

Water Intelli-Buoy

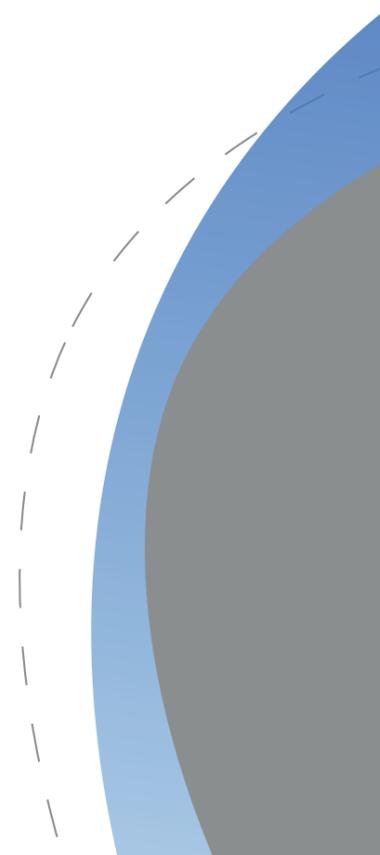
Team 2



isep

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Introduction



Mireia

Mech. Engin.
Spain

Charlotte

Biomed. Engin.
Germany

Geert

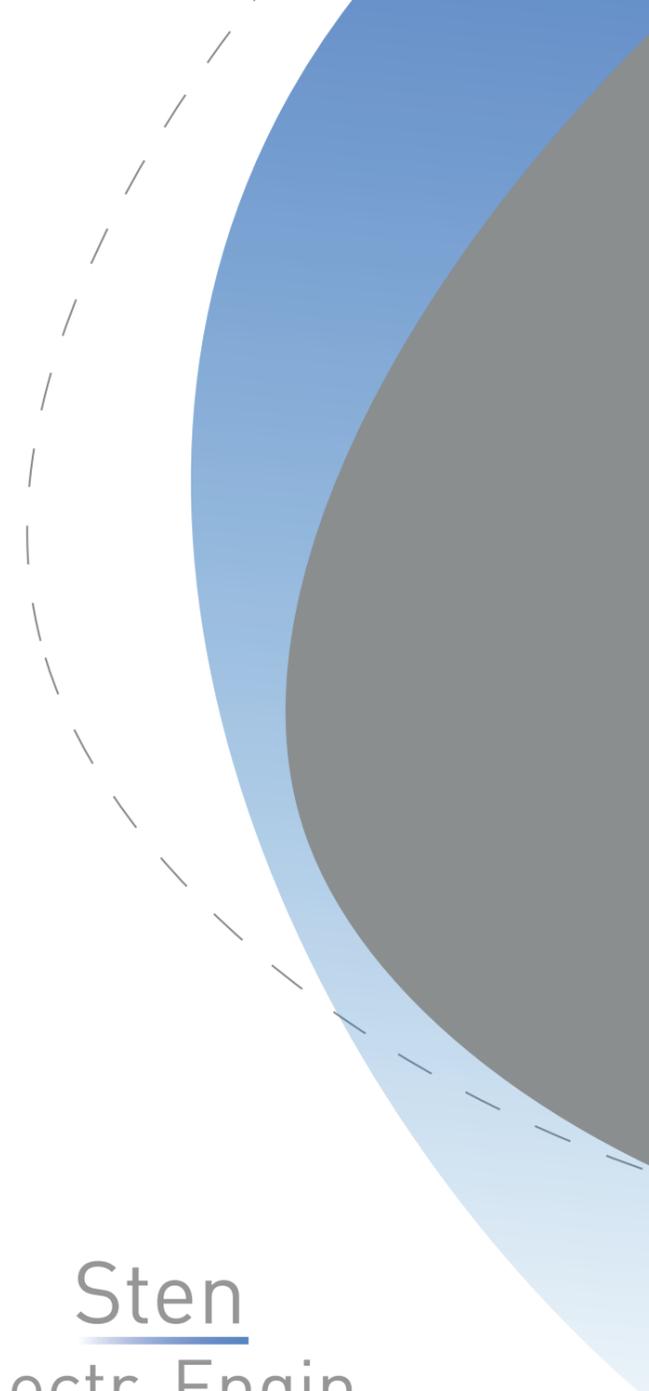
Industr. Engin.
& Management
Netherlands

Hervé

Industr. Design
Belgium

Sten

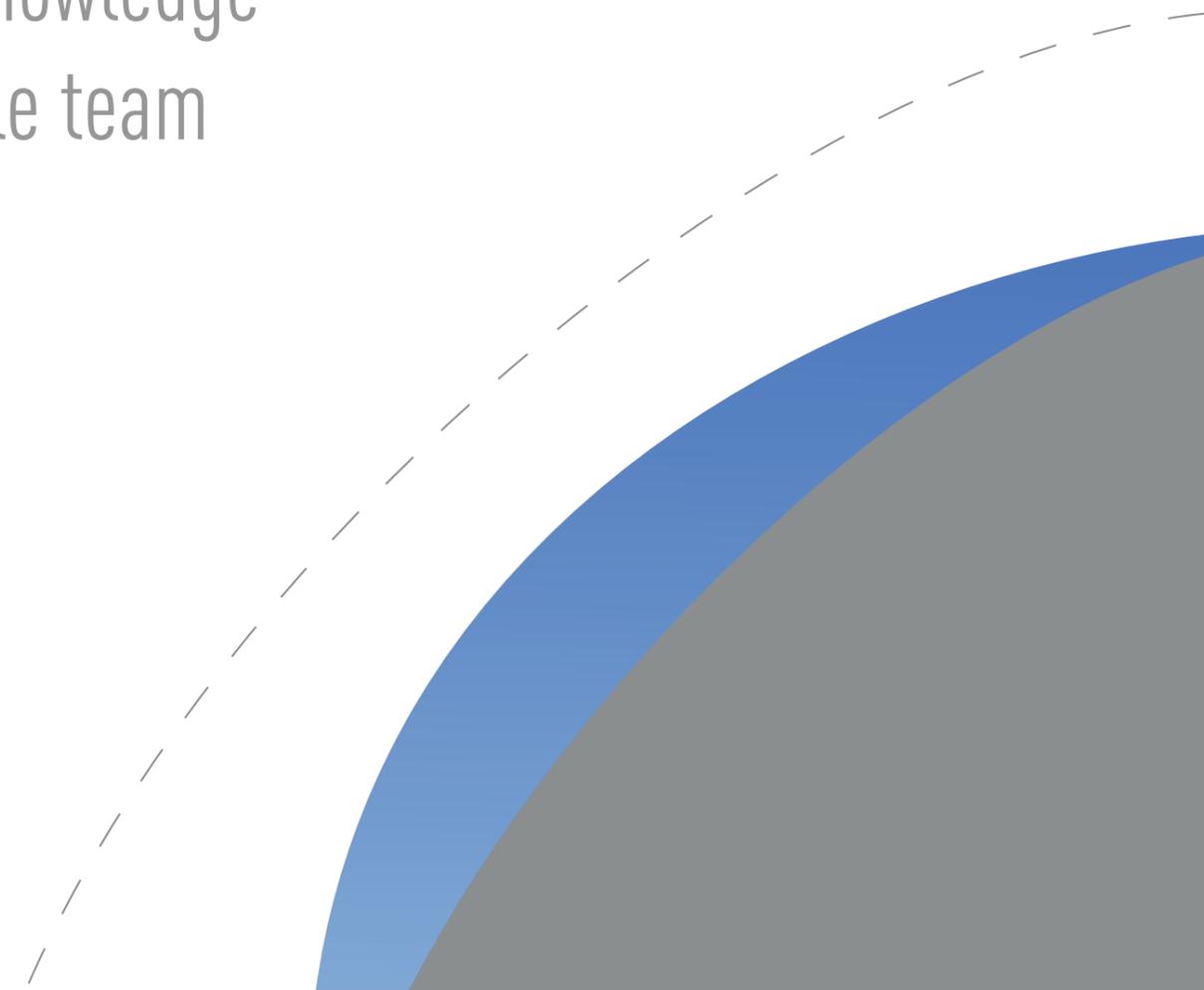
Electr. Engin.
Estonia



Problem statement & motivation

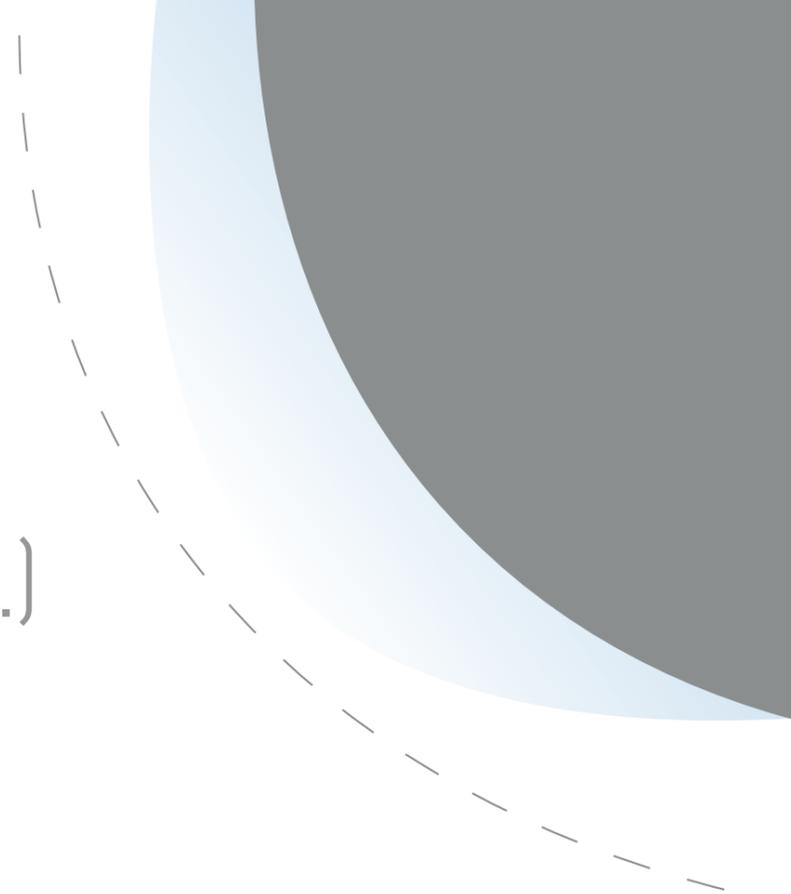
- Problem def.:
 - Measuring water quality = time consuming
 - Informing people = slow & inefficient

- Motivation:
 - Ability to exploit everyone's knowledge
 - Whithing interest area of whole team

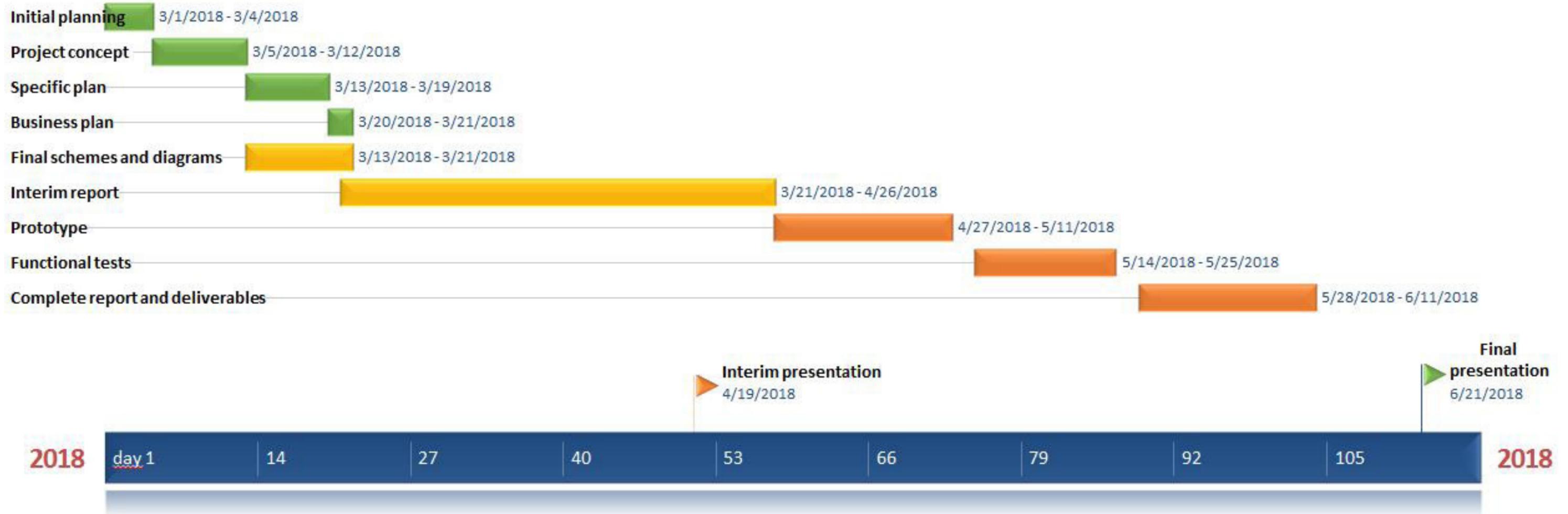


State of the art

- Existing tech. :
 - Industrial & scientific
 - Consumer products (fish ponds, classic pools...)
 - Monitoring systems
- Sensors:
 - Numerous parameters
 - Expensive
- Conclusion:
 - Monitor water quality in natural pools
 - Parameters: Temperature (air+water) & turbidity



Project management



Marketing

Internal analysis

Strengths

- 5 different educational backgrounds
- Help of supervisors
- Helpful team members

Weakness

- different languages
- Limited time & budget
- No “diehard” engineers

external analysis

Opportunities

- Increasing pop. of natural pools
- No direct competitors
- Increasing pop. of PSS*

Threats

- Not difficult to enter the market

*PSS (Product Service System)

Sustainability

- Studies performed:

- Enviromental
- Economical
- Social
- Life Cycle Assesment

- Conclusion:

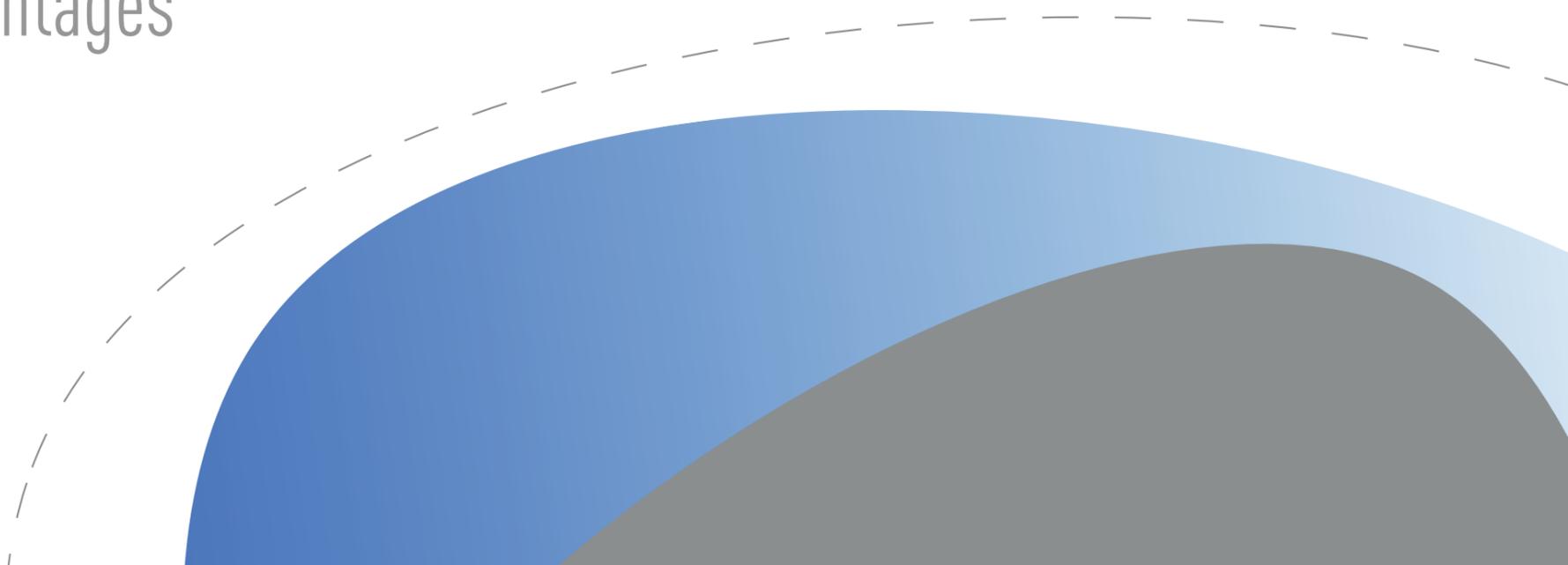
- Use of PSS*
- Longer product lifetime
- Easy maintenance
- Recycling easier



*PSS (Product Service System)

Ethics & Deontology

- Enviromental ethics:
 - Enviromental benefits natural pool (No chemicals...)
 - Goals: Low water consumption, local providers, recyclable materials
- Sales & marketing:
 - Objective adverting
 - Fair & transparent pricing
 - Salespersons represent company & promote real advantages



Project development (General concept)

Product Service System:

- Product:
 - Drifting buoy
 - Monitors temperature + turbidity
 - Sends data to application
- Service:
 - Maintenance of the buoy
 - Advising customer
 - Monthly fee



Project development (Techn. details 1)

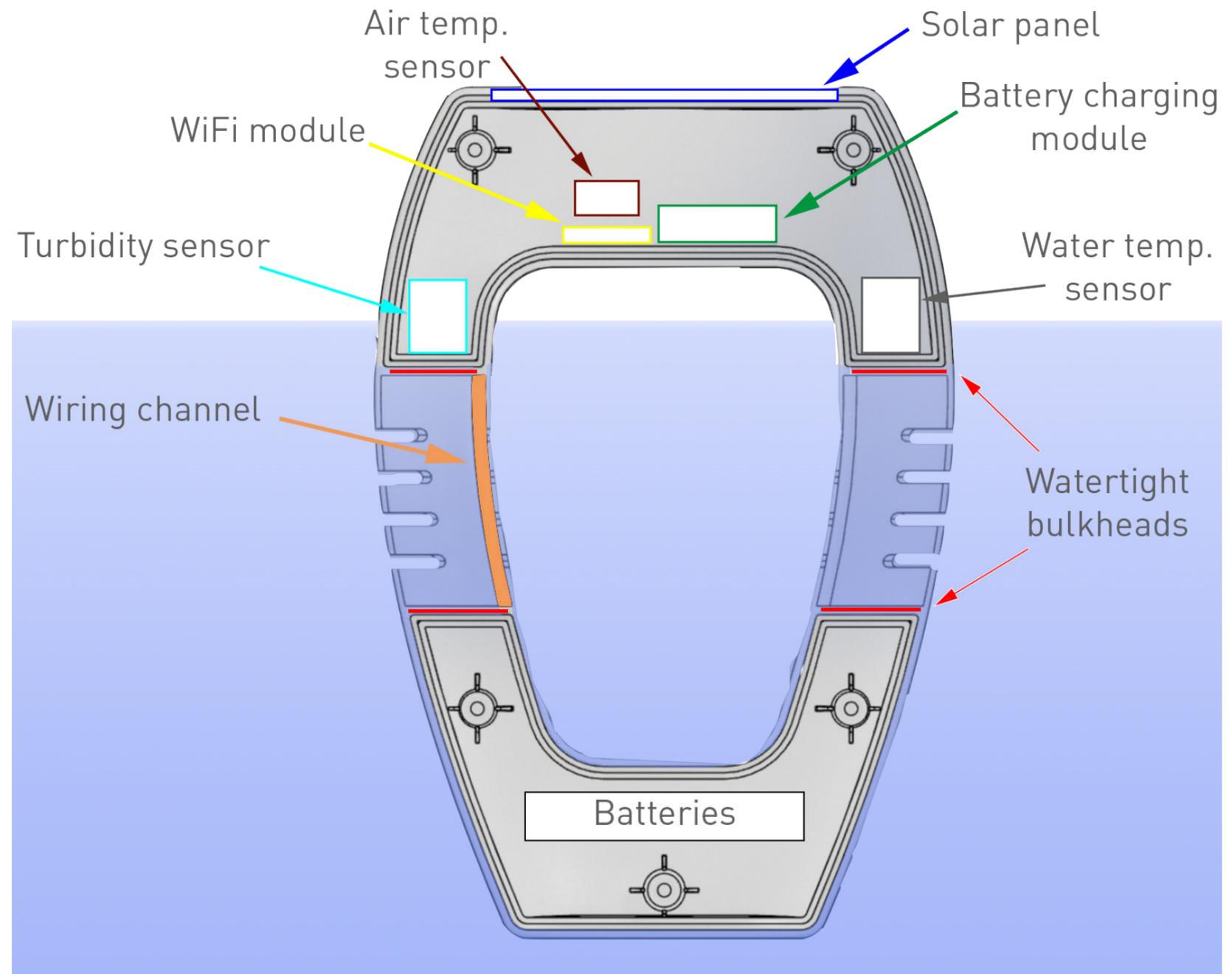
- Production:
 - 2 Shells
 - 5 screws
 - Easy for maintenance

- Materials:
 - PVC (ABS for prototype)
 - Cork

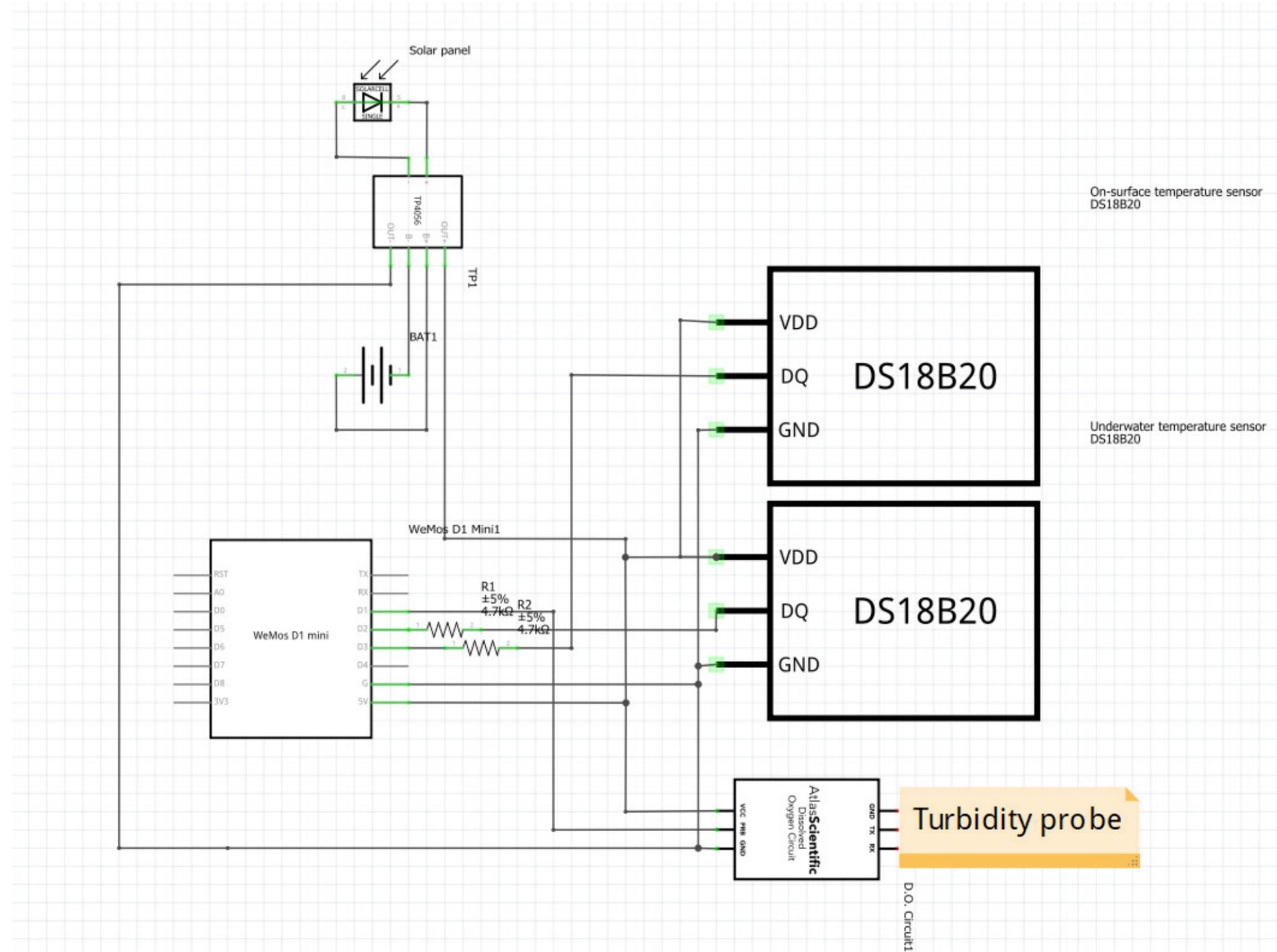


Project development (Techn. details 2)

- Weight on bottom (stability)
- Delicate components above waterline (minimise possible water damage)

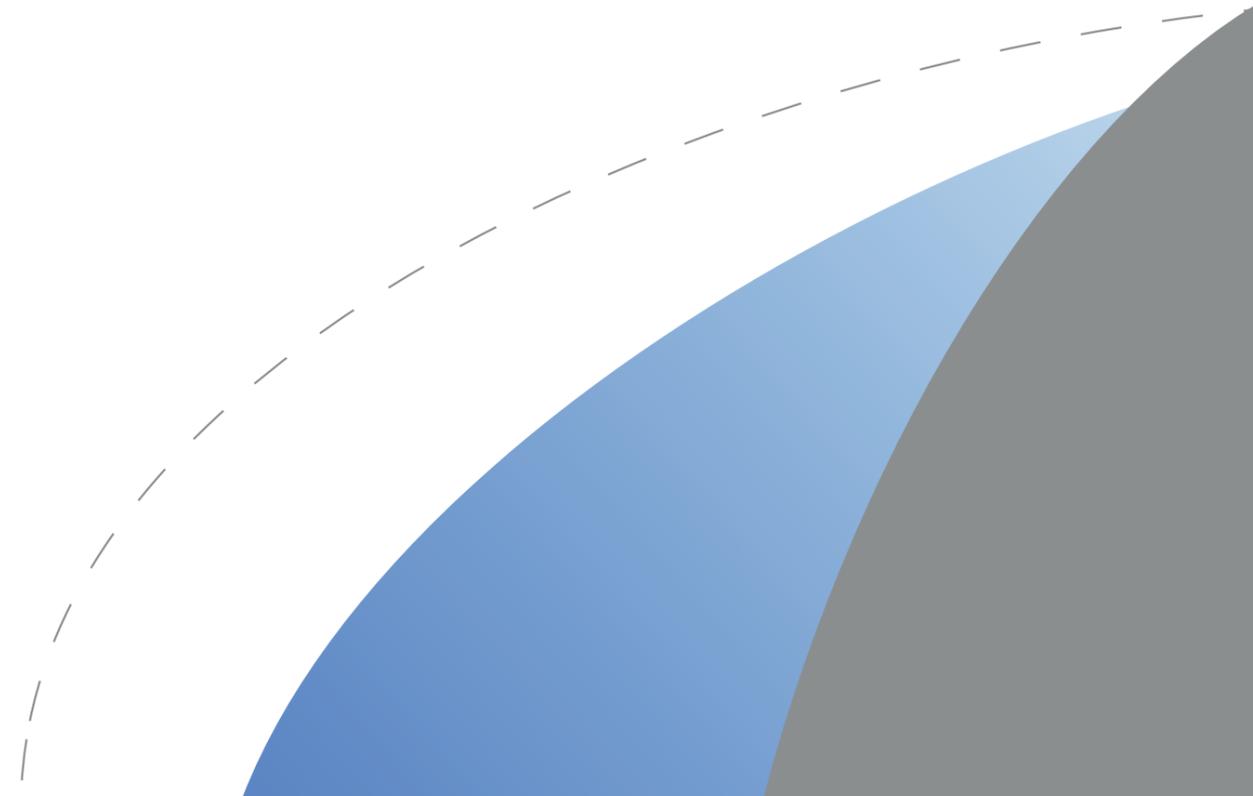


Project development (Electrical scheme)



Conclusion

- Done:
 - Research
 - Define concept
 - Detailed schematics (3D & electrical)
- To do:
 - Software development (Buoy & App)
 - Hardware development (3D printing & components purchase)
 - Prototyping
 - Testing



Questions?

