

SMASHY

STEMPE SAFETY

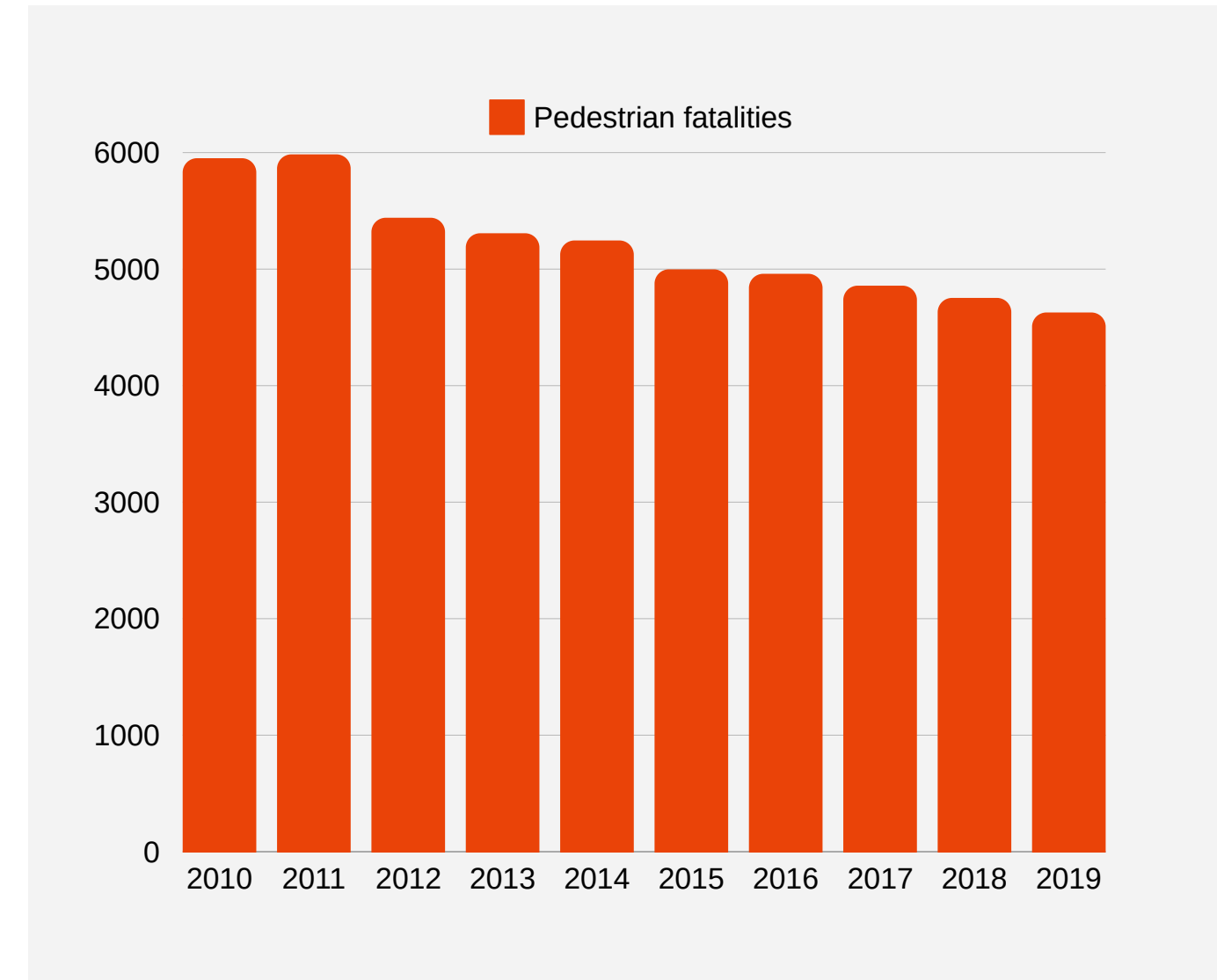


Team 05

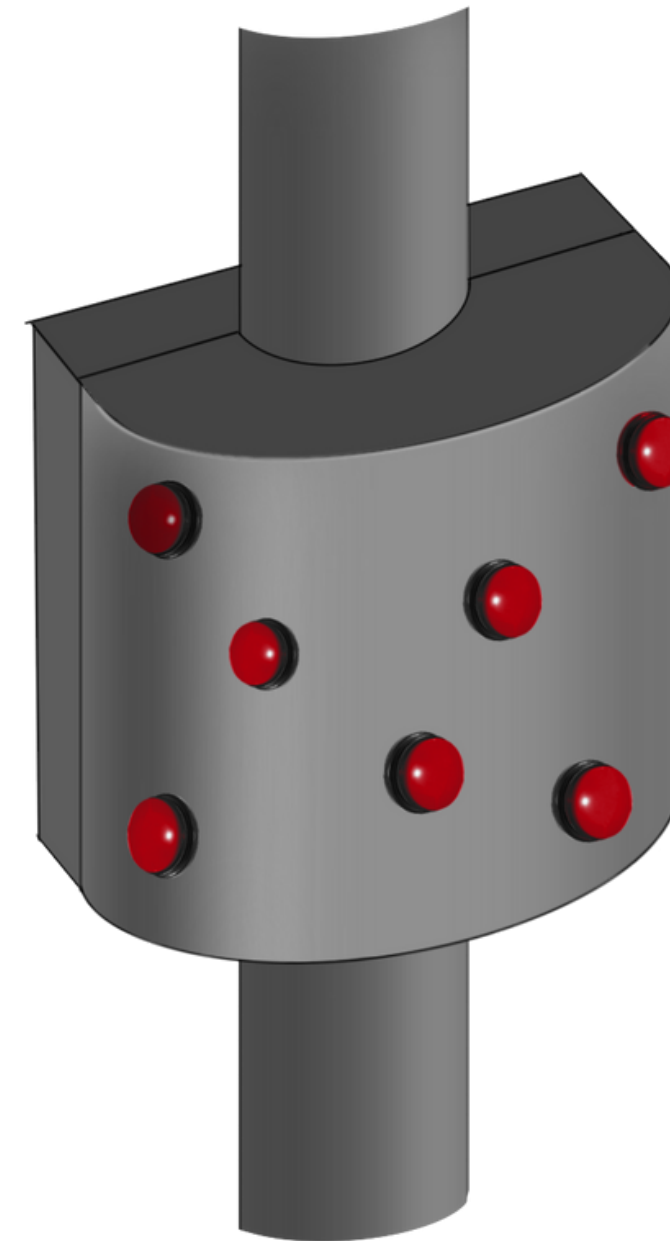
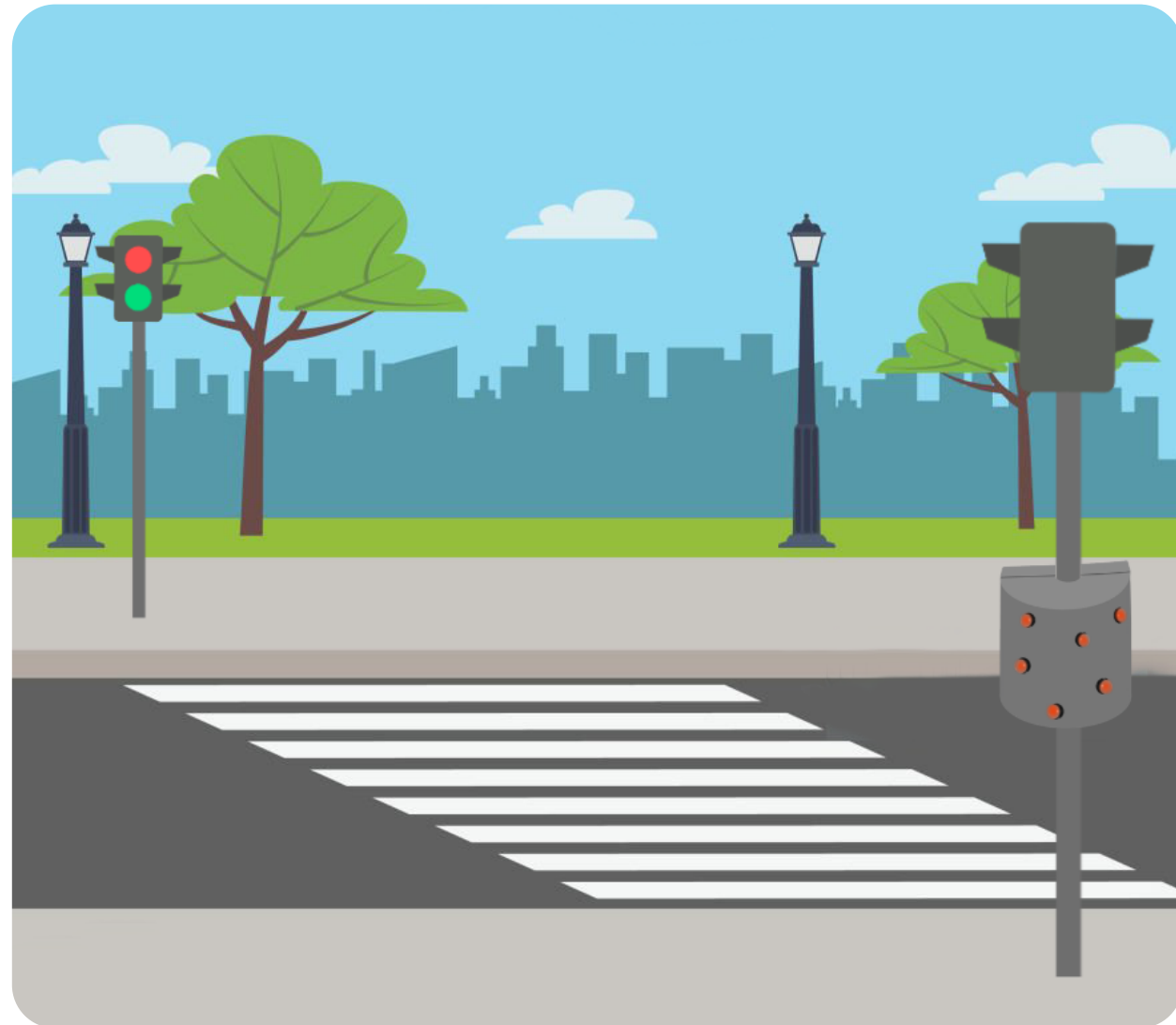
/01 Problem Statement



- **1 in 5** road fatalities in the EU are **pedestrians**
- **Jaywalking** endangers all road users
- Why?
 - Impatience
 - Boredom
 - Social pressure



/02 Solution



Requirements

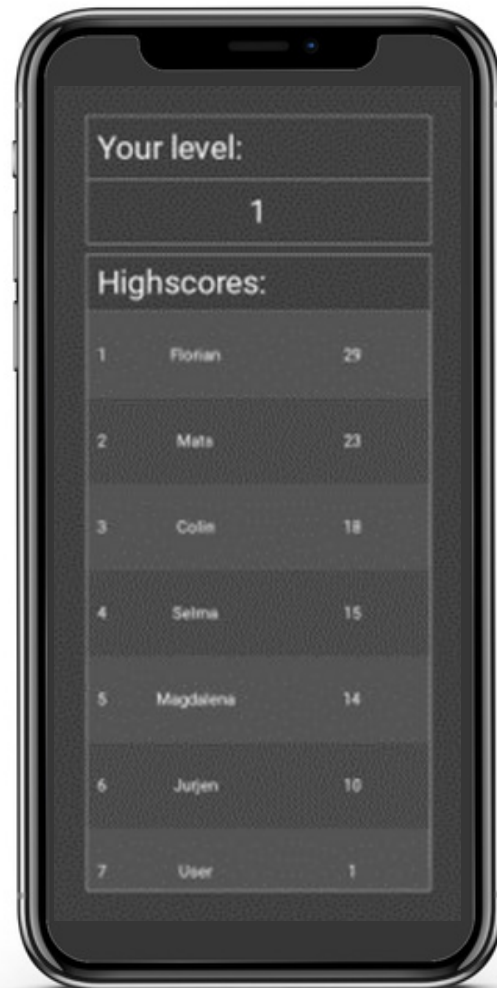
- Safe
- User-friendly
- Ergonomic
- Sustainable



Concept

- Connected to the traffic light
- While the light is **red**
- Random buttons light up

/03 Design



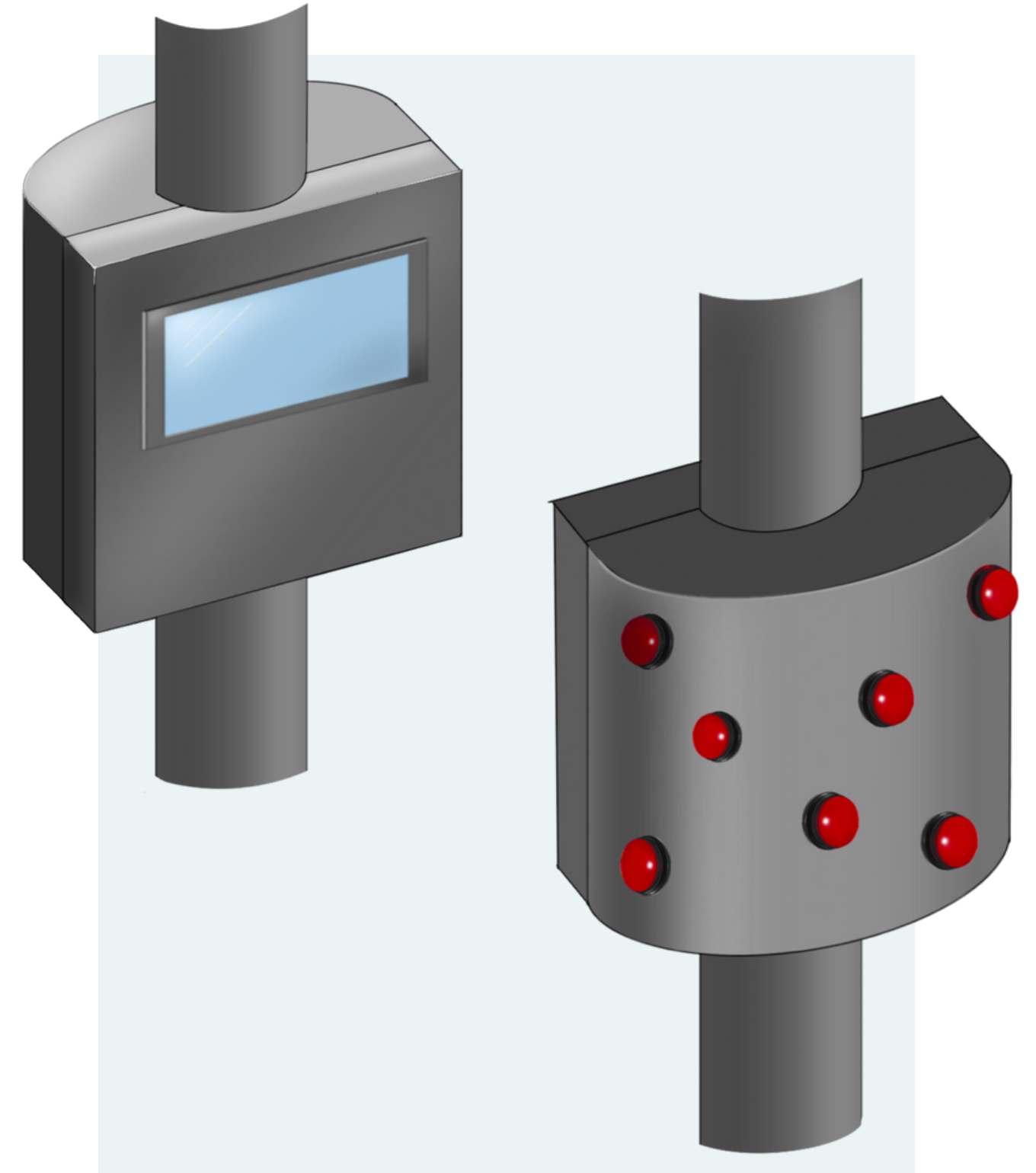
ergonomics

intuitive

simplicity

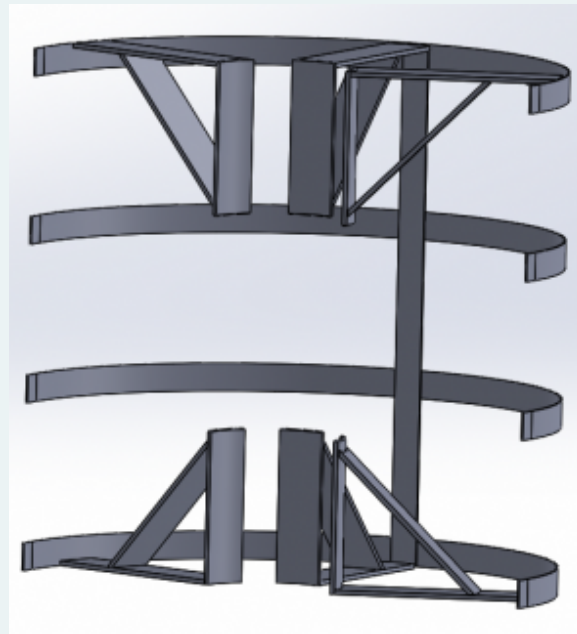
engaging

practicality

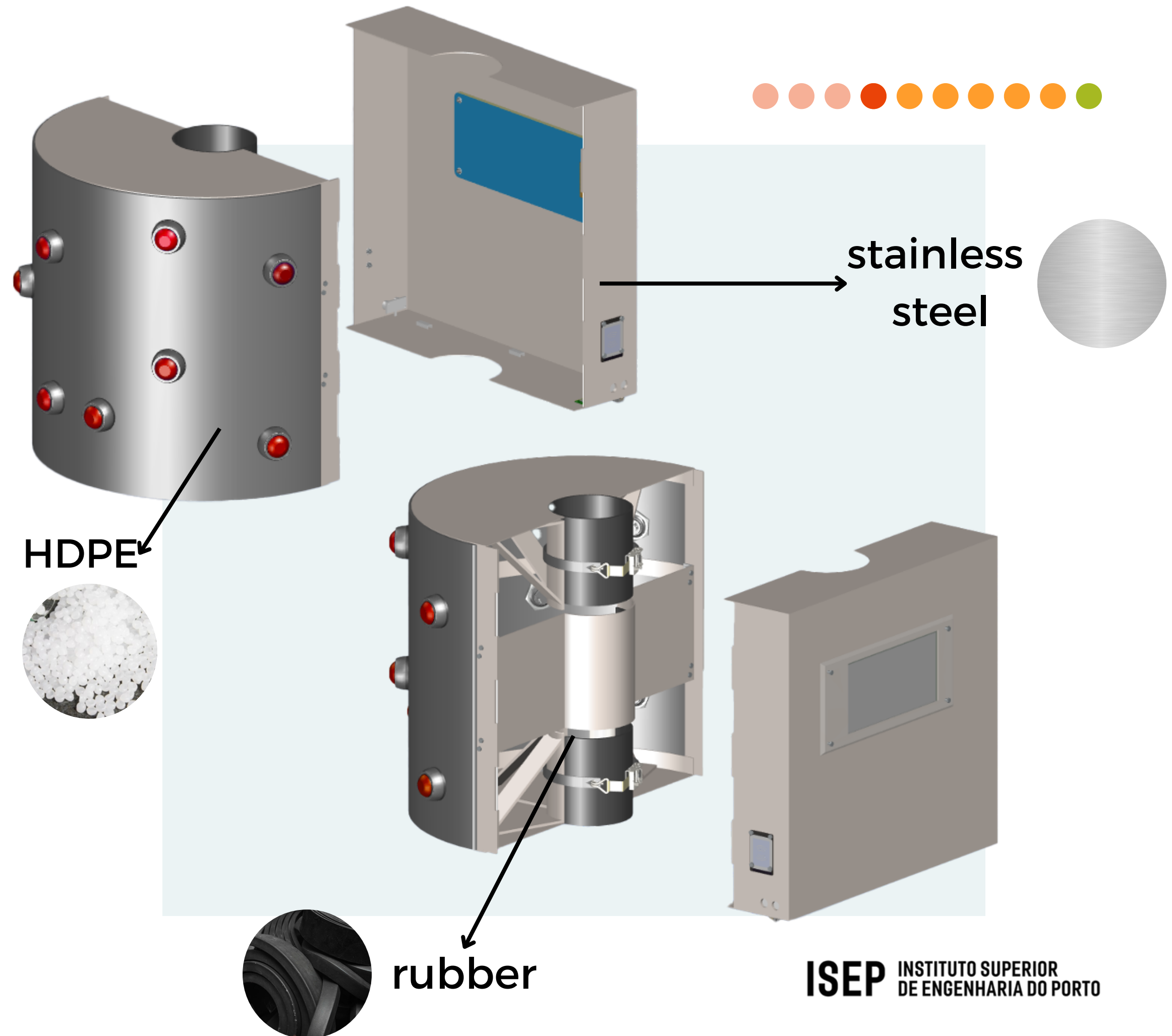


/04 Structure

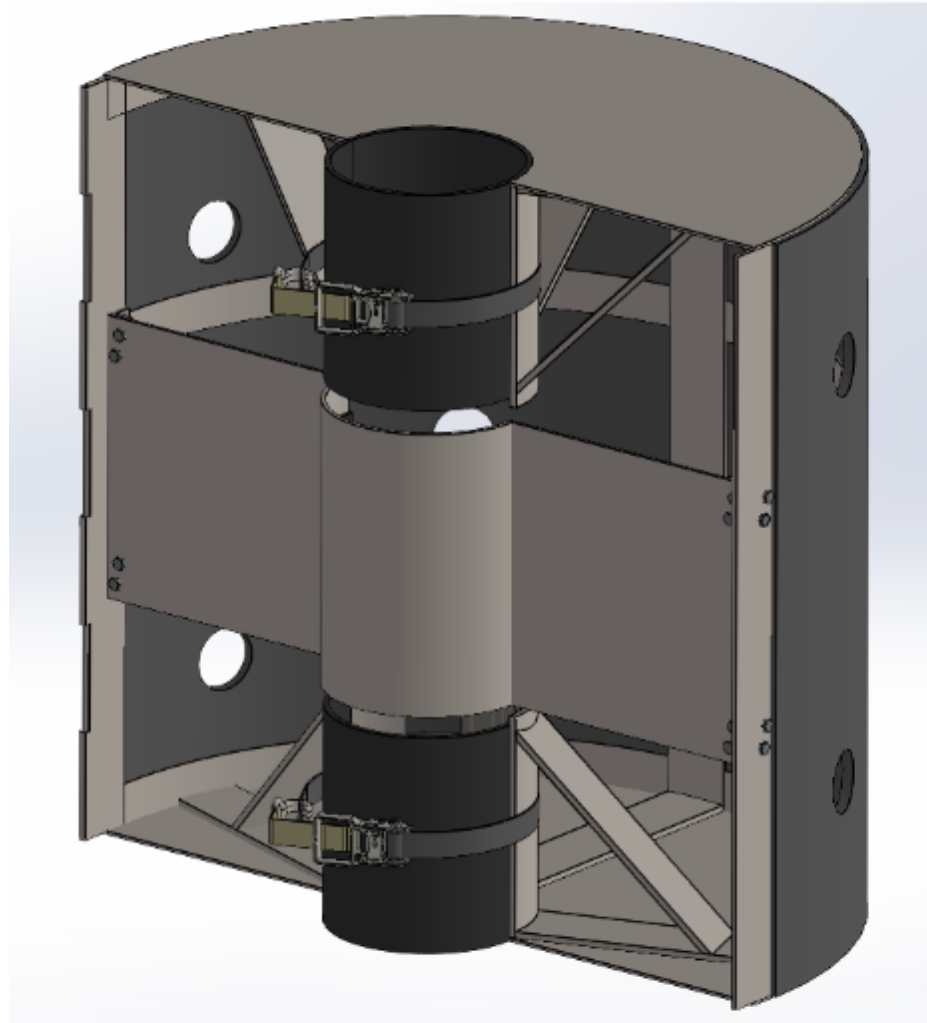
- Hinged design
- Internal framework for support



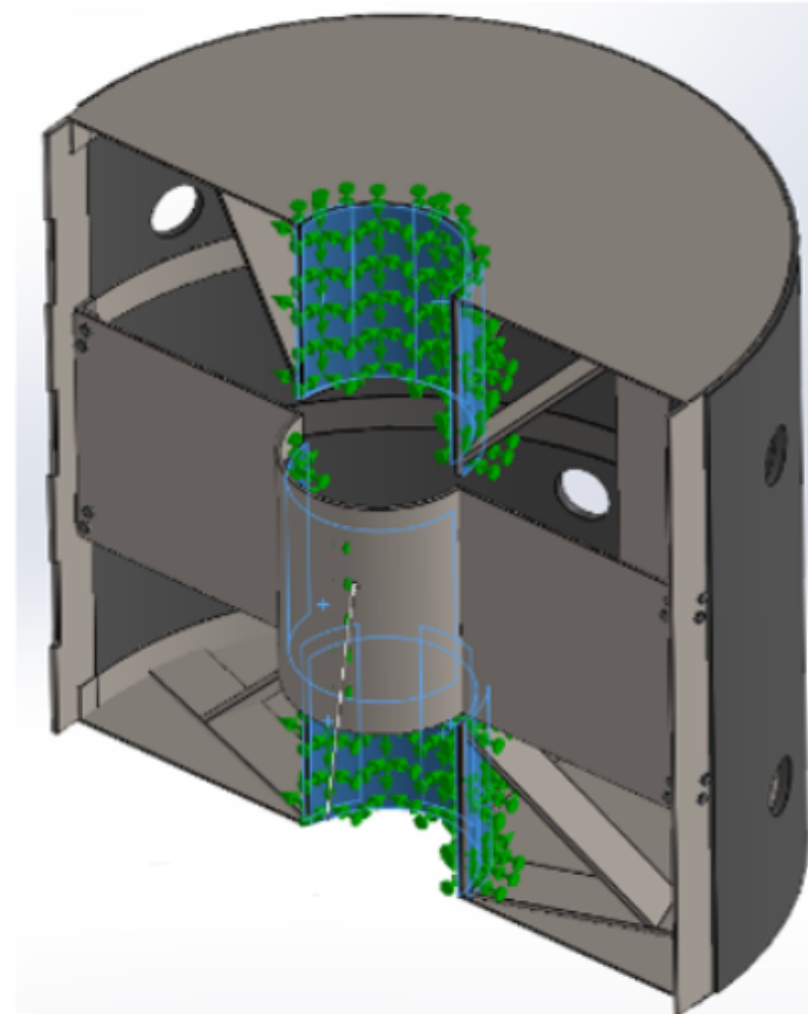
internal framework



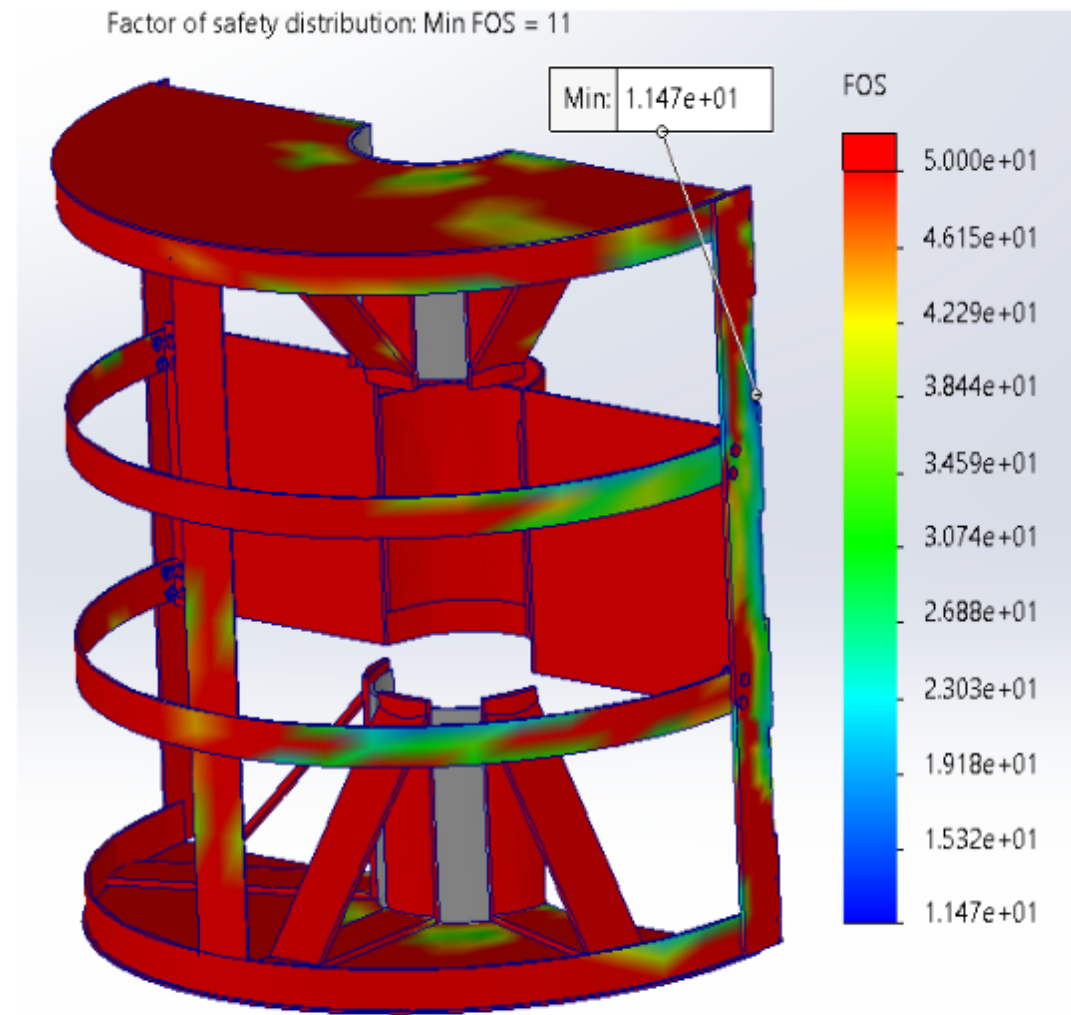
/05 Tests & Results



(a) Structure



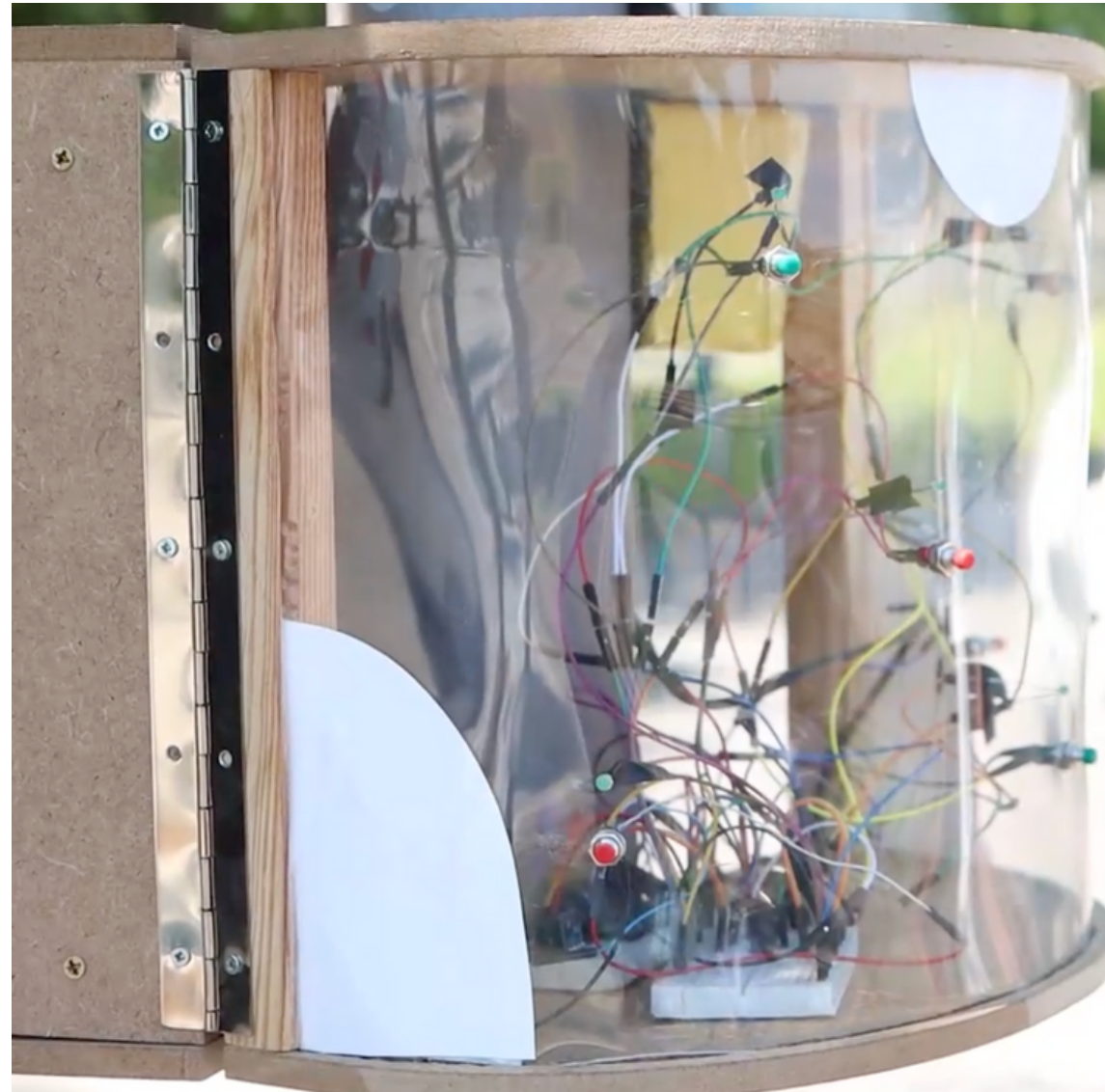
(b) Fixtures



(c) Factor of Safety

- **FoS = 11**
- **Max. Displacement ≈ 0.5 mm**

/06 Prototype



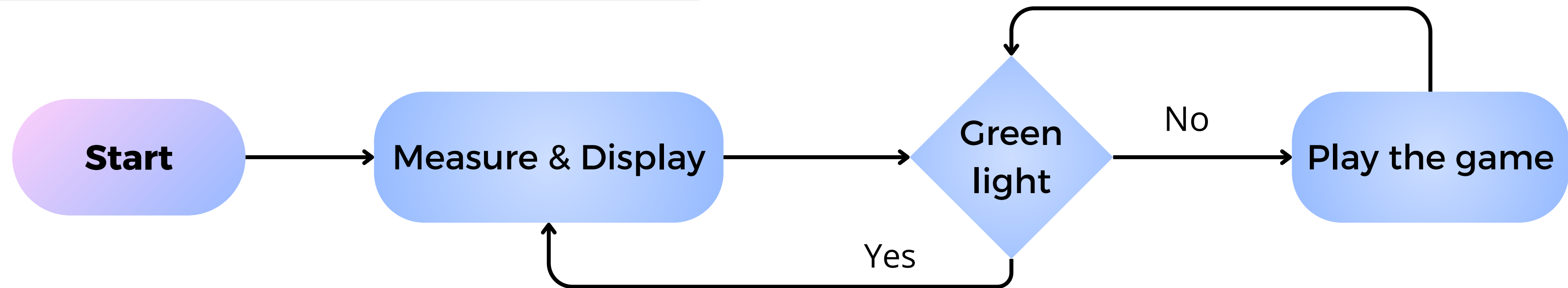
Structural part
Wooden beam

External part
Medium-density
fibreboard (MDF)

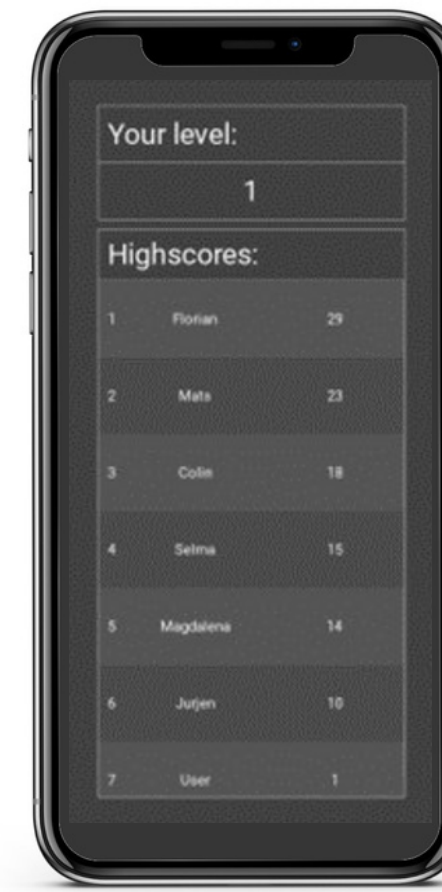
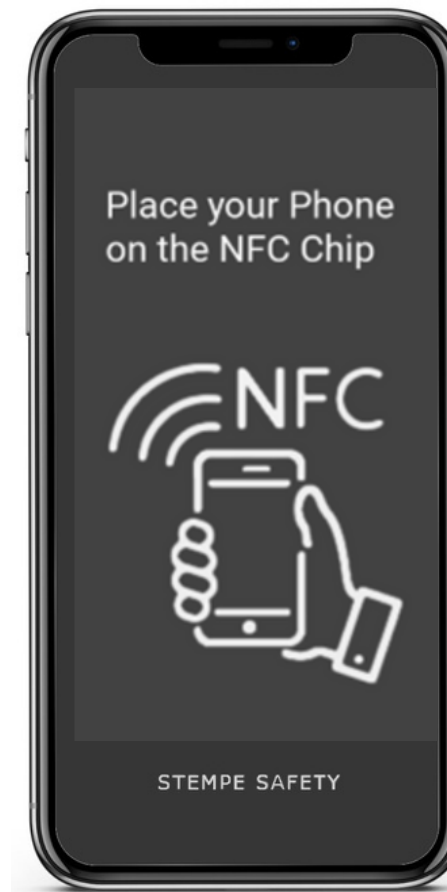
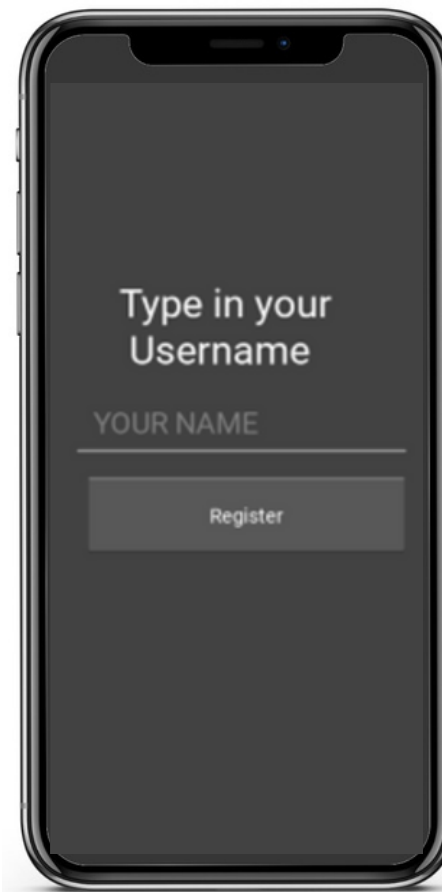
Front
Synthetic glass



/07 Prototype



- Smart control
- App
- Test and Results



/08 Conclusion



Achievements

Limitations



Future work



/09 Video





Obrigado !



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