

PROCESS JOURNAL FOR PRODUCT DESIGN II

PROJECT: DESIGN AN ACCESSORY PRODUCT

CLIENT: ORU KAYAK

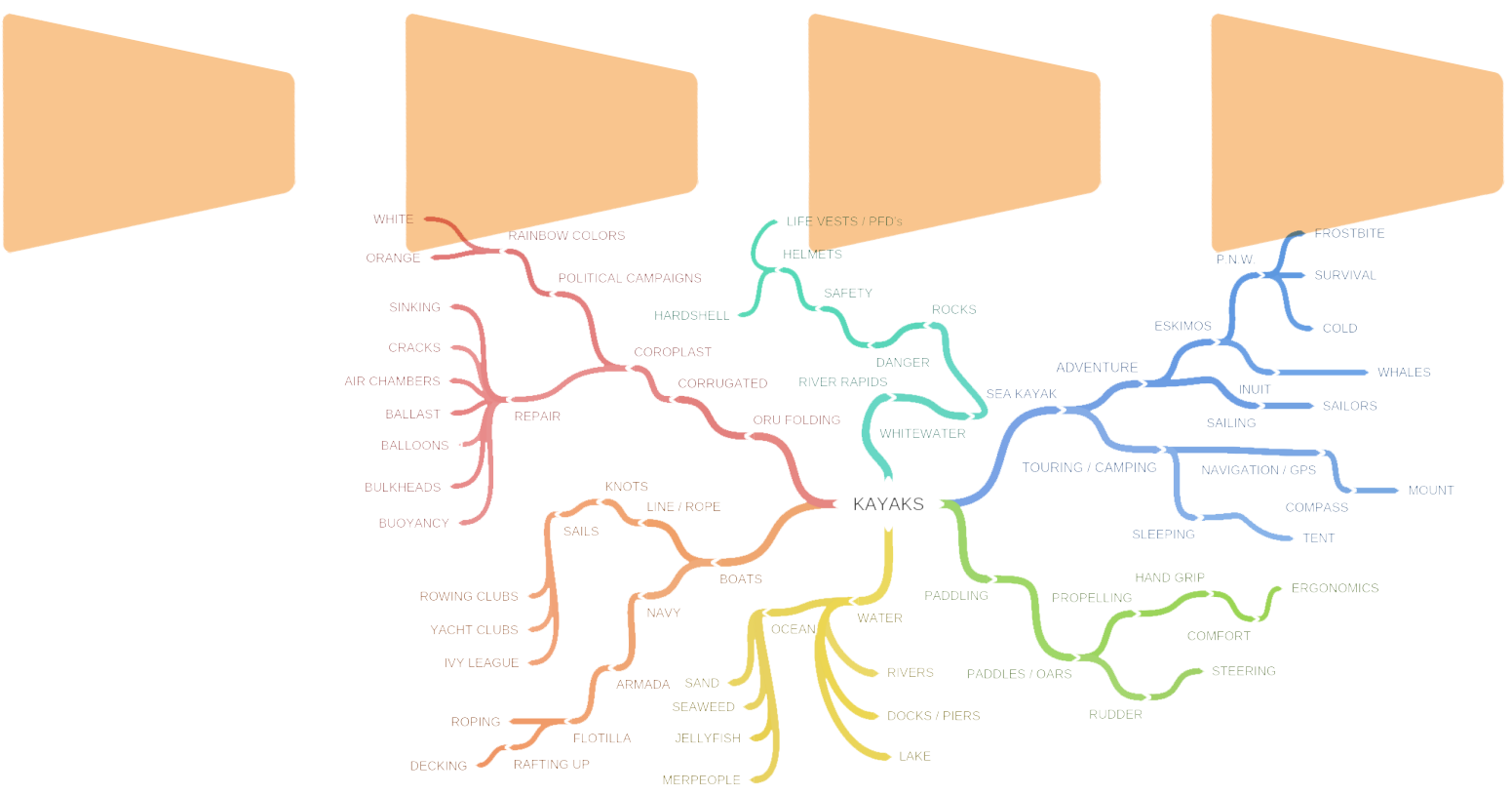
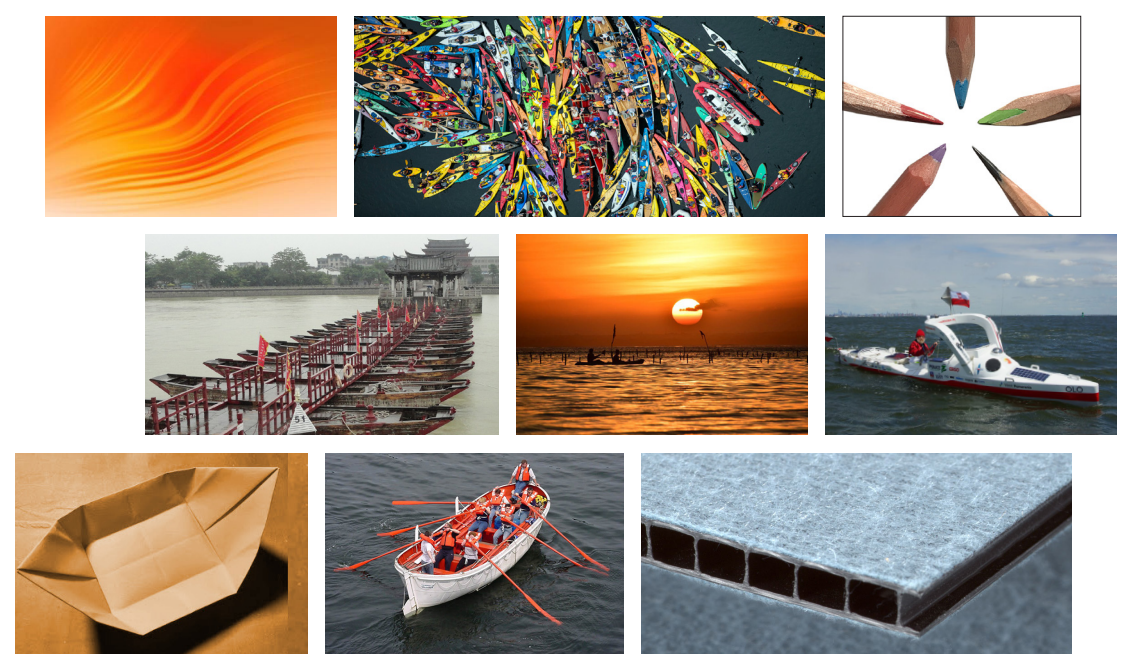
MANAGER: TED RENTERIA

DESIGNER: MICHAEL WEBBER

TIME FRAME: FEBRUARY. 6TH - MAY 21ST, 2020



PHASE: 1



IDEATION BRAINSTORMING

OUTCOME:

- » TEAM WHALEBONE GENERATED COPIOUS IDEAS THROUGH GROUP BRAINSTORMING
- » INDEPENDENTLY, THE MIND MAPPING EXERCISE PRODUCED A NARROWING OF CONCEPTS
- » WHILE THE MOOD BOARD AIDED IN VISUAL AND EMOTIONAL ALIGNMENT

SKETCHES

RESEARCH

MODELS

OBJECTIVE: PRELIMINARY RESEARCH & ANALYSIS

PHASE: 1



ORU KAYAK'S DESIGN LANGUAGE COMPLEMENTED:

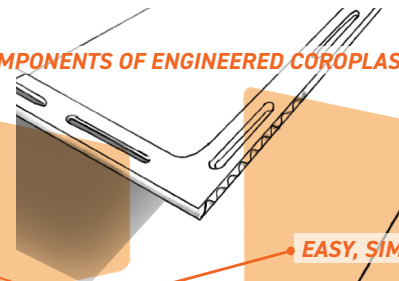
- » Coroplast
- » Foldable
- » Lightweight
- » Origami
- » Outdoors
- » Parametric
- » Simple/Non-complex
- » Urban
- » Oru Kayak Logo
- » Color Palette
- » Font Typeface

ORU KAYAK

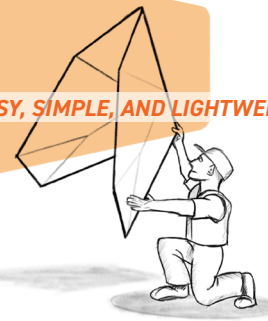
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Fonts:
DIN2014-Regular
DIN2014-Bold
DIN2014-Italic
DIN2014-BoldItalic
DIN2014-Light
DIN2014-ExtraLight

COMPONENTS OF ENGINEERED COROPLAST



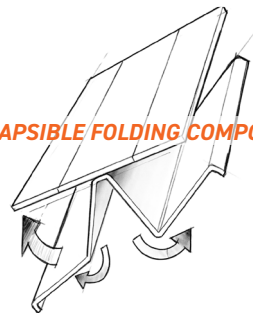
EASY, SIMPLE, AND LIGHTWEIGHT



OUTDOOR ACTIVITIES (LIKE YOGA)



COLLAPSIBLE FOLDING COMPONENTS



DESIGN LANGUAGE

OUTCOME:

- » DECIDING TEAM NAME AND DESIGN AESTHETIC THAT MEMBERS AGREED ON: INCORPORATING STAKEHOLDER'S IDENTIFIABLE BRAND COLORS
- » UNDERSTANDING ORU KAYAK'S DESIGN LANGUAGE FOR ALIGNMENT WITH PRODUCT

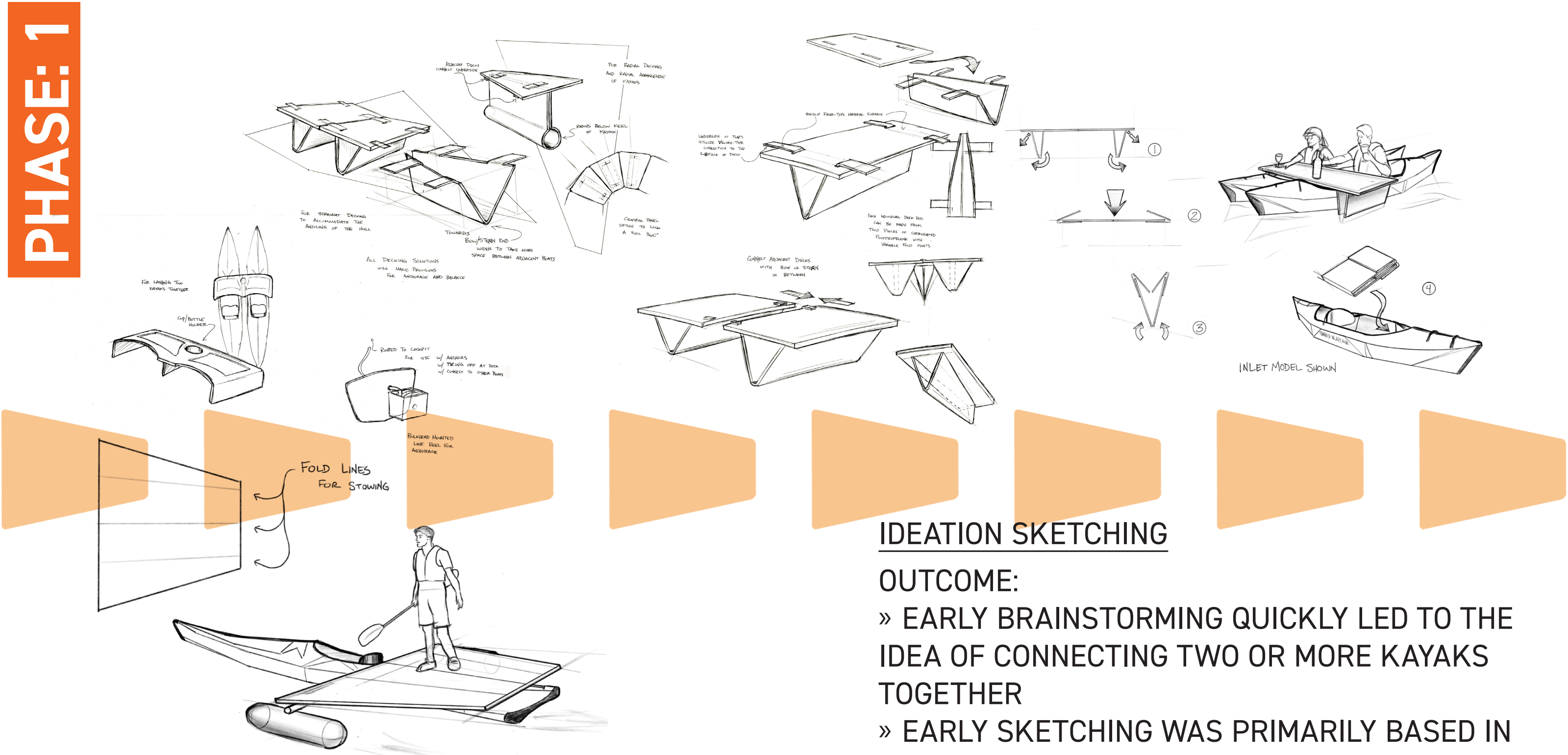
SKETCHES

RESEARCH

MODELS

OBJECTIVE: CONCEPT DEVELOPMENT

PHASE: 1



IDEATION SKETCHING

OUTCOME:

- » EARLY BRAINSTORMING QUICKLY LED TO THE IDEA OF CONNECTING TWO OR MORE KAYAKS TOGETHER
- » EARLY SKETCHING WAS PRIMARILY BASED IN EXPLORING THAT IDEA AND DETERMINING HOW IT MIGHT WORK

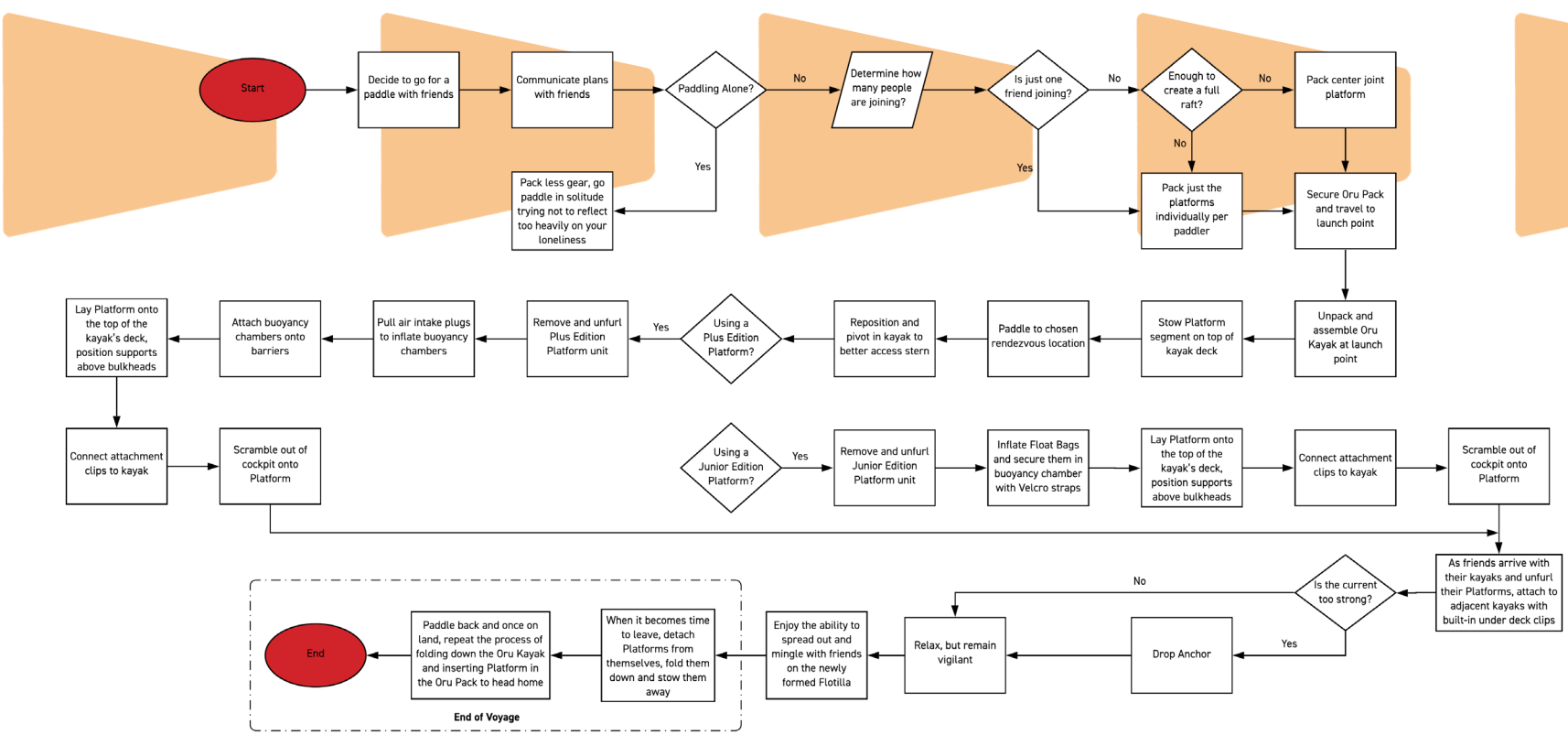
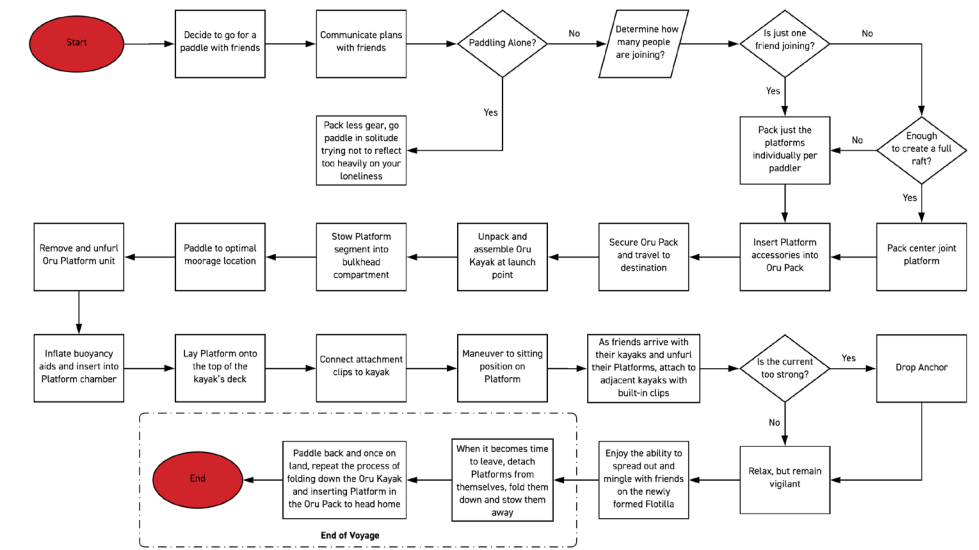
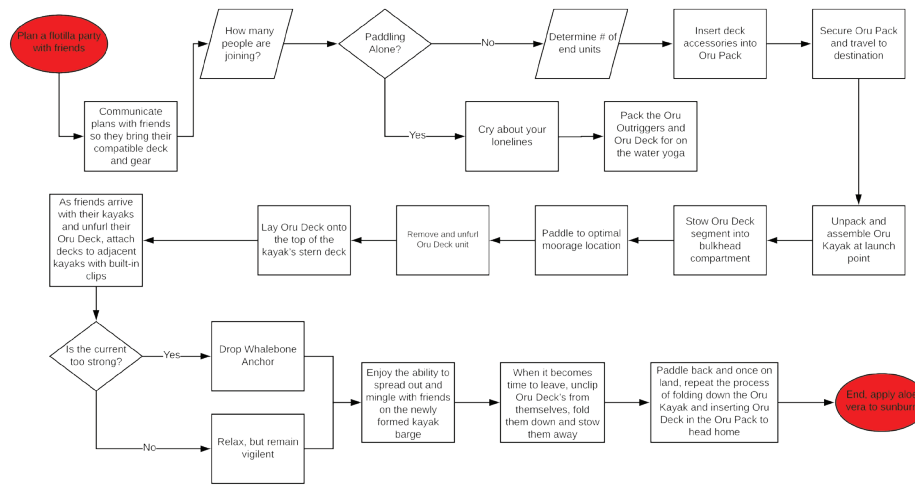
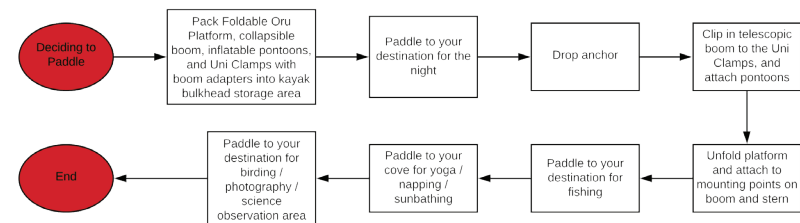
SKETCHES

RESEARCH

MODELS

OBJECTIVE: PRELIMINARY RESEARCH & ANALYSIS

PHASE: 1



FOCUSED INVESTIGATION

OUTCOME:

- » DEVELOPING TASK ANALYSIS FLOW CHARTS RESULTED IN A REFINEMENT OF IDEAS
- » THE FURTHER THE TASK WAS ANALYZED THE FURTHER REFINED IT BECAME WHICH CONTRIBUTED TO DESIGN DETAILS EXPANDING

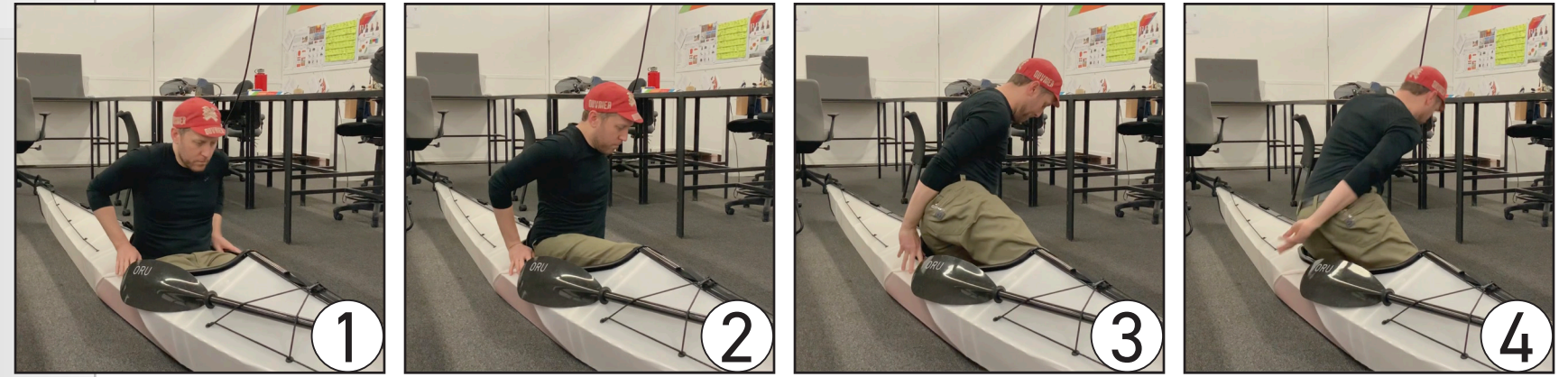
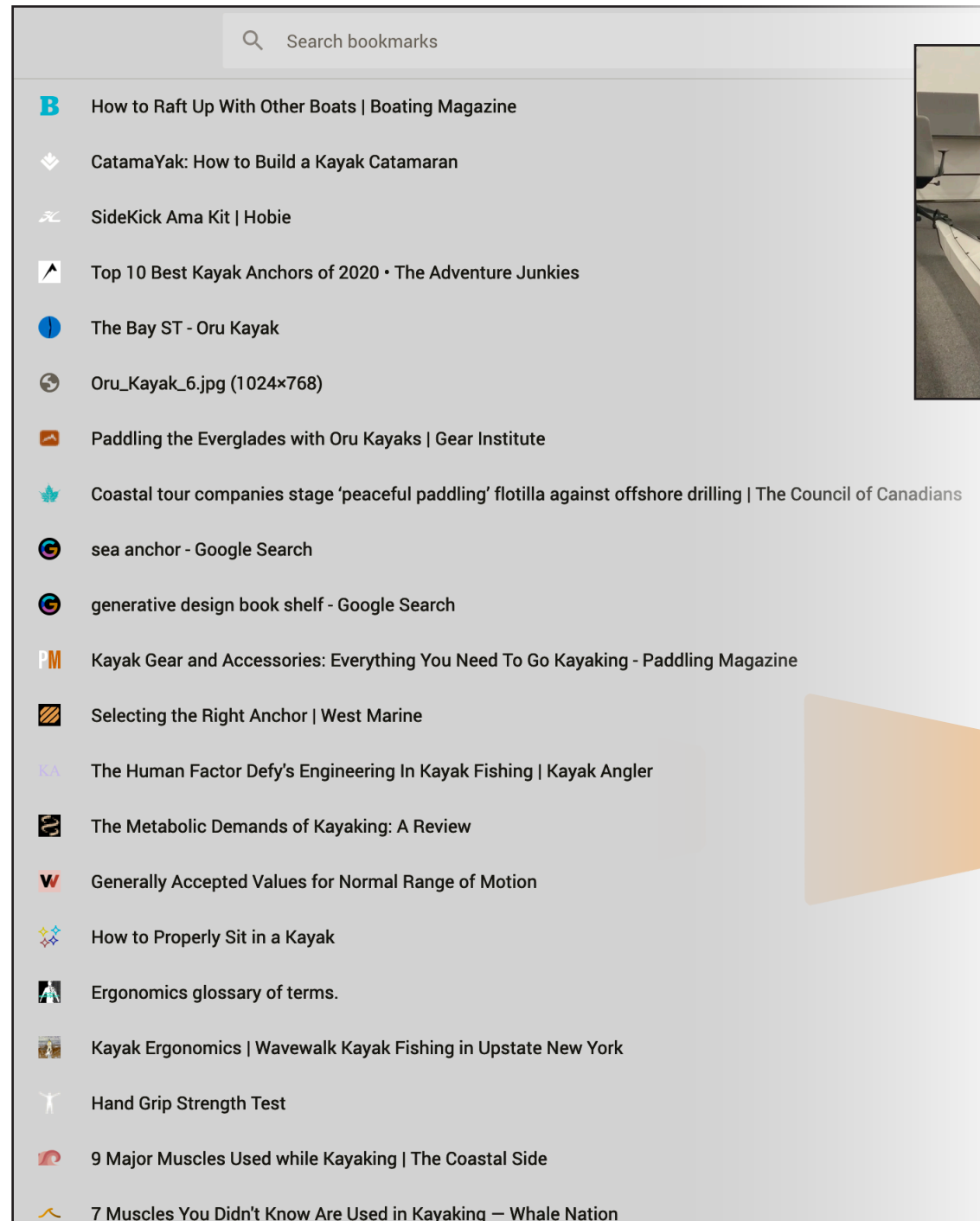
SKETCHES

RESEARCH

MODELS

OBJECTIVE: PRELIMINARY RESEARCH & ANALYSIS

PHASE: 1



CONFIRMING INVESTIGATION

OUTCOME:

- » PRIMARILY BASED ONLINE, DETERMINING USAGE OF BASE PRODUCT (THE KAYAK) AND INTEREST OF CONSUMERS IN GROUP ACTIVITIES
- » SIMULATING PHYSICALLY REPOSITIONING IN KAYAK PROVED OPTIMISTIC
- » INABILITY TO TEST ON THE WATER WAS DISCOURAGING

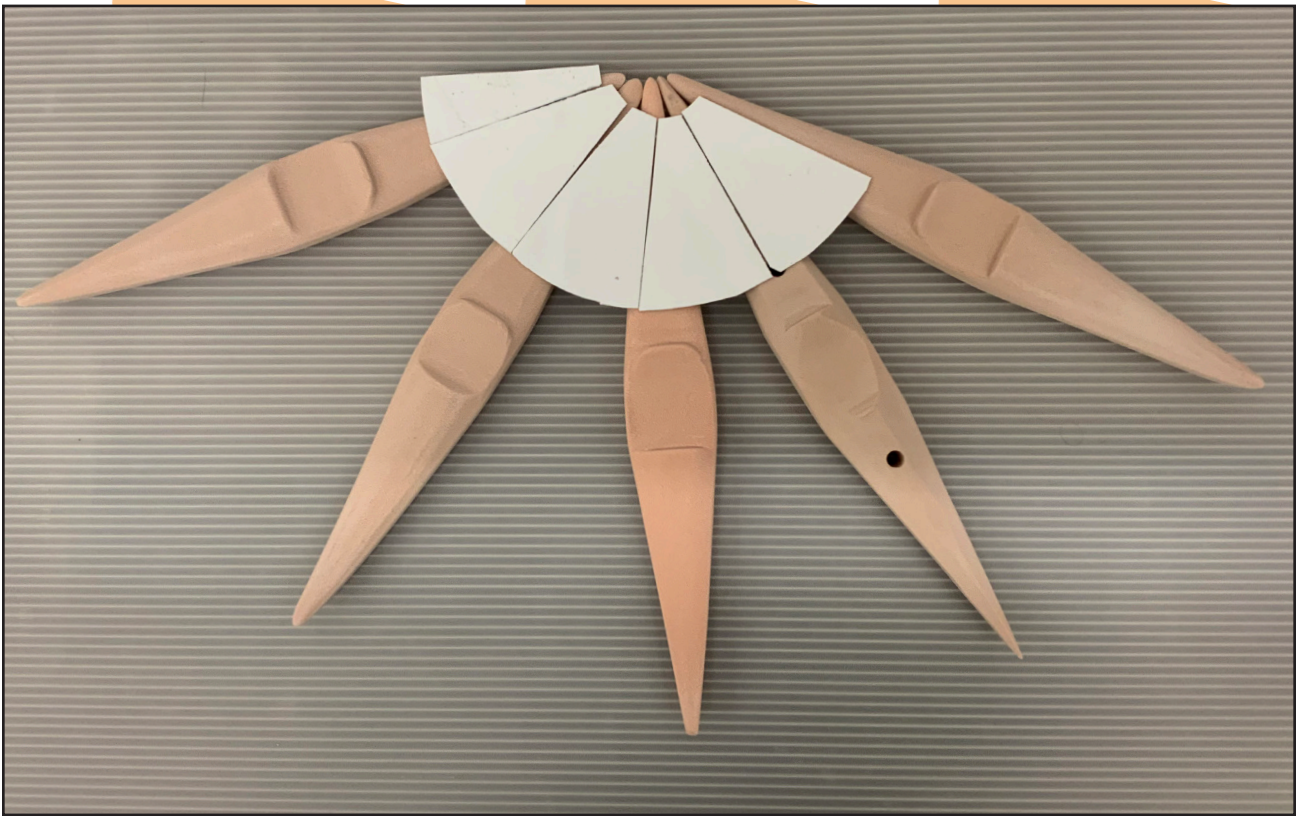
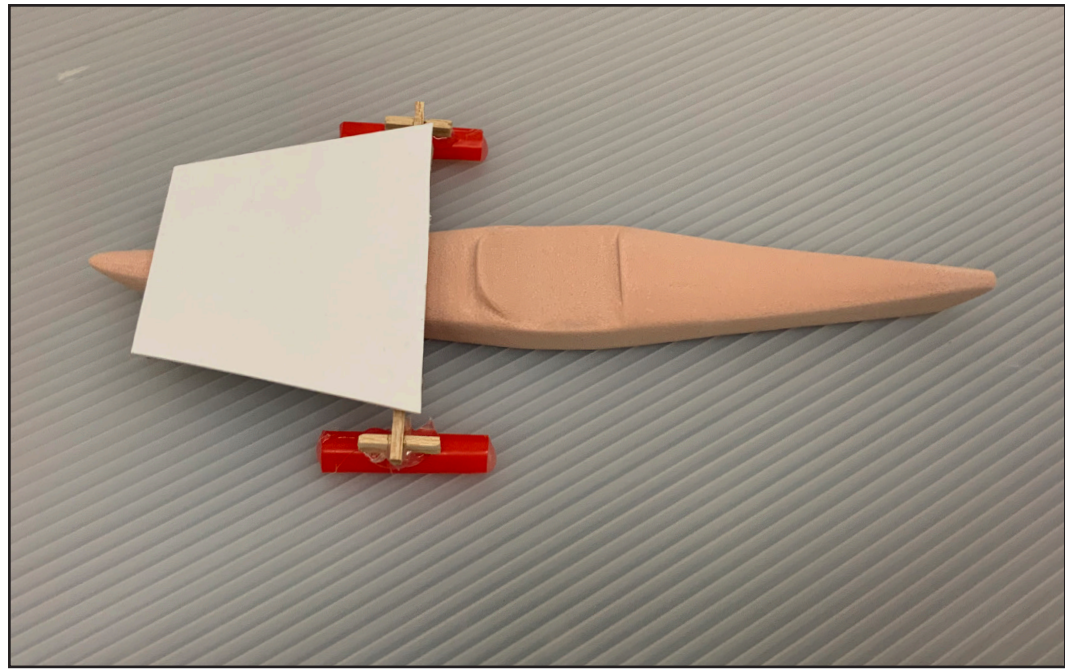
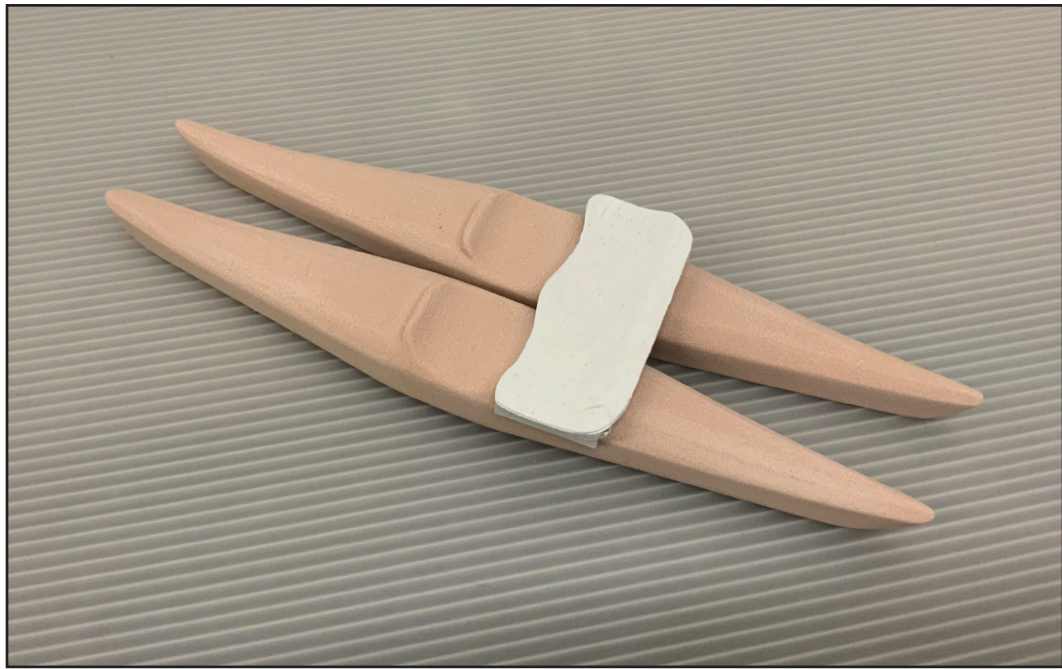
SKETCHES

RESEARCH

MODELS

OBJECTIVE: PRELIMINARY RESEARCH & ANALYSIS

PHASE: 2



PHYSICAL MODELING

OUTCOME:

- » EARLY MODELS WERE ROUGH CONCEPTS FOR THREE-DIMENSIONAL VISUALIZATION
- » LARGER SCALED REPRESENTATIONS EVENTUALLY PROVED HELPFUL BUT WERE SUPPLANTED BY DIGITAL VERSIONS

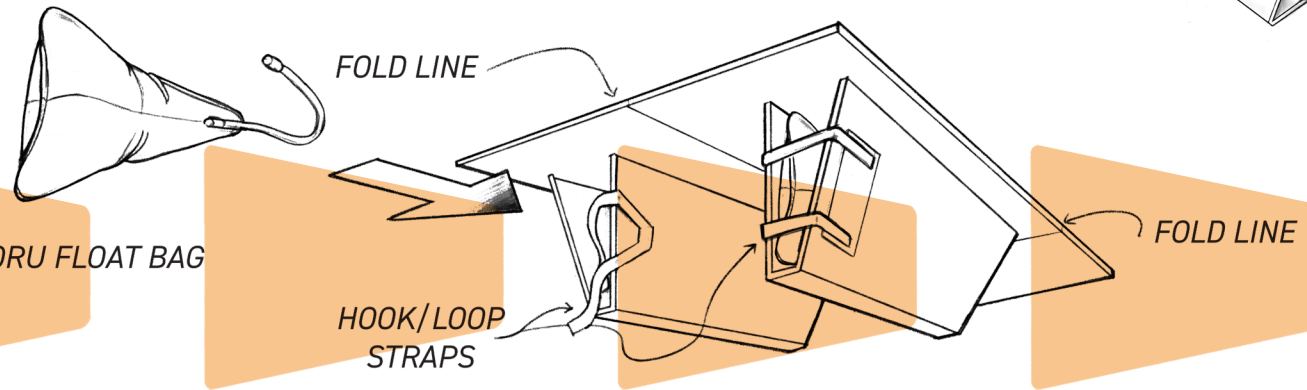
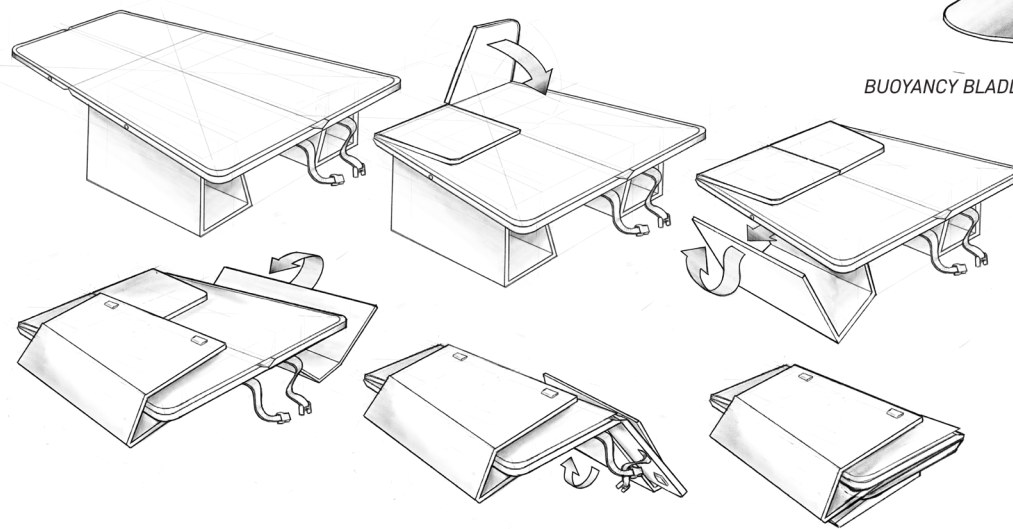
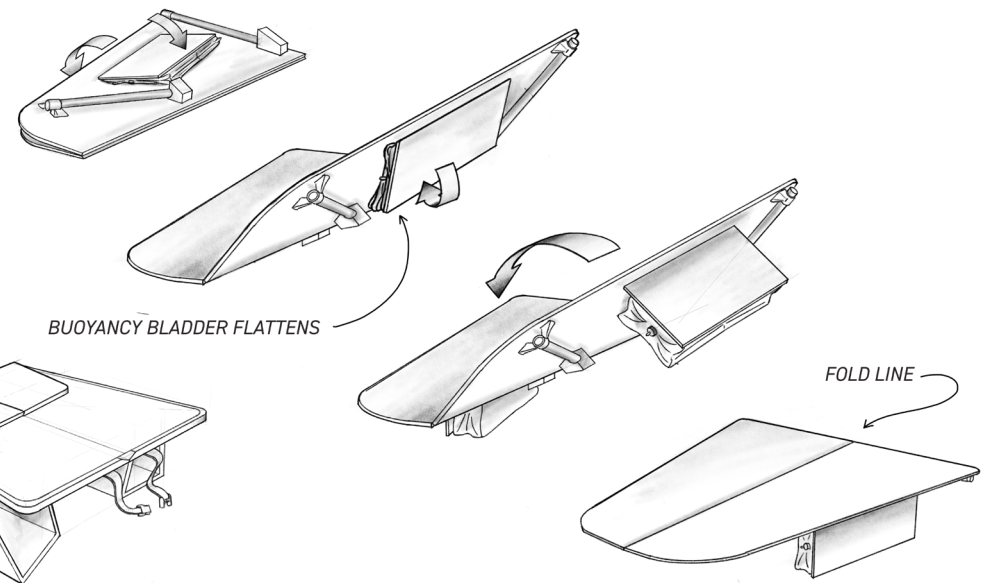
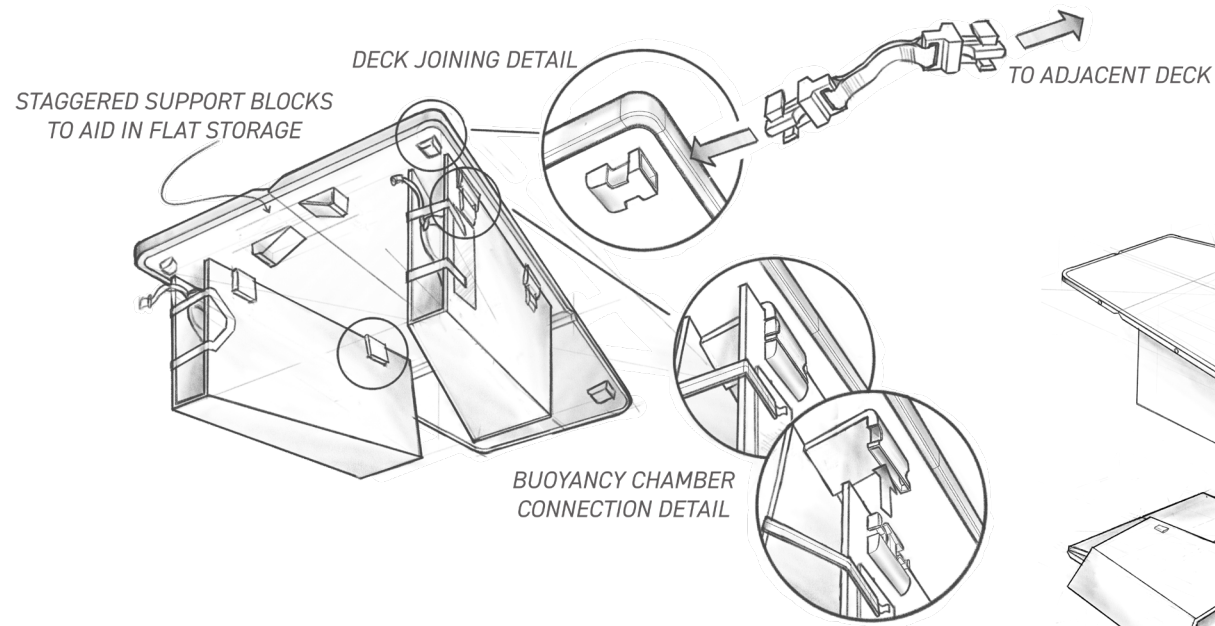
SKETCHES

RESEARCH

MODELS

OBJECTIVE: CONCEPT DEVELOPMENT

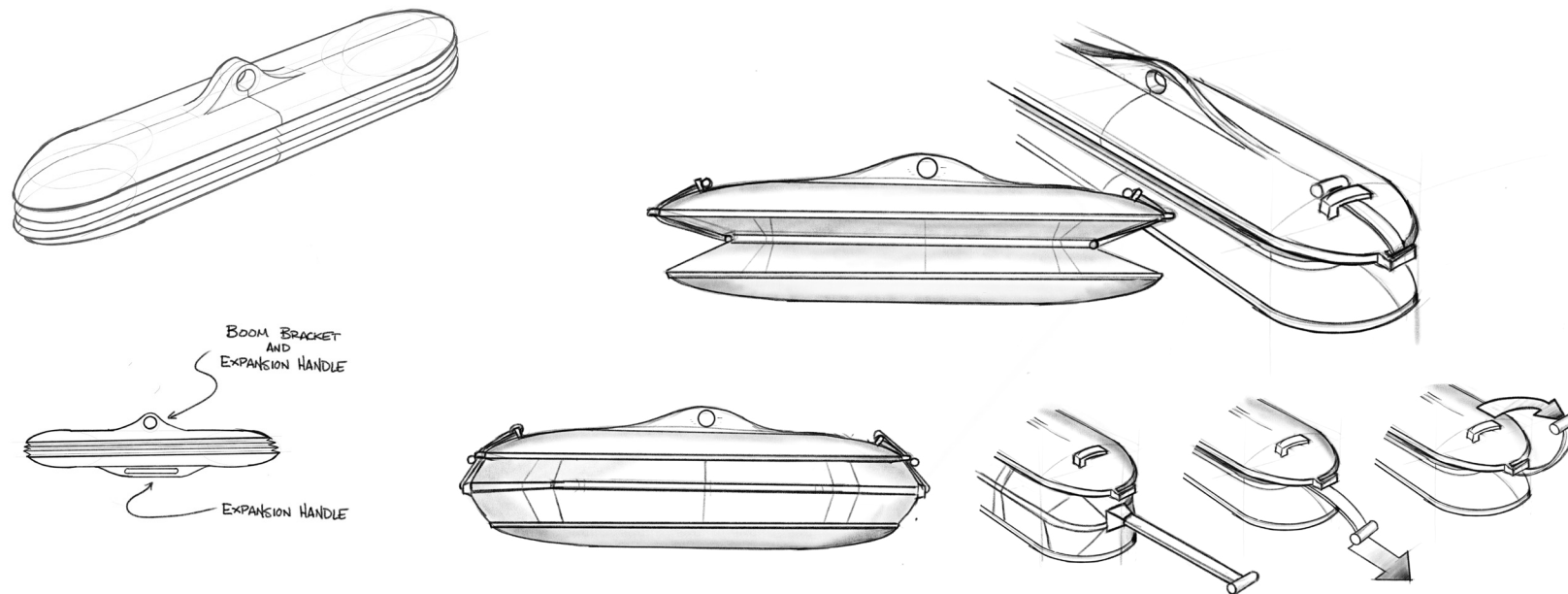
PHASE: 2



SKETCH REFINEMENT

OUTCOME:

- » EXPLORING FURTHER INTO THE CONCEPT OF CONNECTED KAYAKS
- » PRAGMATIC CONSTRAINTS (BUOYANCY, CONNECTION, PORTABILITY) BEGIN TO CROP UP THAT NEED RESEARCH AND RESOLUTION



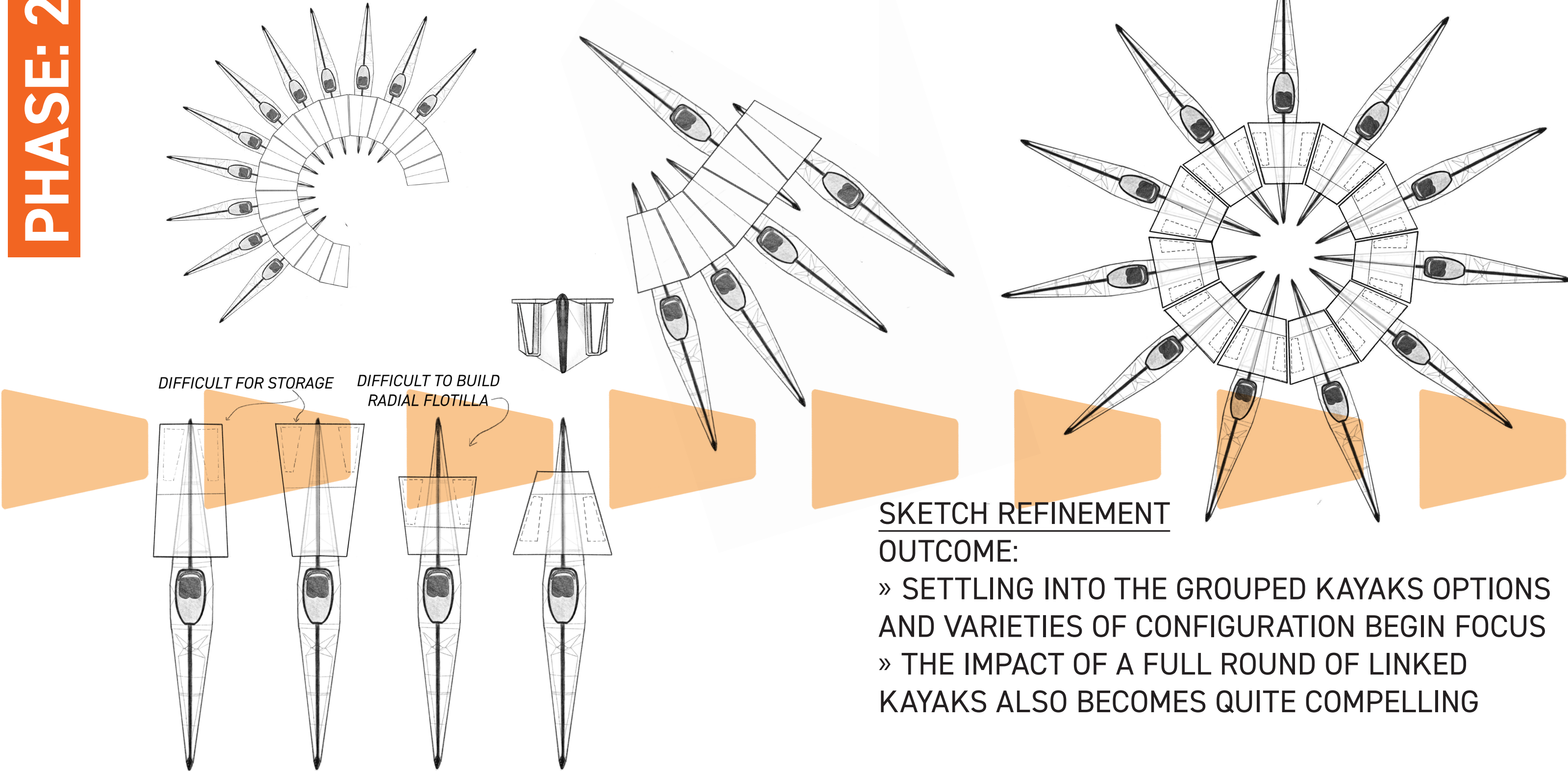
SKETCHES

RESEARCH

MODELS

OBJECTIVE: CONCEPT DEVELOPMENT

PHASE: 2



SKETCH REFINEMENT OUTCOME:

- » SETTLING INTO THE GROUPED KAYAKS OPTIONS AND VARIETIES OF CONFIGURATION BEGIN FOCUS
- » THE IMPACT OF A FULL ROUND OF LINKED KAYAKS ALSO BECOMES QUITE COMPELLING

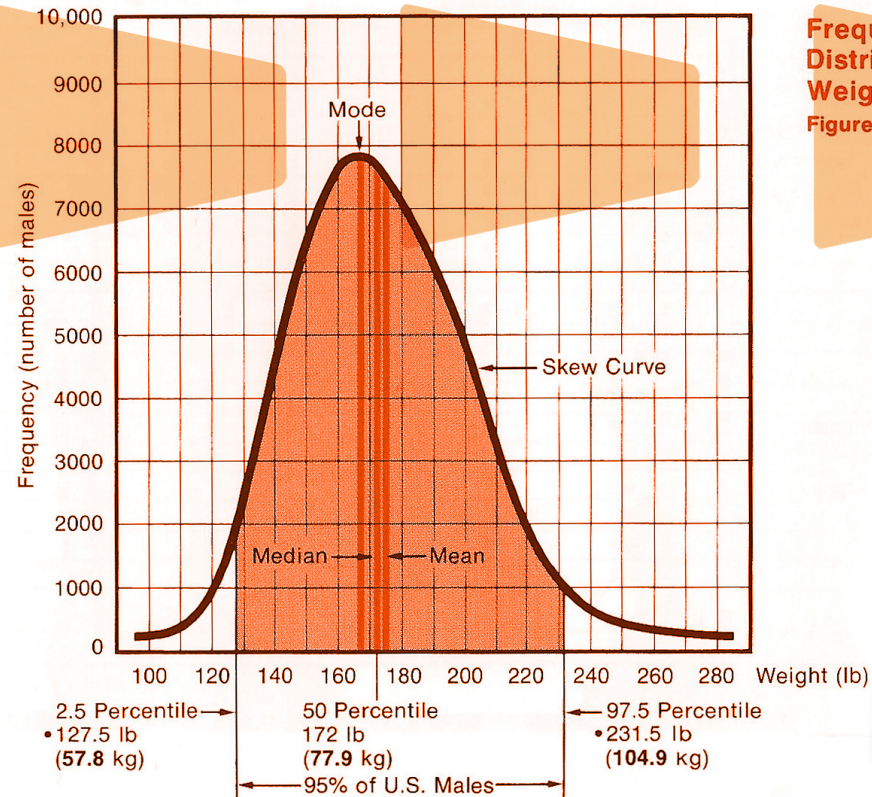
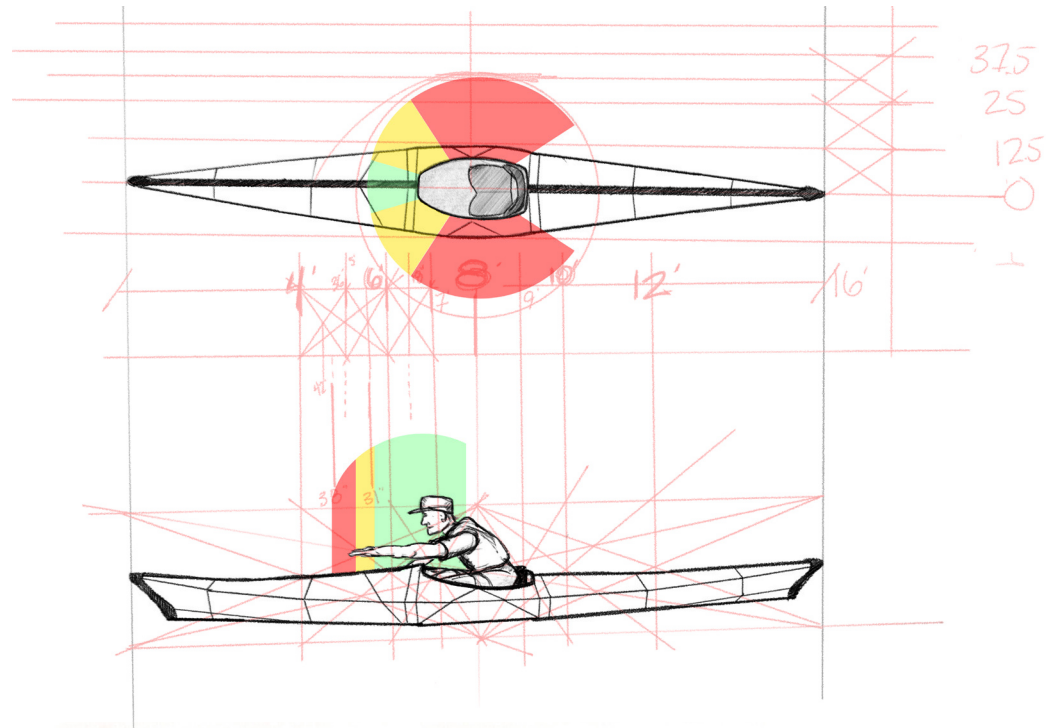
SKETCHES

RESEARCH

MODELS

OBJECTIVE: CONCEPT DEVELOPMENT

PHASE: 2

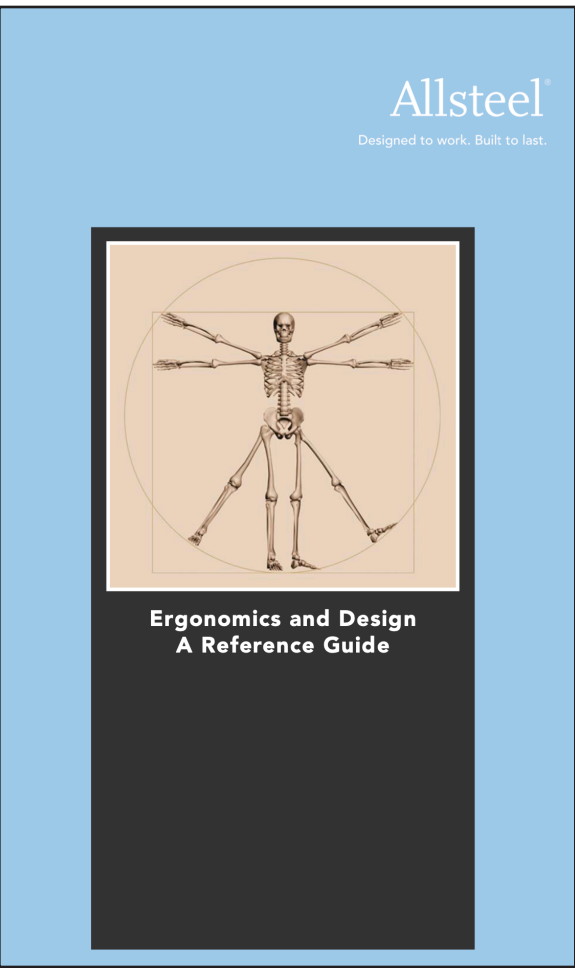
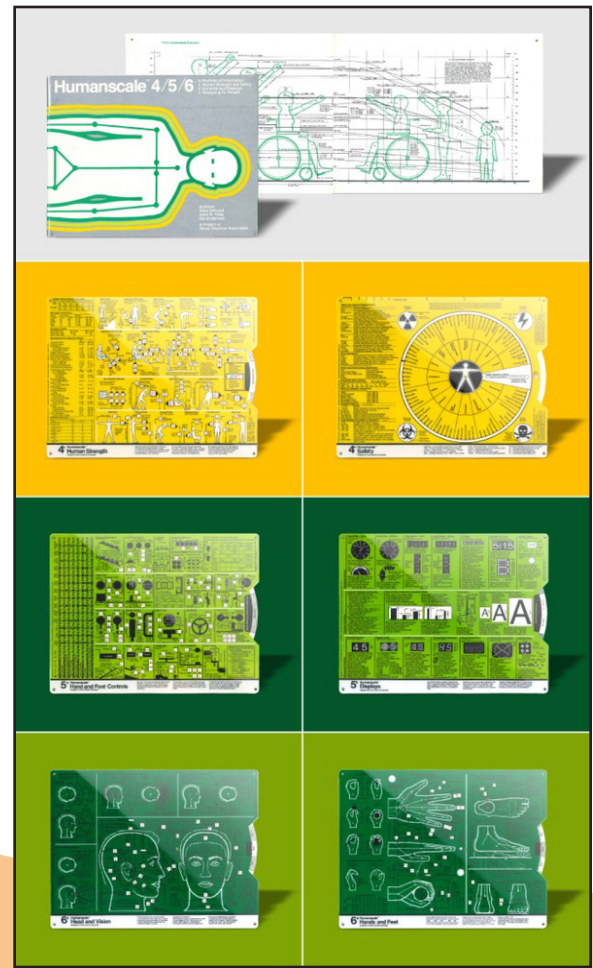
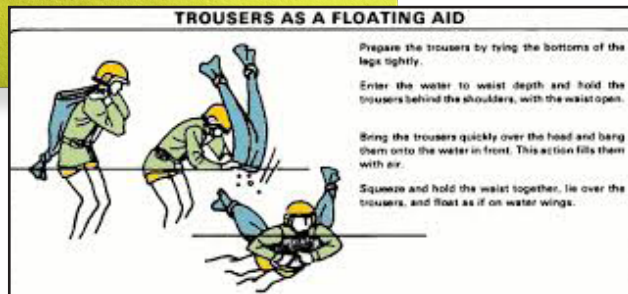


Frequency Distribution Curve—Weight of U.S. Males
Figure 7b

Avg Capacity 6L = 366 cu.in.
avg. length ~24cm = ~9.5in

Float Bags ~ 1000 cu.in each
16 L

7-12 lbs of flotation req'd to keep head afloat



HUMAN FACTORS

OUTCOME:

- » DELVED INTO VARIOUS RESOURCES AND DIRECTIONS ON HOW THE HUMAN ELEMENT WILL INFLUENCE THE PRODUCT
- » WITH REAL-WORLD TESTING THESE FACTORS CAN BE MORE RELIABLY RESEARCHED

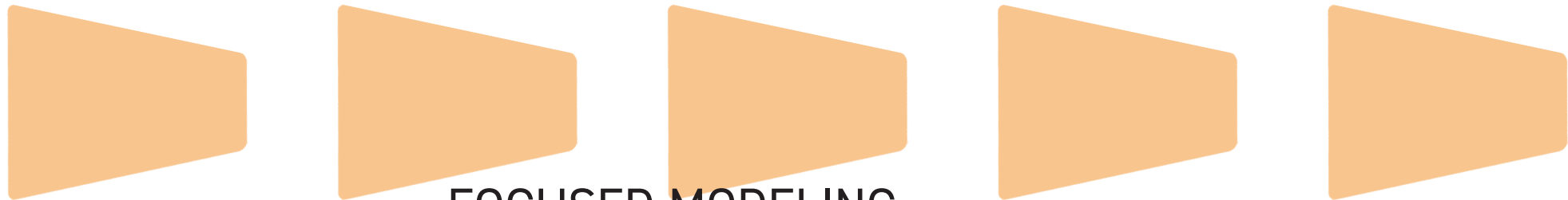
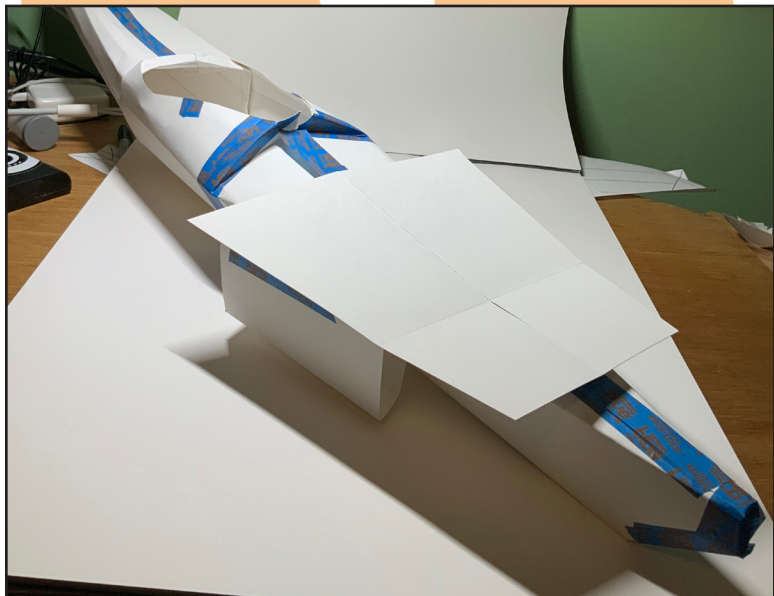
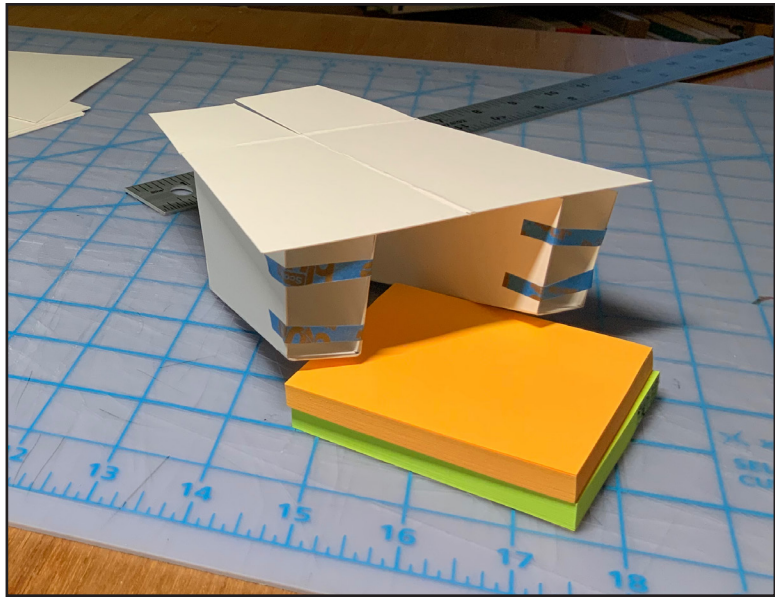
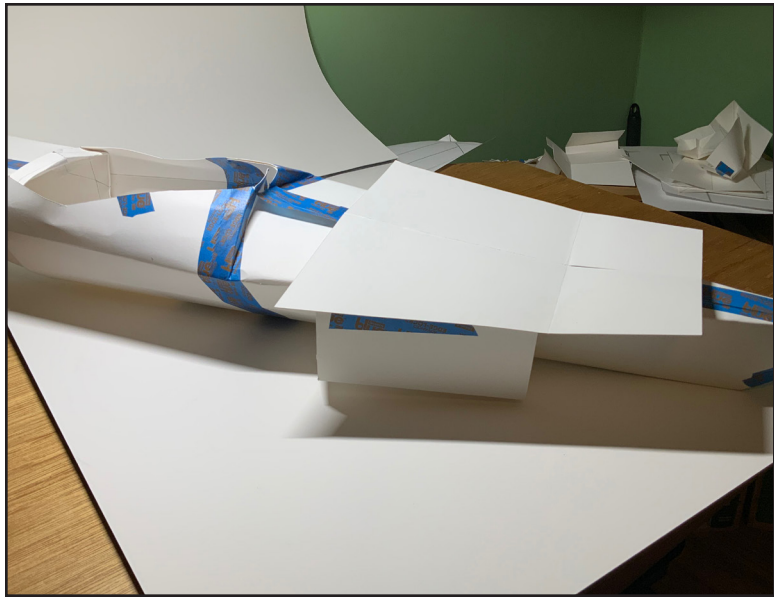
SKETCHES

RESEARCH

MODELS

OBJECTIVE: CONCEPT DEVELOPMENT

PHASE: 2



FOCUSED MODELING

OUTCOME:

- » WITH DIRECTION NARROWING FURTHER CREATING PHYSICAL MODELS BEGAN SOLIDIFYING CONCEPT OF A PLATFORM SUPPORTED FROM BENEATH
- » EXPLORING OTHER BUOYANCY DEVICES INSPIRED FROM TETRA-PAKS AND OTHER PEDESTRIAN OBJECTS

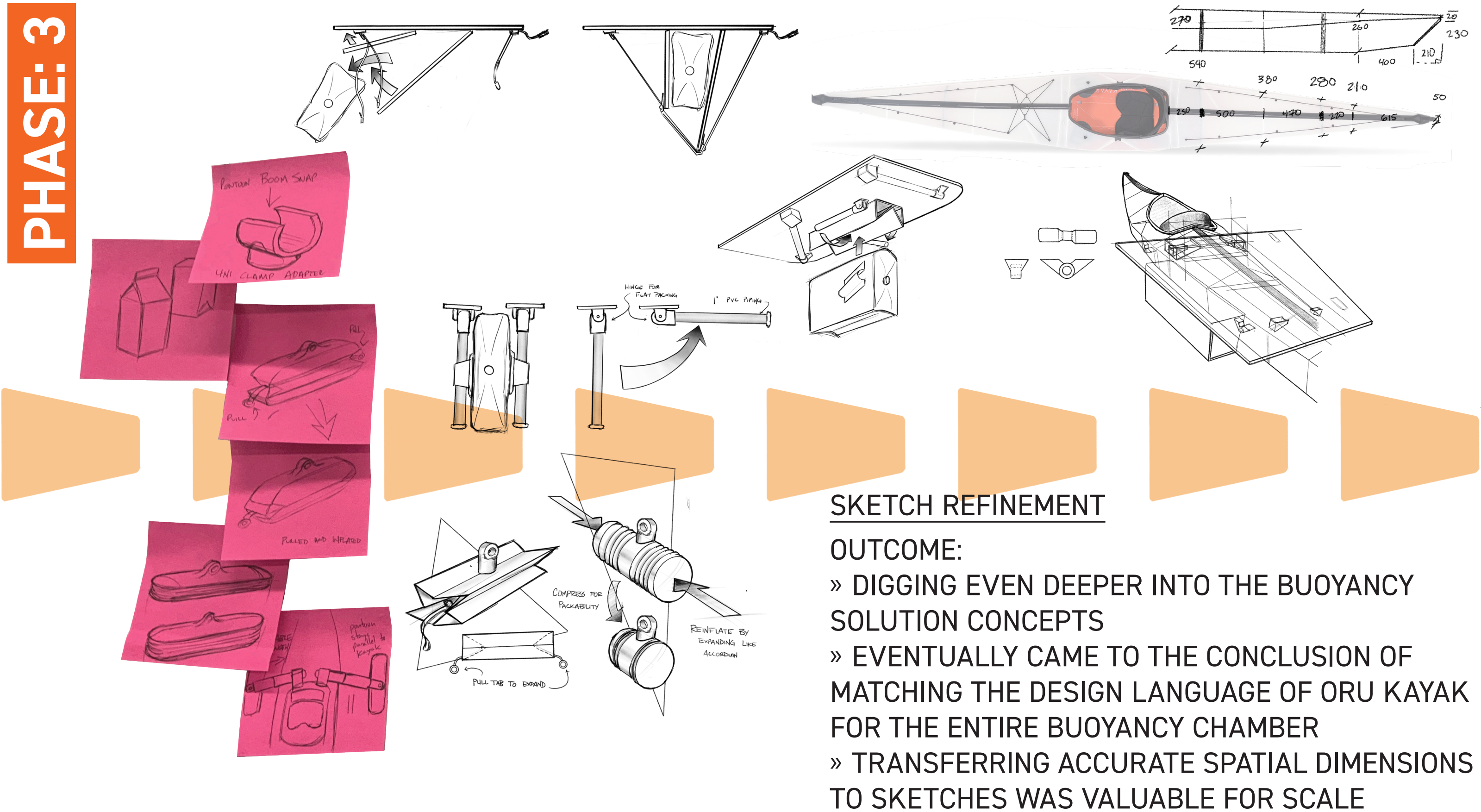
SKETCHES

OBJECTIVE: CONCEPT DEVELOPMENT

RESEARCH

MODELS

PHASE: 3



SKETCH REFINEMENT

OUTCOME:

- » DIGGING EVEN DEEPER INTO THE BUOYANCY SOLUTION CONCEPTS
- » EVENTUALLY CAME TO THE CONCLUSION OF MATCHING THE DESIGN LANGUAGE OF ORU KAYAK FOR THE ENTIRE BUOYANCY CHAMBER
- » TRANSFERRING ACCURATE SPATIAL DIMENSIONS TO SKETCHES WAS VALUABLE FOR SCALE

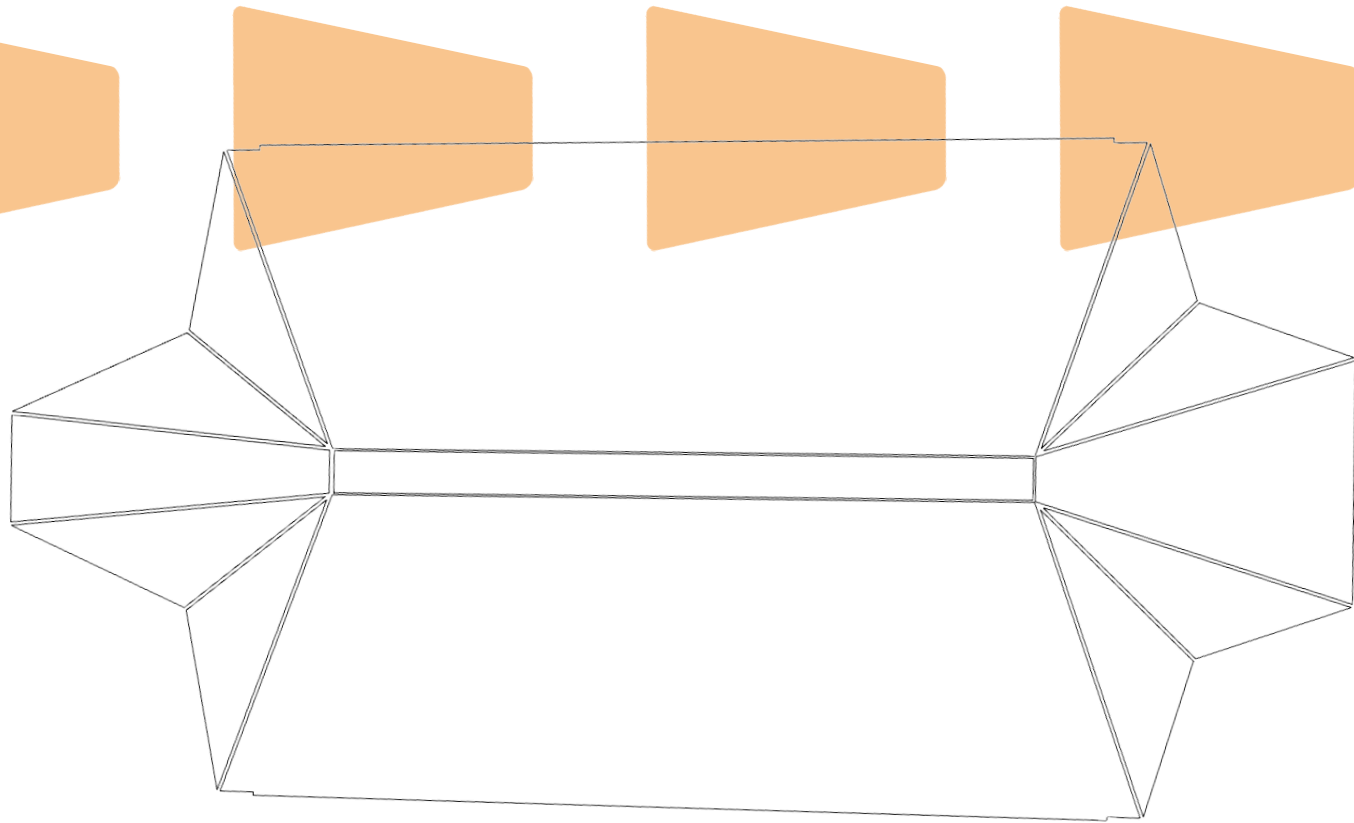
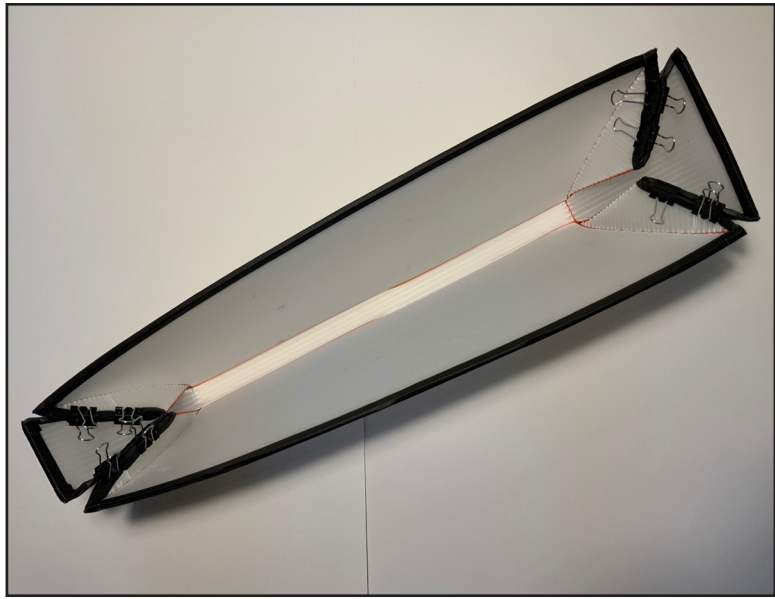
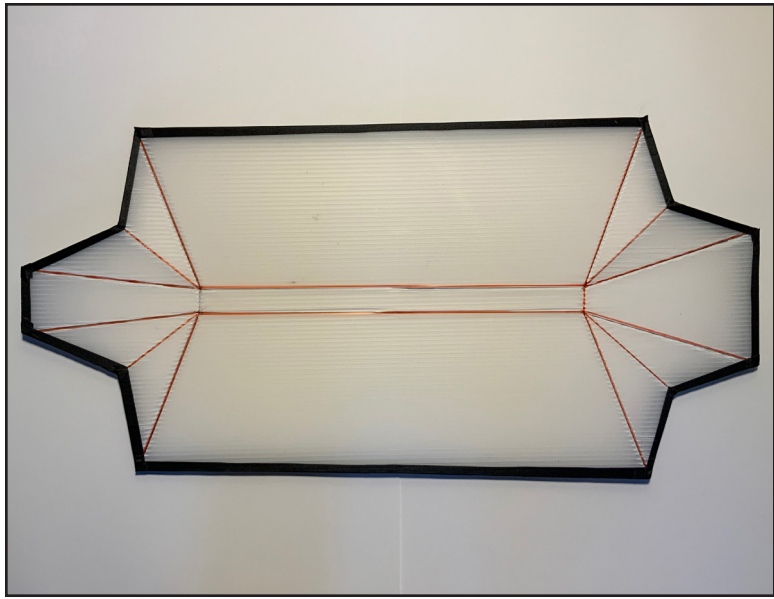
SKETCHES

RESEARCH

MODELS

OBJECTIVE: CONCEPT REFINEMENT

PHASE: 3



FURTHER FOCUSED MODELING

OUTCOME:

- » DETERMINING A MORE SIMPLE BUOYANCY CHAMBER ELIMINATES THE NEED FOR ADVANCED ENGINEERING
- » [PROBABLY] FEASIBLE FOLDING PATTERN DESIGNED DIGITALLY NEEDED TO BE PHYSICALLY PROVEN

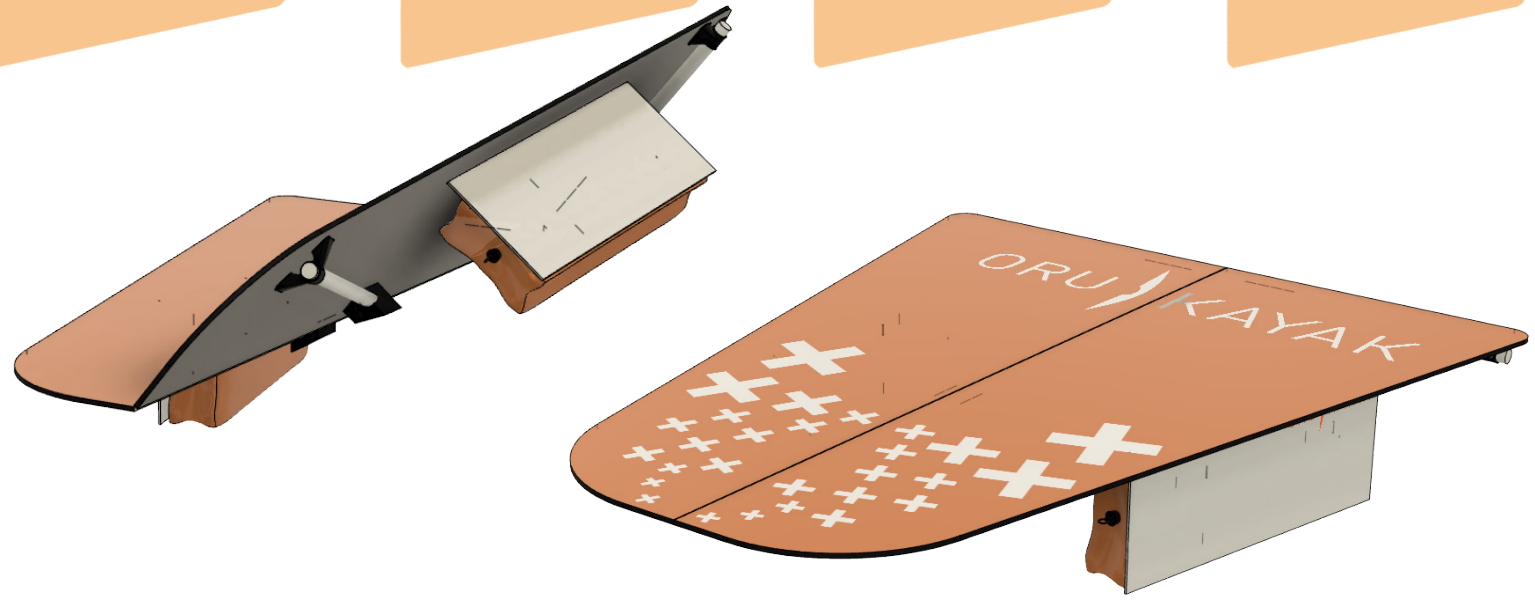
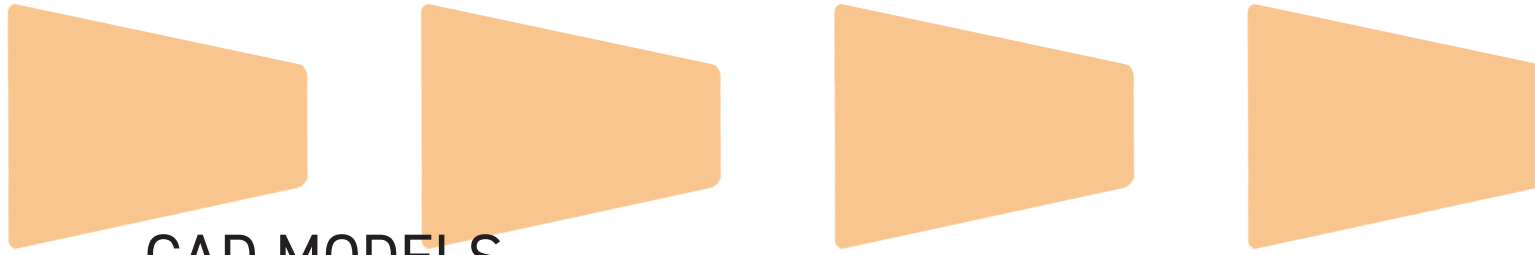
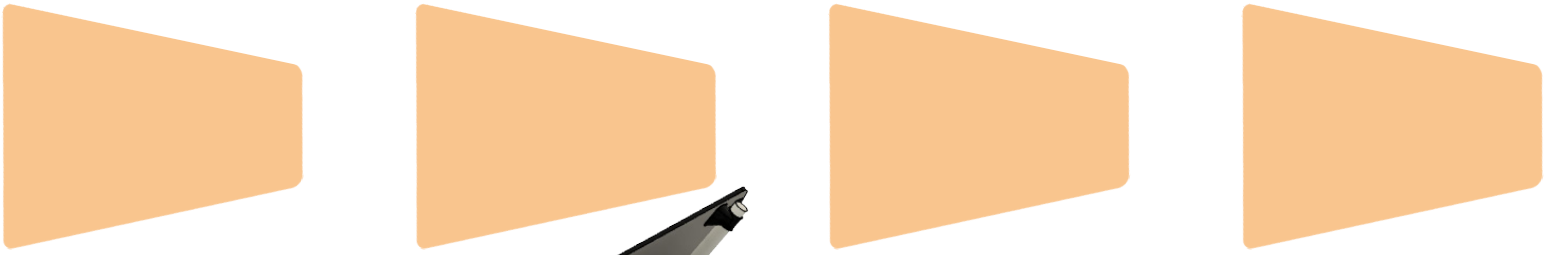
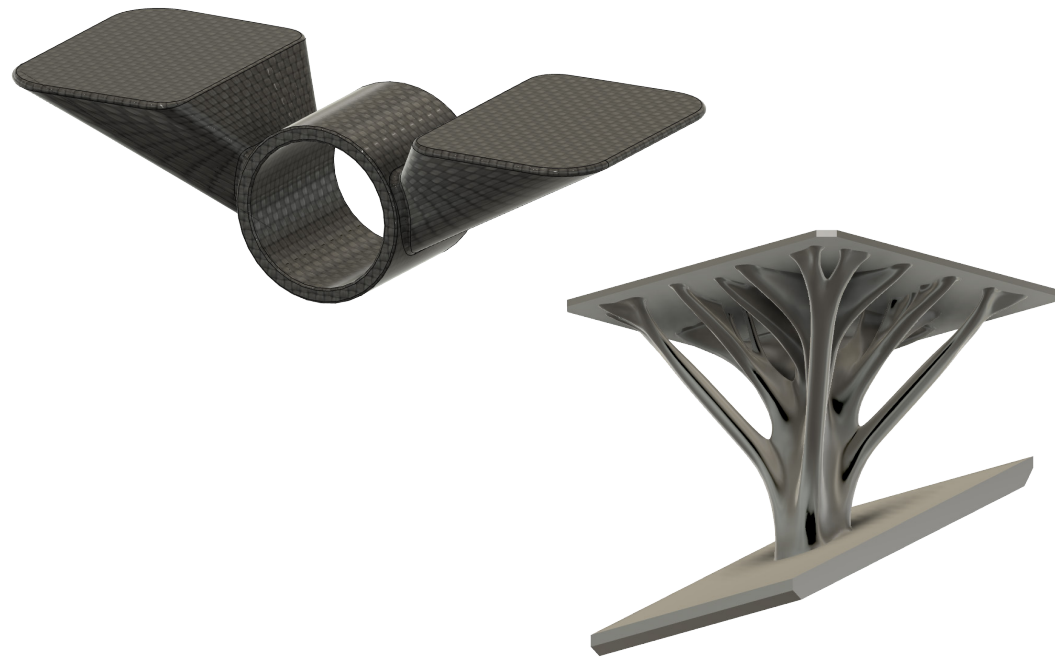
SKETCHES

OBJECTIVE: CONCEPT REFINEMENT

RESEARCH

MODELS

PHASE: 3



CAD MODELS

OUTCOME:

- » FURTHER FEASIBILITY STUDIES AND CONCEPT REFINEMENT IN FUSION 360
- » BEGINNING OF DECISION-MAKING FOR GENERATIVE DESIGNED COMPONENT, CHOSE A SUPPORT STRUCTURE AS THE REMAINDER OF THE DESIGN IS COROPLAST

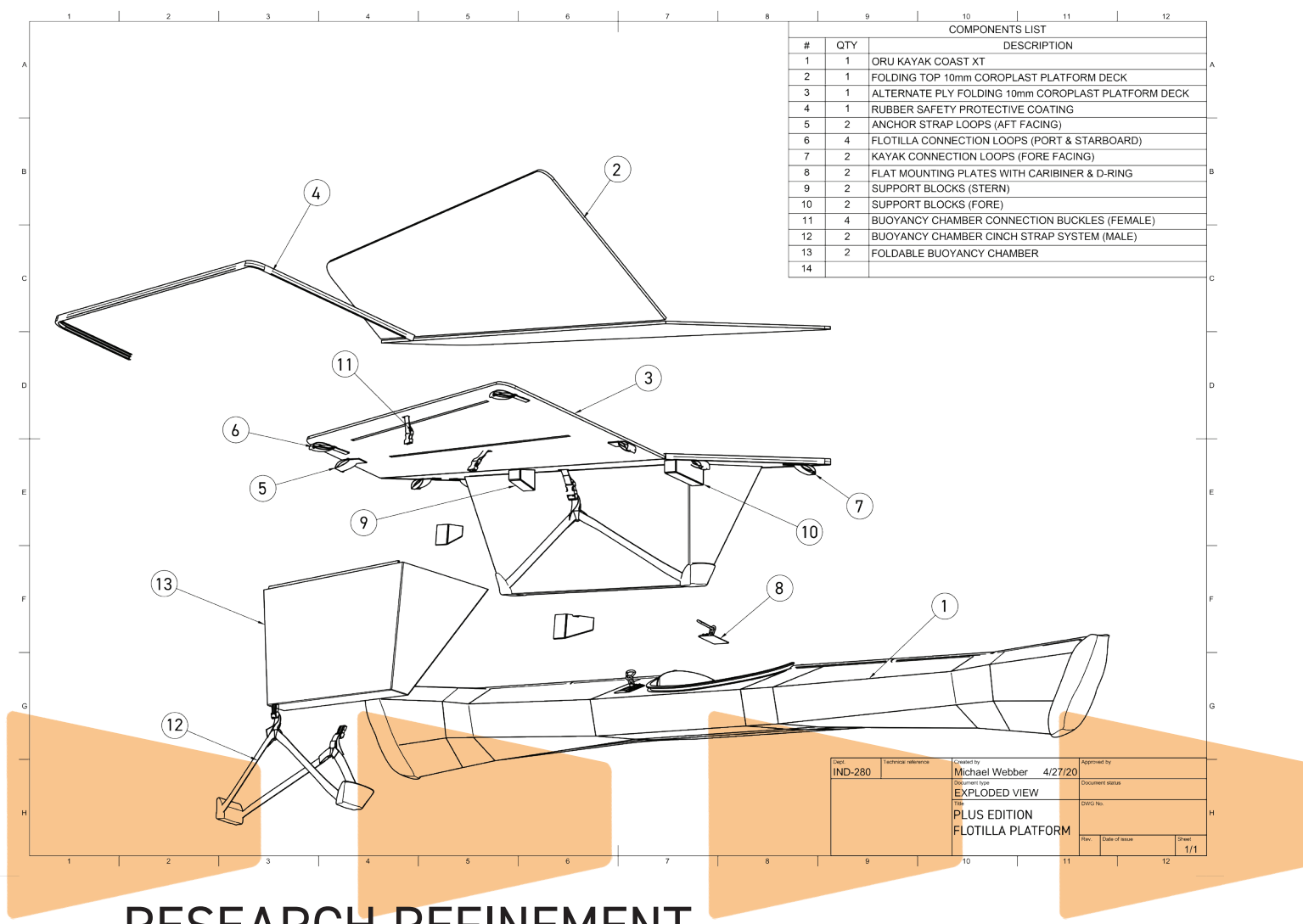
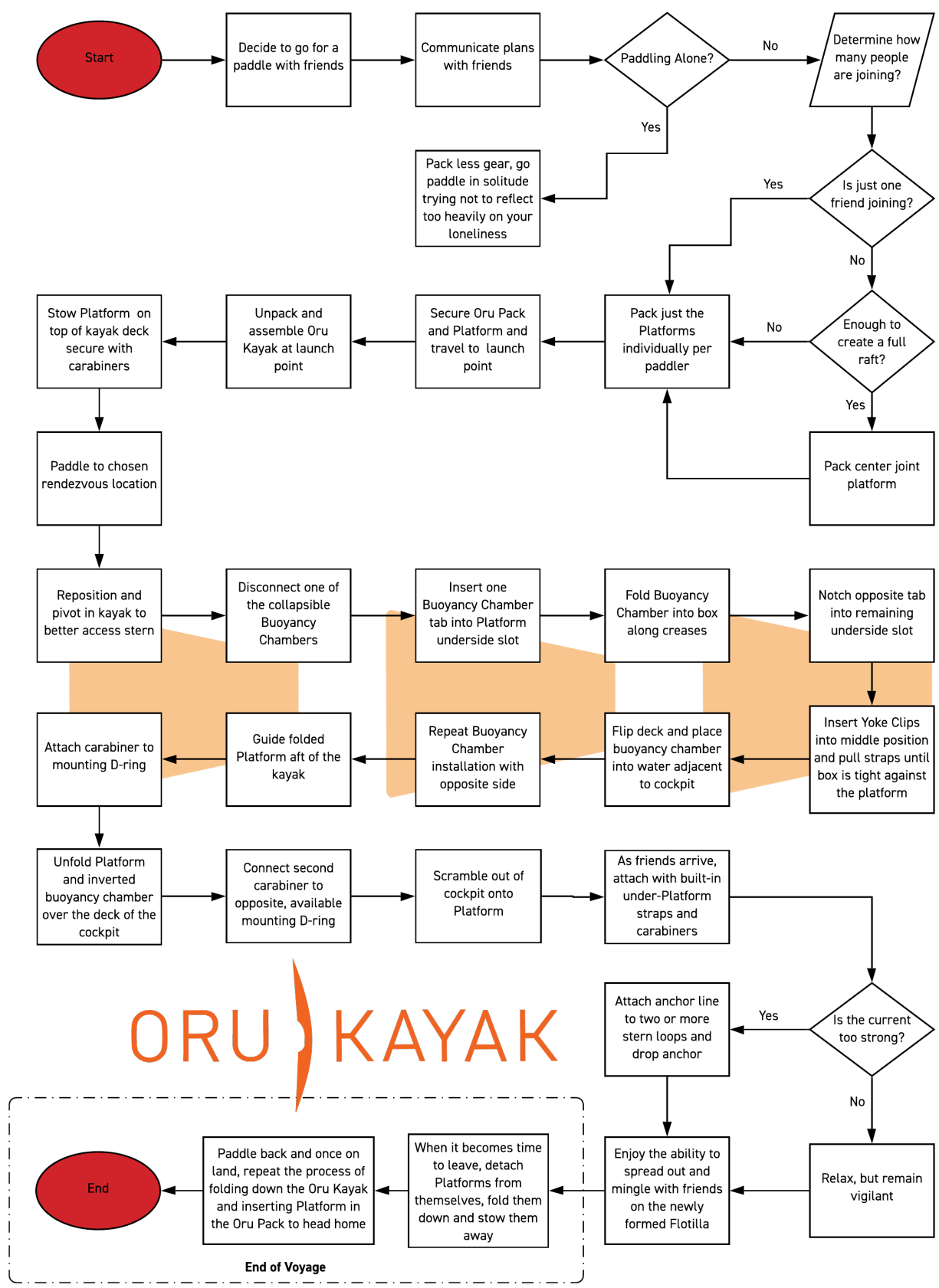
SKETCHES

RESEARCH

MODELS

OBJECTIVE: CONCEPT REFINEMENT

PHASE: 3



RESEARCH REFINEMENT

OUTCOME:

- » EVEN DEEPER REFINEMENT OF TASK ANALYSIS DOCUMENT
- » DISCOVERED A STREAMLINING OF THE PROCESS THAT ALSO INTRODUCED MORE LOGICAL STEPS
- » ONCE CAD MODELING STARTED, FURTHER DETAILS ALSO BEGAN TO REVEAL THEMSELVES

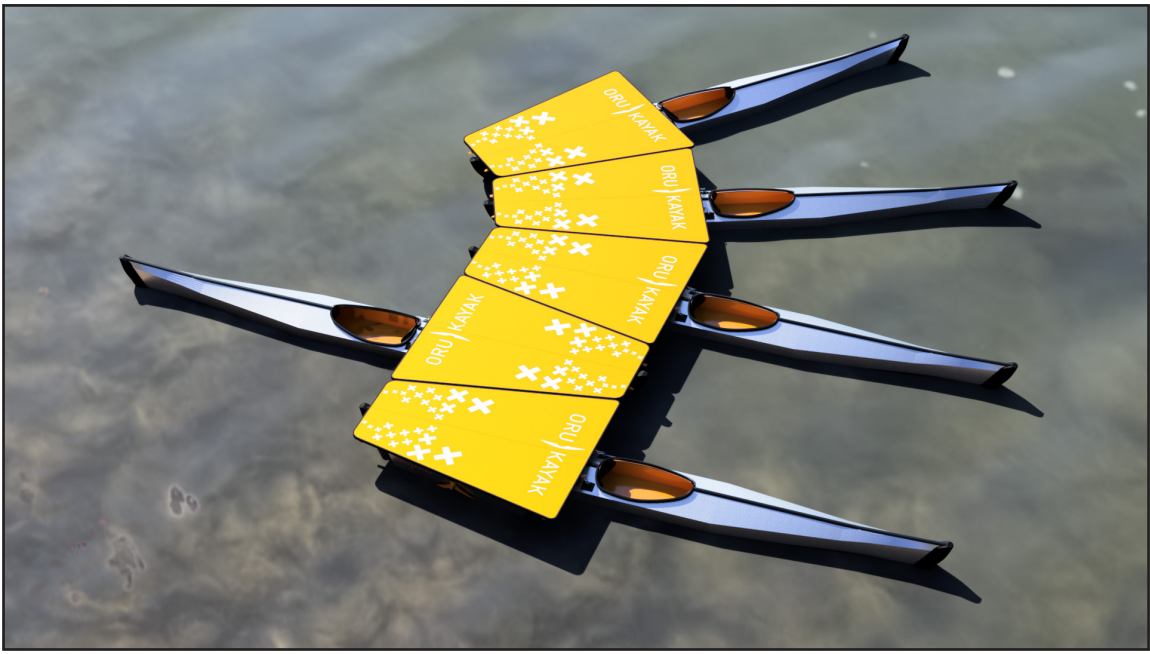
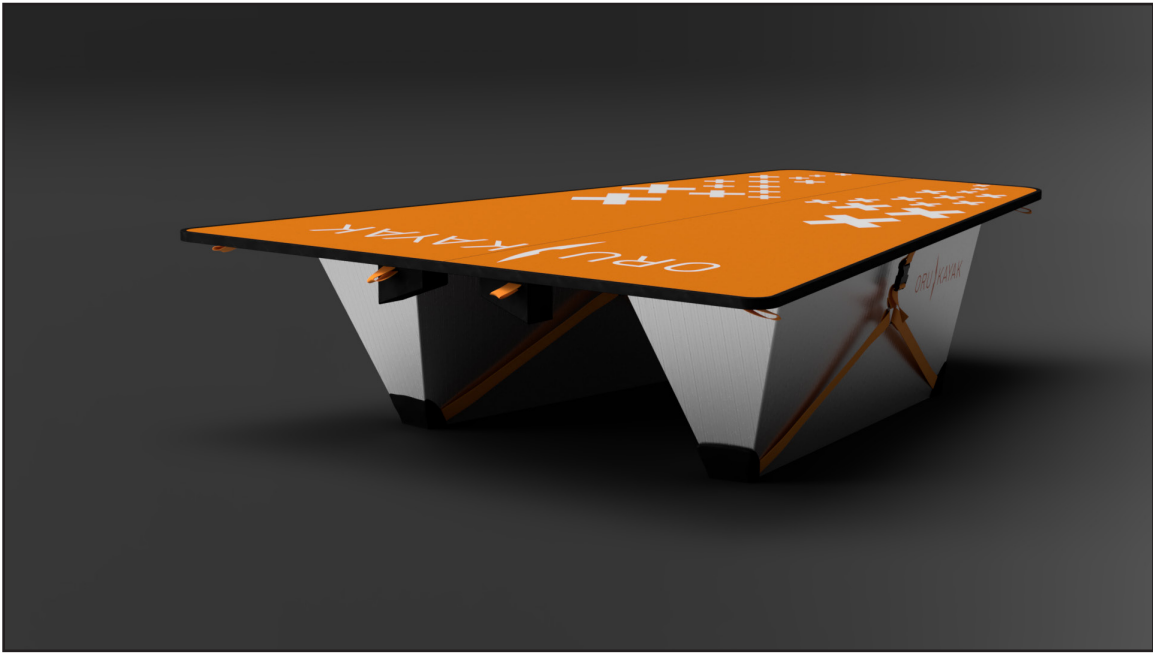
SKETCHES

RESEARCH

MODELS

OBJECTIVE: CONCEPT REFINEMENT

PHASE: 4



CURRENT FINAL DELIVERABLE

OUTCOME:

- » SUCCESSFUL DEPICTION OF EXCITEMENT AND COMMUNITY EXPERIENCE AS WELL AS INTENTION OF CONNECTED KAYAKS
- » ADEQUATE UTILIZATION OF BRANDING FOR ORU KAYAK

SKETCHES

RESEARCH

MODELS

OBJECTIVE: IMPLEMENTATION

**ACADEMY OF ART UNIVERSITY
PRODUCT DESIGN II
IND 280-01
SPRING 2020
DESIGNER: MICHAEL WEBBER**

