

PORTFOLIO

Alejandro Edwards



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Education

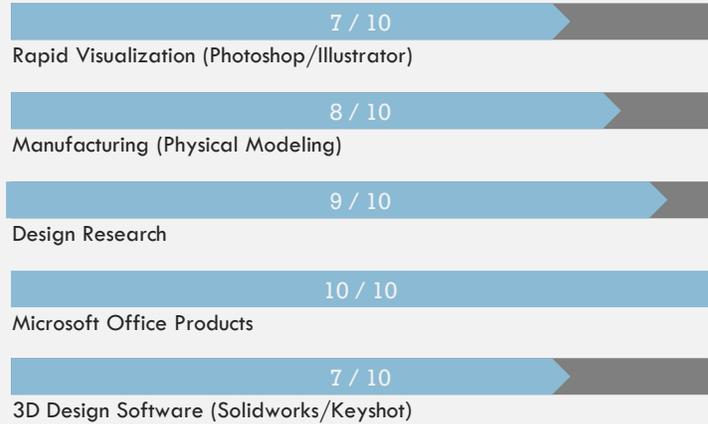
University of Notre Dame
Bachelor of Arts | Industrial Design & Music Theory
2017 – 2021

Syracuse High School
GPA: 3.92 | Class Rank: 61/612
2015 – 2017

Hobbies/Activities

D&D Dungeonmaster
Musical Composer
Theme Park Enthusiast

Skills



About Me

I am an alumni from the University of Notre Dame with two degrees in Industrial Design and Music Theory. As a student, I have been contracted by companies, and affiliates, such as Resideo Technologies and BEHR Paint Company to design both physical items and UX/UI interfaces. I have also participated in many themed entertainment design competitions, where my teams and I placed in the top tiers in a few of them. I endeavor to use my skills of design, storytelling, and others to actualize new ideas and create fantastical themed worlds.

Experience & Leadership

Themed Entertainment Association at Notre Dame (TEA@ND): Treasurer | Spring, 2020 – Spring, 2021

Managing club finances for different activities and opportunities for our organization and interacting with other industry groups/university clubs through joint ventures. I keep track of club dues, student reimbursement, club purchases, and assist members with competition finances.

Ryerson Invitational Thrill Design Competition (RITDC): Design Competition Member | November 14 – 18, 2019

Collaborated with a group of Notre Dame TEA (Themed Entertainment Association) members in a competition that tested our ability to design thrill rides and other aspects of themed entertainment. Facilitated by Universal Creative, I was part of the design team that translated the work of our engineers into desirable products.

Theme Park Entertainment Group (TEPG) Design Competition: Design Competition Member | Fall, 2020

Contracted to design and develop a themed entertainment land that tested our creativity and innovativeness. My team and I designed a themed space that included interactive experiences, novel attractions, and overall placed in the top 5 finalists.

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Pg. 19 – 27..... Cornell Theme Park Design Competition: Fraser Flying Fish

Group Concept

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Hokusai Harbour

Novel Rapids Ride Raft Design



Members: Jack Ferletic, Alejandro Edwards, Lito Michael Moróña, John Folts & Jason Wanamaker

Background

- Biggest manufacturer of river rapids rides: Intamin Amusement Rides
- Design features
 - Circular Fiberglass Body
 - Rubber Ring
 - Center-facing seating
- Social Interaction and motion are the biggest draws for this attraction



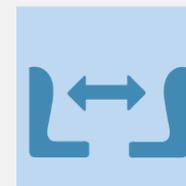
Raft Designer: Intamin Amusement Rides



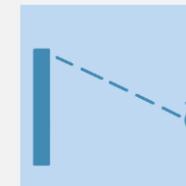
Design Limitations

In the Fall of 2020, a design team and I were tasked with creating a themed world and we decided that one of the major attractions is a river rapids ride. However, due to the ride's heavy theming, we wanted to develop a new raft design that would allow our guest to better immerse themselves in the experience.

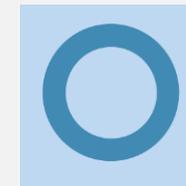
Some of the limitations were:



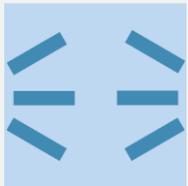
Inward Facing Seats



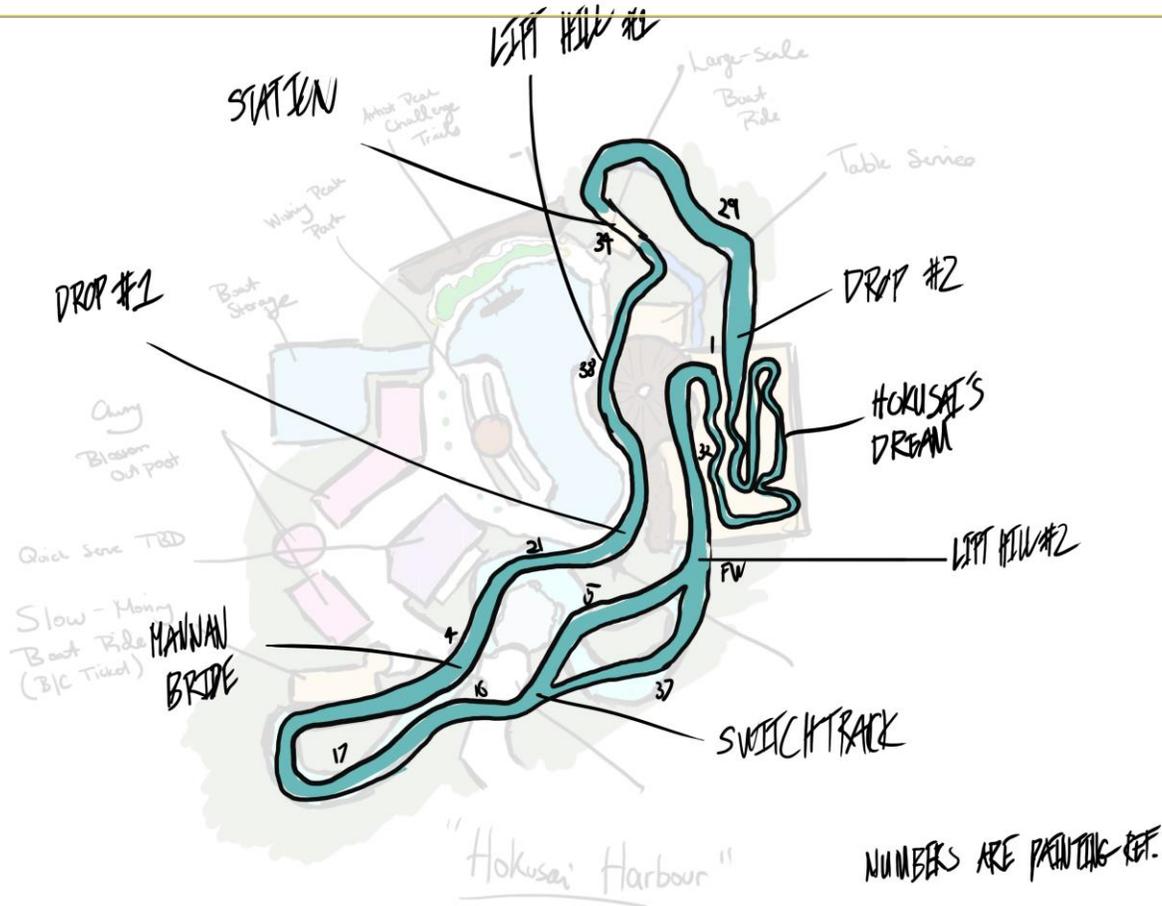
High Walls



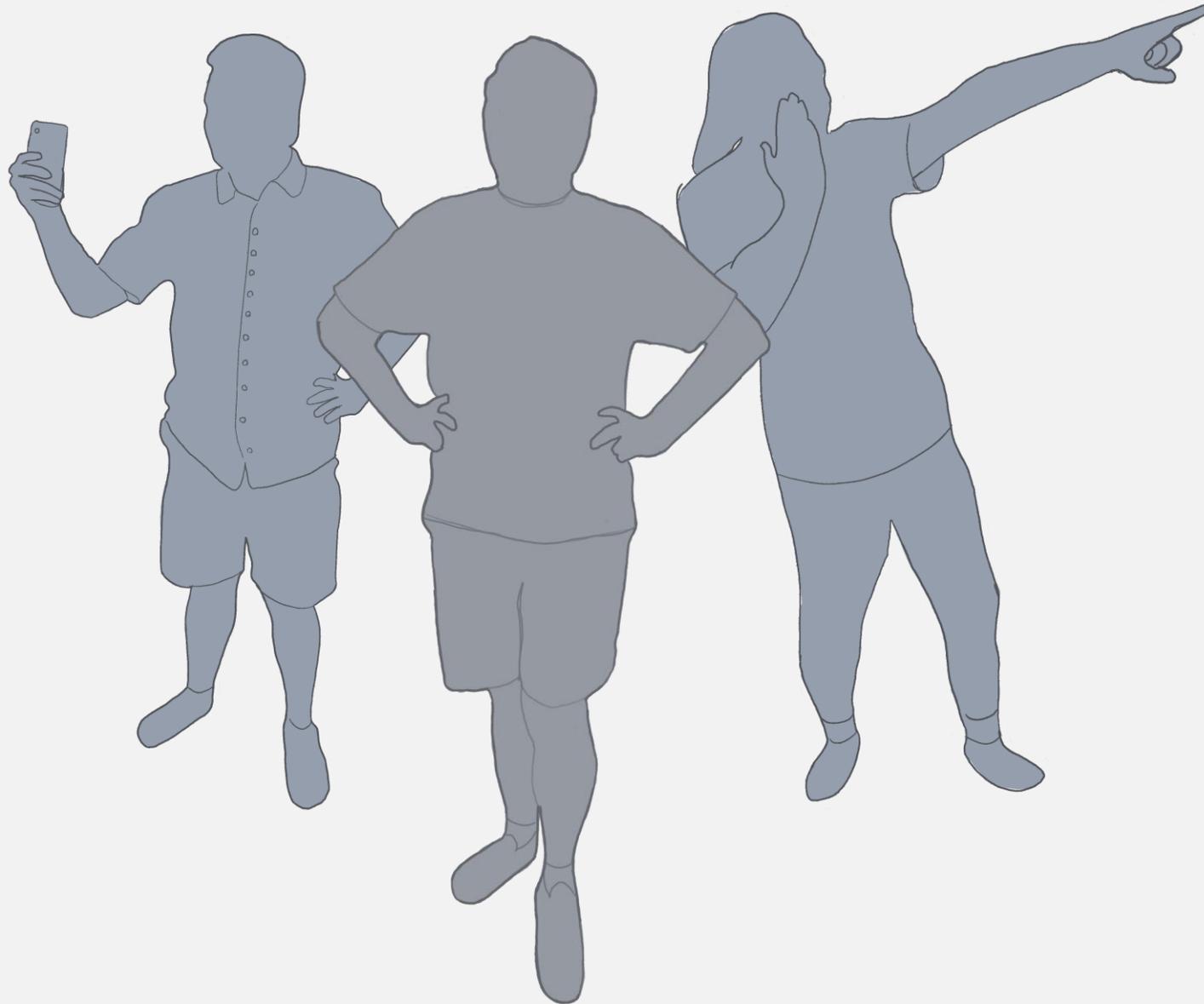
Dead Inner Space



Social Reliance



Co-Designers: Lito Michael Moróña, Jack Ferletic & Alejandro Edwards



Persona

To create a new raft design, we researched what guests crave for in these types of river rapids rides.

Thrill

Rapids rides must provide a sense of excitement and unpredictability

Fun

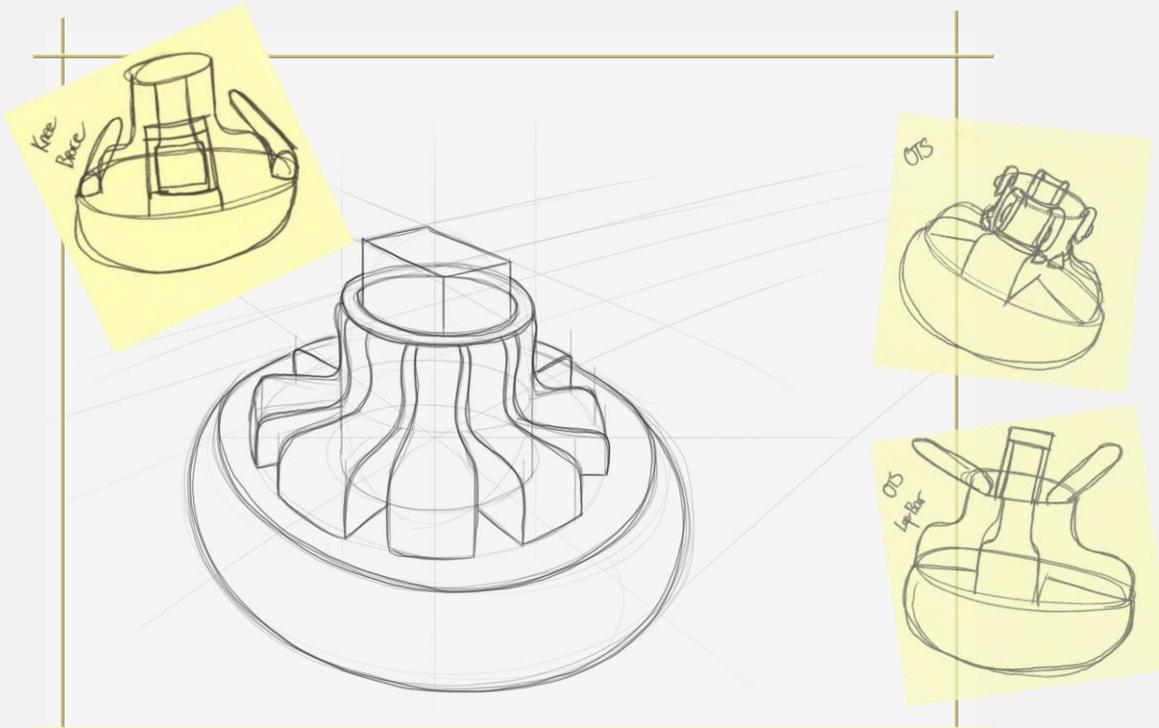
These rides must also be enjoyable to ride and provide fantastic memories

Immersion

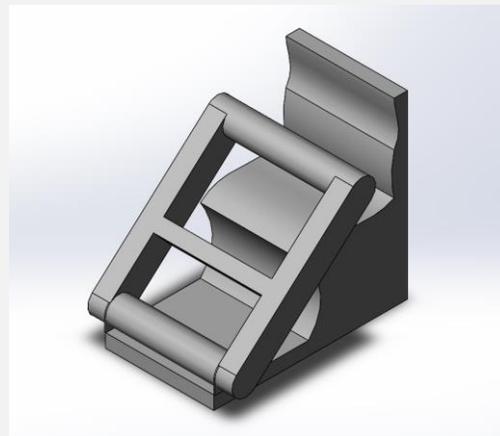
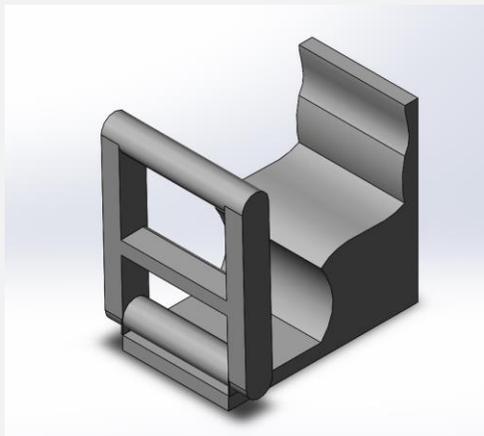
Rapids rides need to draw guests into the story and setting that its telling

Design Refinement

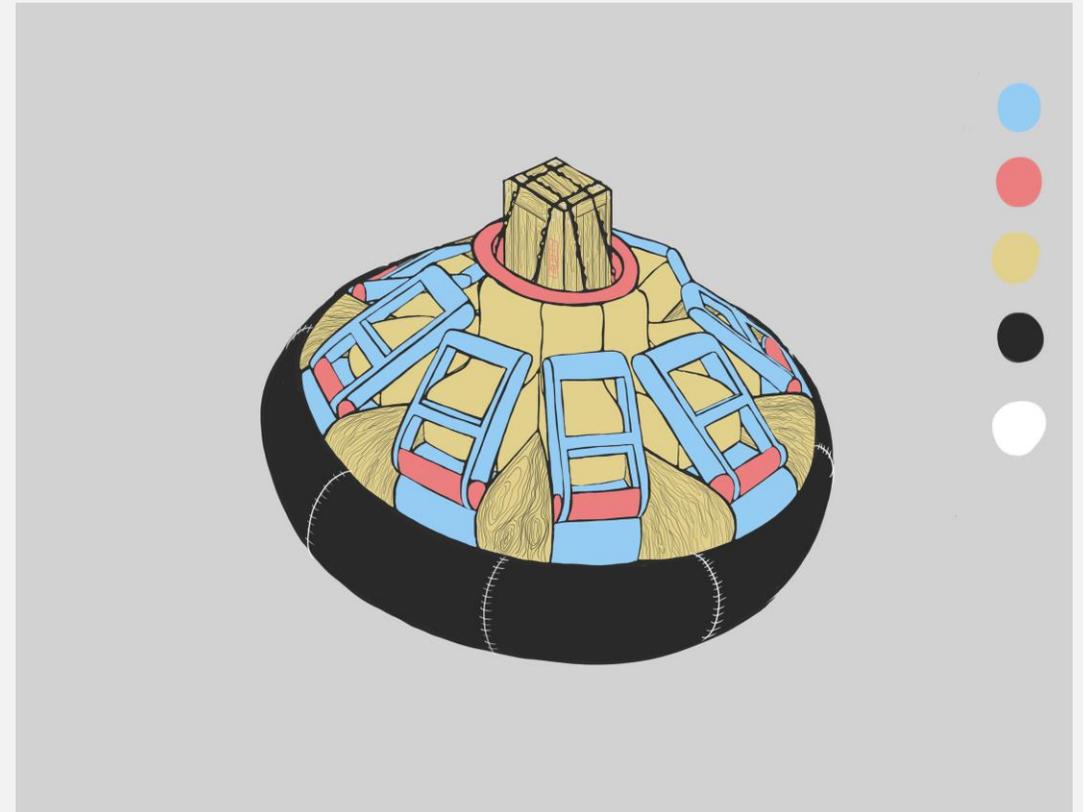
Through the consultation of our team's engineers, our raft seats 8 people at once. The outward facing design, coupled with the trackless ride vehicle, allows guests to spin around and see all the immersive facets of the ride without sacrificing the traditional social aspect of rapids rides.

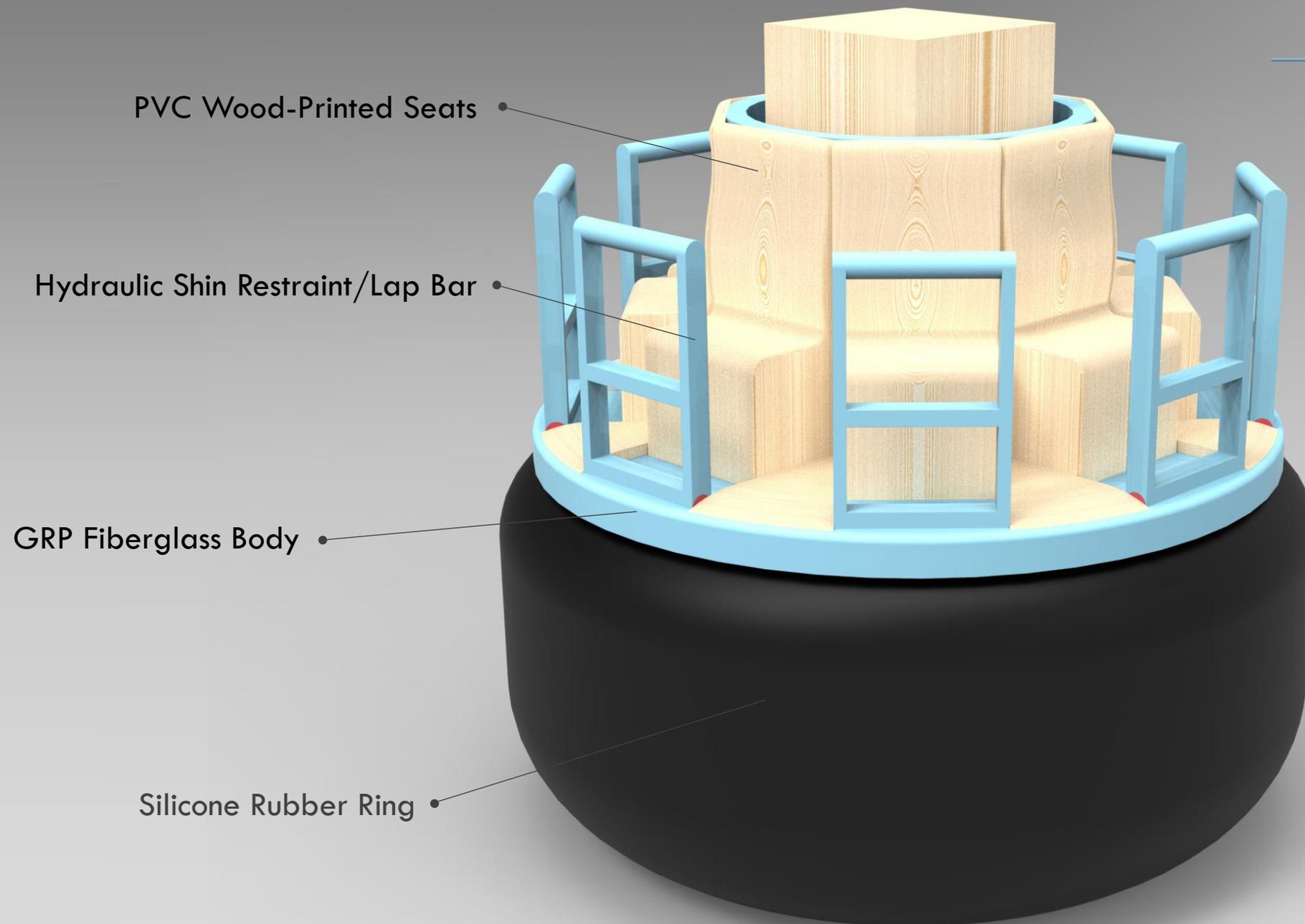


Raft Ride Vehicle Designer: Alejandro Edwards



3-D Seat Modelers: John Folts & Jason Wanamaker







In Context



Physical Product

SCOUR

The First Portable Wheelchair Tire Cleaner

Needs of a Disabled Person

Independence

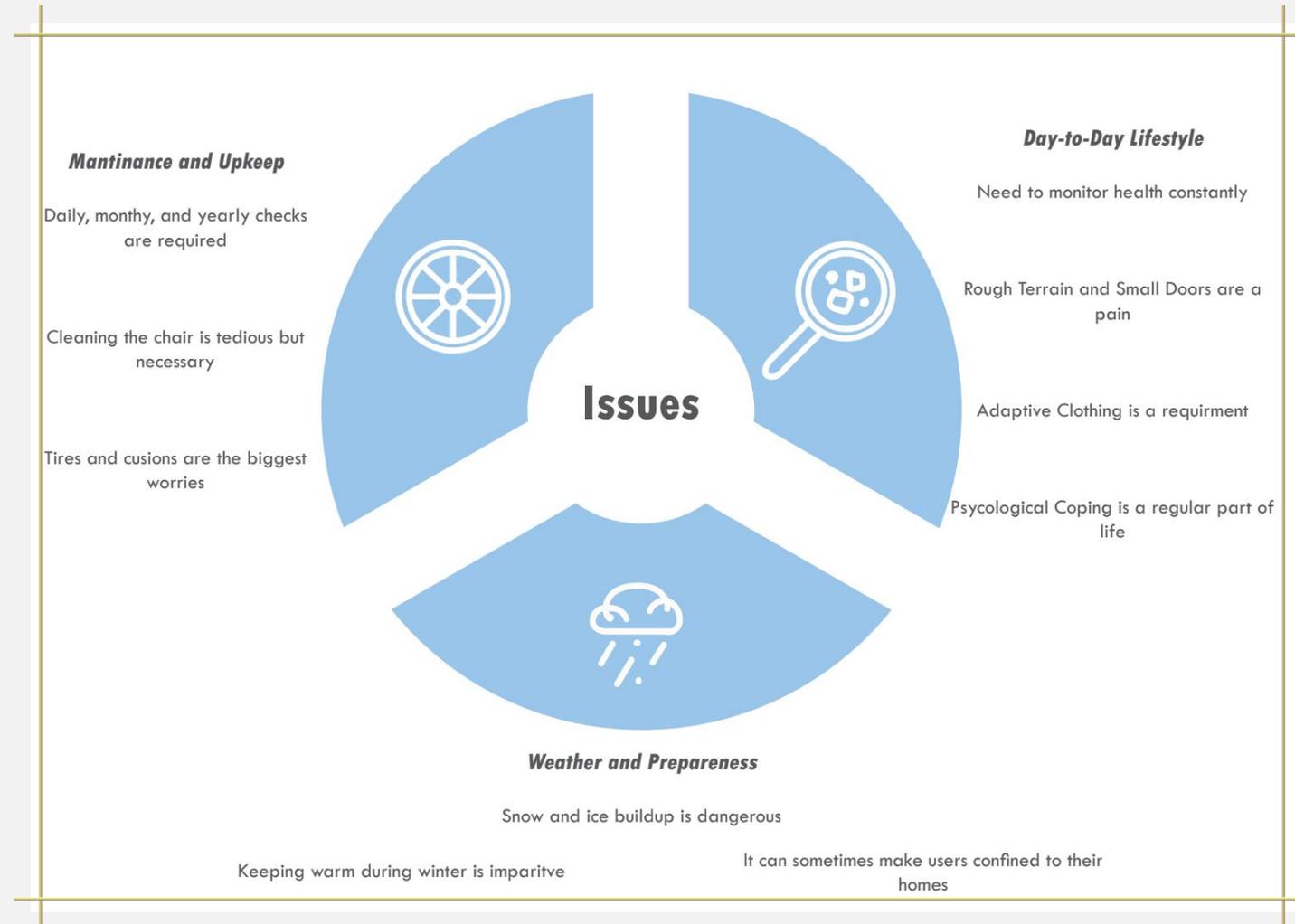
One of the highest priorities; they want to take care of themselves without being a burden on others.

Understanding

They don't want pity from others; they want real relationships with people that will support them.

Normality

They don't want praise for simply existing; they need the freedom to choose what they want in their life.





“In the wintertime, there are days where I am simply less mobile.”

- Adam Sargent

Interview Summary

- The worsening weather was the most discussed issue
 - “Winter is always hard, depending on the degree of snow.” – Adam Sargent
- Users are surprisingly independent
 - “I try too be as active as possible.” – Jean Kapica
- They have learned to overcome many of their daily lifestyle issues.
 - “I won’t give up, I will keep going as long as I can.” – Sherly Fulton

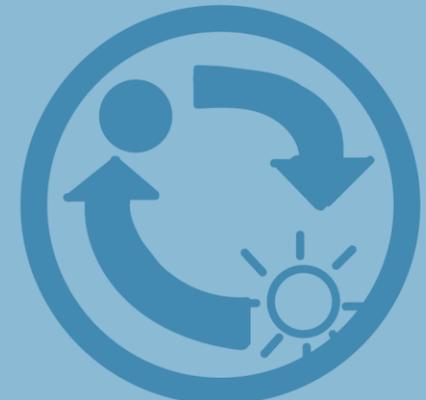
Design Opportunities



Maintenance

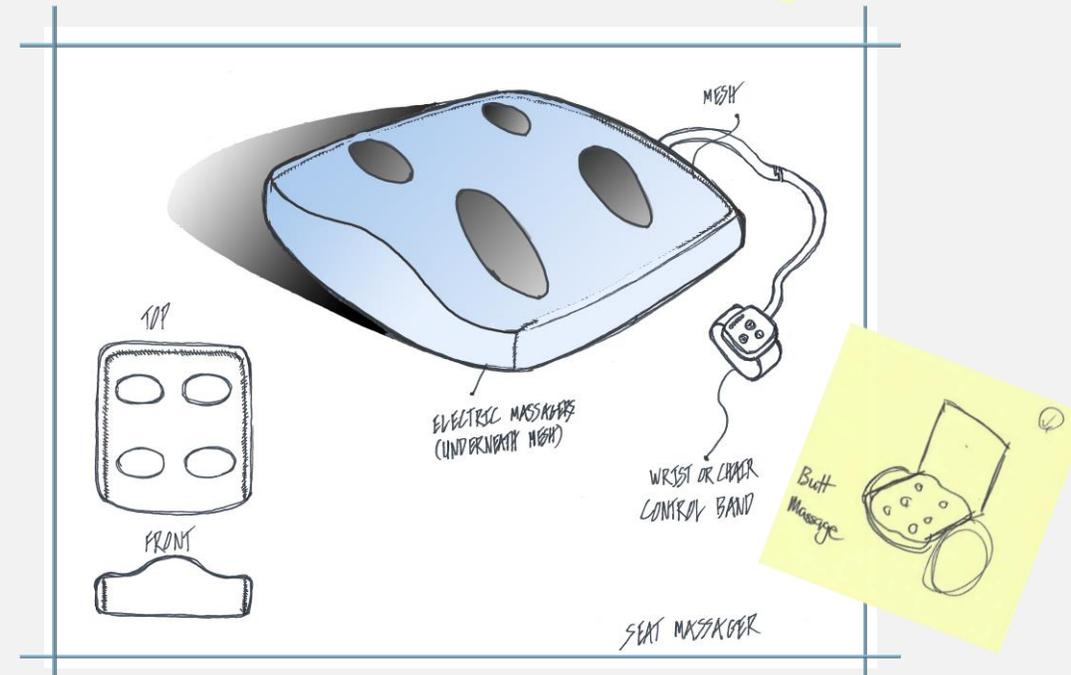
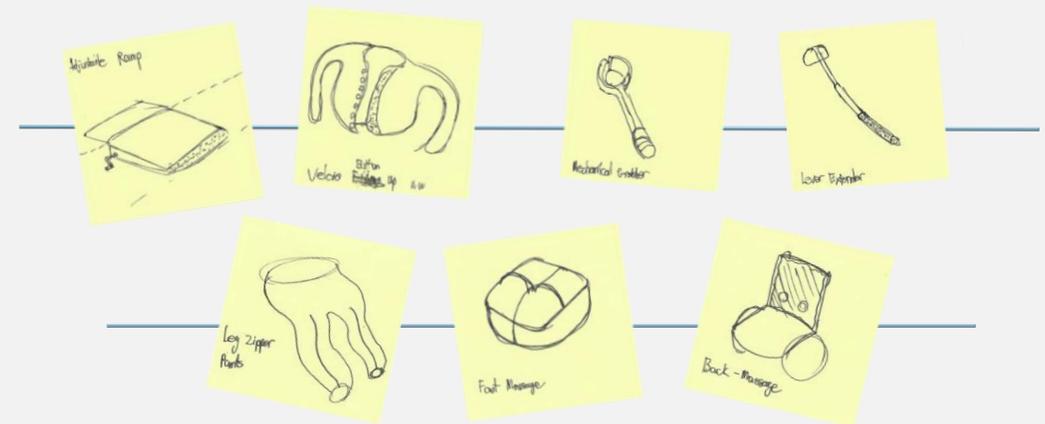
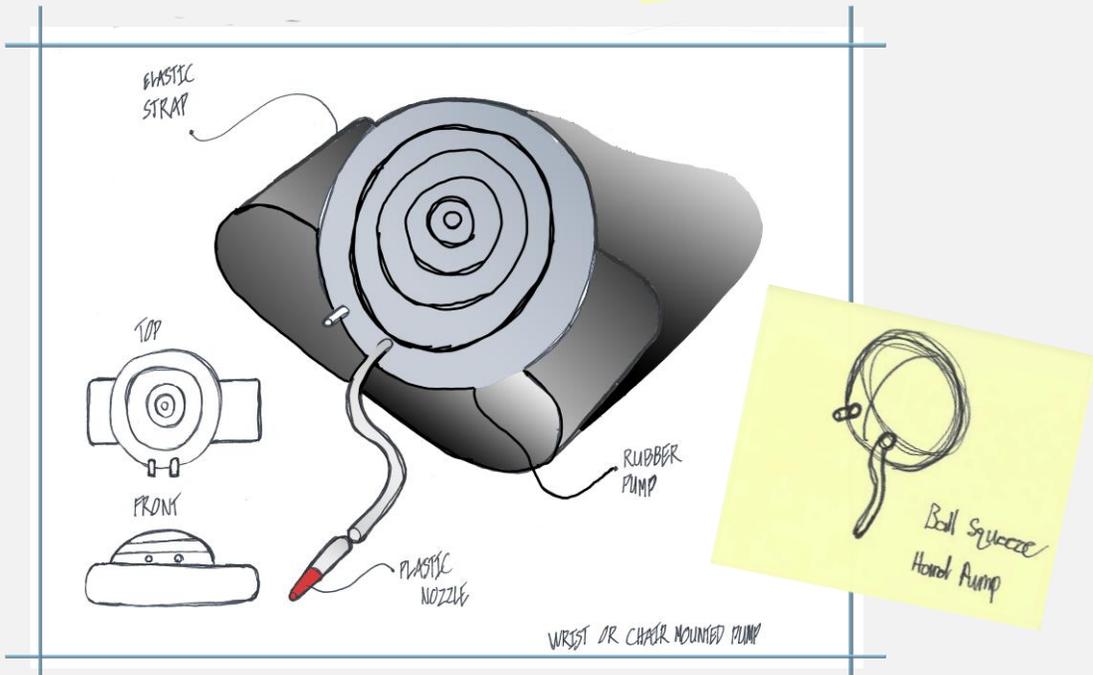
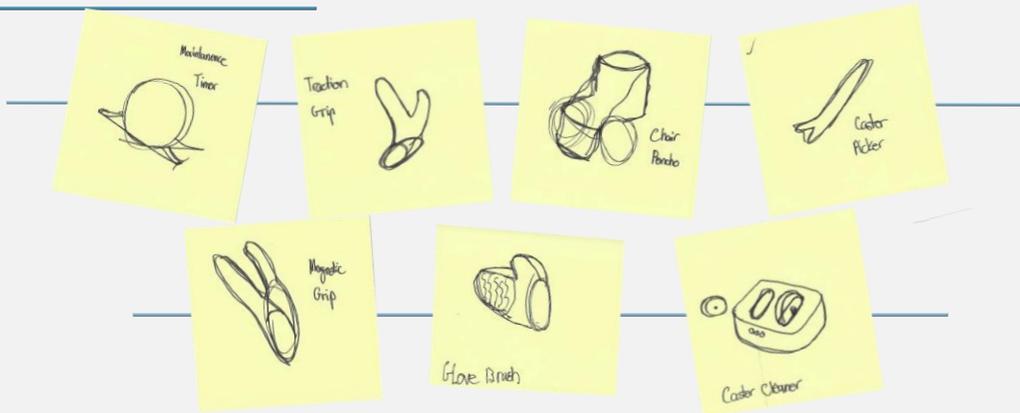


Weather Upkeep



Day – to – Day Lifestyle

Ideation

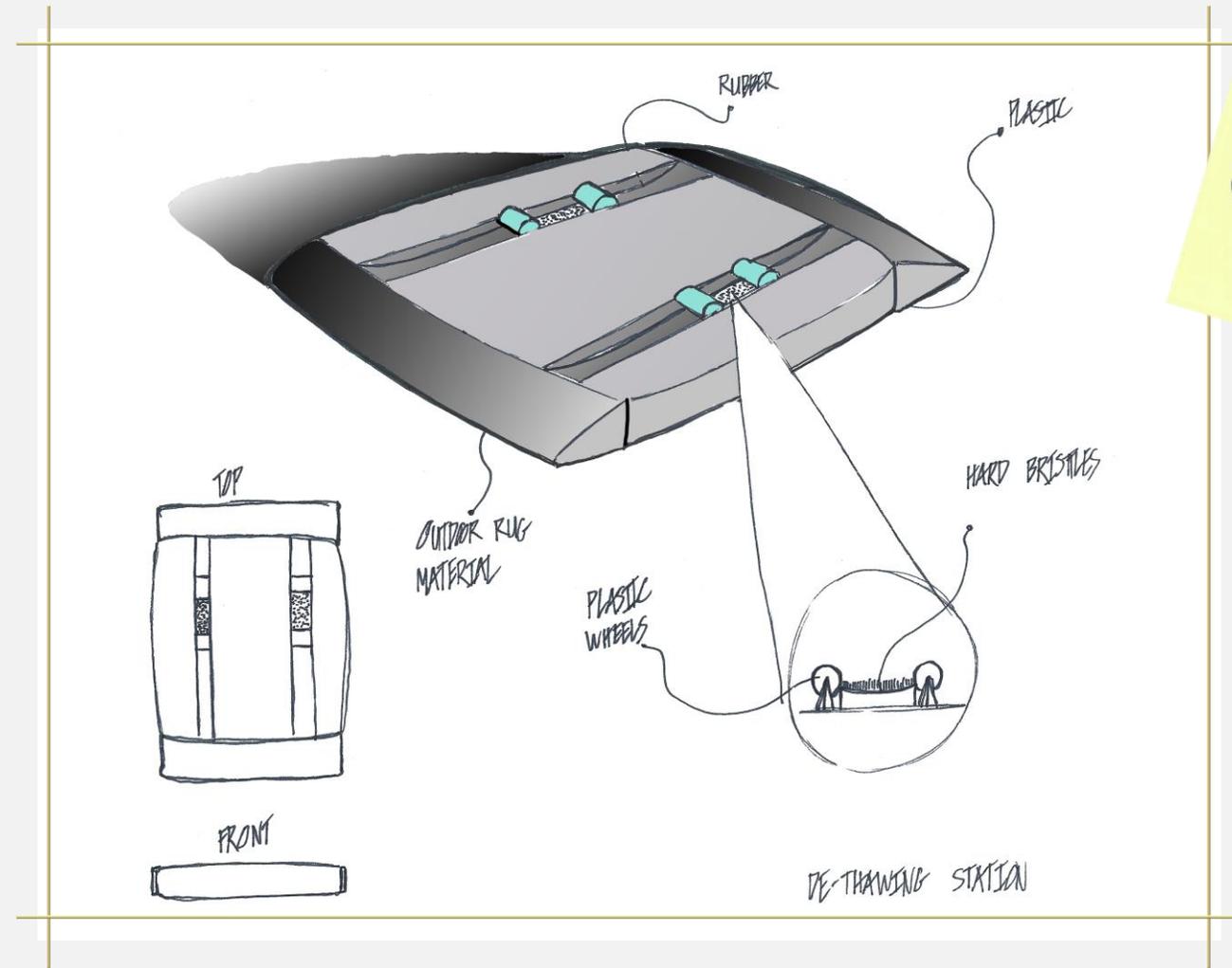
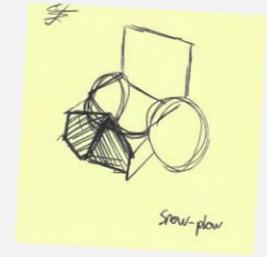
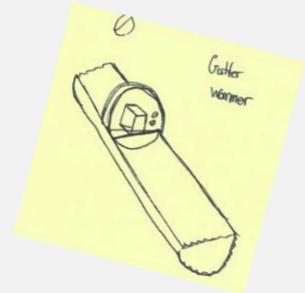


Pros:
Easy re-inflation mechanism, convenient placement, more independence

Cons:
Requires strength that older users may not have, many pumps are required

Pros:
Prevents pressure point sores, easy control access, quick installation

Cons:
Similar products exist currently,

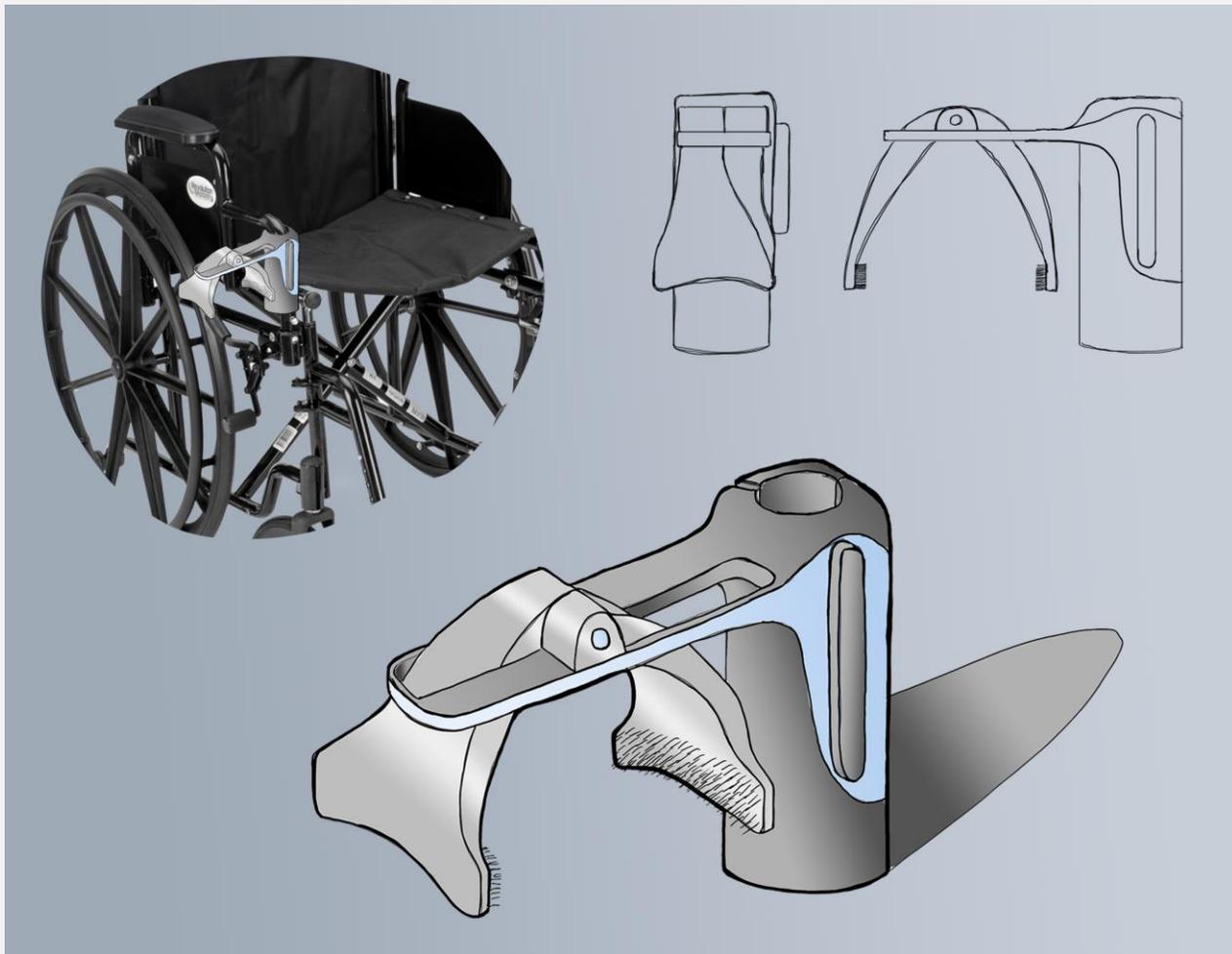


Why choose the weather design opportunity?

- One of the biggest complaints from interviewees
- Not many innovative products in this opportunity
- Would meet the needs of independence and normality by granting the users new mobility during the winter months.

Product Features

- Floor unit placed at building entrances.
- Users would roll onto the device and sit in the groove.
- Rolling on the wheels would allow the bristles to clean off harmful debris such as ice, snow, and especially salt.



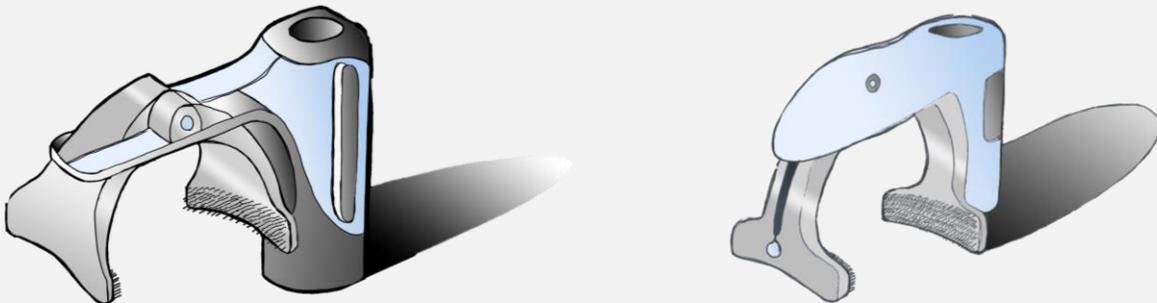
Form Exploration

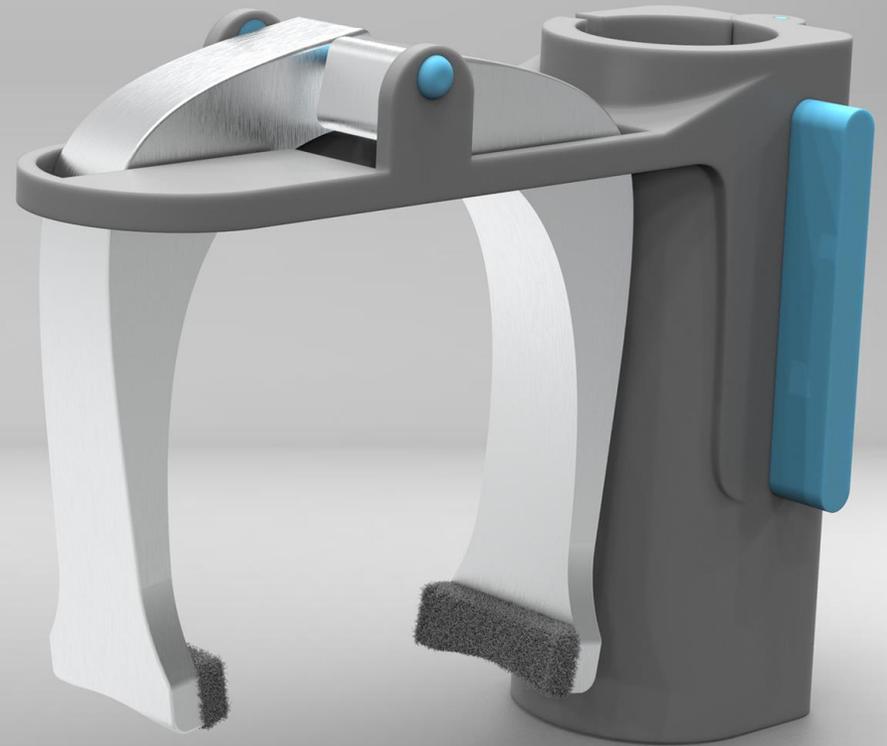
Through prototyping, the design developed into a portable model.

The model's final design took elements from the medical and relaxation fields.

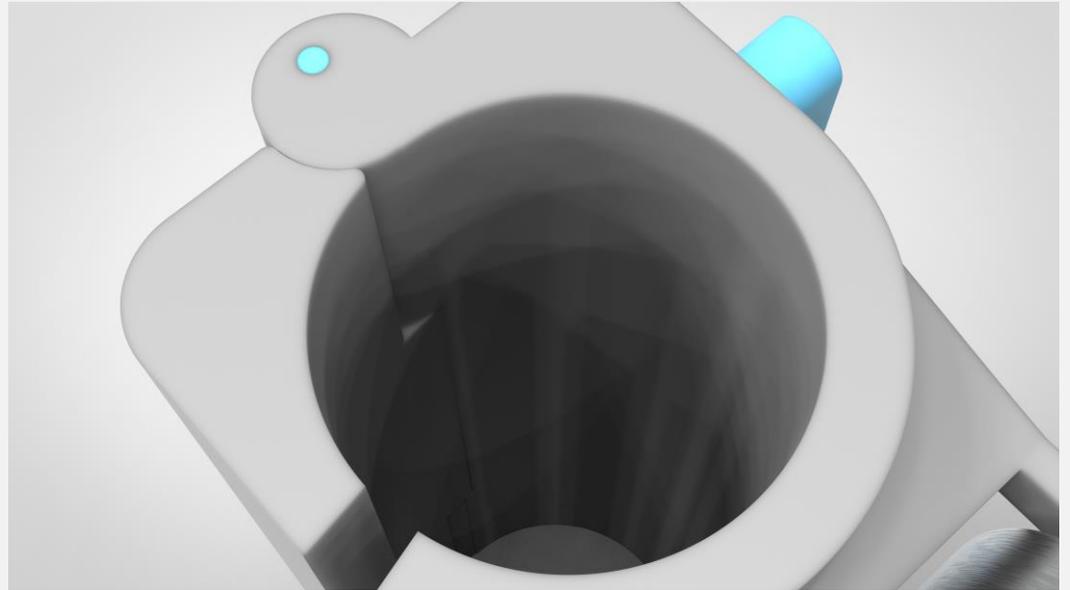
It attaches to the front of the wheelchair to easily clean debris.

The model activates by pushing the button on the cylinder whereupon the flaps will close.





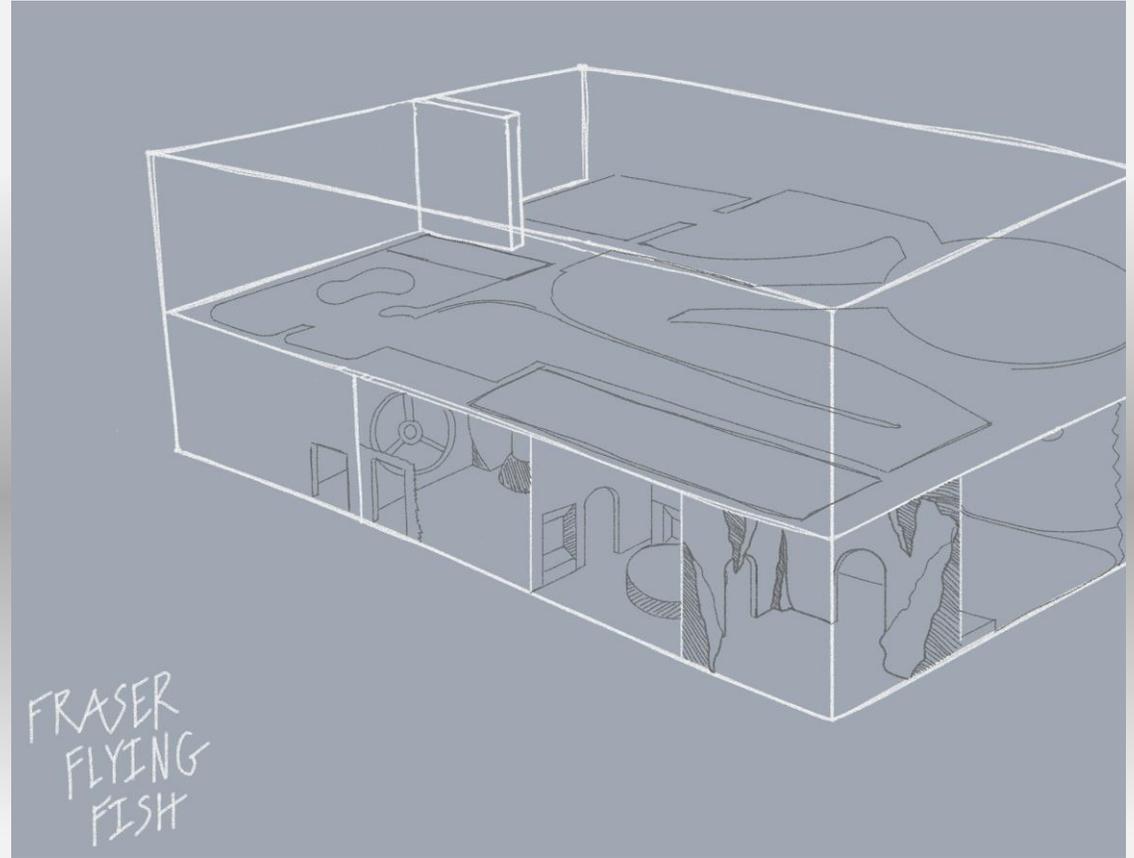
SCOUR



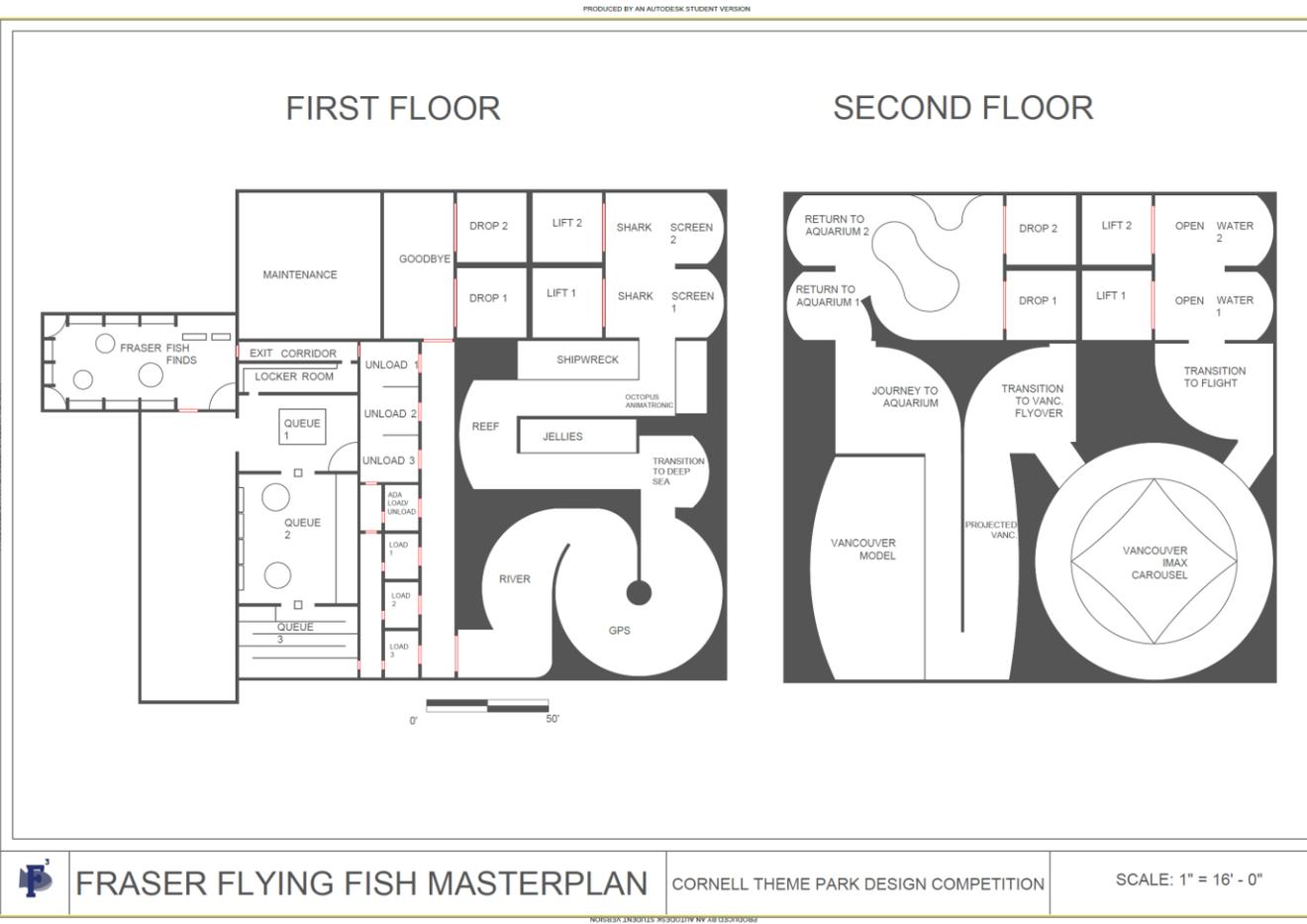
Group Concept



Aquarium Attraction



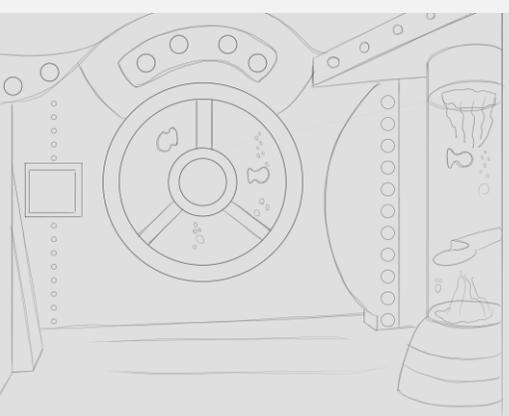
Concept



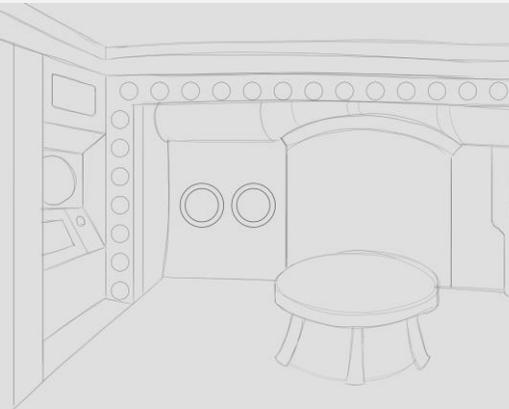
Once entering the Cornell Theme Park Design Competition, our group acted as the Spirit of Adventure Creative Group and was tasked to design an attraction for the aquarium Seas of Imagination.

We must create an immersive themed experience that uses a cohesive narrative. We must integrate cutting-edge interactive technology, a novel ride system, and make sure that each individual guest has a unique, personalized experience.

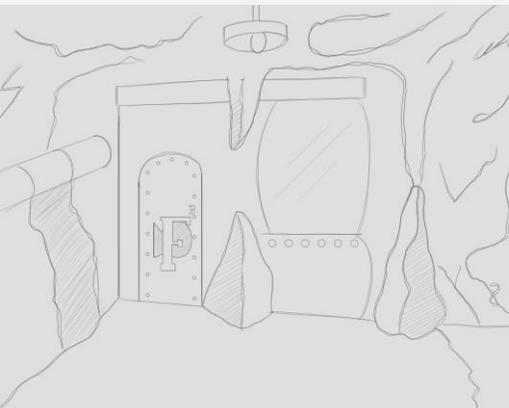
Floor Plan Designer: Lito Michael Moraña



Guests begin by entering the queue on the first floor. The first room they encounter is a viewing deck akin to a steampunk Jules Verne. Here, they can observe different aquatic exhibits while they wait for their ship number (given at the entrance of the attraction) to be called.

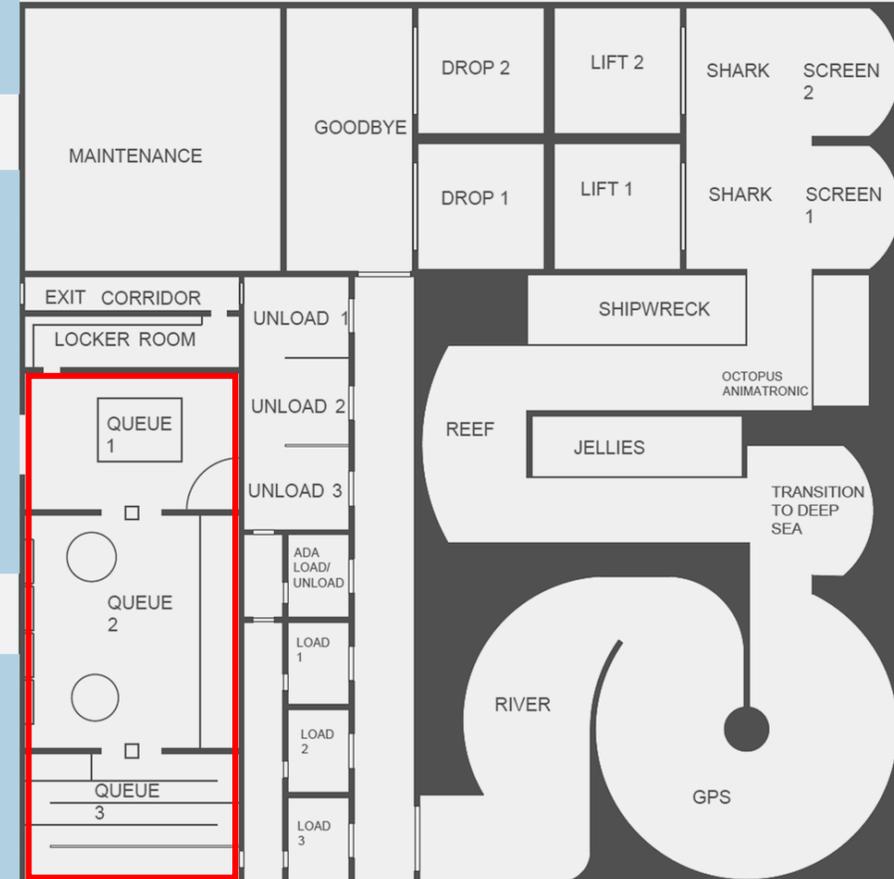


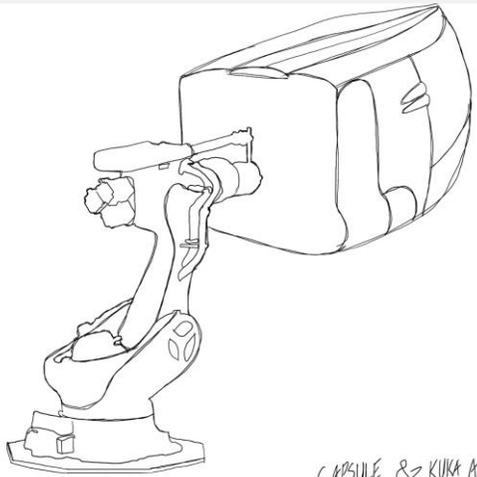
Once their ship number is called, the guests move into this deck where they can draw aquatic creatures that accompany them during the ride (explained later). Here they also choose which of the three animals that they would like to save.



The group's ship number is called one last time and our guests are taken into an underwater cavern beneath the Fraser River. Therein, the guests will board their vessel: Fraser's Flying Fish.

FIRST FLOOR



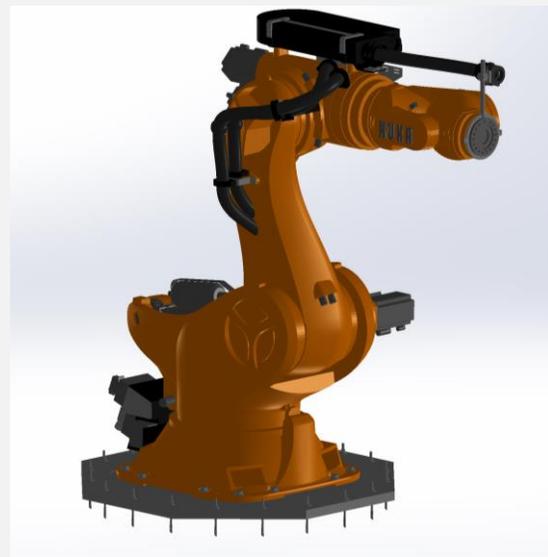
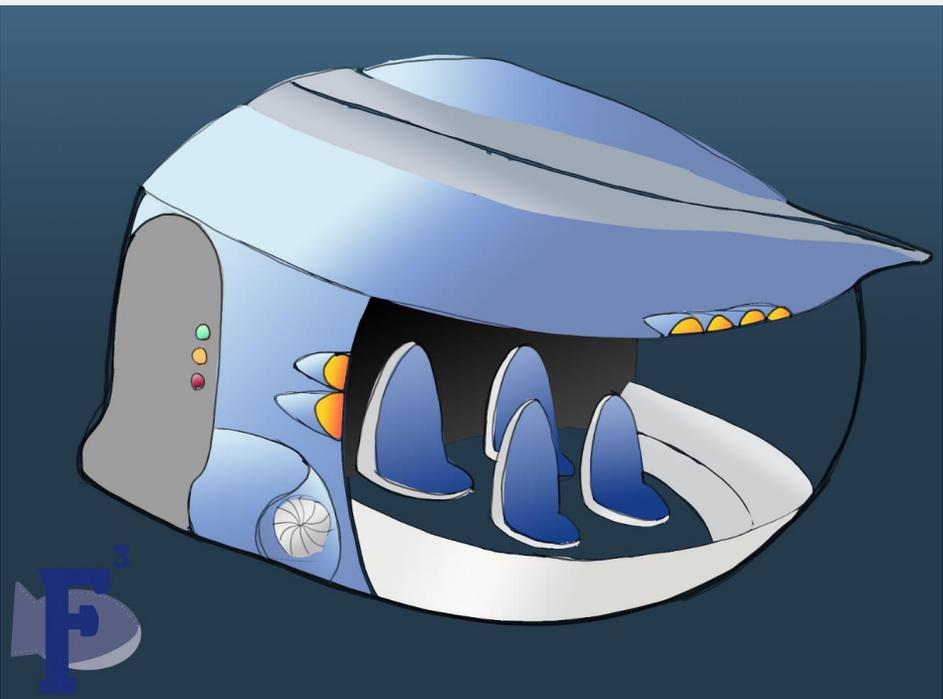
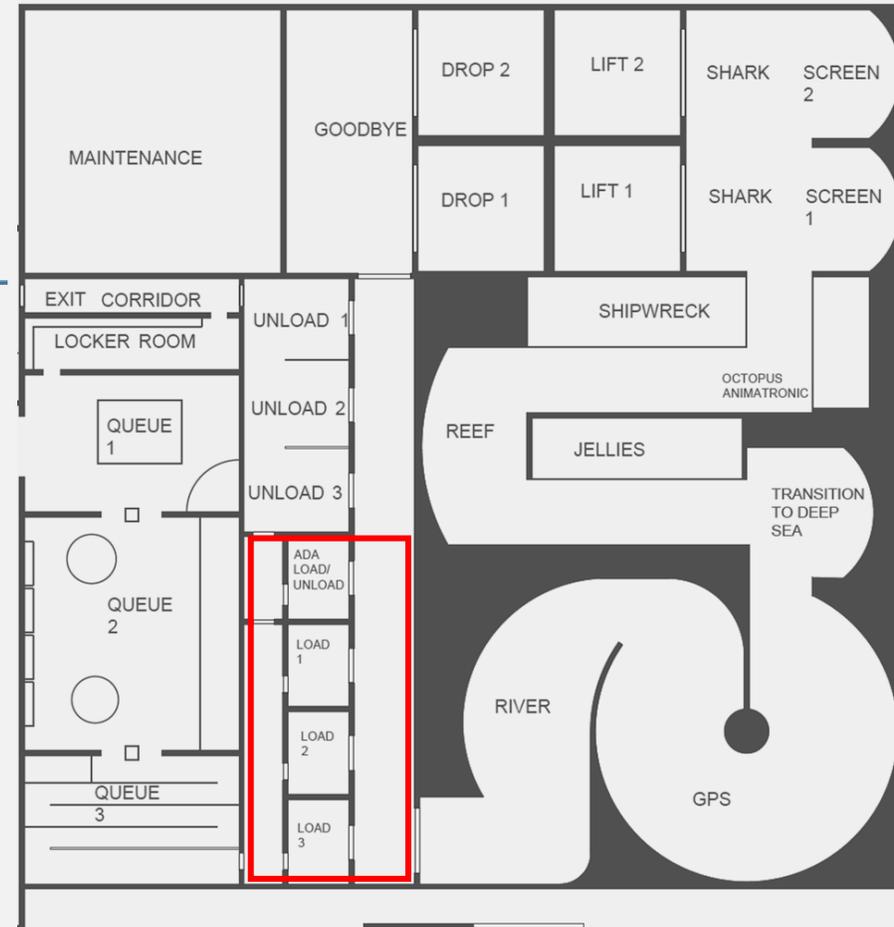


CAPSULE & KUKA ARM

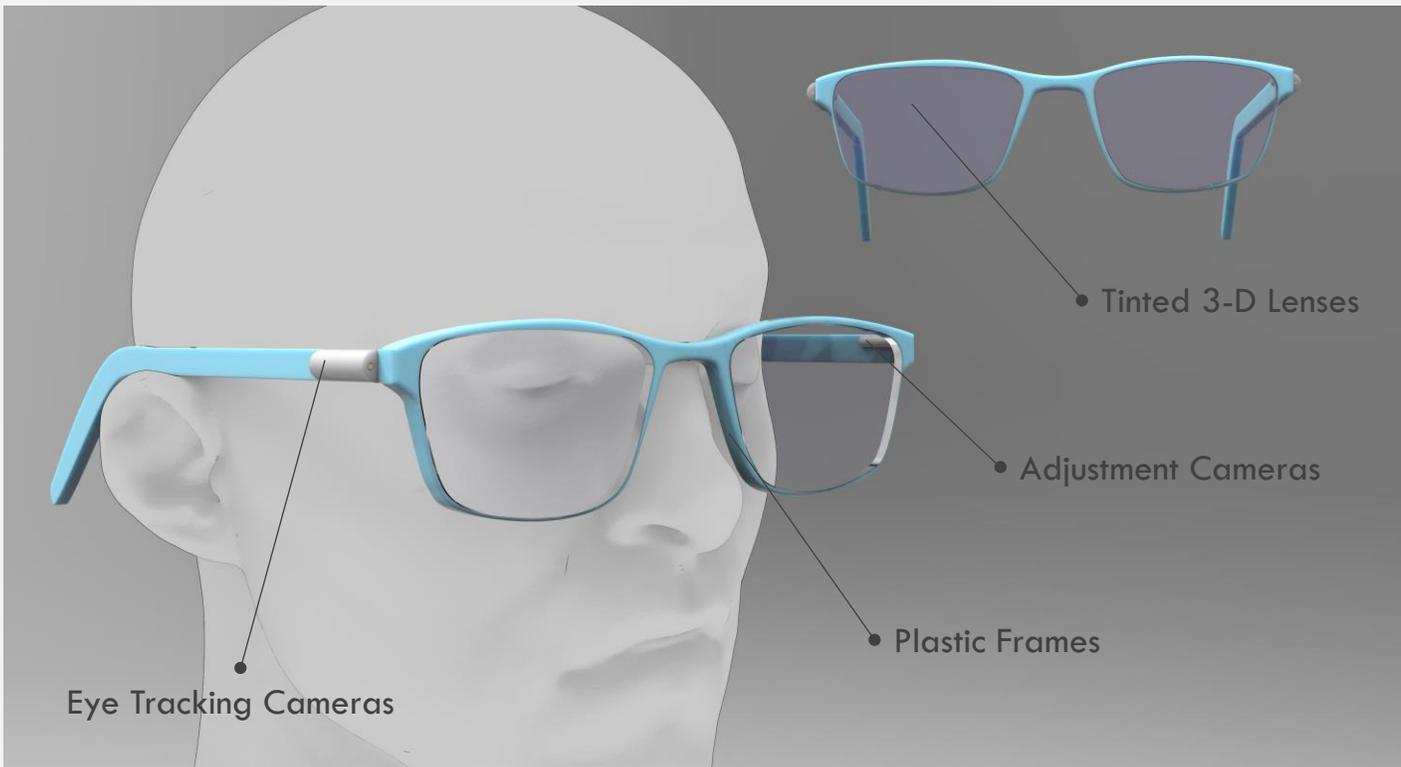
The ride vehicle itself is an enclosed fiberglass unit attached to a KUKA KR 1000 Titan arm which can hold up to four people. The structure is supported by a trackless robocoaster G3 which automatically guides the unit around.

The ship group is divided into three loading parties that board three different units whereupon each is launched into the Fraser River whereupon they begin their journey to the open ocean.

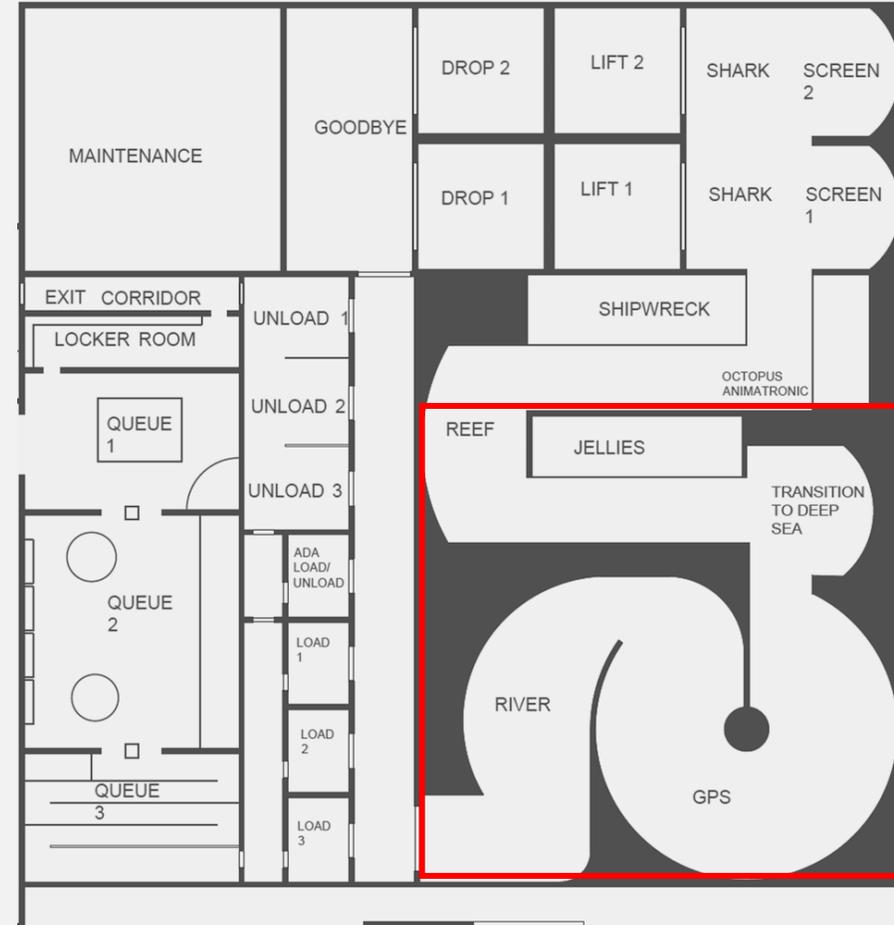
FIRST FLOOR



KUKA Model: KUKA Robotics



FIRST FLOOR

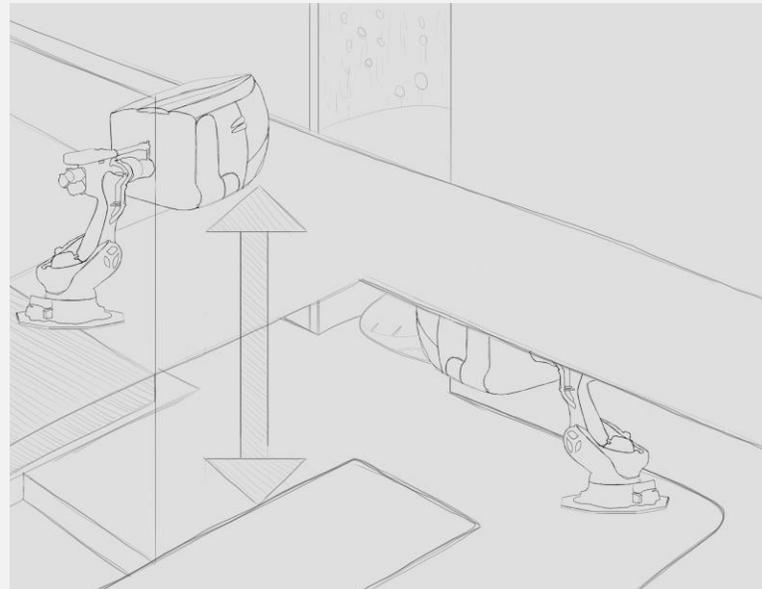
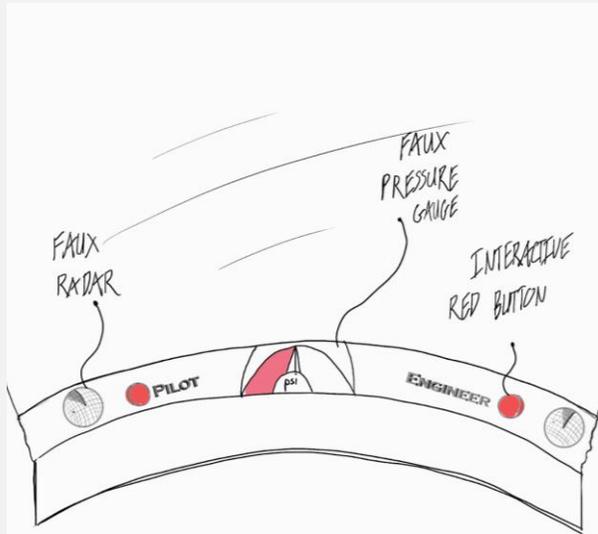


As the ship travels through several underwater scenes (including navigating a jellyfish smack and coral reef) the space between the glass panes fills with water to emulate diving. To enhance the effect of this and other immersive elements, guests are given search and rescue glasses which projects 3-D images. These projections are dependent on which animal the guest chose to save and are adjusted in real time to negate water disturbance.

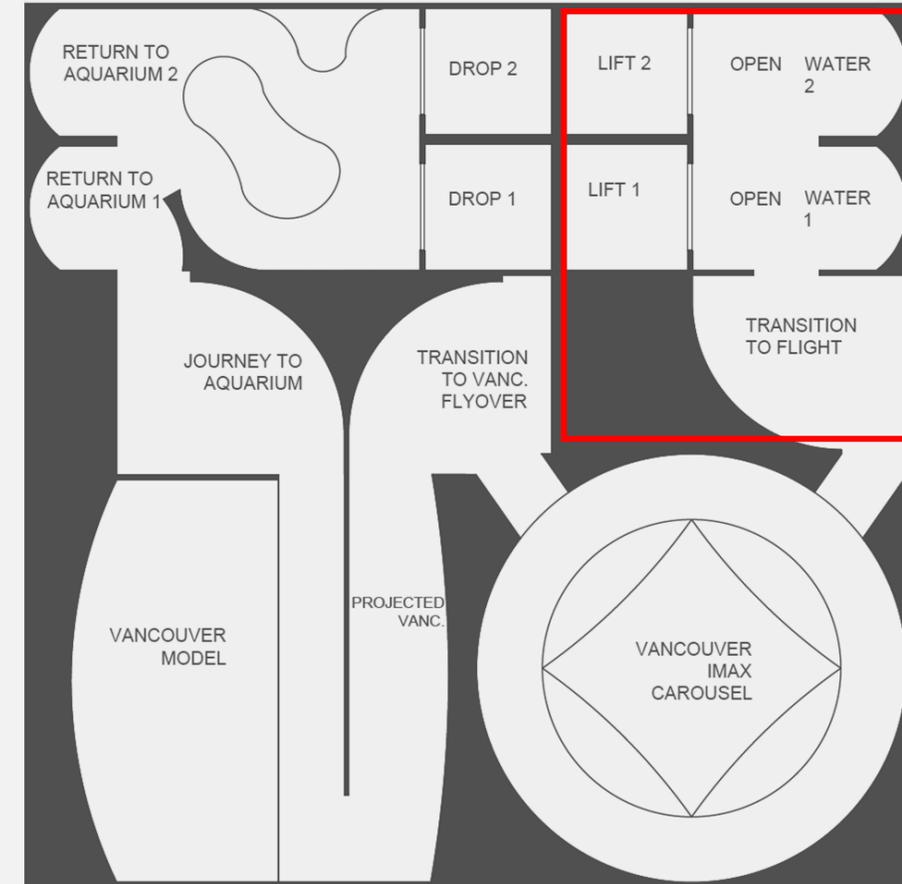
Additionally, a new feature using eye-tracking software allows a more personalized experience for each guest so that when someone looks away from a potentially scary scene for instance the projections are updated accordingly.

After the animal has been located, the guests will “load” it in the ship and start heading back toward the aquarium. However, as they are departing, they encounter a shark. The guests are prompted to push a glowing red button in order to transform the ship from a submarine into an aircraft.

The ride vehicle will travel into an elevator and activate a glowing LED button. Regardless whether the guests push the button or not, the ride vehicle will rise to the second floor during which the water in the double paned glass will fall back into the reservoir.



SECOND FLOOR

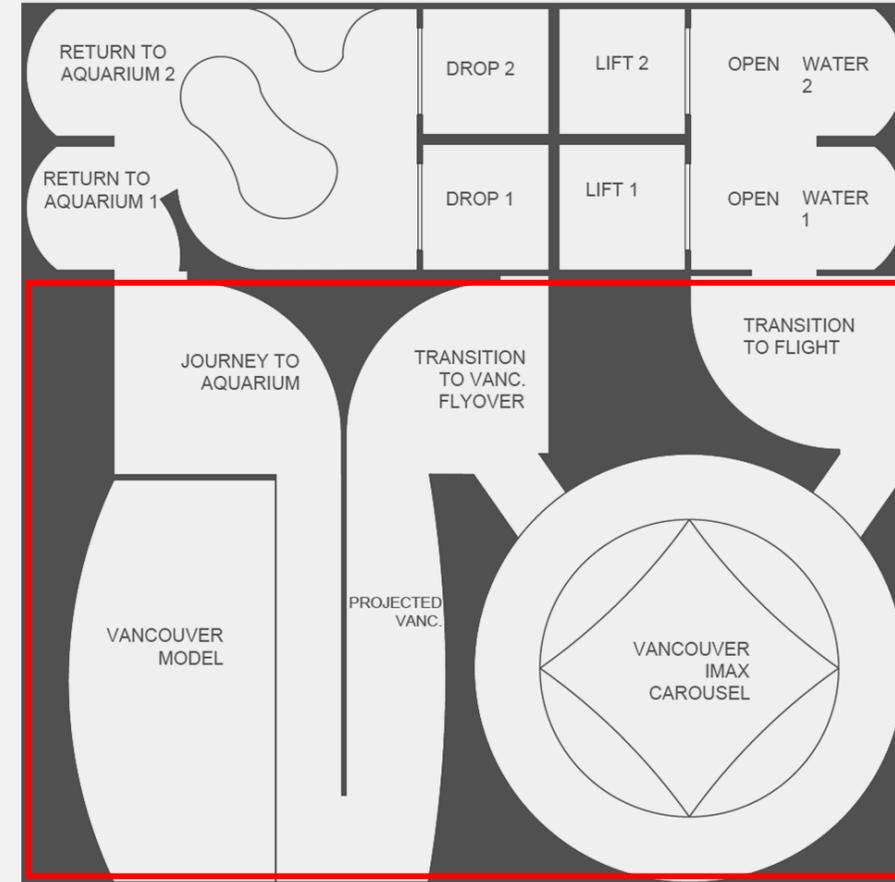


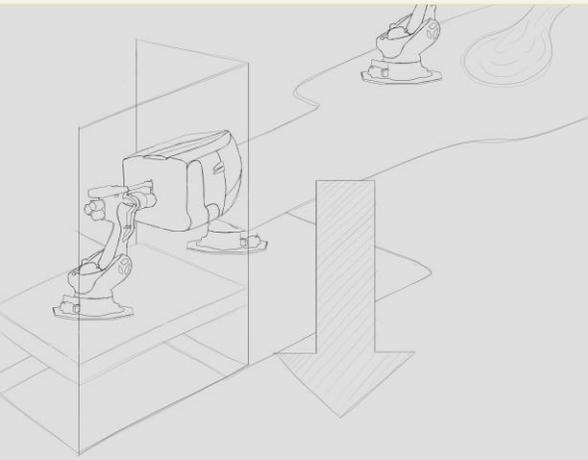
Upon rising to the second floor, the guests begin flying over the ocean and perform a quick flyby over the vast city of Vancouver whereupon they see its varied landscapes and monuments.

The guests travel into an IMAX carousel and travel over a model of Vancouver before they begin their return to the aquarium.



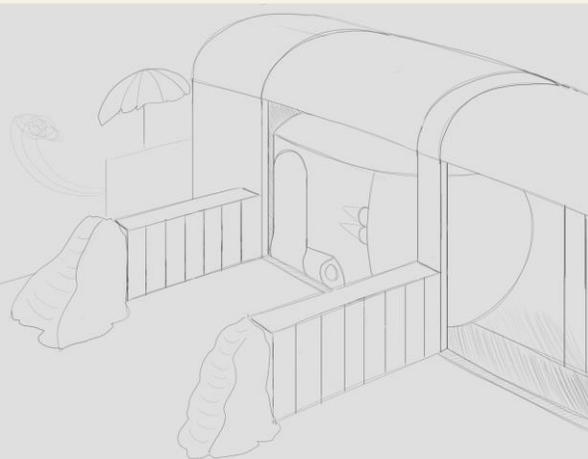
SECOND FLOOR





The ship finally returns to the aquarium where they land upon a “helipad” that drops them into the hanger.

The ride vehicle connects to a drop tower mechanism that propels them back down to the first floor.



The guests then travel to the unloading station whereupon they enter the gift shop *Fraser Fish Finds*. The ride vehicle returns to the loading dock to await more guests.

SECOND FLOOR

