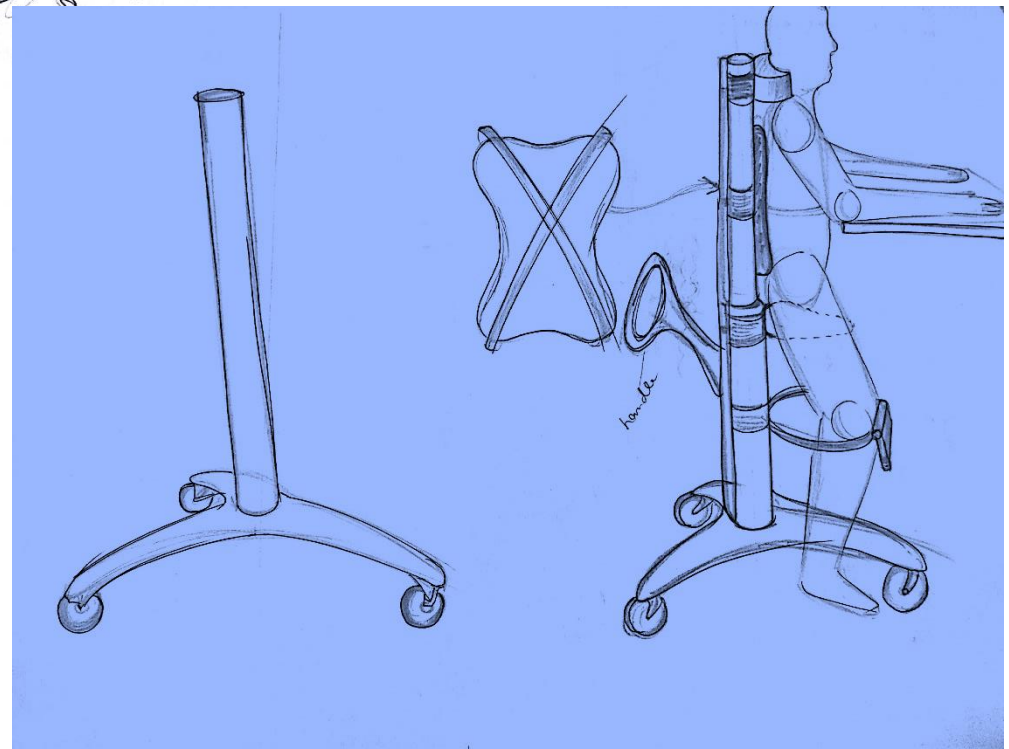
If You Dont Cannibalize Your Own Product

If You Dont Cannibalize Your Own Product

OTHERS WILL

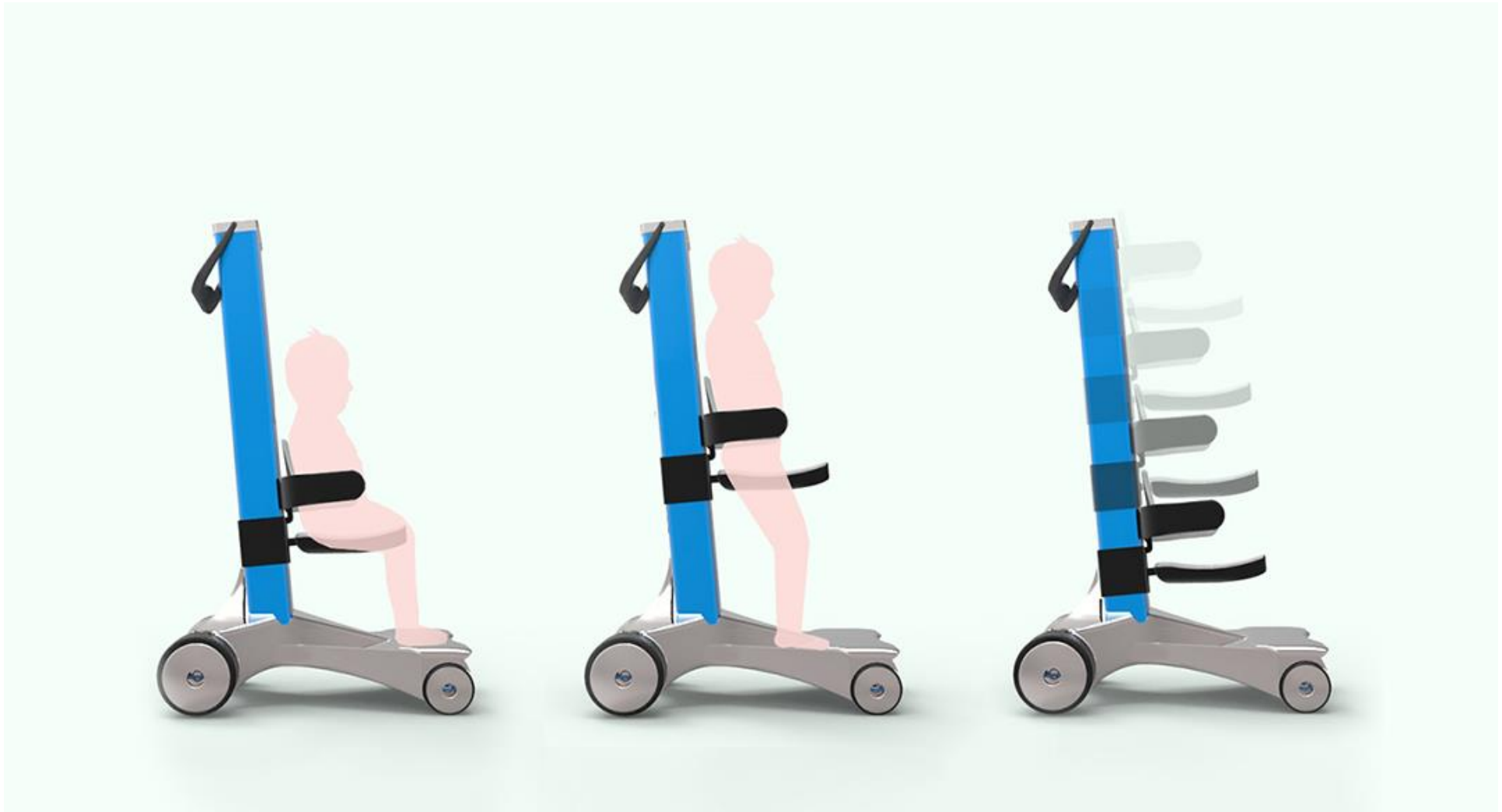

↑ stability


pro = leg
touches ground
con - stability
option 2 - make base bigger
pro - stability
con - leg does not touch
ground - unstable


handle

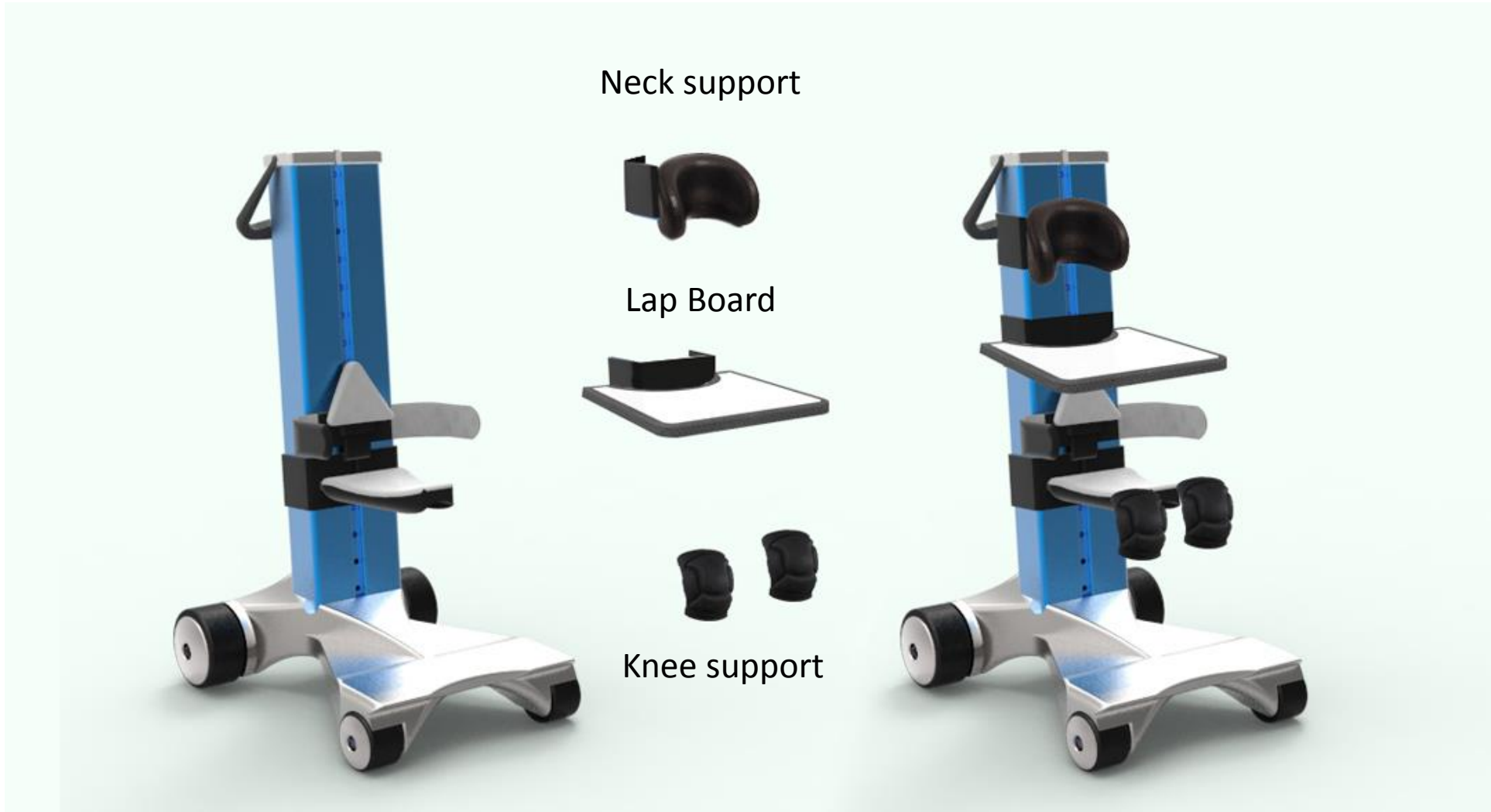
An aid for children with cerebral palsy to move and play around

Adjustable Seat



Easy to maneuver

Easy to pack



Add on features

Colour Variants

Horse saddle
Inspired seat

Questions and Feedback

Thank You