Autonomous Sailboat

European Project Semester
Team 5

isep Instituto Superior de Engenharia do Porto

LSA ISEP

HORIZON SAIL

Possible Applications

Objectives

State of the Art
Components of our boat
- Hull
- Keel
- Rudder
- Mast
- Rigid Wing-Sail

Comprehend Electrical Devices

State of the Art

Aerodynamics
Hydrodynamics
Equilibrium

Project Management
- Scope
- Budgeting
- Risk
- People/Communication
- Stakeholder

Marketing

SWOT Analysis

Segmentation
- Geographic
- Characteristics of the company
- Way of procurement
- Criteria of usage

Ethics & Deontology
- General Code of Conduct
- Environmental
- Engineering
- Sales & Marketing
- Academic
- Liability

Project Development

Project Development
- Hexadecill
- Calculation
- Design Hull & Keel

Conclusion

Bibliography

Our Crew

Summary
- Our Crew
- Objective
- State of the Art
- Project Management
- Marketing Analysis
- Ethics & Deontology
- Eco-efficacy measures for Sustainability
- Project Development
- Conclusion
- References & Bibliography

Eco-efficacy Measures for Sustainability

Life cycle analysis
- Raw material
- Design
- Mass Assume
- Distribution
- Use
- Disposal

Prezi

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Summary

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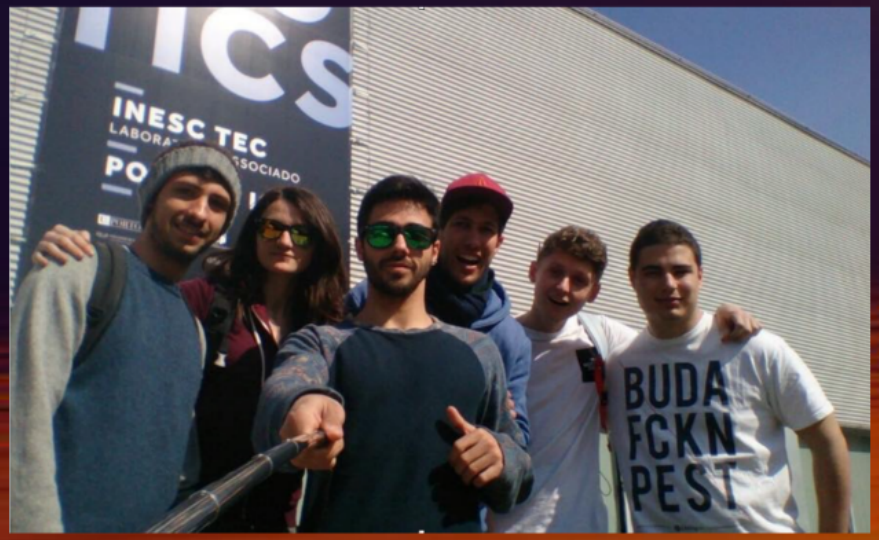
Our Crew



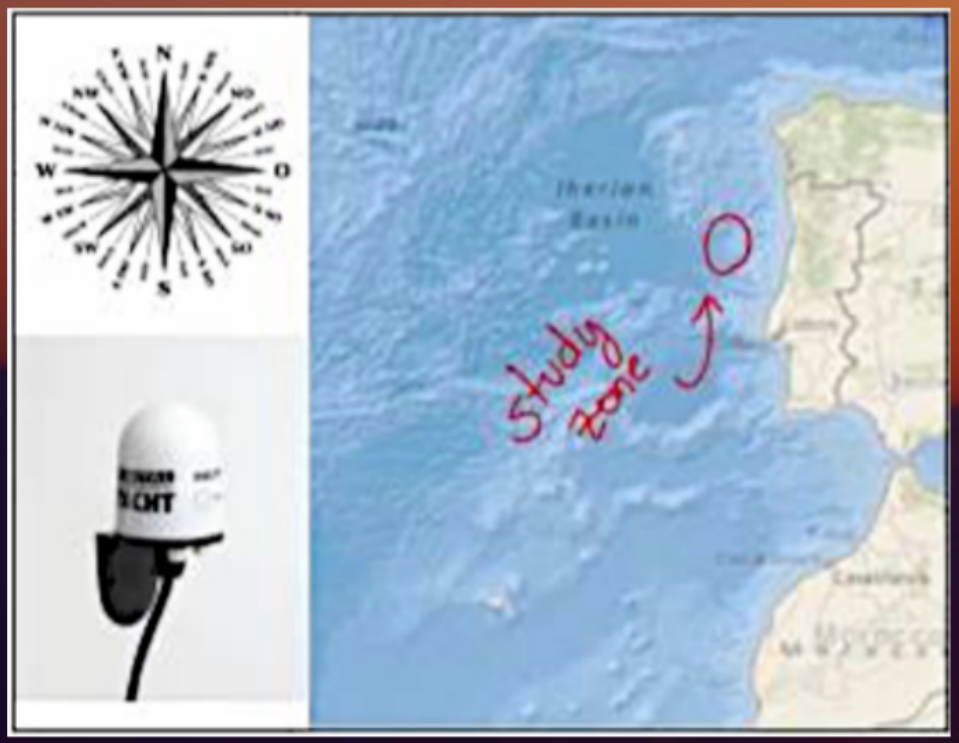
- **Roberto**, Engineering Management
- **Gizem**, Mechanical Engineering
- **Marc**, Industrial Design
- **Jonny**, Mechanical Engineering
- **Imre**, Electrical Engineering
- **Thies**, Industrial Engineering

Objectives

Transportable for 4 people

Has to face the waves
force to go offshore

Has to support the weather conditions once in operation



Will stay in a prior determined region

Wind and current sensors for optimal movement

Energy supply
for the boat

scue

Possible Applications

Control sea farms

Search and Rescue Missions

Study and analyze water conditions

Offshore security for wind farms or oil rigs

Monitor piracy in dangerous regions

Study and monitor sea life

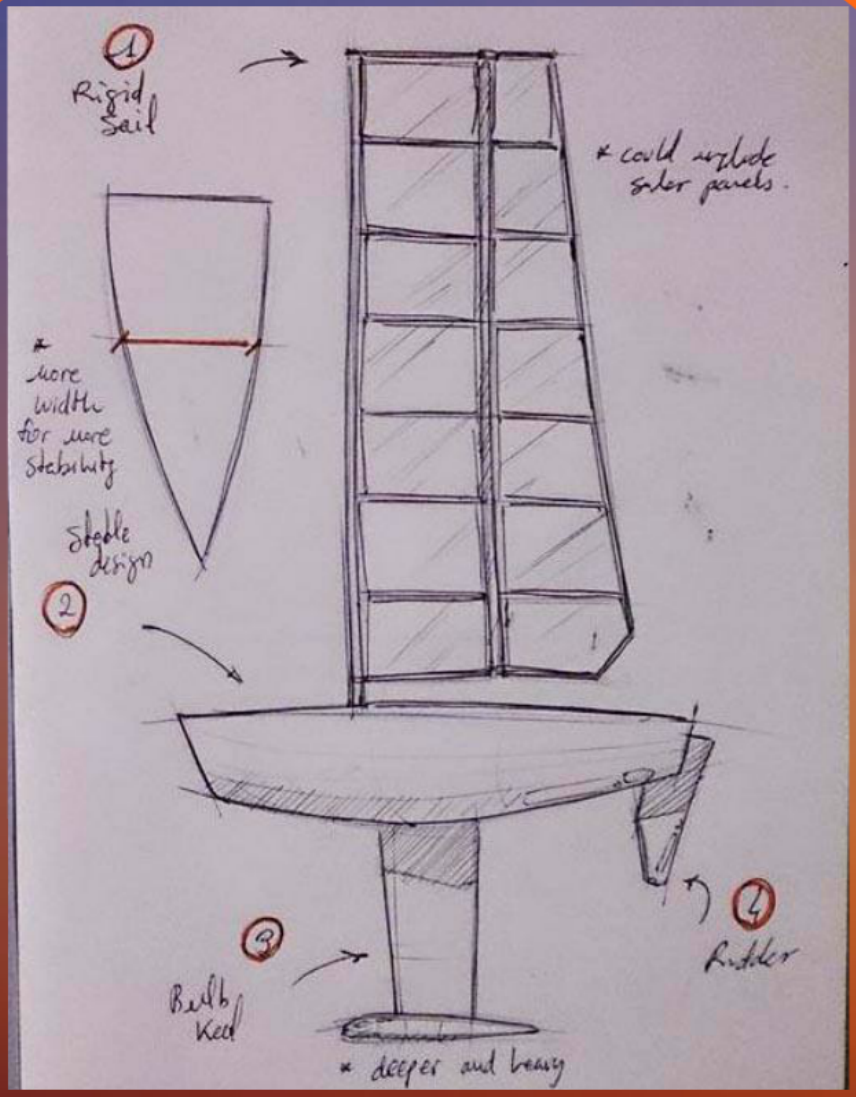
State of the Art

Components of our boat

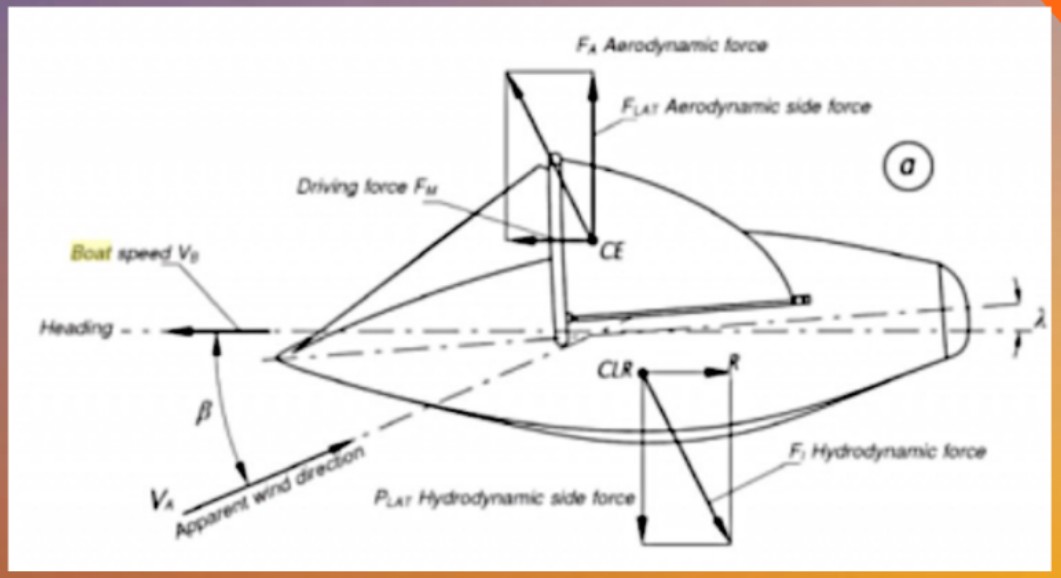
- Hull
- Keel
- Rudder
- Mast
- Rigid Wing-Sail

Comprehend Electrical Devices

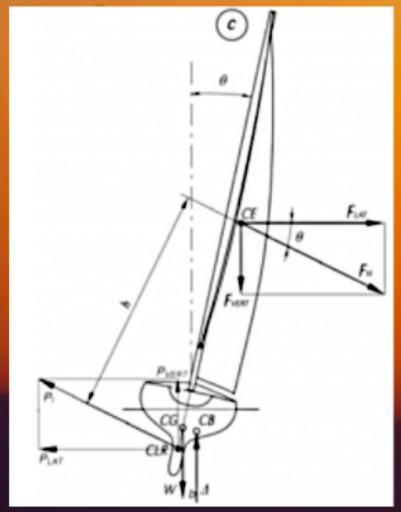
- Systems
- Wind sensor
- Batteries
- Solar panel


1
Rigid Sail
* could include solar panels.
* more width for more stability
Stable design
2
3
Bulb Keel
* deeper and heavy
4
Rudder

State of the Art



Aerodynamics
Hydrodynamics
Equilibrium



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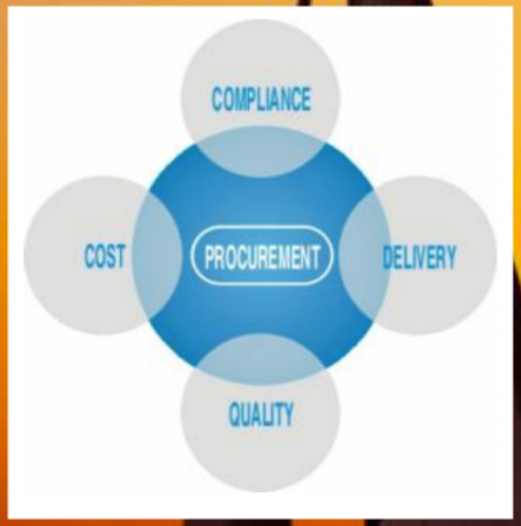
Project Management

- Scope
- Budgeting
- Risk
- People/Communication
- Stakeholder



Marketing

- PEST ANALYSIS

Political : EU Maritime Growth	Economic : R&D in Renewables
Social : Climate Change	*Technological : Marine/Robotic*

- Competitors

Costumers

SWOT Analysis

Segmentation

- Geographic
- Characteristics of the company
- Way of procurement
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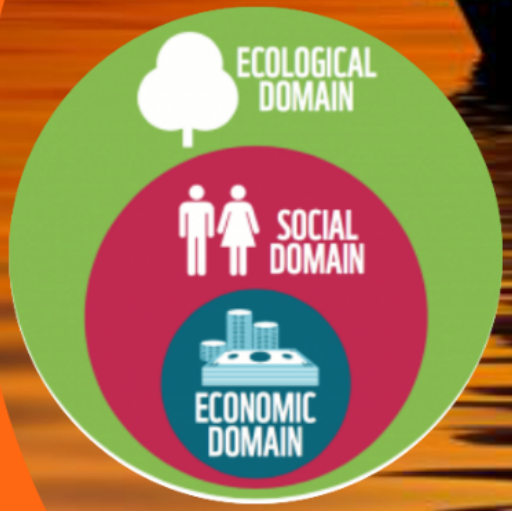
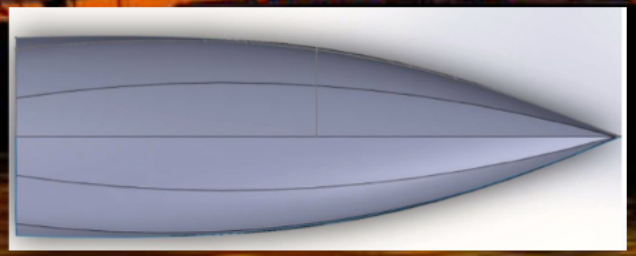
Eco-efficacy Measures for Sustainability



Life cycle analysis

- Raw material
- Design
- Manufacutre
- Distribution
- Use
- Disposal

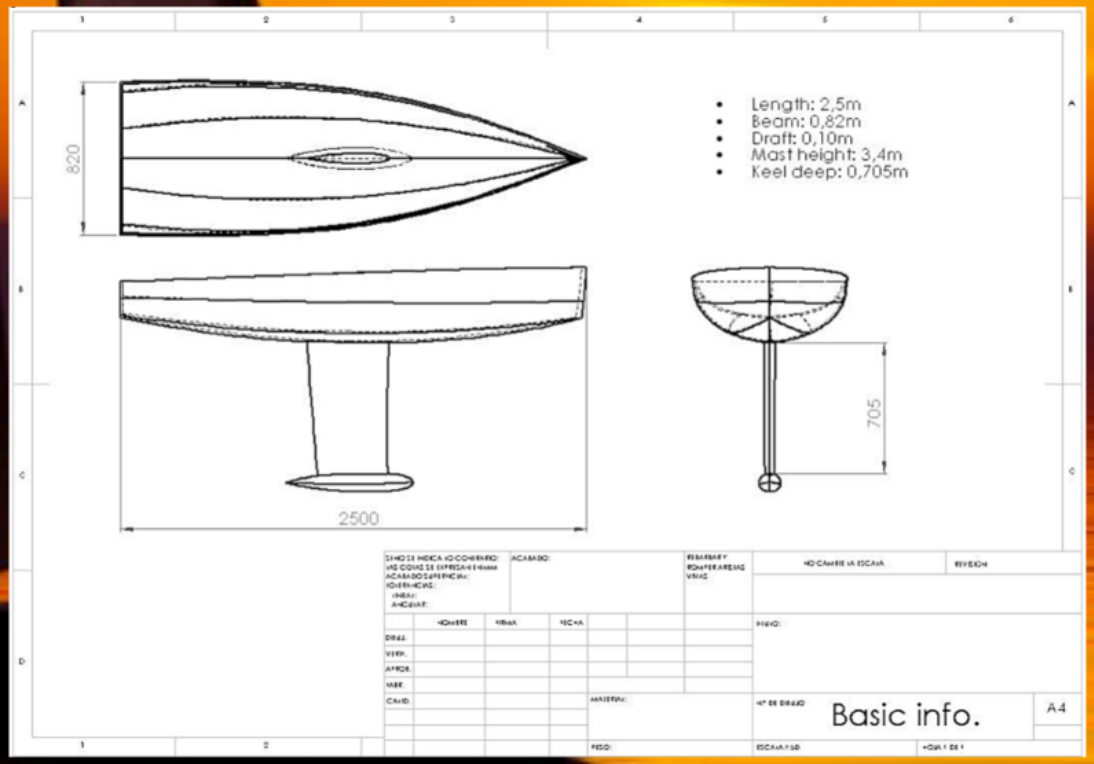
Project Development



- Monohull
- Calculation
- Design Hull & Keel

Project Development

First Measuring




Conclusion
Achivements
• State of the Art
• Boat architecture
• Marketing, Sustainability & Ethics
Future Recommendation/ Decelopments
• Complete viable calculations and select material
• Develop a manufacturing plan
• Conduct final tests
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Bibliography

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