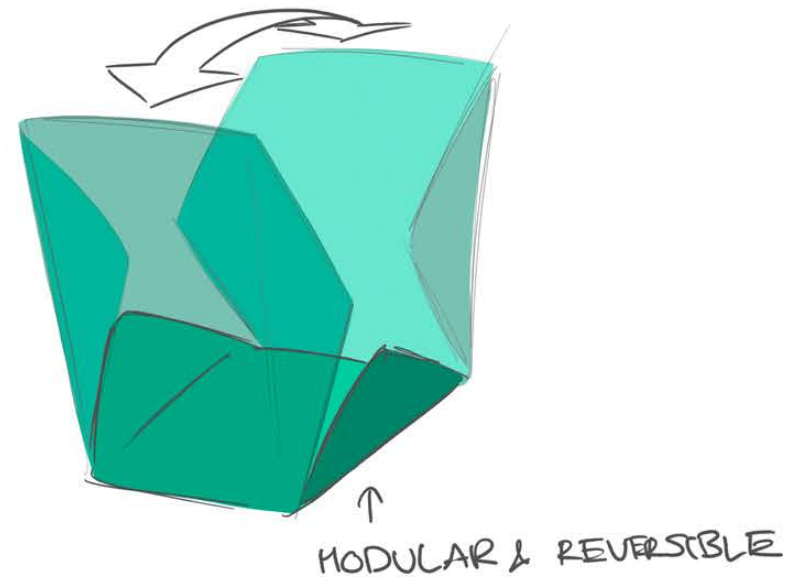
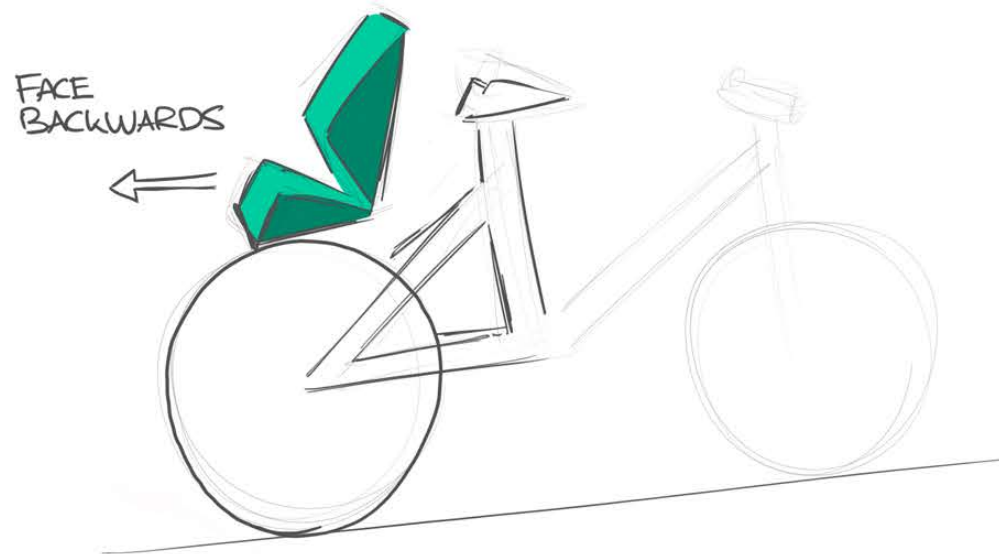


Child Seating Solution for Shared Bicycles

**development process and alternative
ideas that were rejected**

Seating Configuration



- + SOCIALLY MORE FUN
- + BETTER STABILITY (CENTRE OF GRAVITY)
- + BETTER PERCEPTION OF EFFECT TOWARDS HEALTH (NOT INHALING FUMES DIRECTLY)

- COULD CAUSE TRAVEL SICKNESS
- CAN'T SEE FORWARD

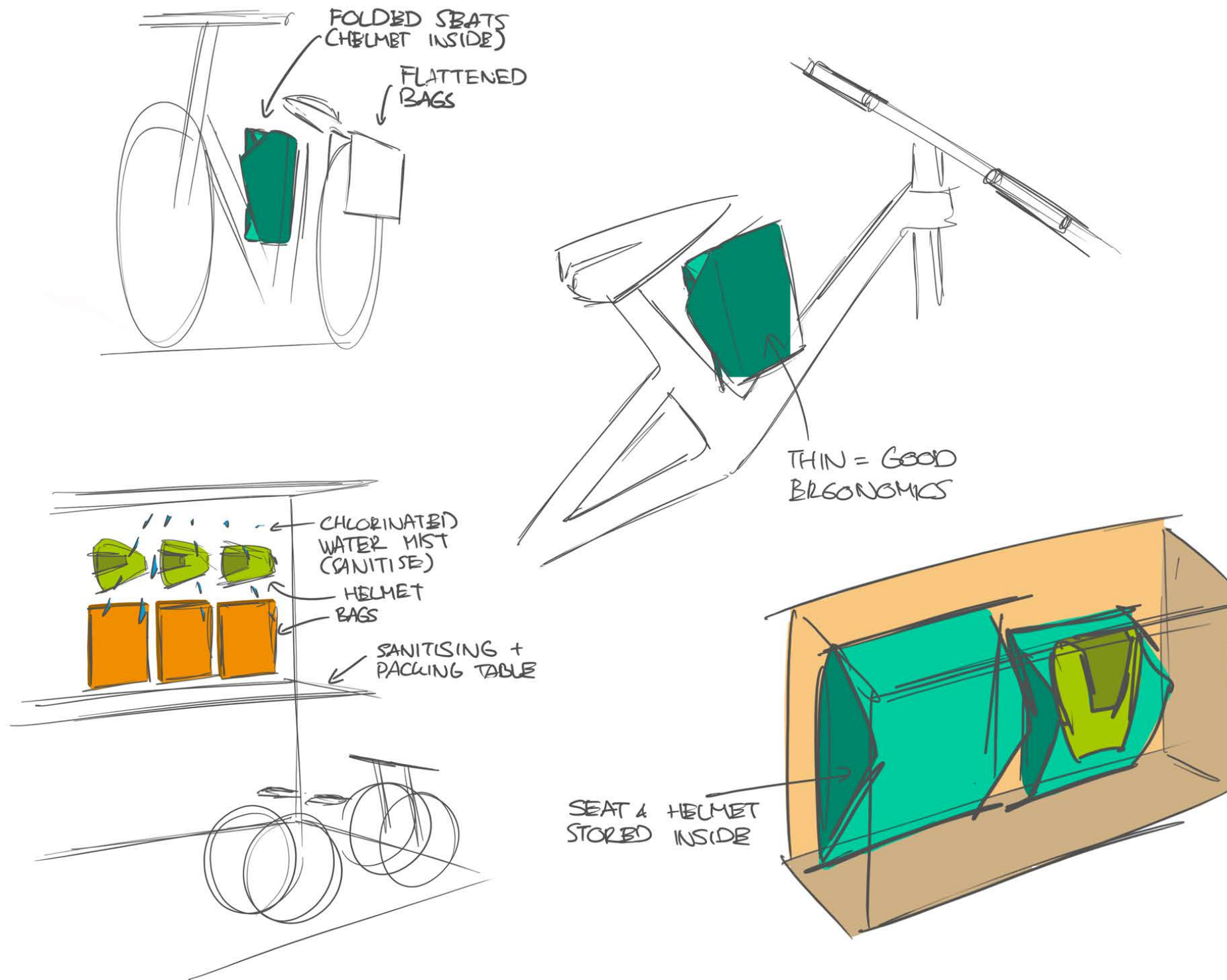
SUITABLE FOR OLDER CHILD



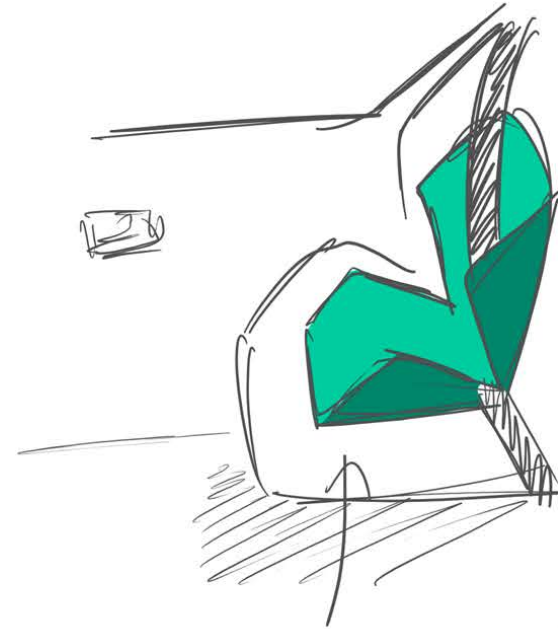
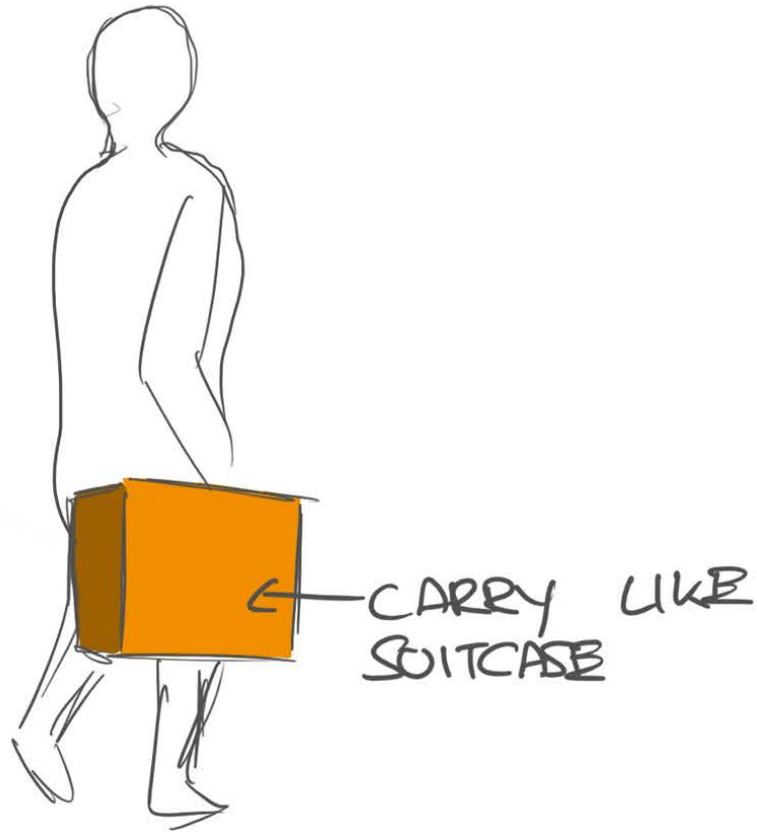
- + CAN SEE WHAT'S IN FRONT
- + OPPORTUNITY TO LEARN BALANCE
- LESS STABLE

SUITABLE FOR YOUNGER CHILD

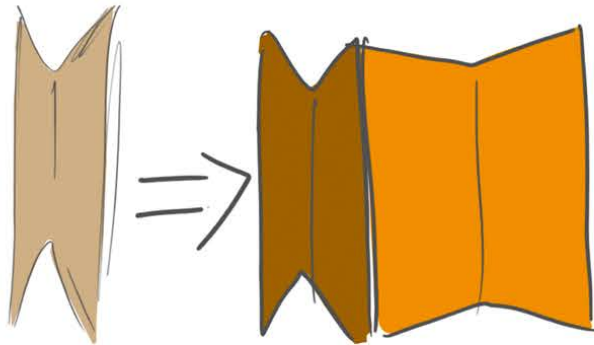
Short Term Rent Initial Proposal (feature omitted)



Long Term Lease Proposal

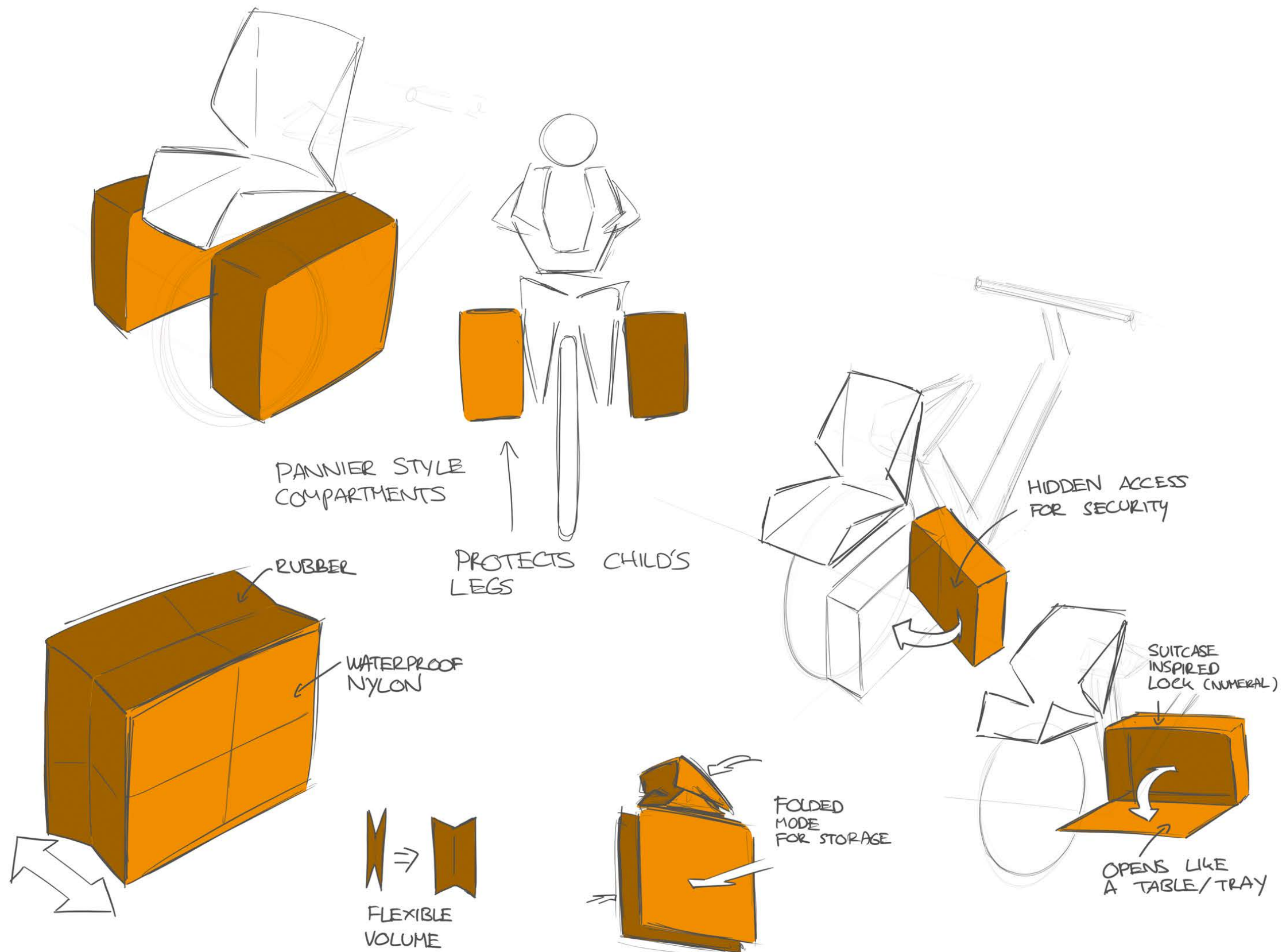


WORKS AS CAR
CHILD SEAT
(I.E. FOR USE IN
TAXI DURING
BAD WEATHER)

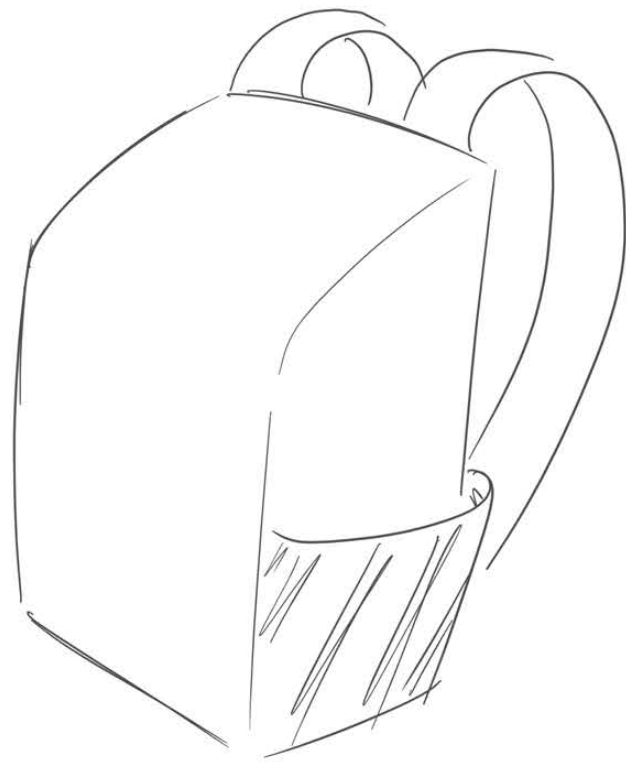


MAGNETS ATTACH BOTH
BAGS TOGETHER

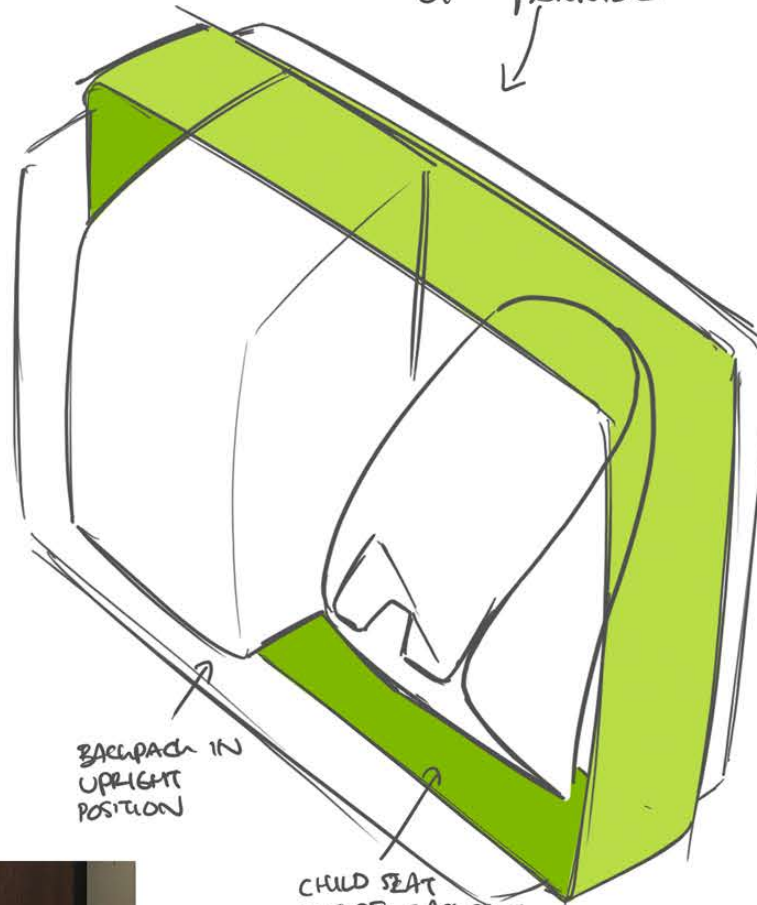
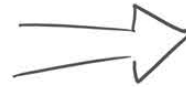
Belongings Management I



Belongings Management II (Final)



↑
15L BACKPACK,
FULLY PACKED



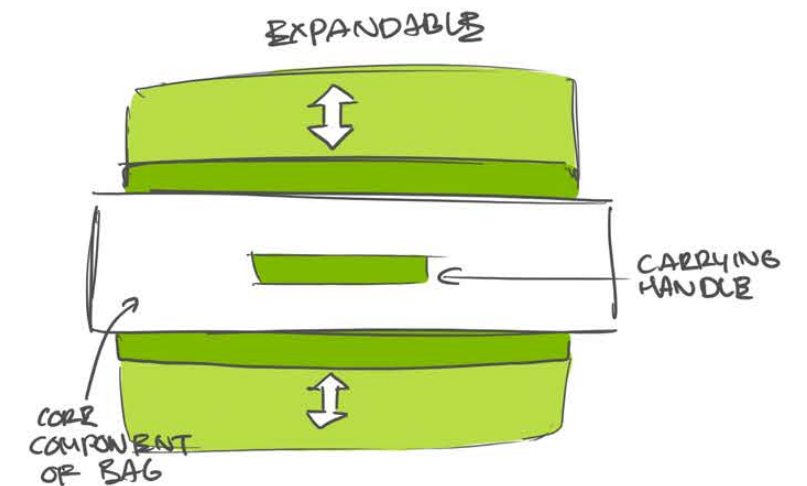
BACKPACK IN
UPRIGHT
POSITION

CHILD SEAT
BESIDE BACKPACK

ROUGH VOLUME
OF "PANNIER"



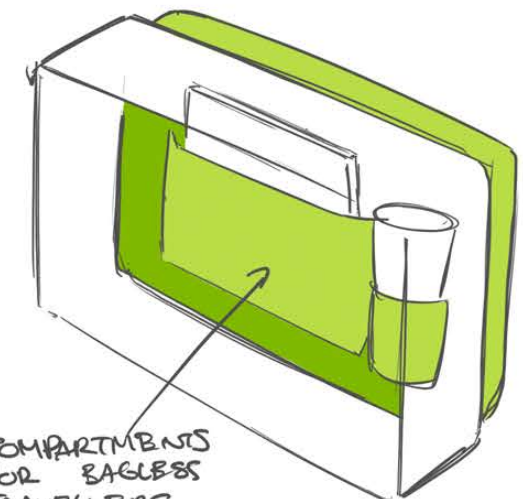
← BAG SIZE IN
RELATION TO
AN ADULT MACE
SIZE MTB



EXPANDABLE

CARRYING
HANDLE

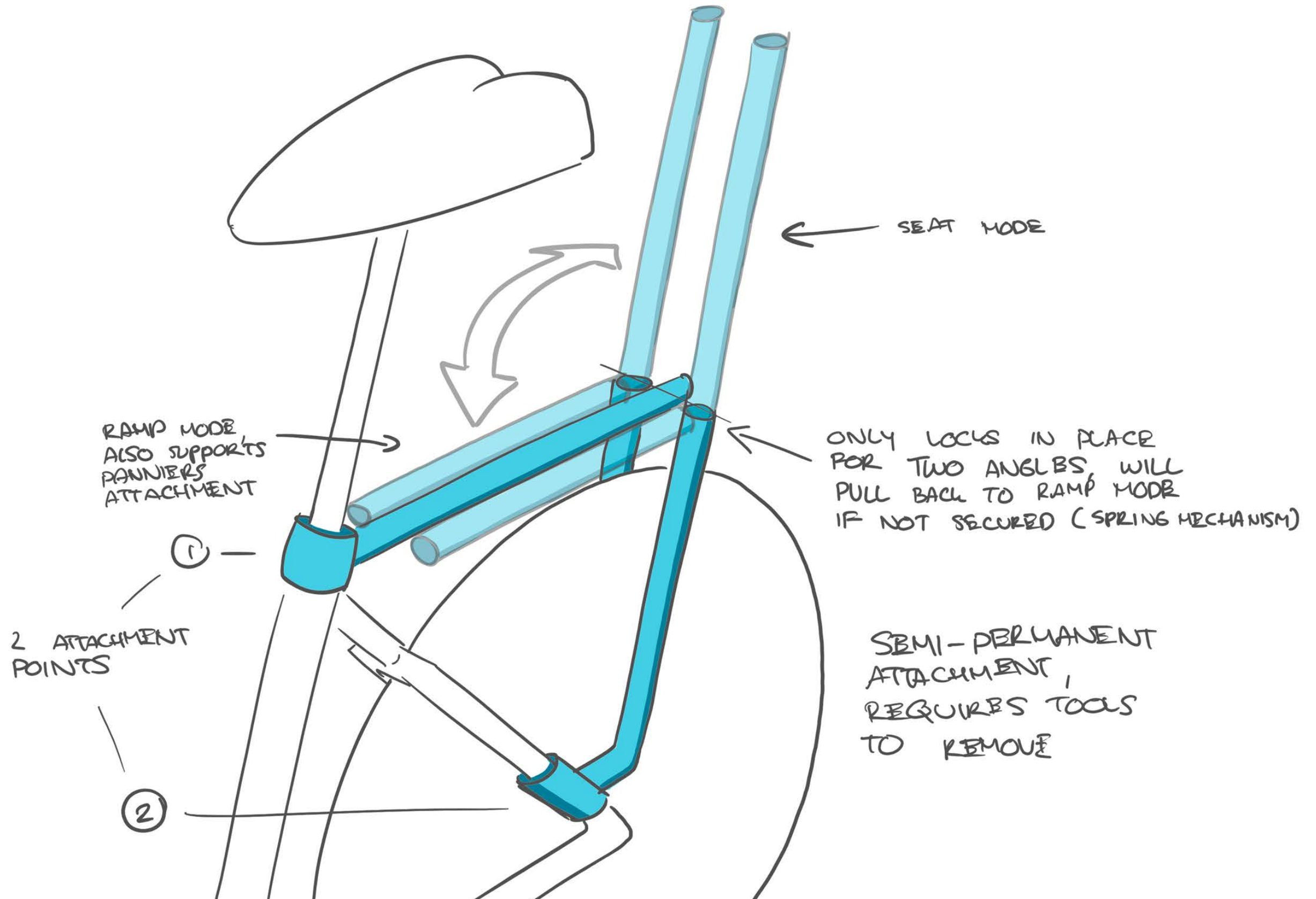
CORE
COMPONENT
OF BAG



COMPARTMENTS
FOR BAGLESS
TRAVELLERS

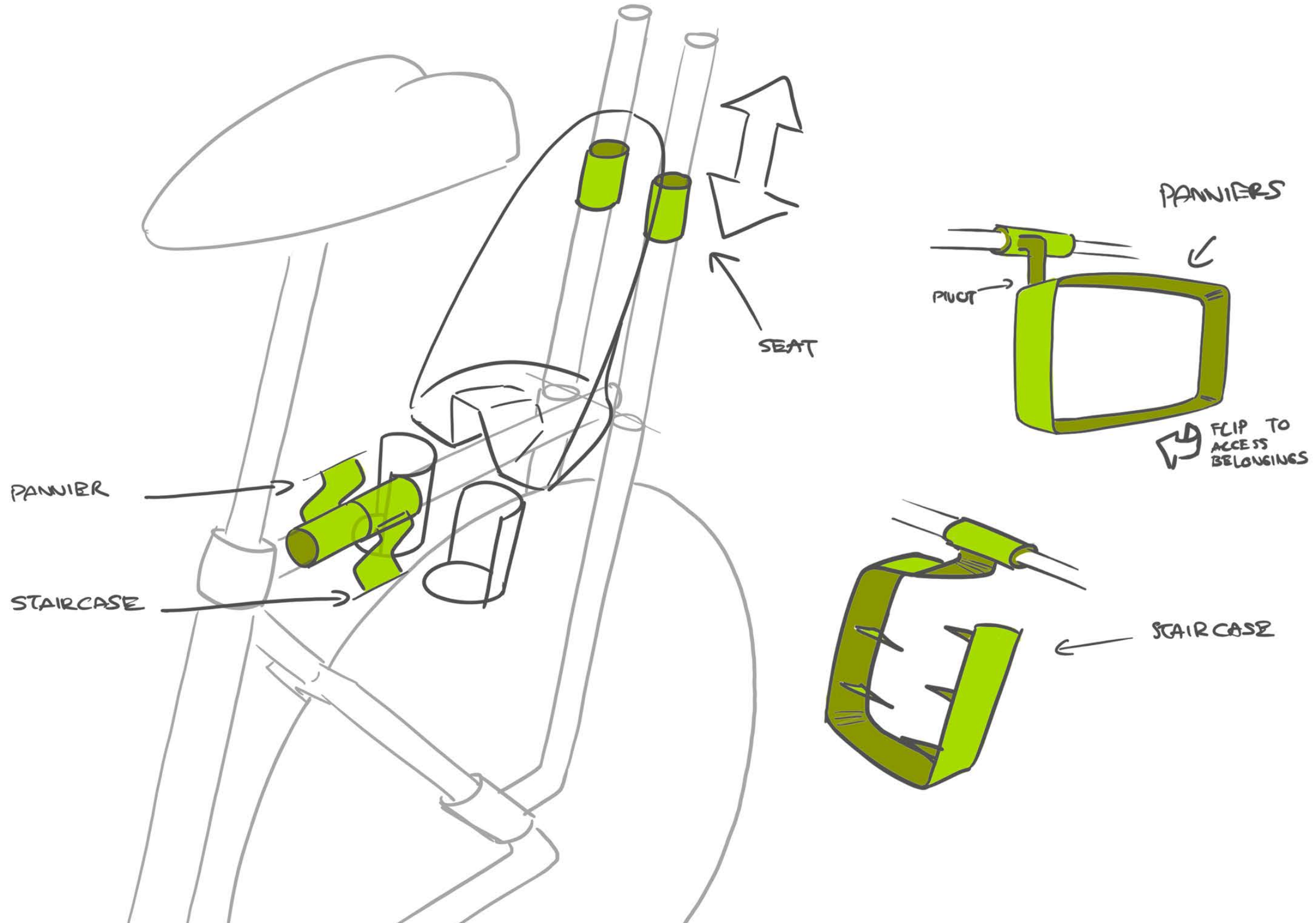


Bicycle Attachment Mechanism - Part I

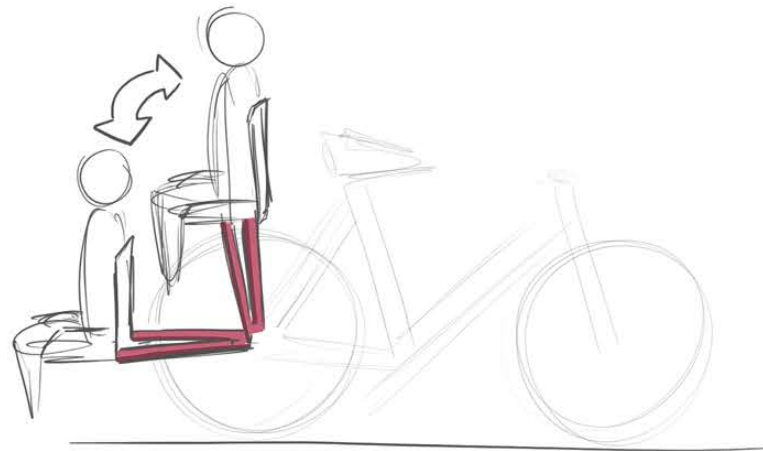




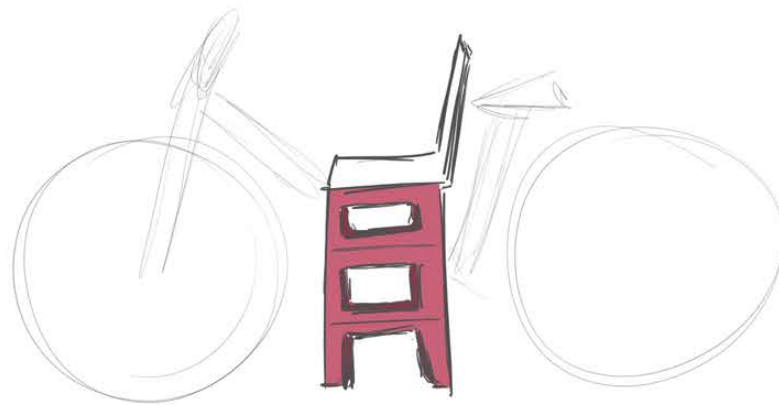
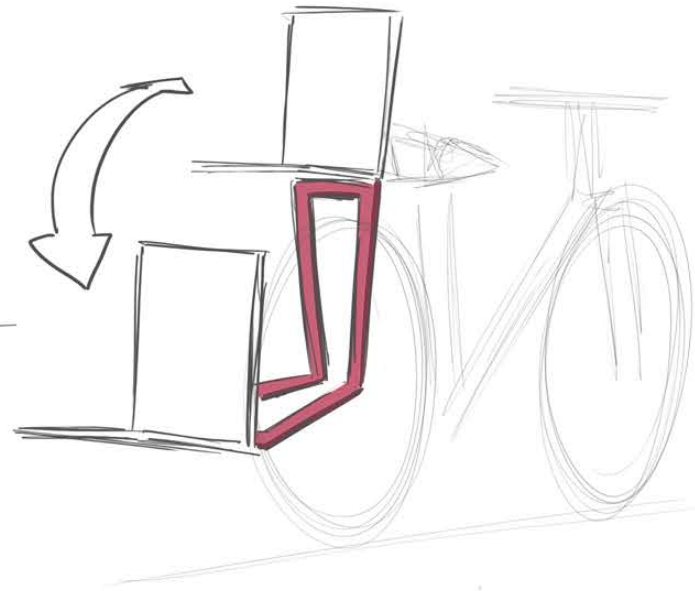
Bicycle Attachment Mechanism - Part II



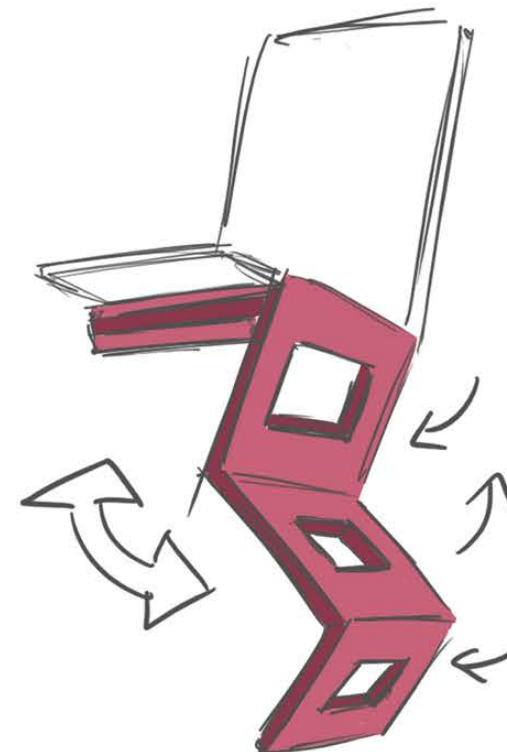
Child Loading Mechanism I



EASIER LOADING/
UNLOADING



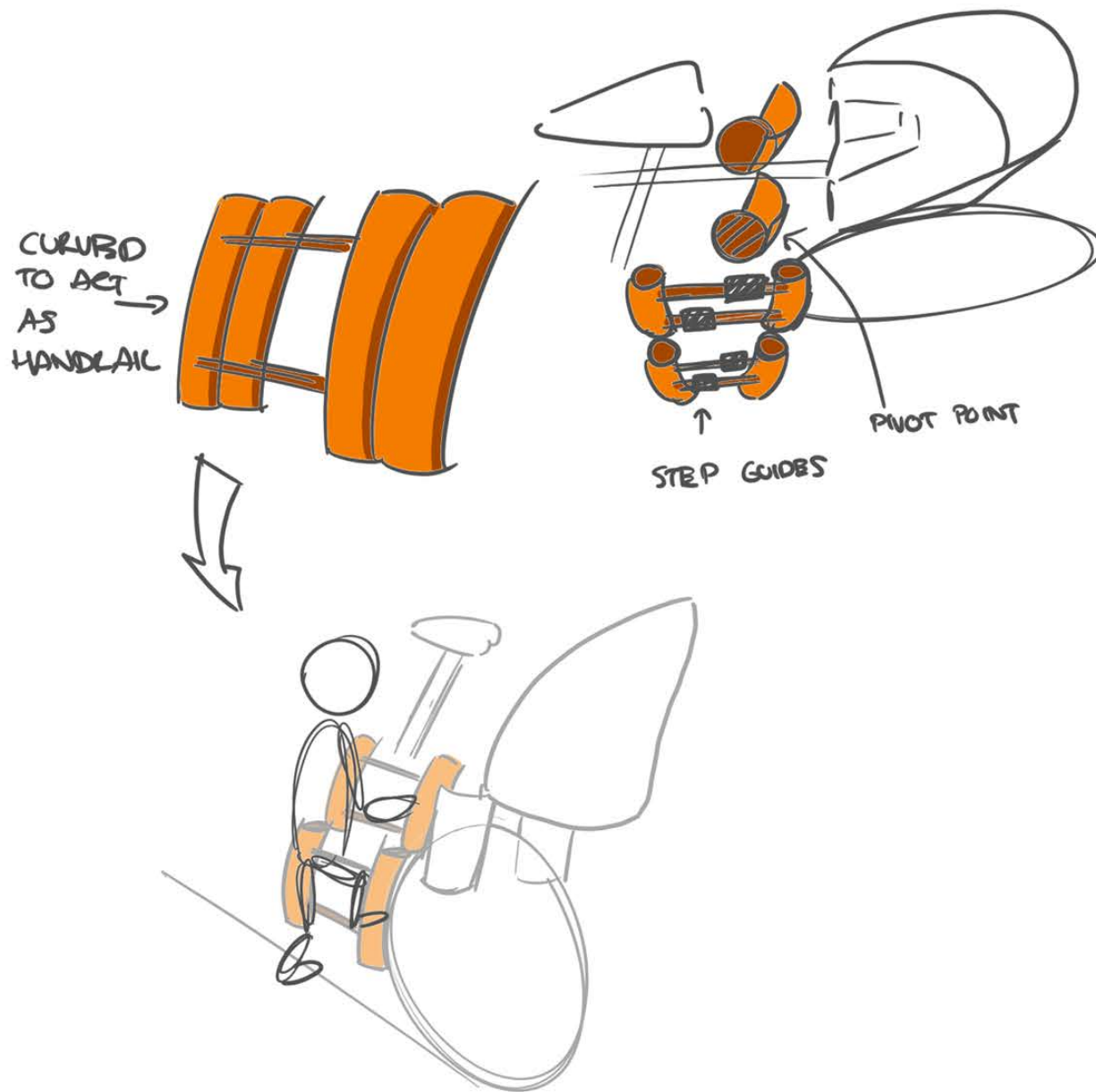
FOLDABLE
SIDE LADDER



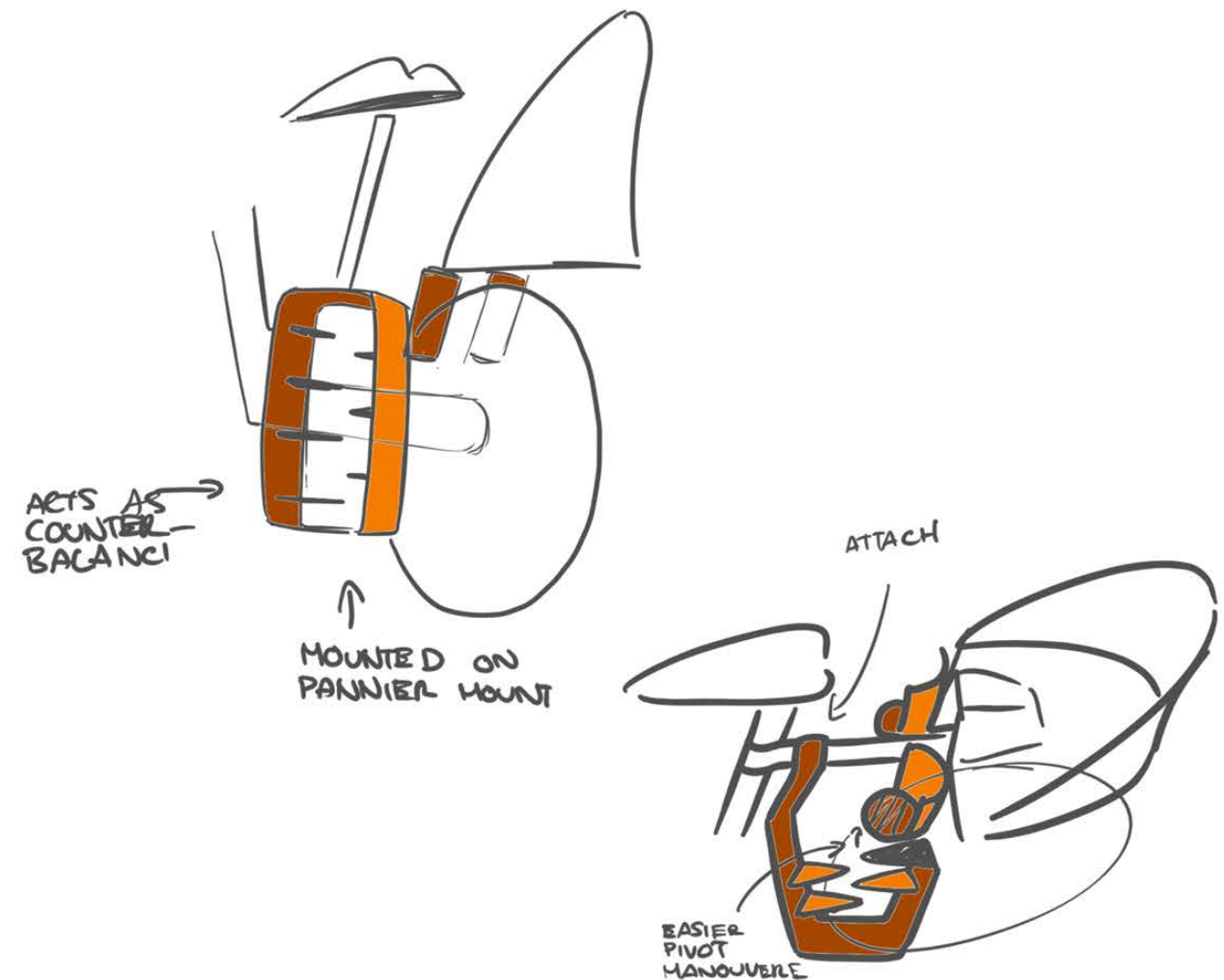
FOLDING
MECHANISM

Child Loading Mechanism II

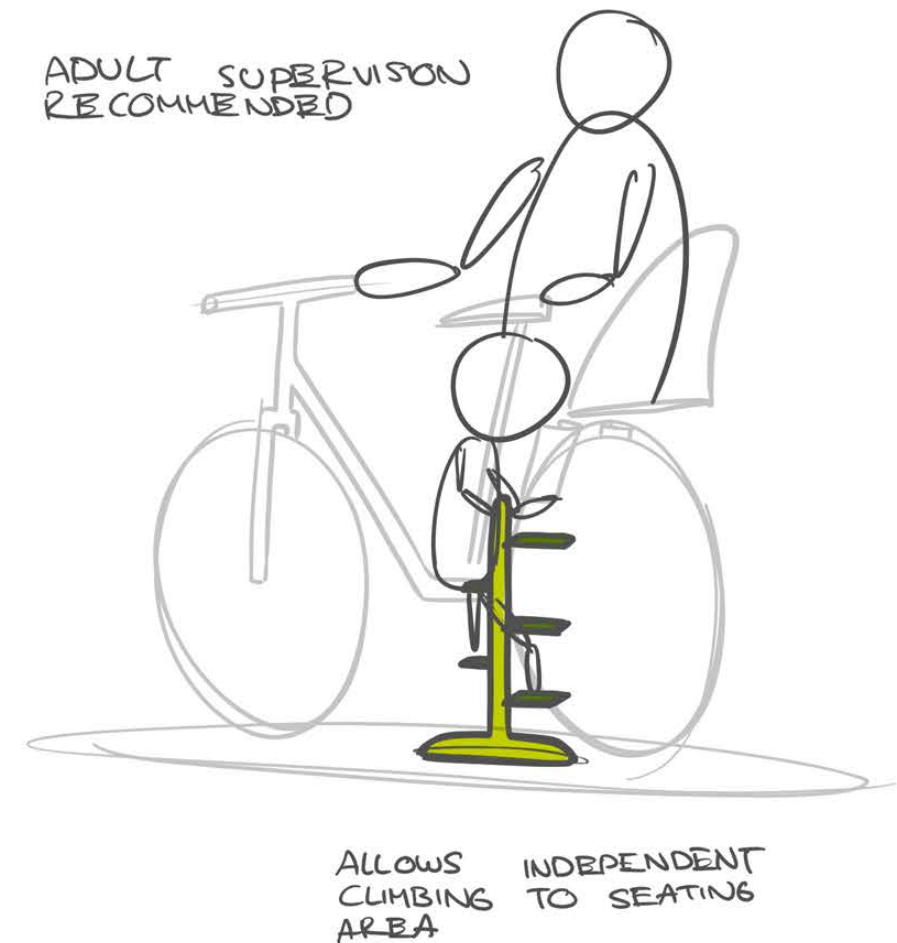
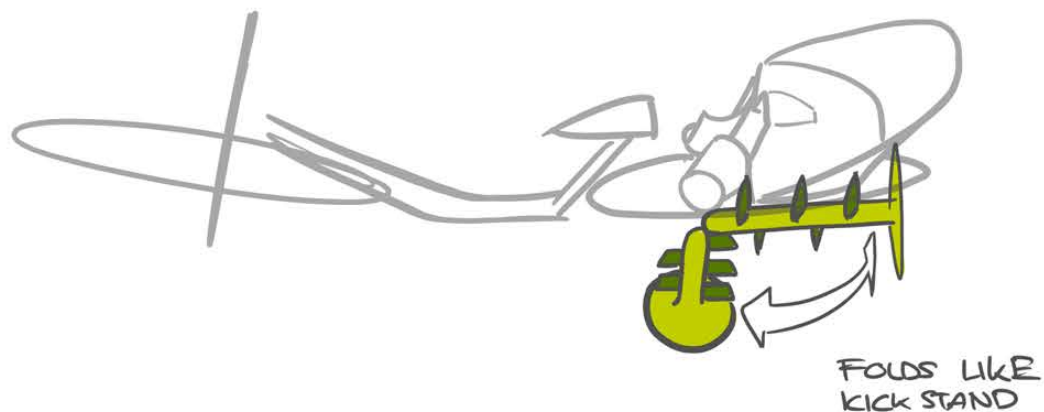
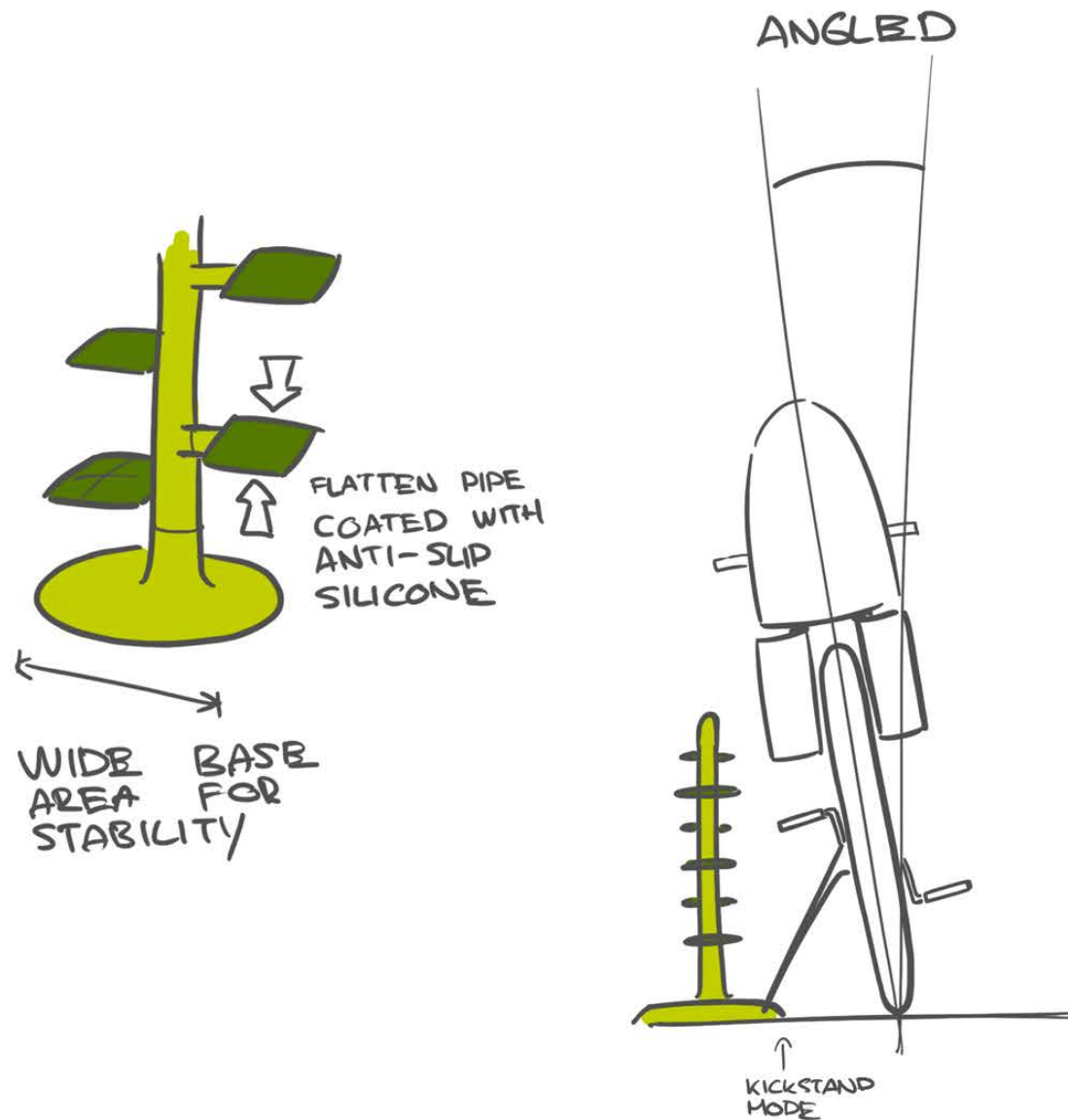
① SLIDING STAIRCASE



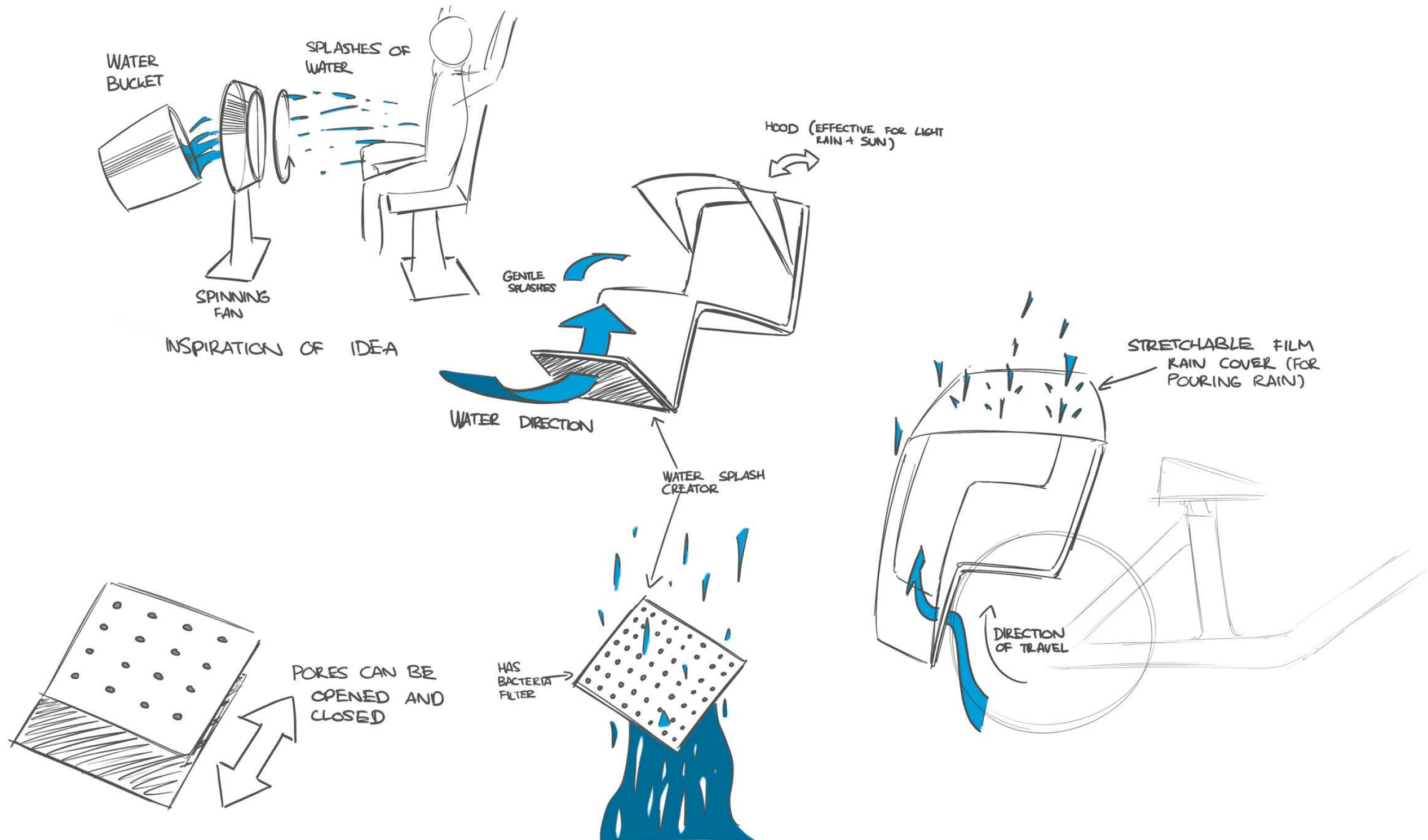
② FIXED STAIRCASE



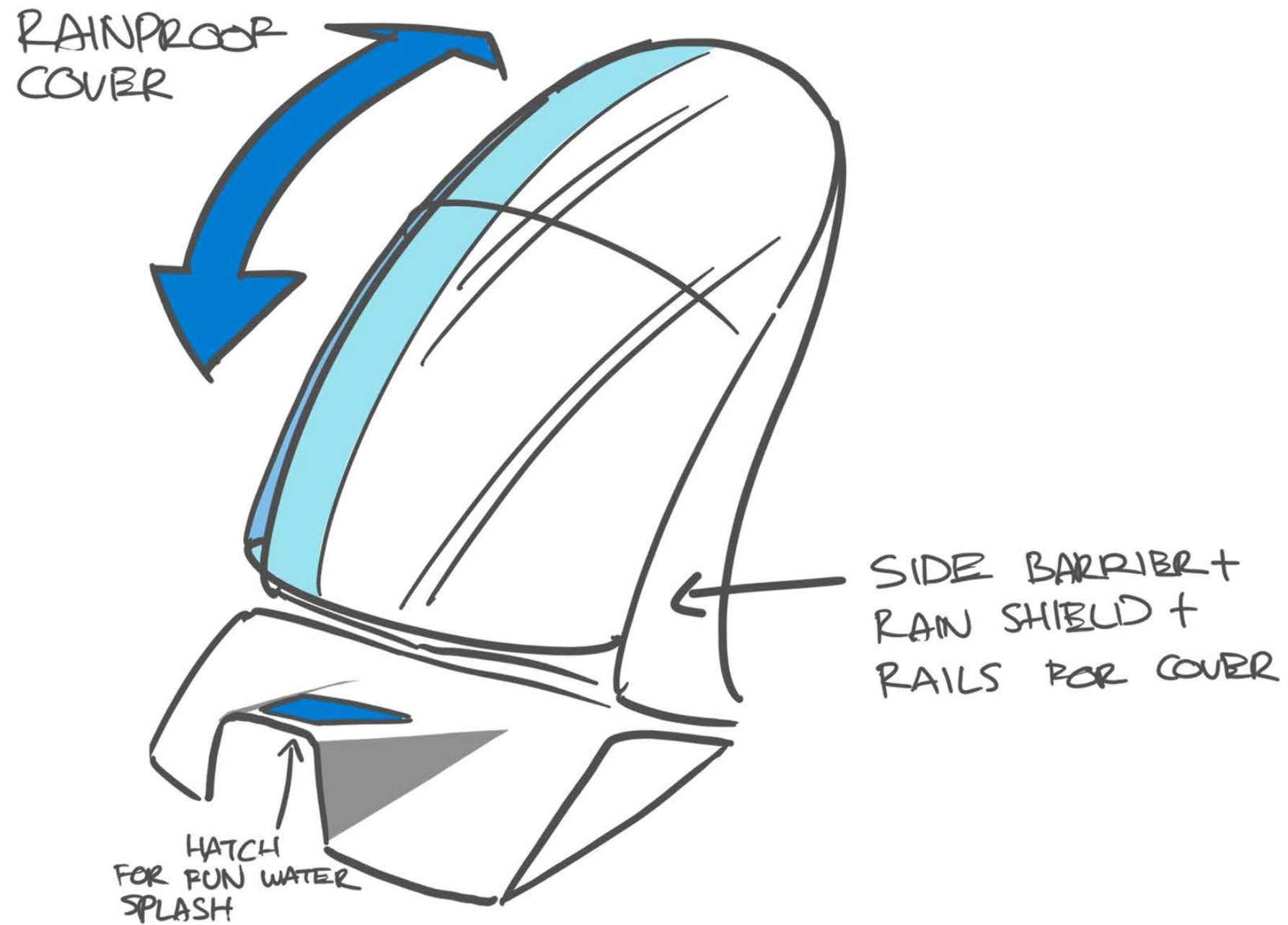
Child Loading Mechanism III (Final)



Interaction with Water I



Interaction with Water II



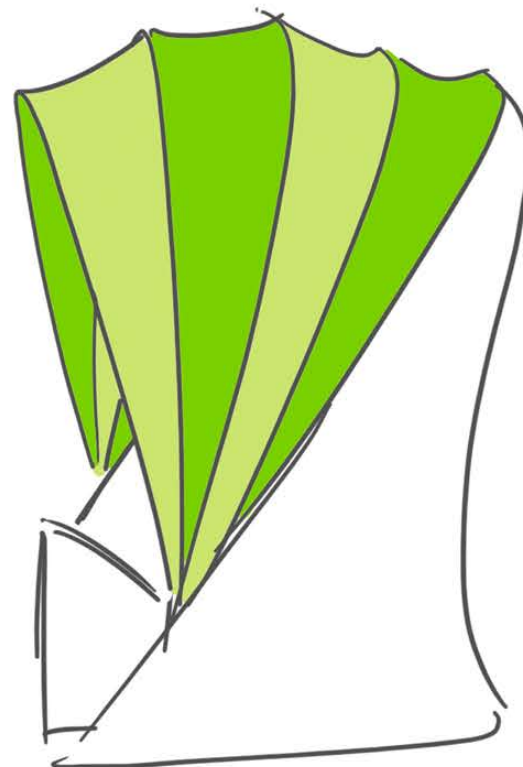
Interaction with Water III (Final)



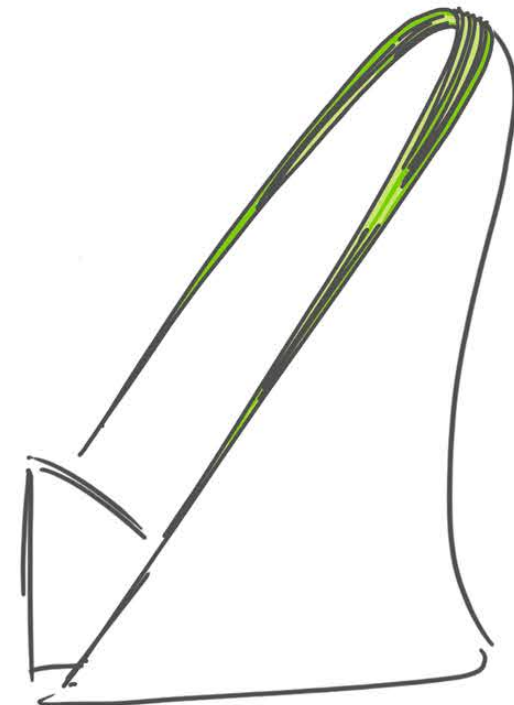
NOW INCLUDES A PATH FOR WATER TO DRIP FROM THE SIDE + DOESN'T BLOCK HEADWAY

ALSO EFFECTIVE AGAINST HABIT

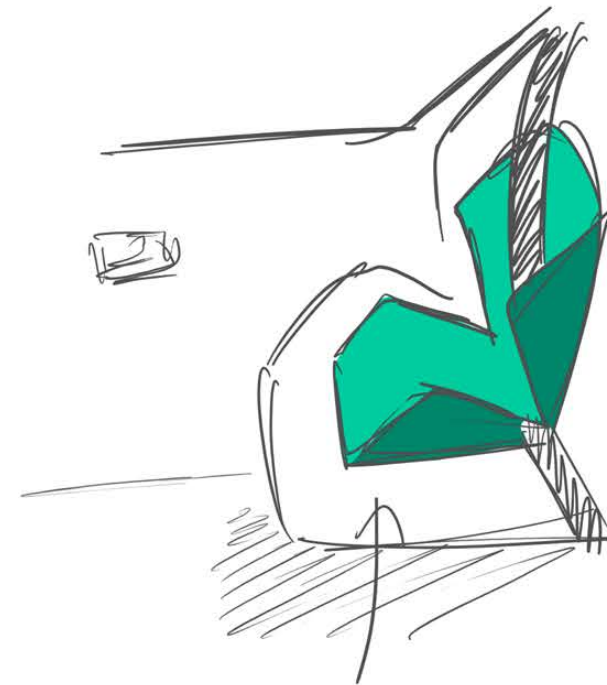
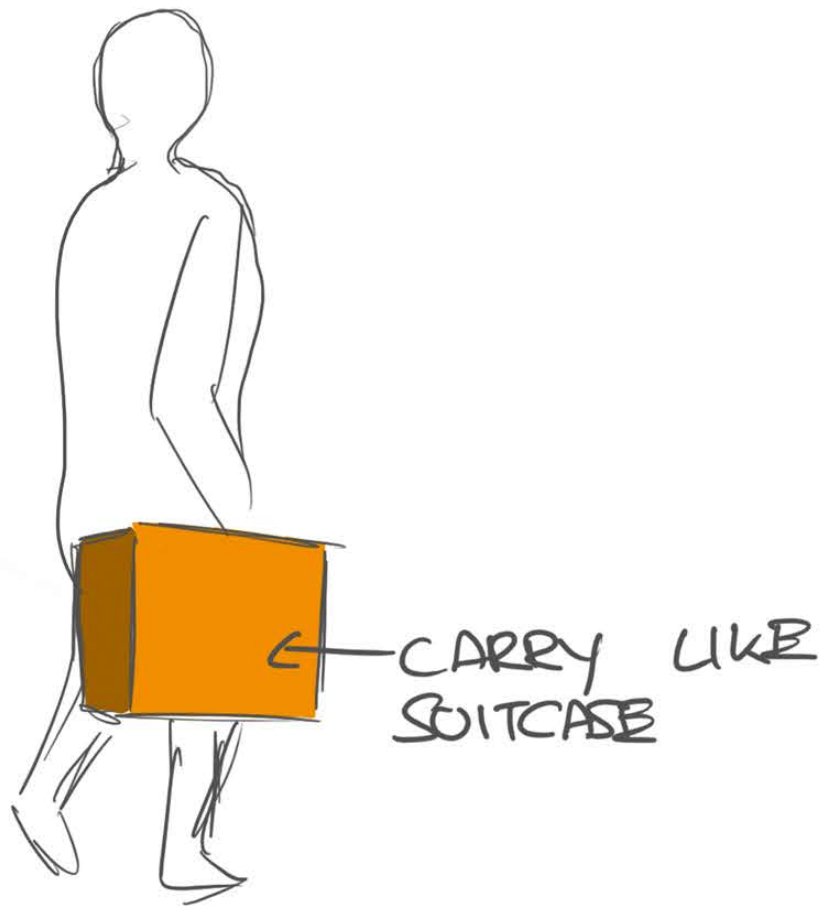
HOOD UNFOLDED



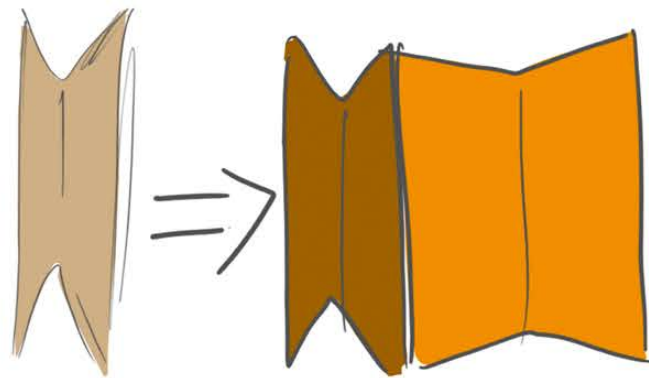
HOOD RETRACTED



Utility beyond Cycling - Car Seat (feature omitted)



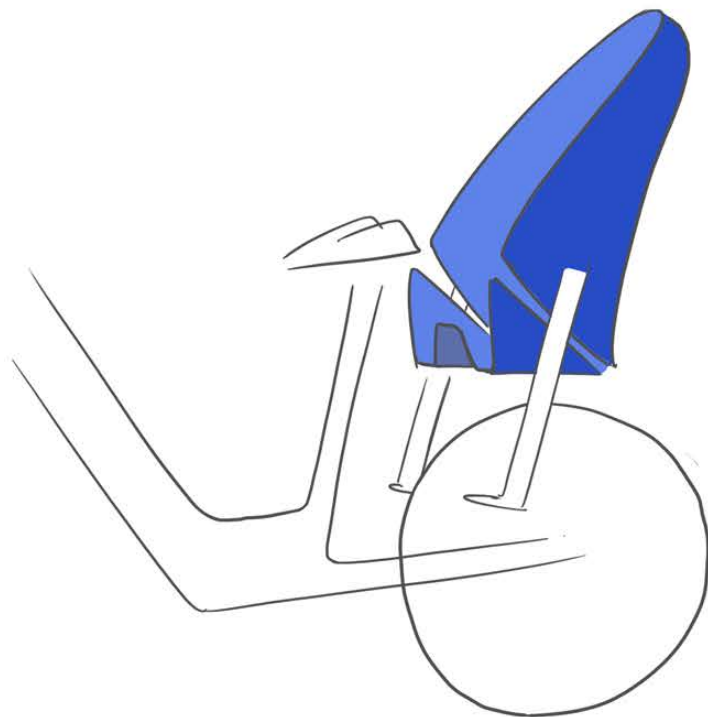
WORKS AS CAR
CHILD SEAT
(I.E. FOR USE IN
TAXI DURING
BAD WEATHER)



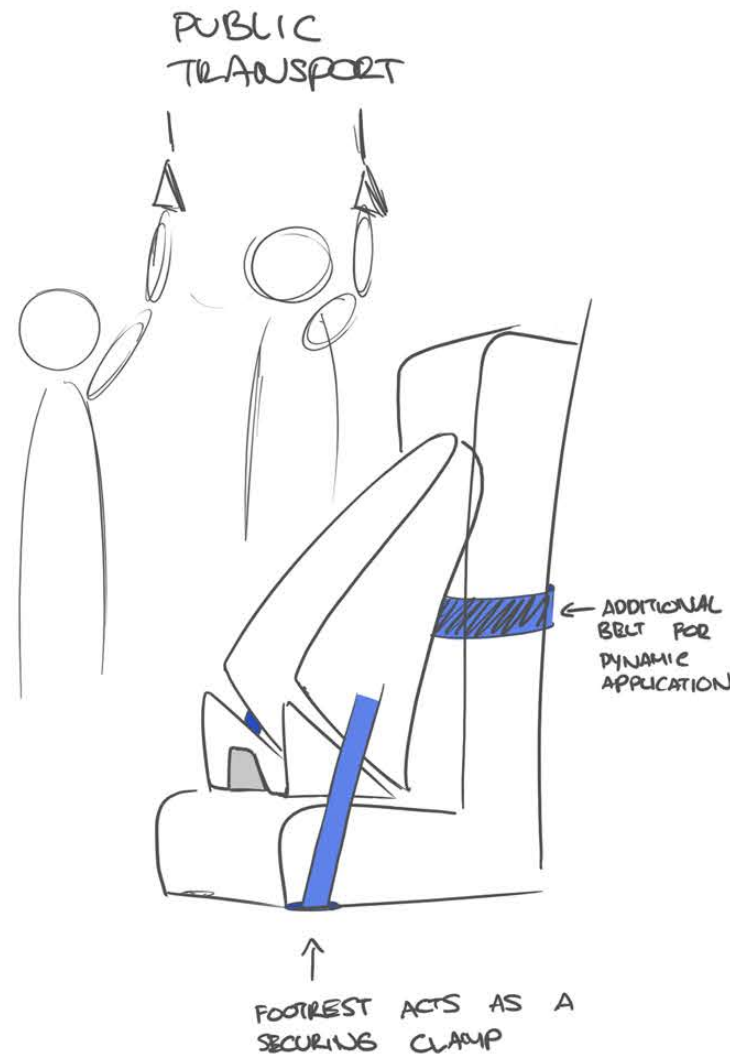
MAGNETS ATTACH BOTH
BAGS TOGETHER

Utility beyond Cycling - Public Transport/Other Public Places (feature omitted)

- + MORE ACHIEVABLE THAN 'CAR MODE' (DUE TO THE REGS & SAFETY SURROUNDING CAR CHILD SEAT)
- + ENCOURAGES MORE USE OF BICYCLE (AS THE CHILD SEAT IS USEFUL AT DESTINATION)
- + ENCOURAGES USE OF PUBLIC TRANSPORT

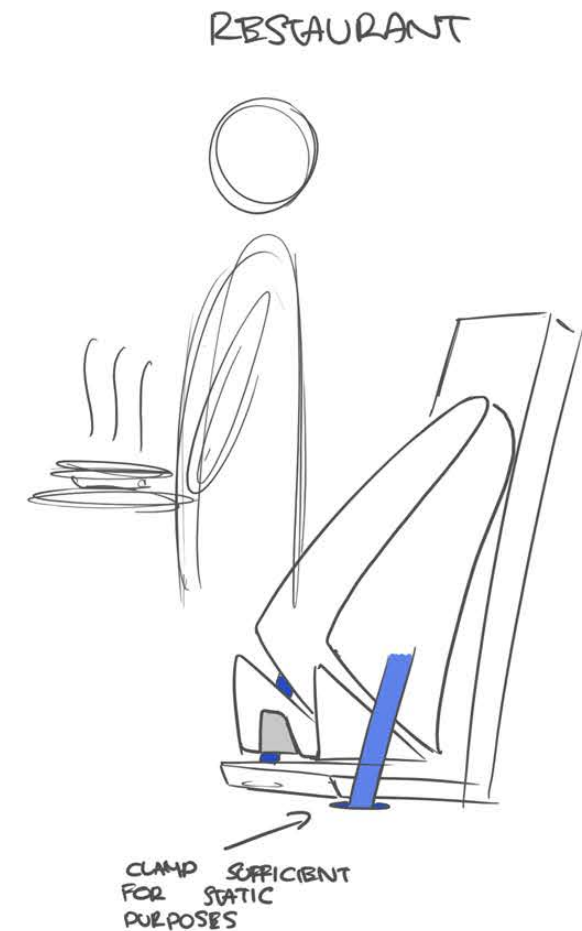


MAIN USE CASE :
ON A BICYCLE

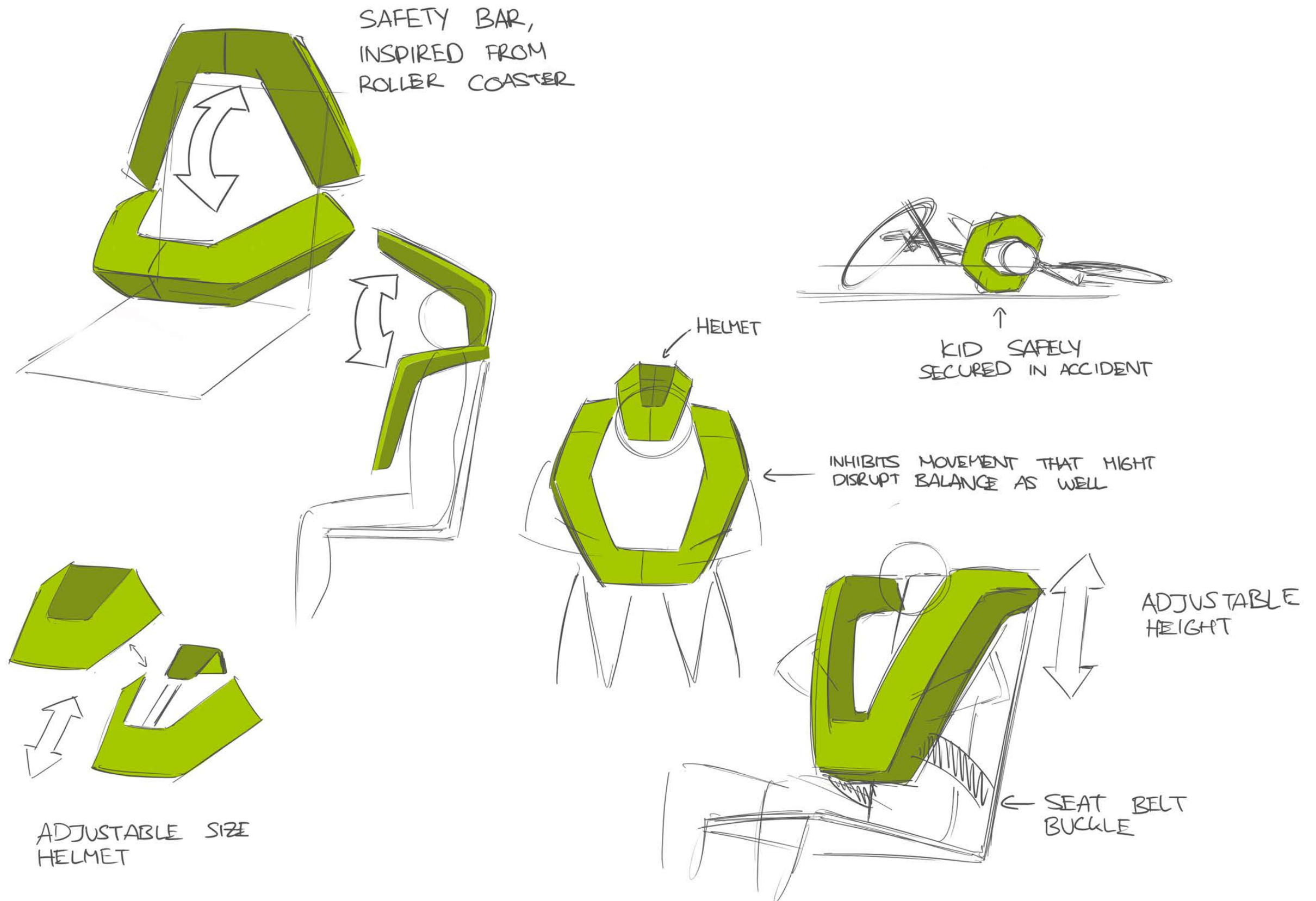


SECONDARY USE CASE :

- ON OTHER PUBLIC TRANSPORT OPTIONS (I.E. BUS/TRAM)
- ON OTHER PUBLIC SPACES (I.E. RESTAURANTS)



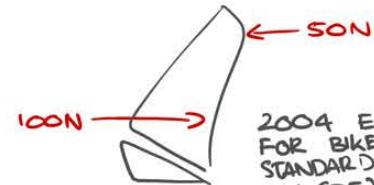
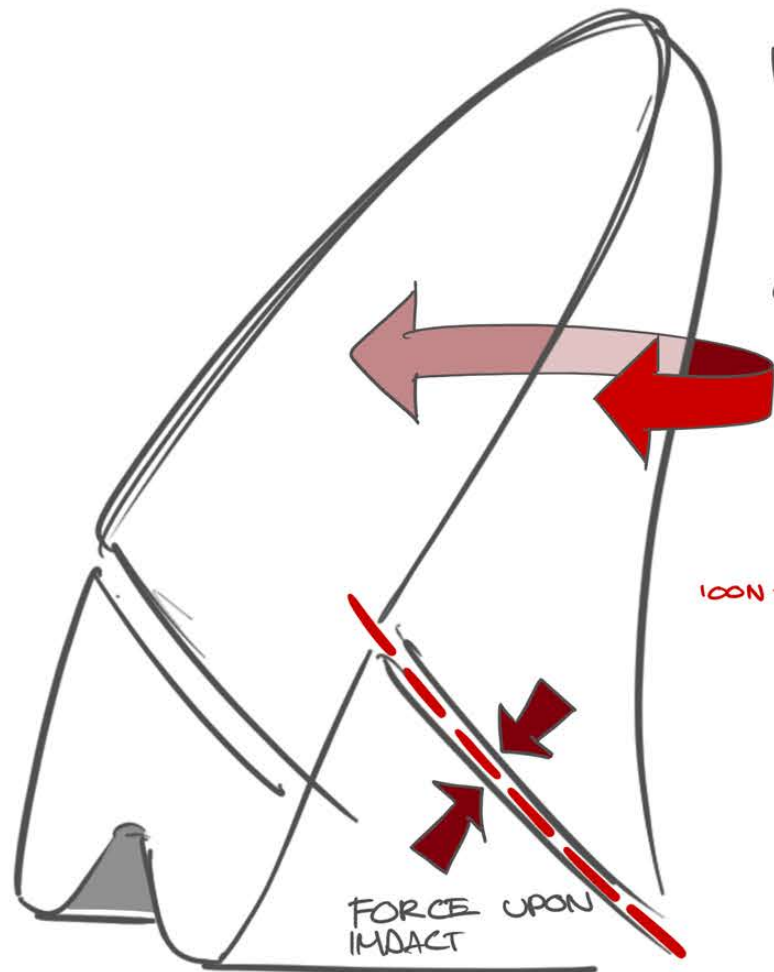
Safety Consideration I



Safety Consideration II

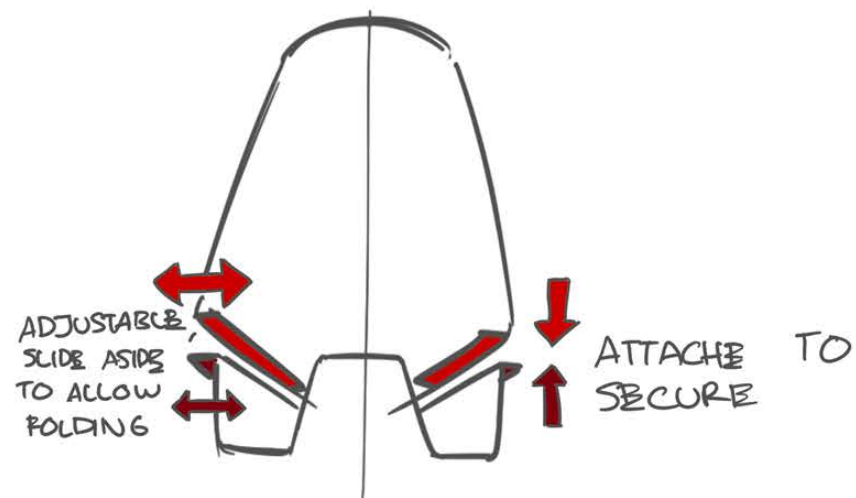
1. THROUGH DESIGN OF SEAT

CURVED BACK = STRONGER



2004 EU SAFETY
FOR BIKE CHILD SEAT
STANDARD SET BY
DIN (DE)
DIN EN 14344 (2004)

CONCERNS OF
FOLDABLE DESIGN
AFFECTING SAFETY
NEGATED BY DESIGN



2. THROUGH BETTER HARNESS

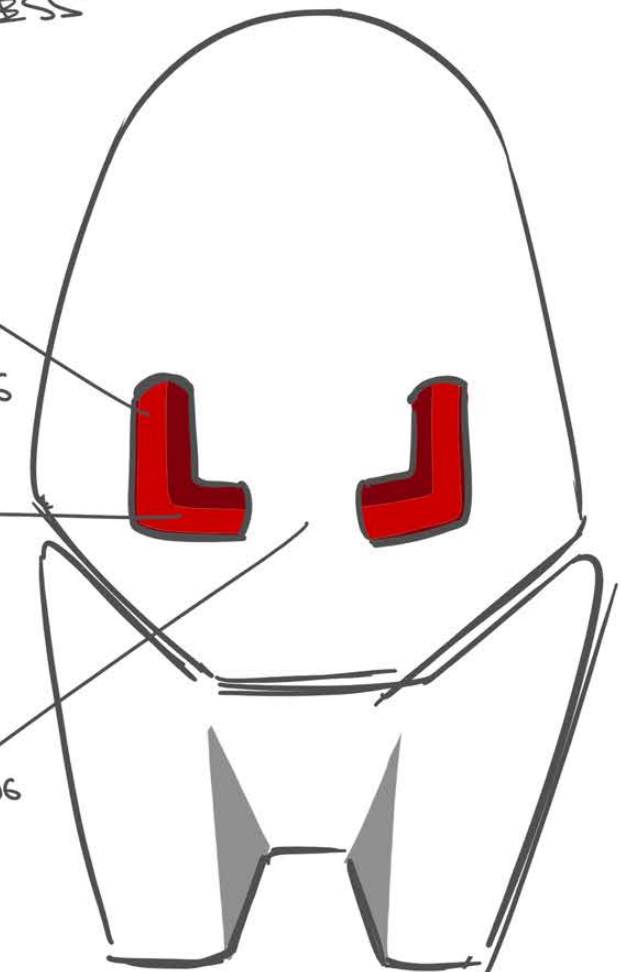
ARMPIT GUARD
TO
PREVENT
CHILD SLIPPING

HORIZONTAL =
FLEXIBLE AGE
RANGE

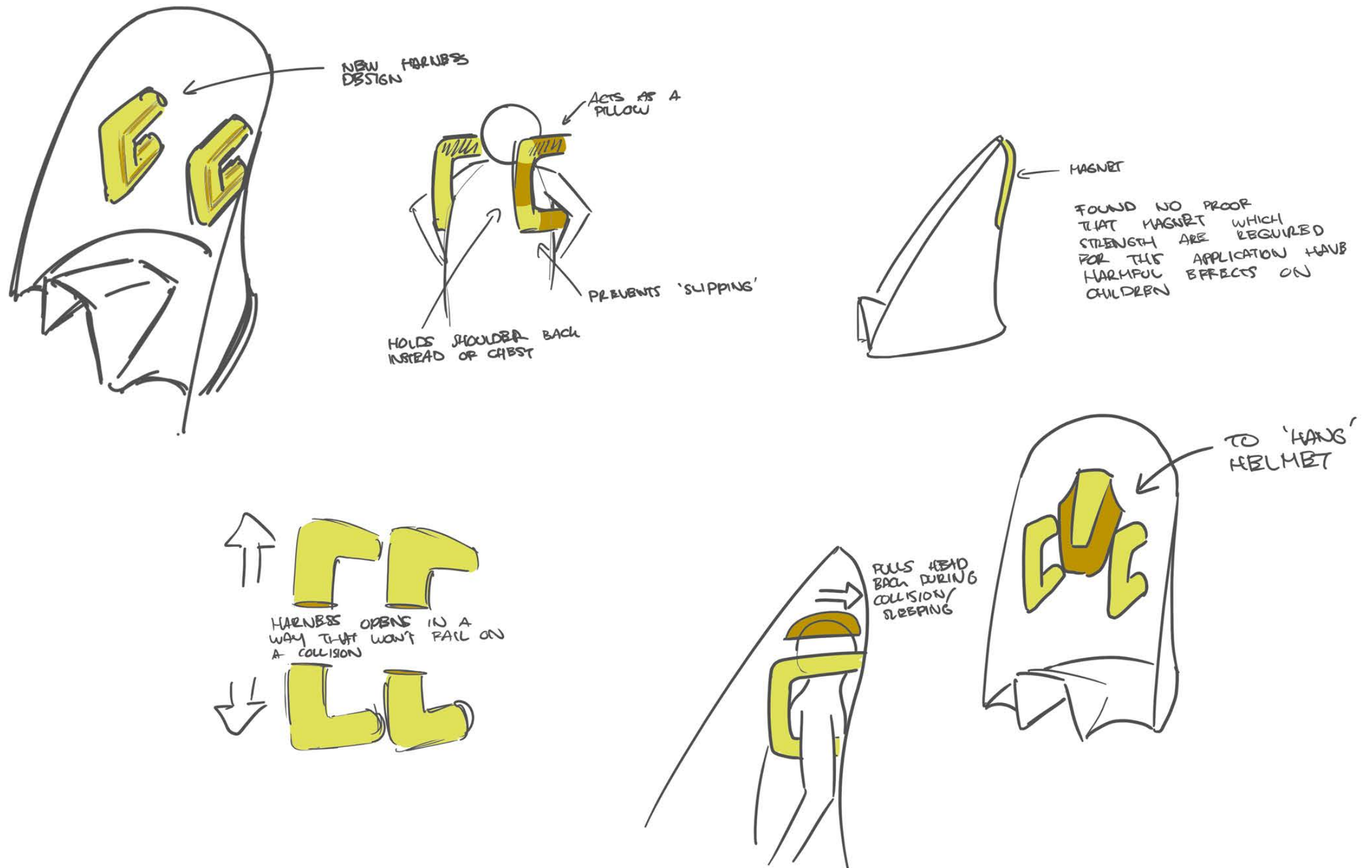
NO CHOKING
HAZARD



SIDE VIEW

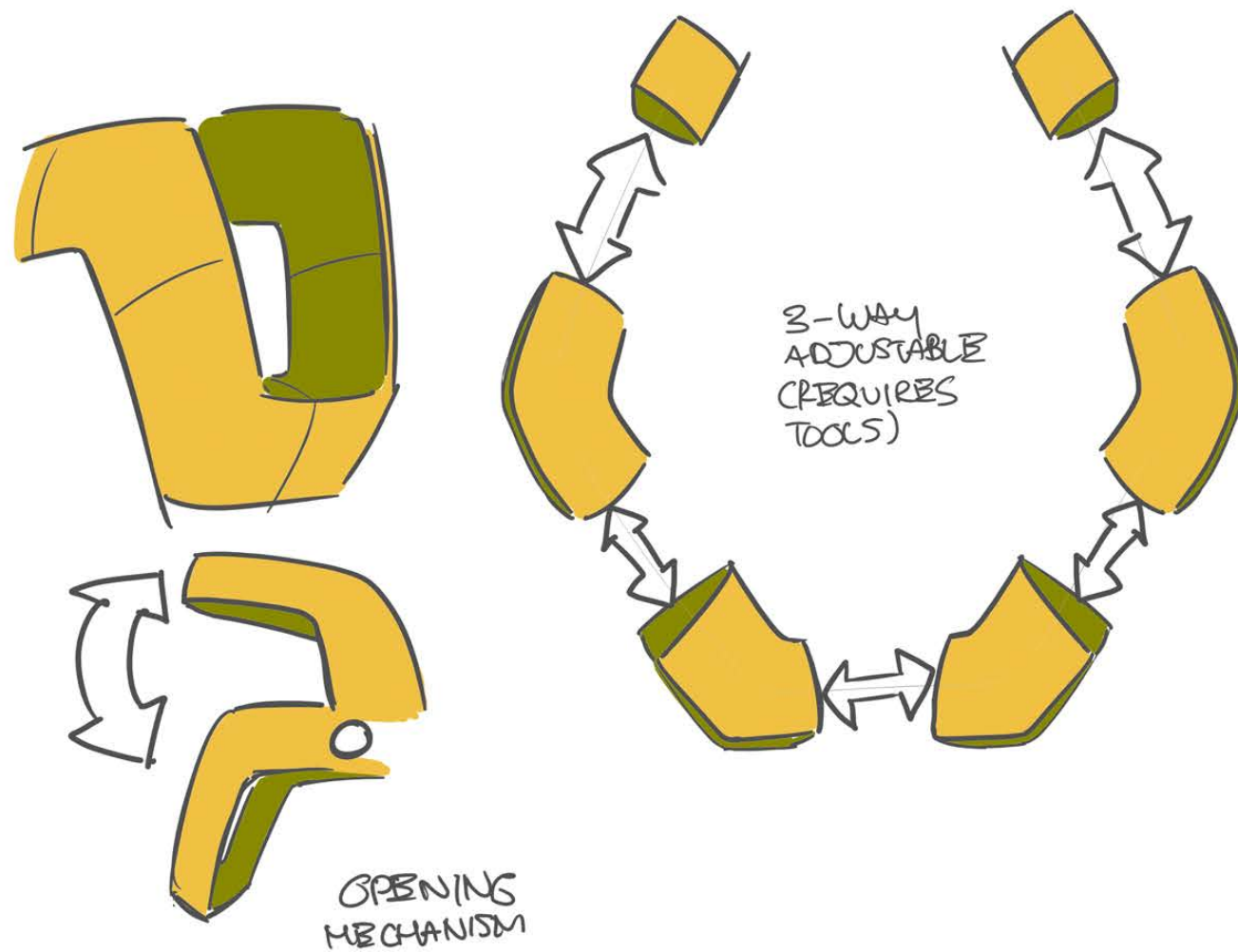


Safety Consideration III

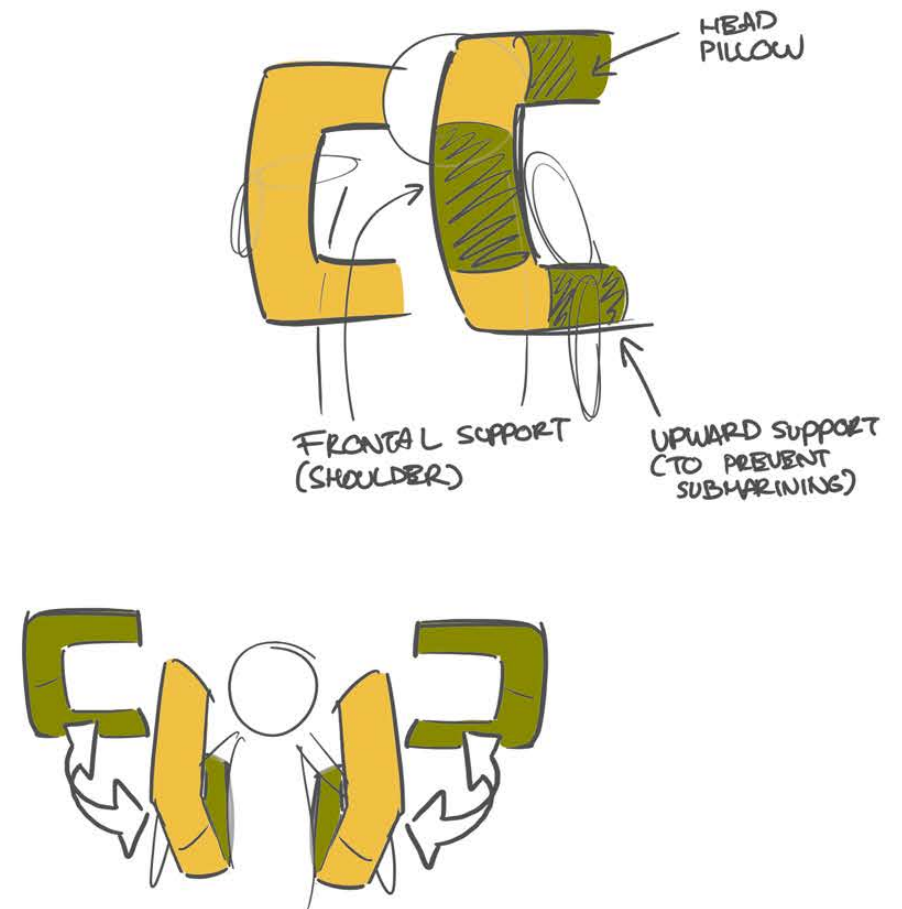


Safety Consideration Alternatives I

① VEST HARNESS



② HARNESS 2.0

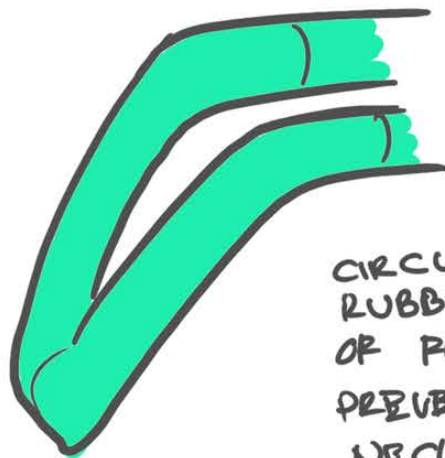
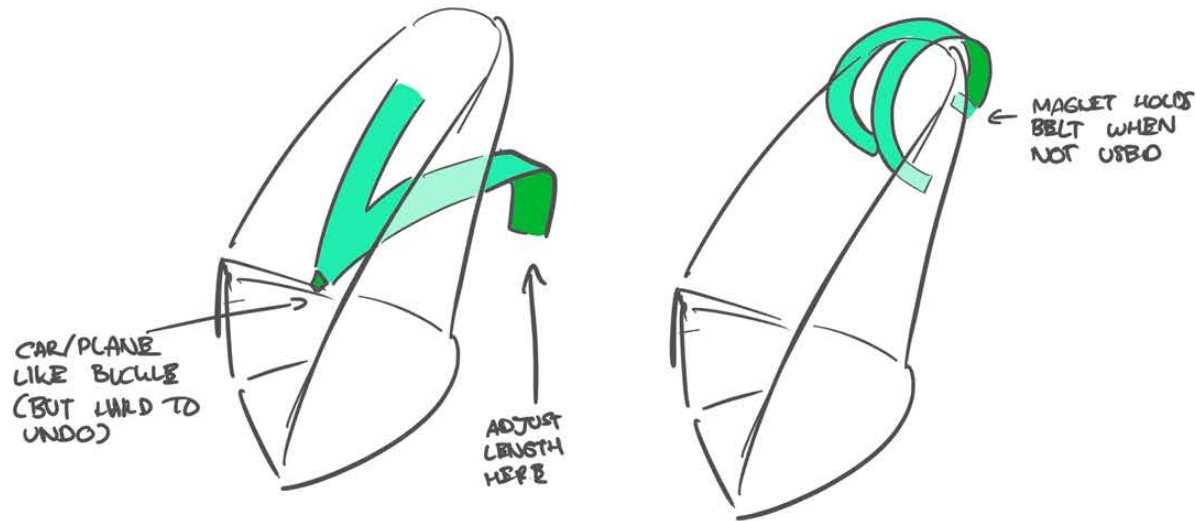


Safety Consideration Alternatives II

3

'FIXED' LENGTH
SOFT HARNESS

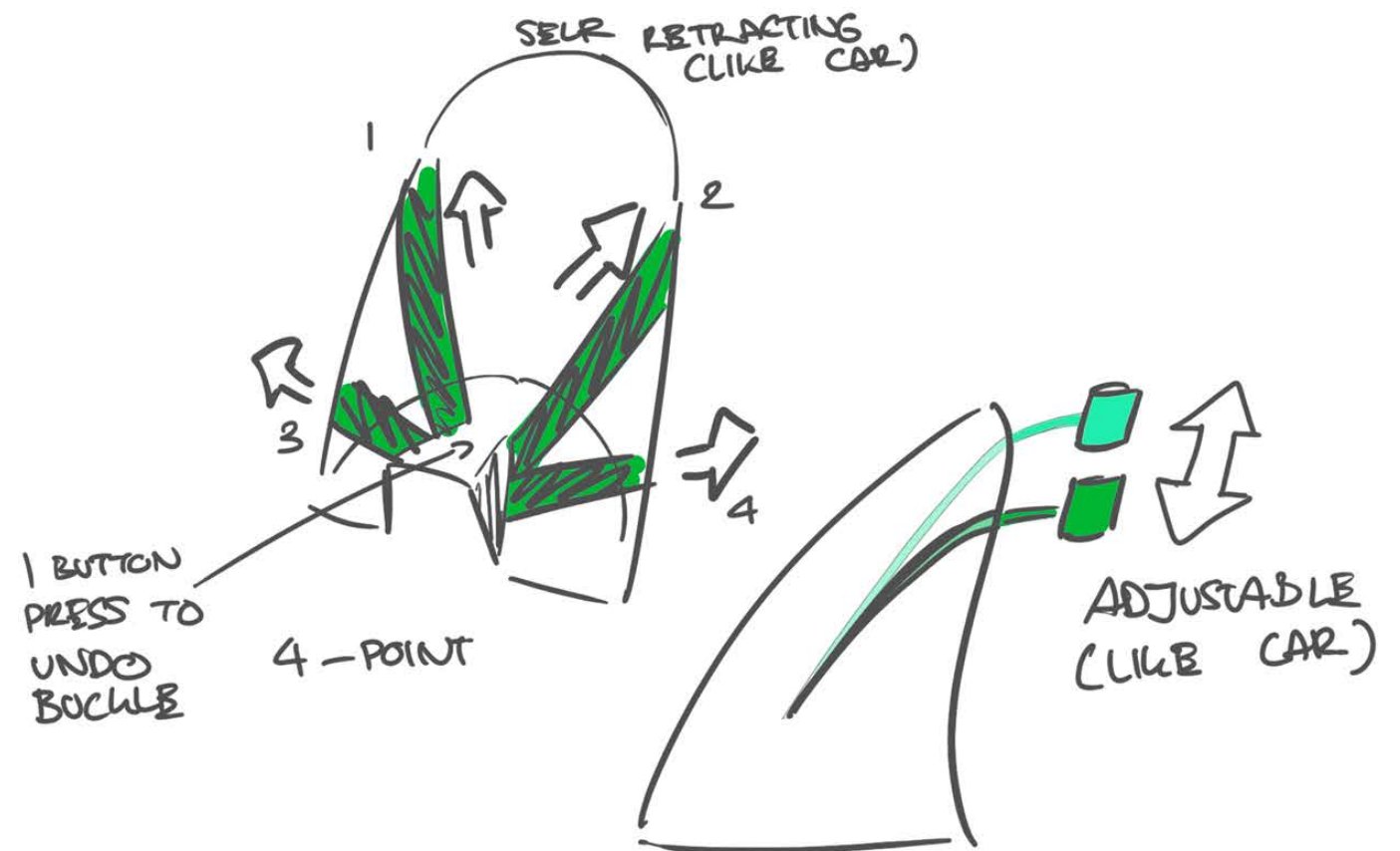
CREDITS TO SOLENZA & SANJEEVI



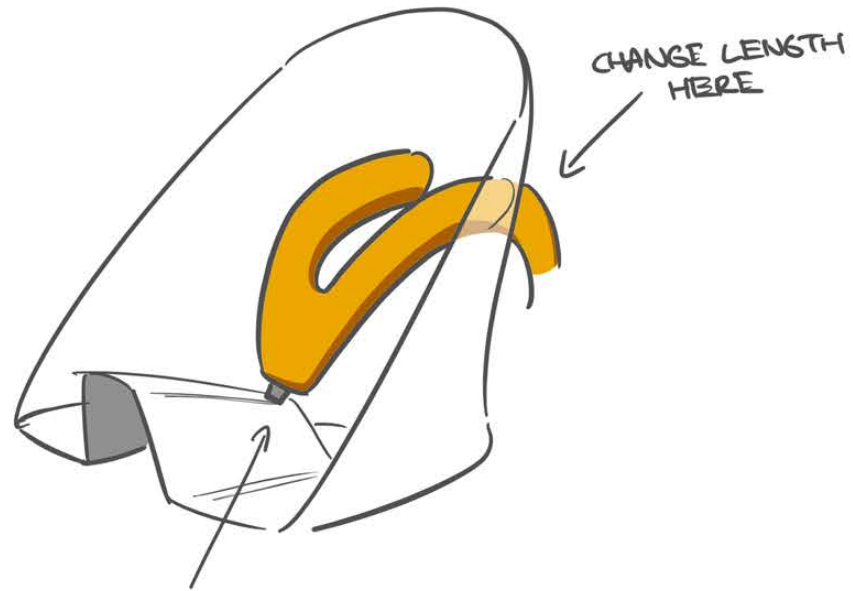
CIRCULAR RUBBER OR FLAT BELT, PREVENTS HURTING NECK

4

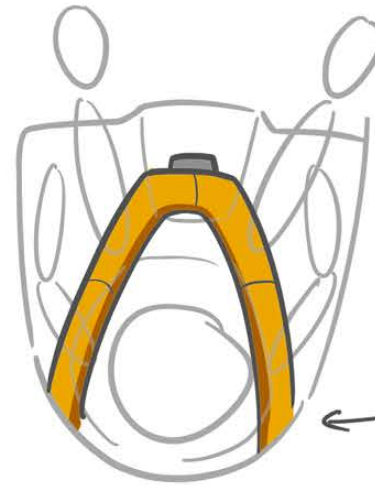
CAR STYLE SEAT BELT



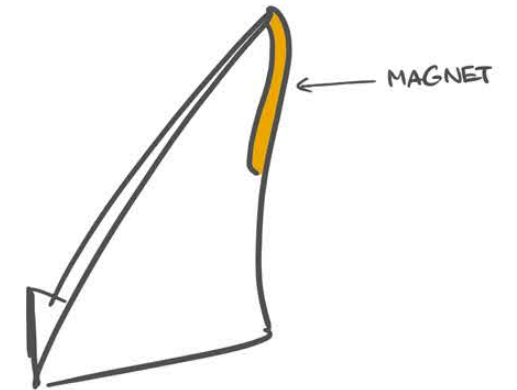
Safety Consideration Final



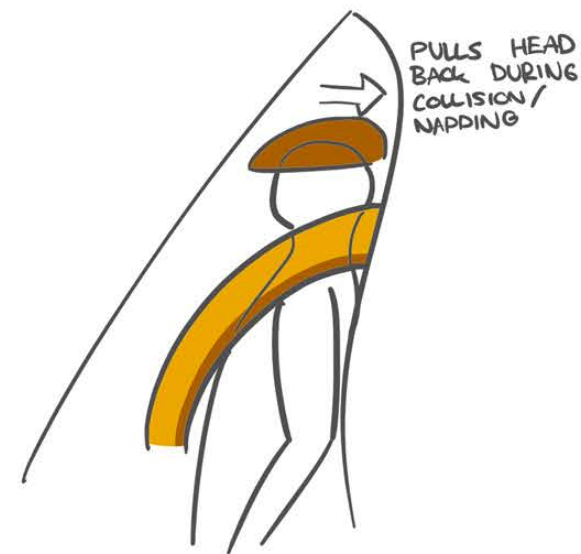
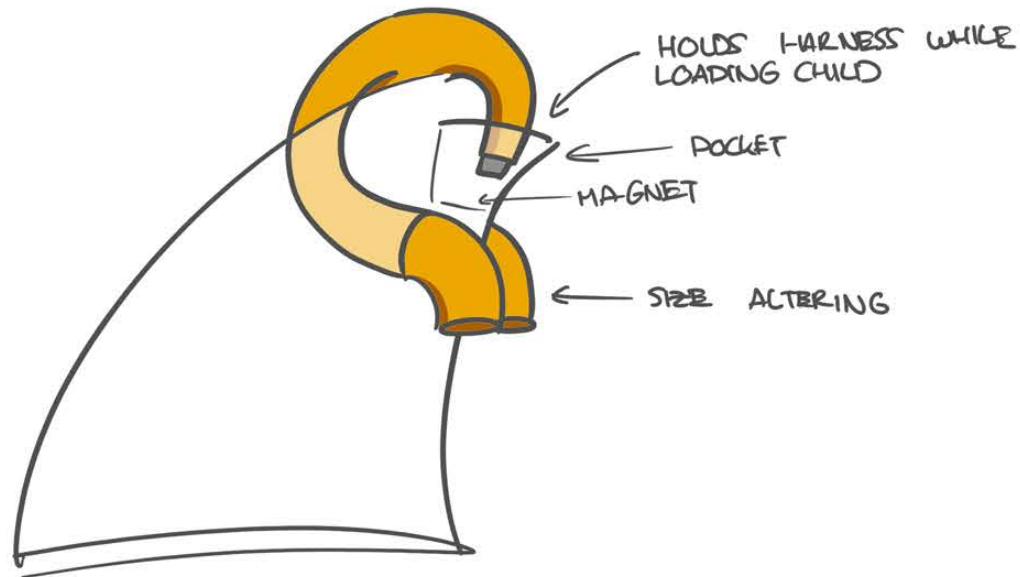
PLANE LIKE BUCKLE,
HARD TO UNDO TO
PREVENT ACCIDENTAL
UNDOING



SOFT MATERIAL,
STRETCHABLE BUT
SECURE



MAGNET

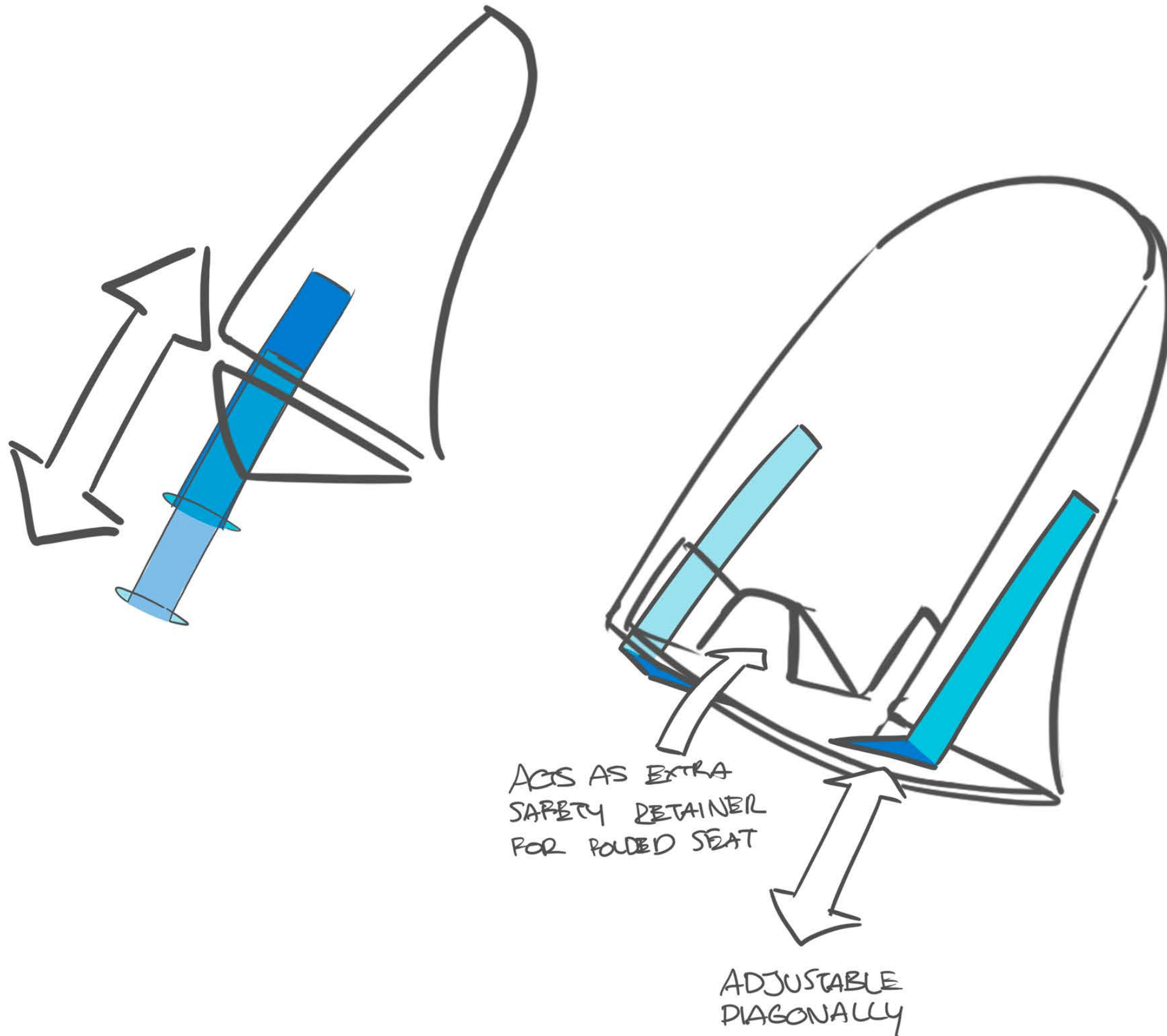


PULLS HEAD
BACK DURING
COLLISION /
NAPPING

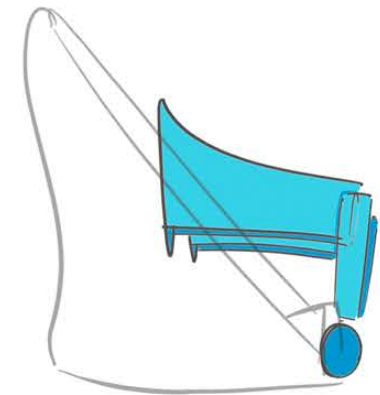
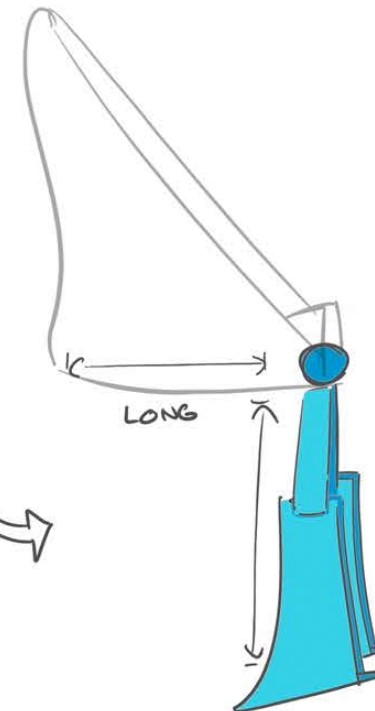
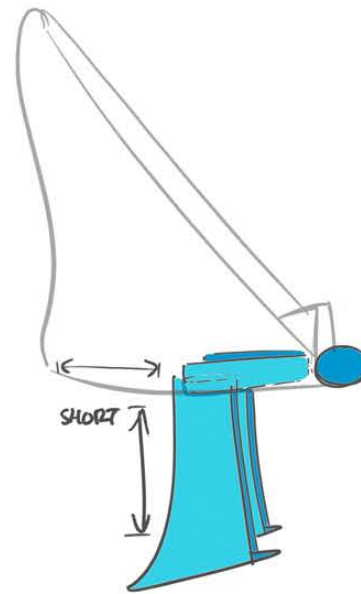
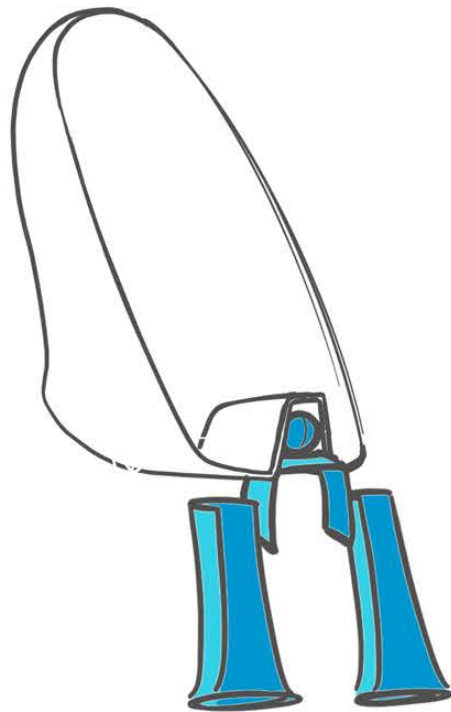


TO HANG
HELMET

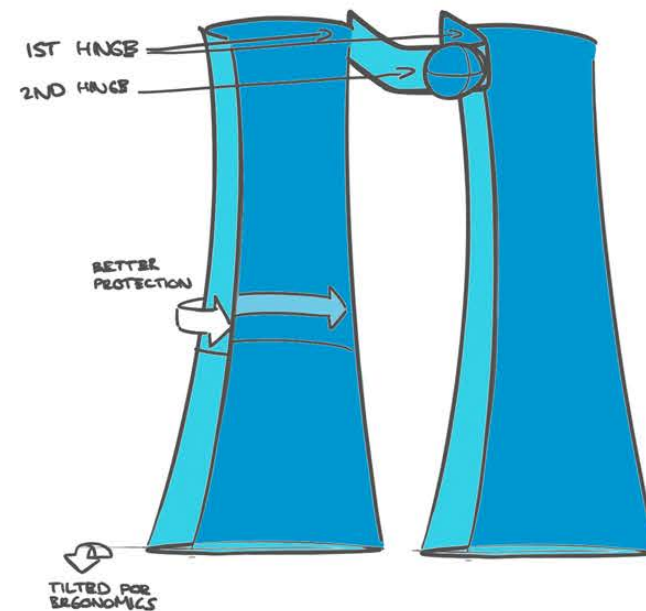
Footrest Design I



Footrest Design II



FOLDED POSITION

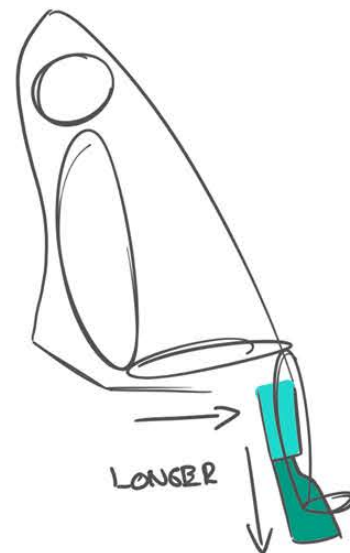
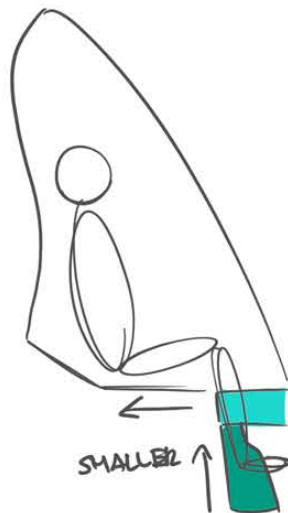
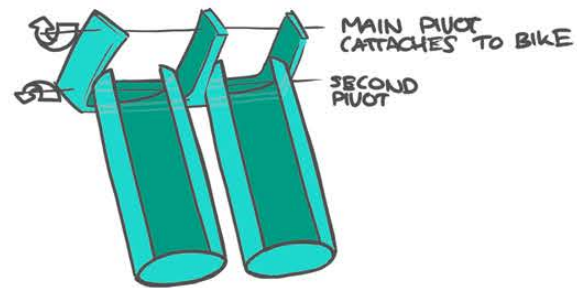


3 POSSIBLE POSITIONS,
NOT ENDLESSLY ADJUSTABLE

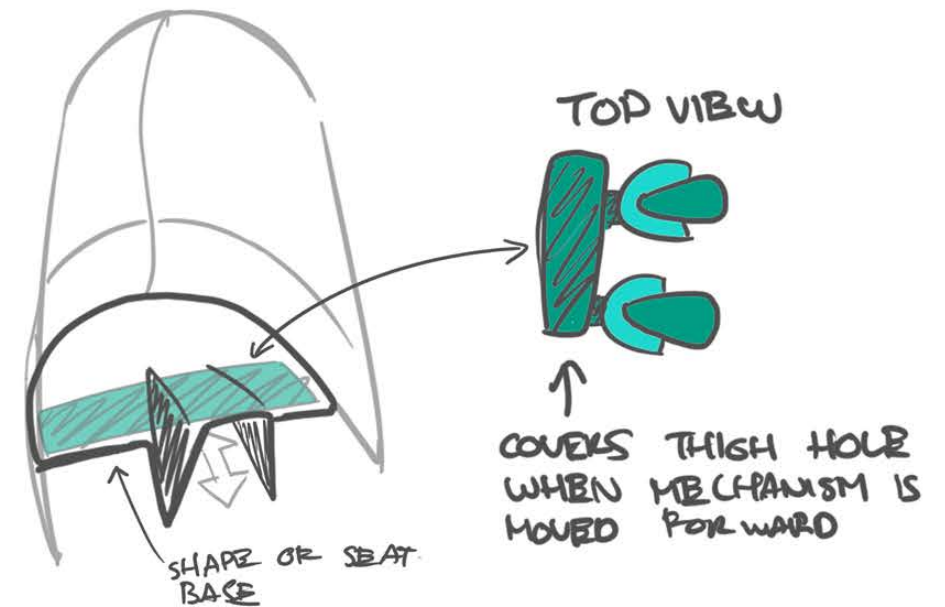
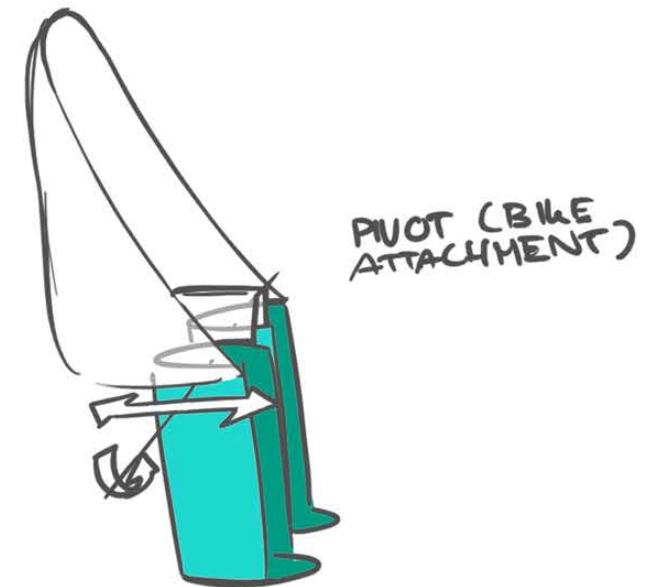
- + ADJUSTABLE
- + SAFE FOR CHILD
- DUAL HINGE, NEEDS A STRONG MECHANISM + VISUAL FEATURE TO SHOW "SECURED"

Footrest Alternatives I

① DOUBLE PIVOT



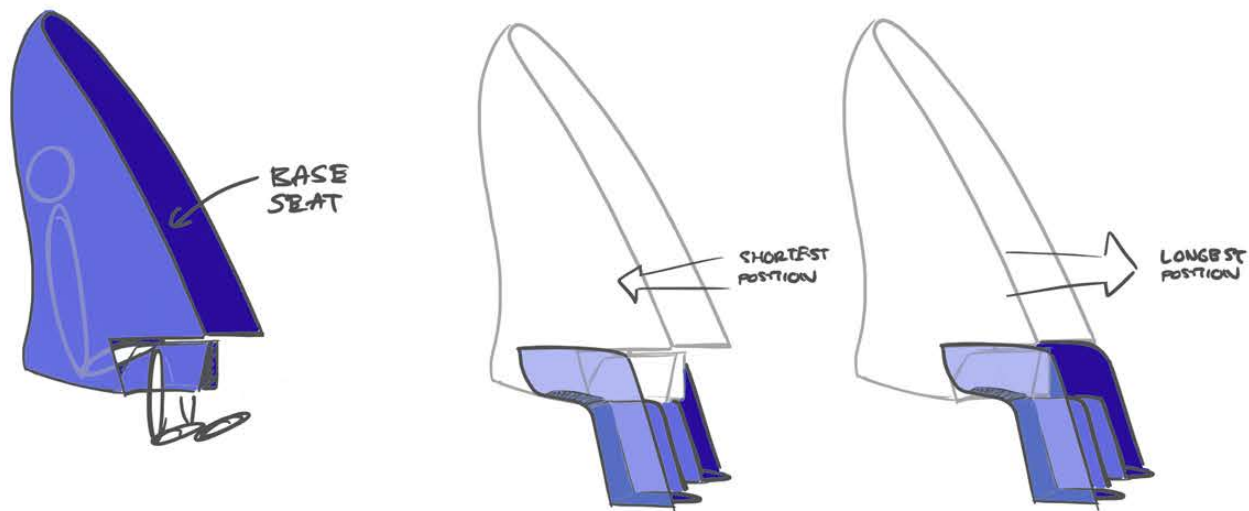
② SLIDING PIVOT



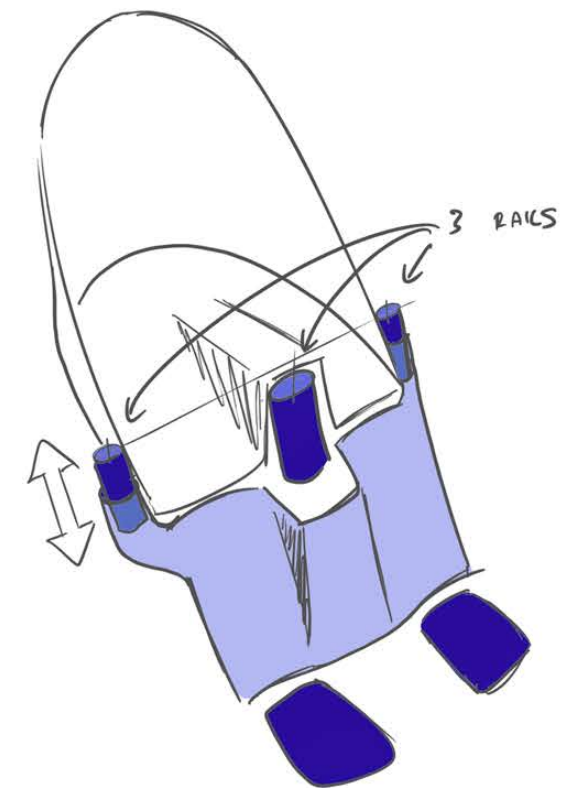
Footrest Alternatives II

③ EXTENDING FOOTREST

SIMILAR TO ②, BUT THE ADJUSTMENTS ARE MORE PERMANENT (REQUIRES TOOLS)



④ SLIDE-IN MECHANISM



OFFERS NO FOLDING/ THIGH ADJUSTMENT, BUT SIMPLER

Footrest Design Final

