Final Presentation

Cstrider - Cdocker

Docking just got smarter, faster, and safer—welcome to the future of electric ferry operations with CStrider's magnetic docking solution

Needfinding

- Ride comfortably,
- Ability to ride at any time of the day
- Good range

Docking

- Benchmarking Insights
  - High energy loss during docking
  - CStrider uses a lot of power to stay stationary
  - E.g this power could extend the range instead

Problen focus

The goal: Improve range and reduce energy loss
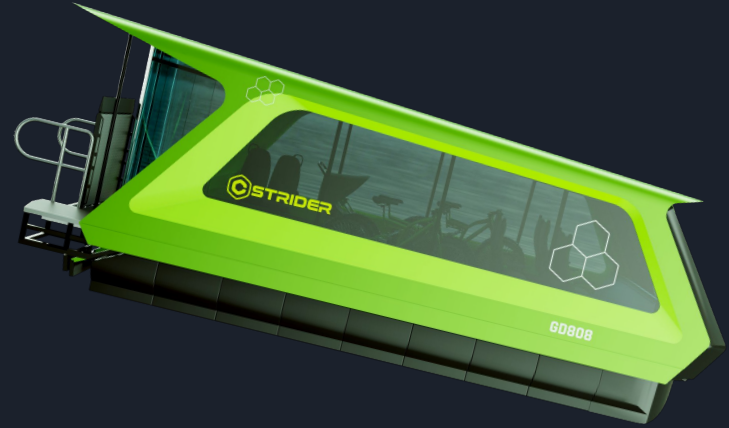
Less charging time = more time on the water

Benefits: Better accessibility and lower operational costs

Designing for Autonomous Ferries

- Failsafe operation
- User-friendly design
- No power drawn from the boat

Magnetic docking solution

Our Solution

- Reduces mechanical parts
- Easily activated and deactivated during docking
- Uses electromagnets for secure, automated docking

How the solution works

- CStrider communicates with sensors at the dock
- Electromagnets are activated for docking
- Boat is securely pulled to the dock

Sustaining the archipelago

- Sustain the waves that a dock is exposed to.

- Magnet force to withstand wind

- Docking during sidewind without damaging the dock

The solution

- The docking solution consists of 4 ''poles'' 2 on each side.
- This will spare energy by only using 2 at a time depending on wind direction

- It's spring loaded which will automatically retract the magnetic poles.

- It has two axis movement to reduce strains from waves creating relative motion between boat and dock.
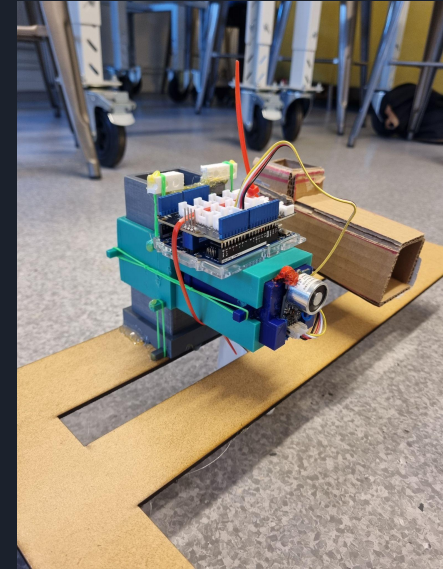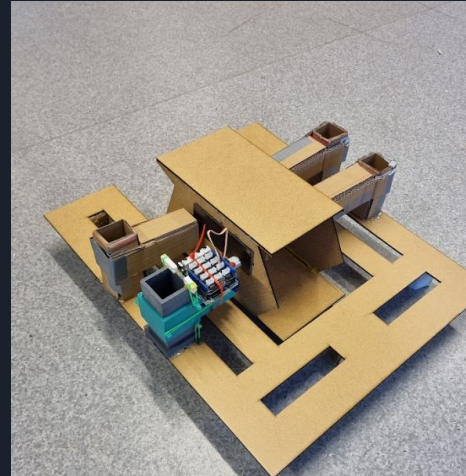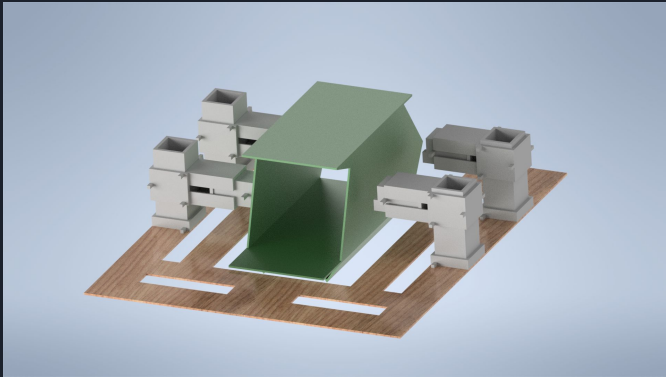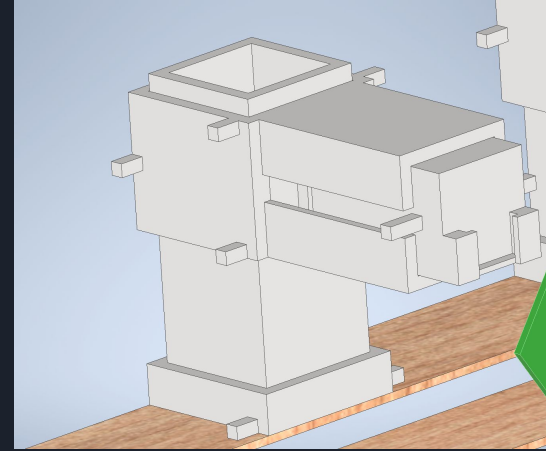
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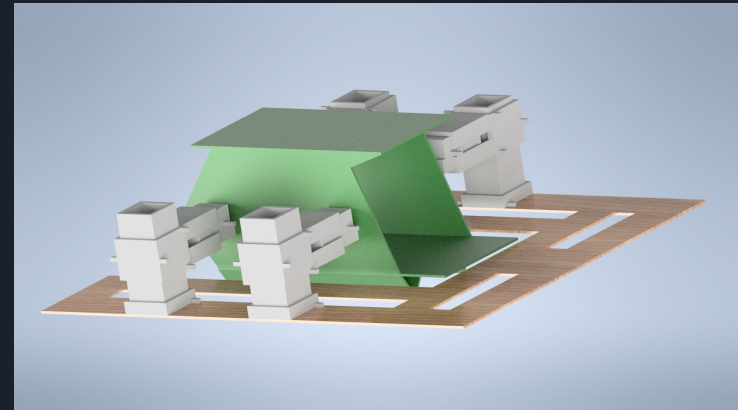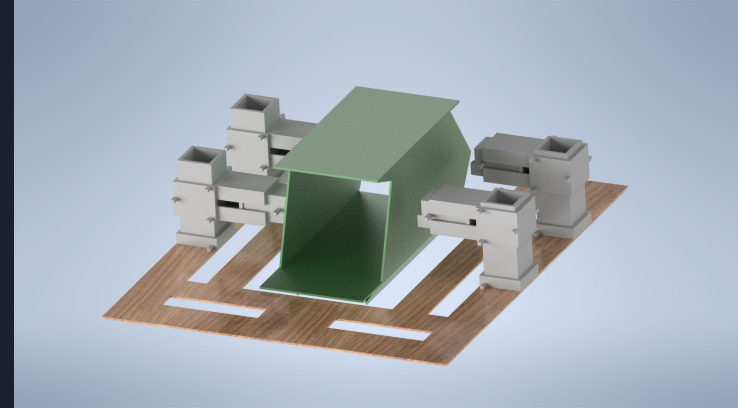
Our prototype

3D printing and laser cutting.

Our prototype focuses mainly on the way that the axis movement reduces strain in combination with the electromagnetic docking.
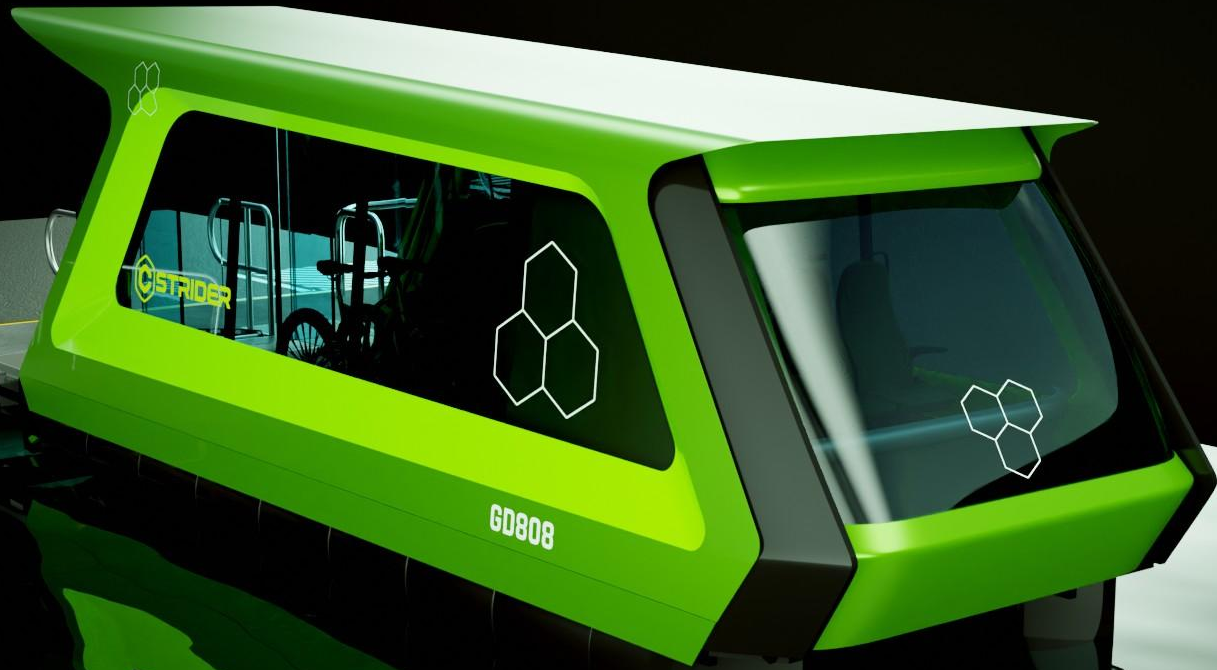
Target Customers, Pricing, and Revenue Opportunities

- Customers - Operators of Cstrider
  - Blekingetrafiken, Affärsverket, Karlskrona Sjötaxi
- Revenue streams
  - Buying and Leasing
- Cost
  - 4500 USD —>5400 USD

Questions?

Let's dock the future, together.