

CLIMATE  
NEUTRAL BY  
**2035**

**TAL  
TECH**

# Saaremaa – Center for Wind Energy Knowledge, Skills, and Research

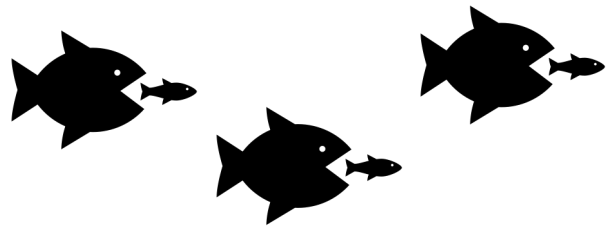
Merit Kindsigo  
School of Engineering / Kuressaare College

28.03.24

**TALLINN UNIVERSITY  
OF TECHNOLOGY**

# WHERE ARE WE?

*„The Baltic Sea is a shitty place to be...“*

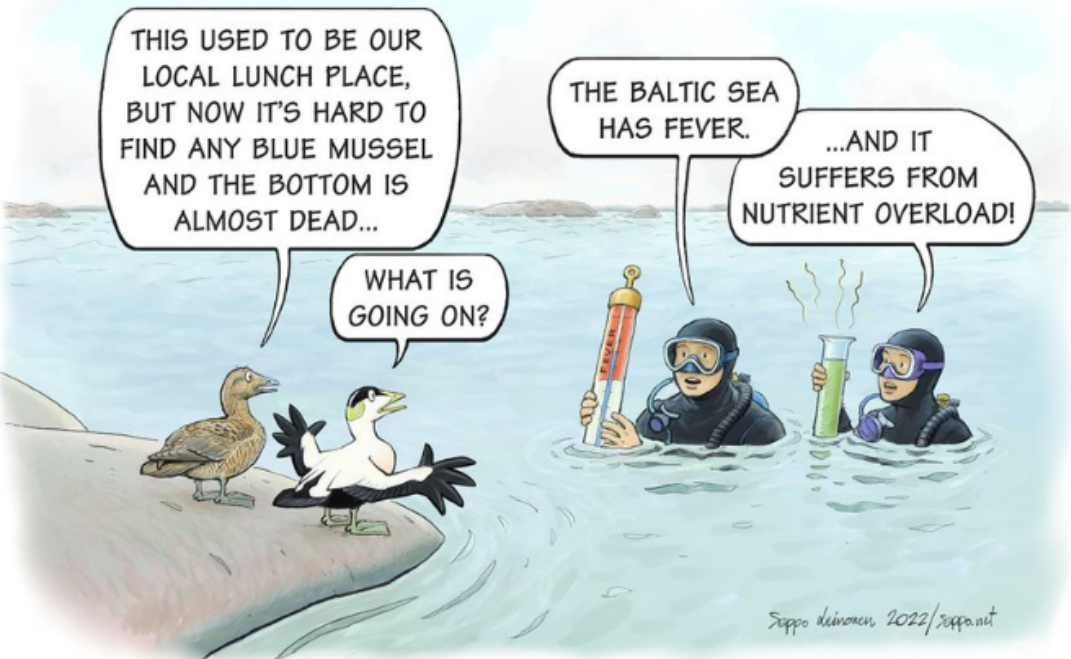


THIS USED TO BE OUR LOCAL LUNCH PLACE, BUT NOW IT'S HARD TO FIND ANY BLUE MUSSEL AND THE BOTTOM IS ALMOST DEAD...

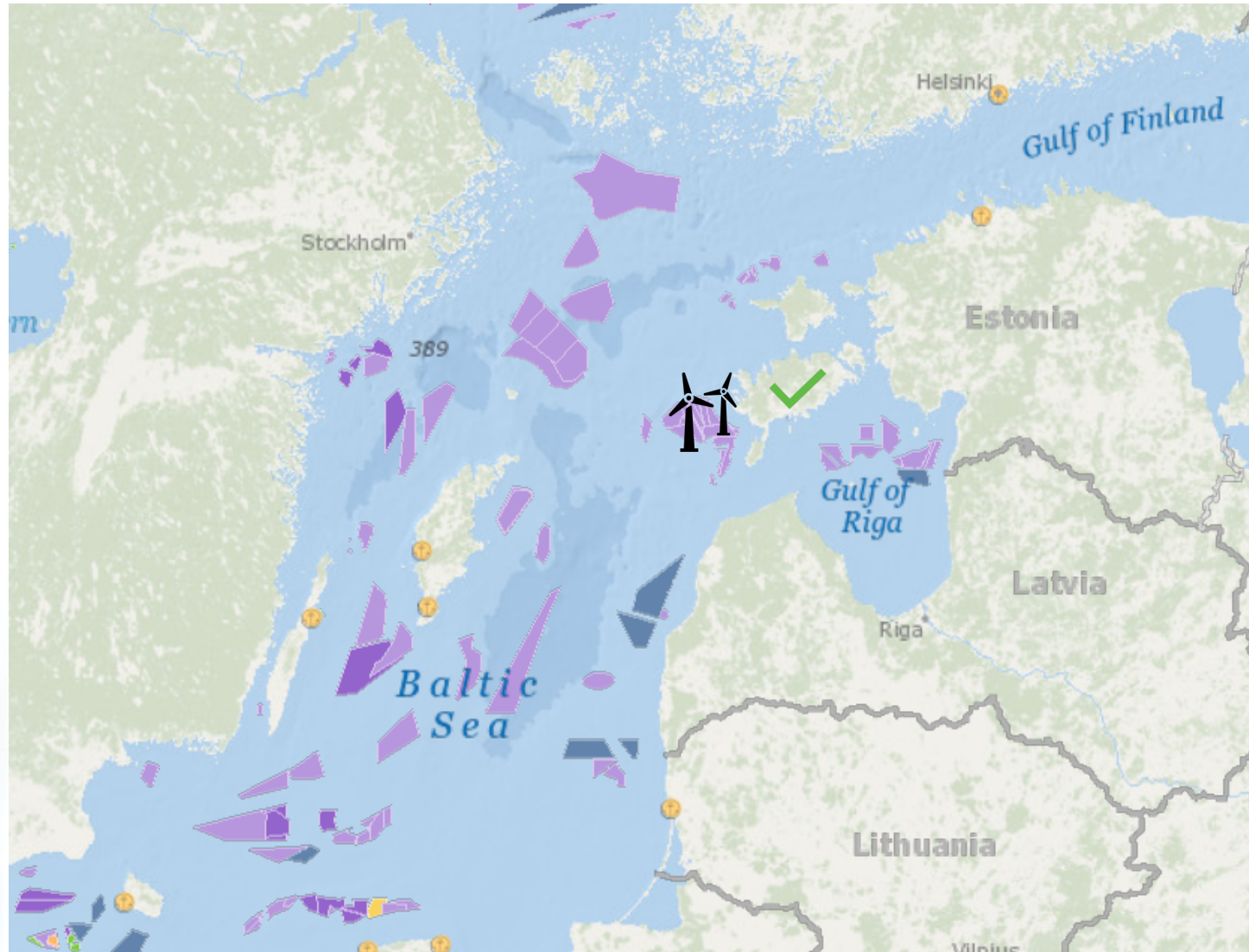
WHAT IS GOING ON?

THE BALTIC SEA HAS FEVER.

...AND IT SUFFERS FROM NUTRIENT OVERLOAD!



Suppo Leinonen 2022/rippant



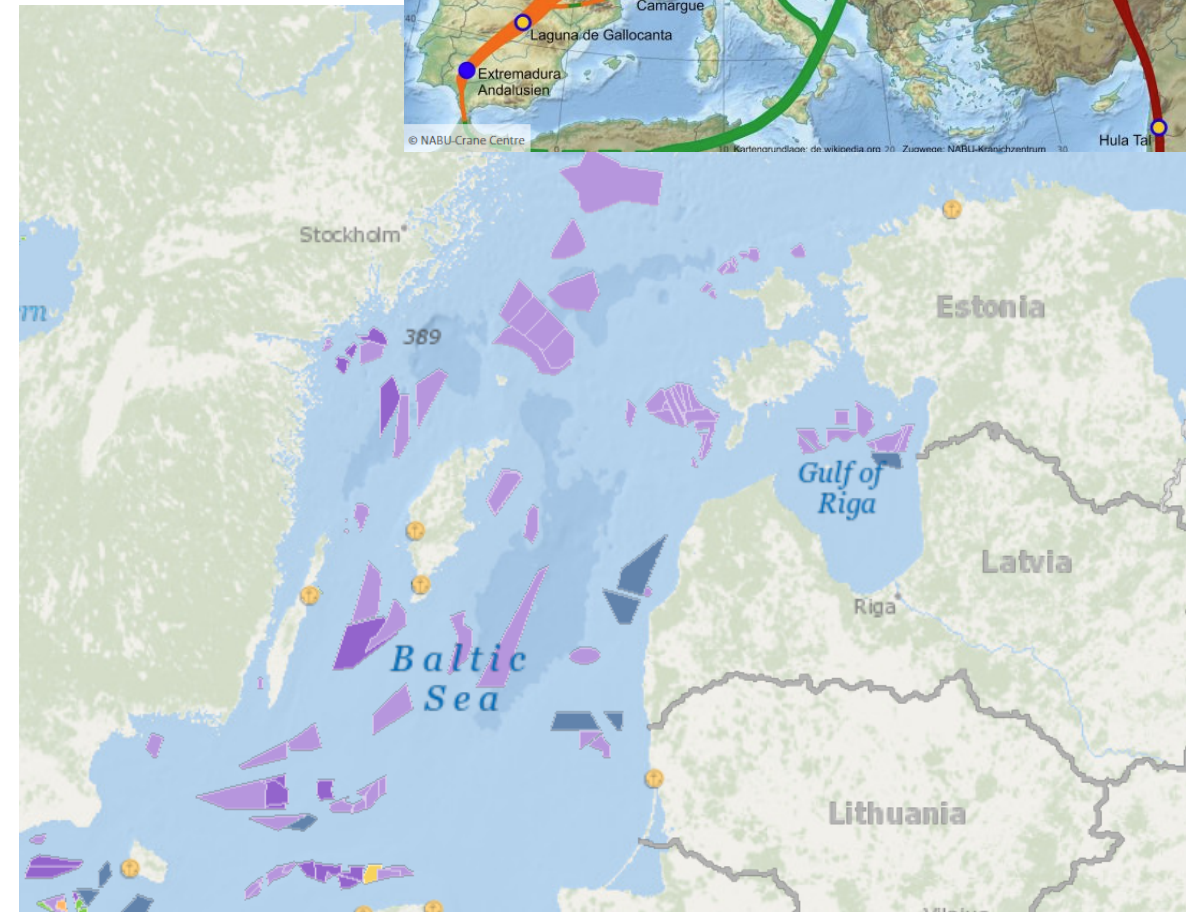


# WHAT DO WE KNOW?

- Environmental conditions:
  - nature, species,
  - physical conditions,
  - weather etc.
- Pollution
- Shipping routes/logistics
- Ports

*The Baltic Sea - one of the most important European bird migration routes and habitats of different species:*

- Birds (over 80 sp.)*
- Bats (14 sp.)*
- Seals (2 sp.)*
- Fishes (approx. 30 sp.)*
- Other (plants, algae)*



# BRIEF HISTORY OF THE CENTER OF THE BALTIC SEA

## Systematic growth of competence:

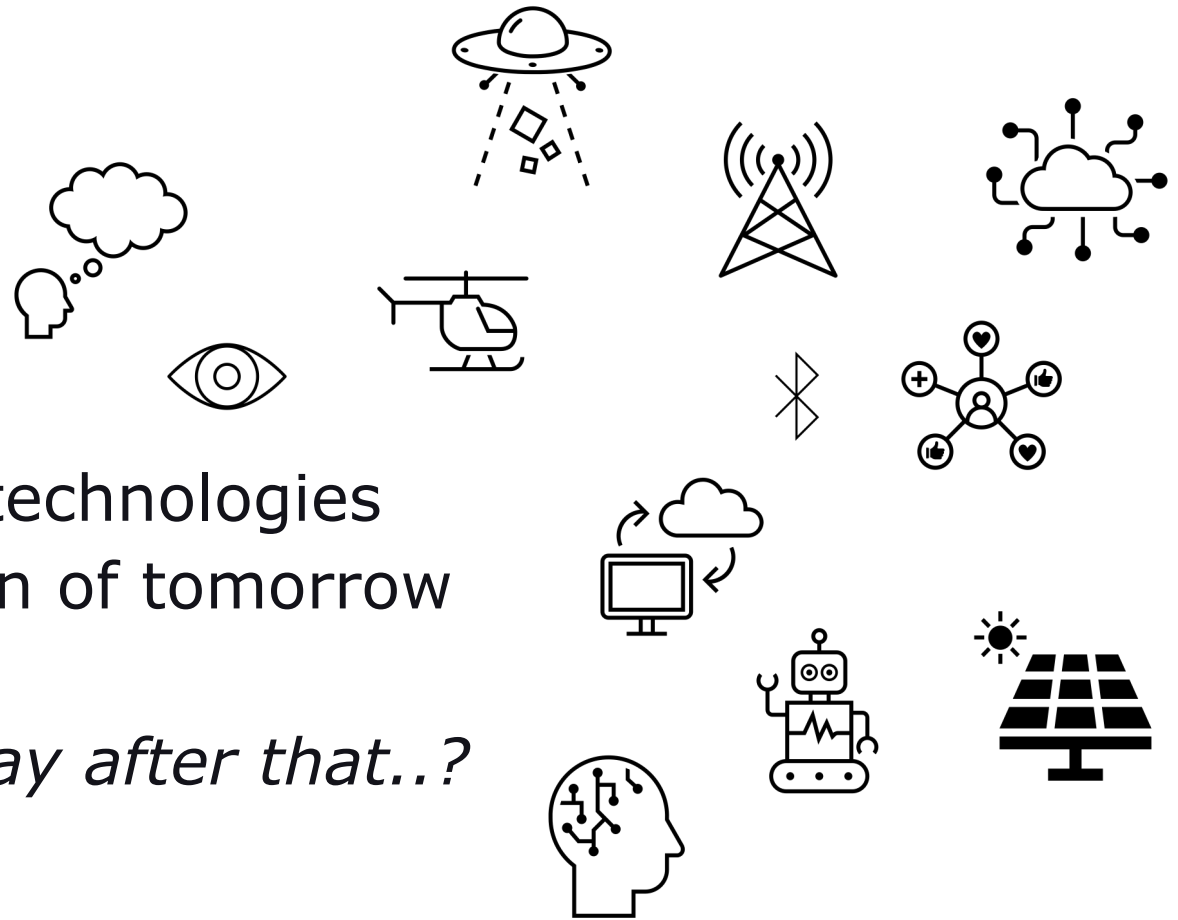
- 2010 3,7 MEUR
- 2016 0,7 MEUR
- 2020 1 MEUR
- 2021 1,8 MEUR
- 2024 2,4 MEUR + 1,98 MEUR



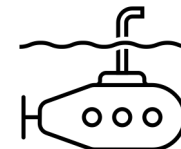
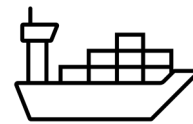
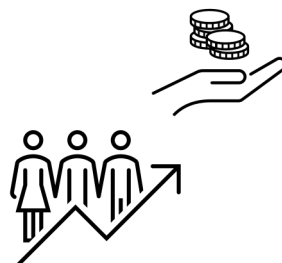


# WHAT WE DON'T KNOW?

- Sea-blindness
- Climate change
- The speed on innovation
- Solutions for next generation technologies
- Economic and political situation of tomorrow
- *What we need tomorrow or day after that..?*



*How to bridge the gap between 'we have's' and 'we don't have's'; we know's and we don't know's..?*  
*How to go beyond boundaries..?*

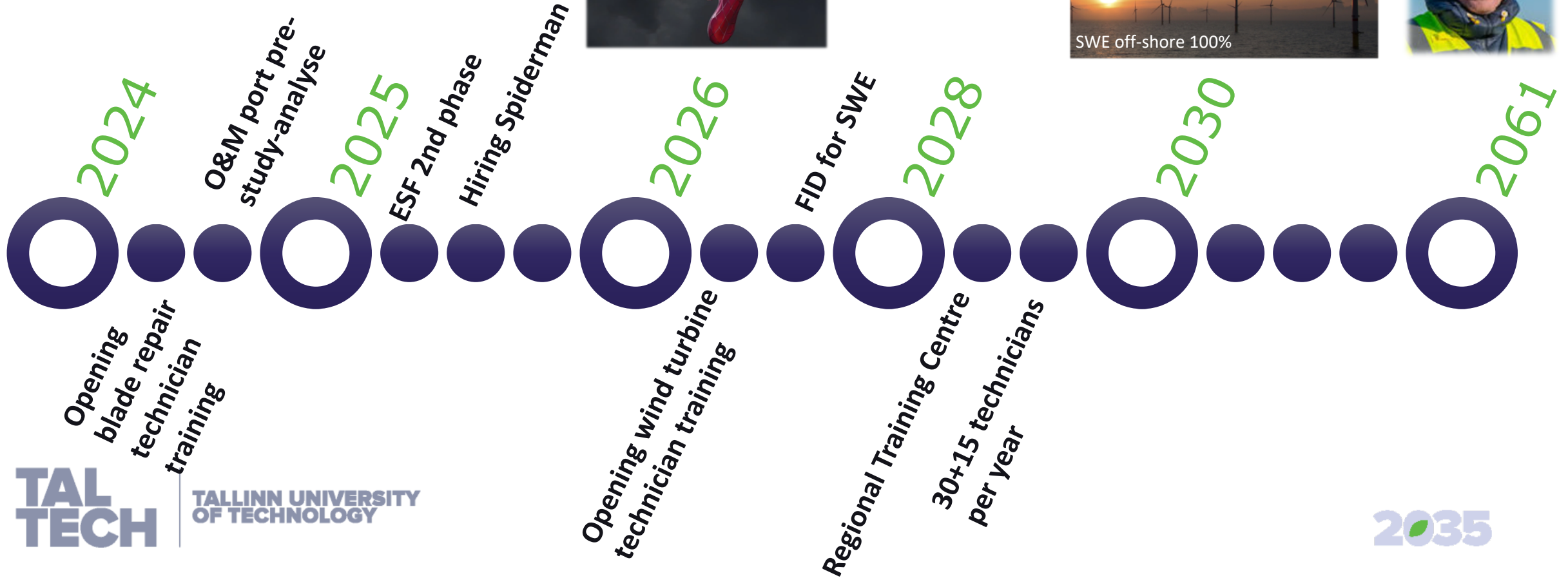


**2035**

**THE MYSTERIOUS FUTURE..**



# WHAT THE FUTURE HOLDS?

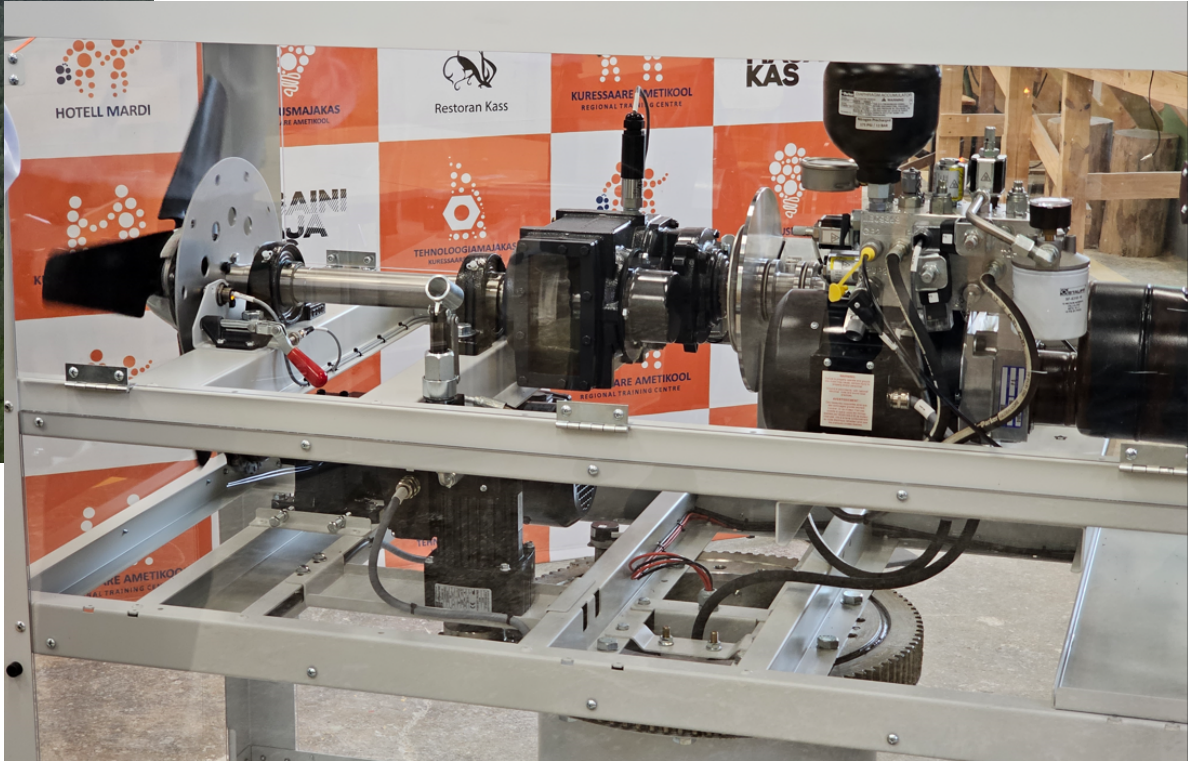




# DO SOLUTIONS HAVE TO BE PHYSICAL?



Author: 3D Wind Service



TALLINN UNIVERSITY  
OF TECHNOLOGY



Kaasrahasanud  
Euroopa Liit

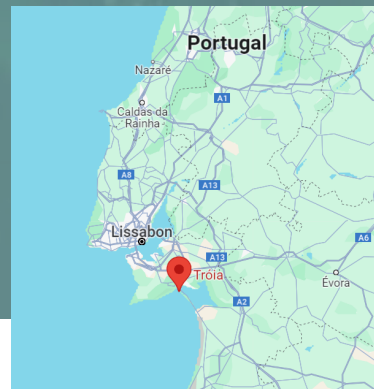
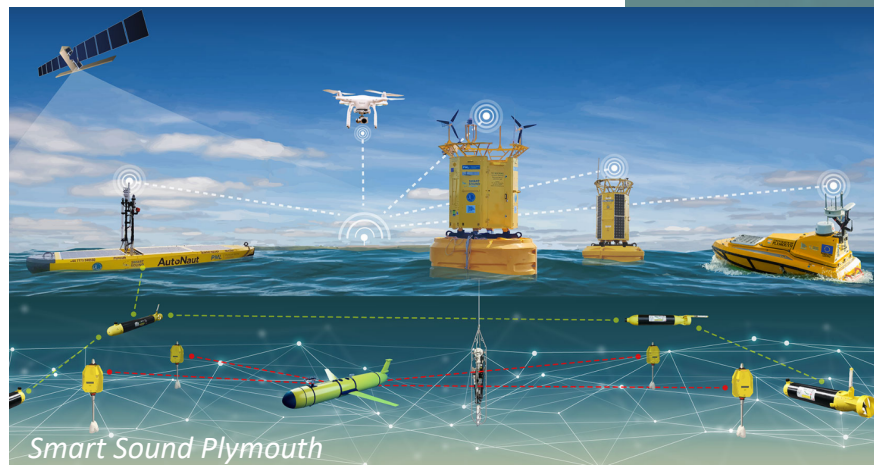
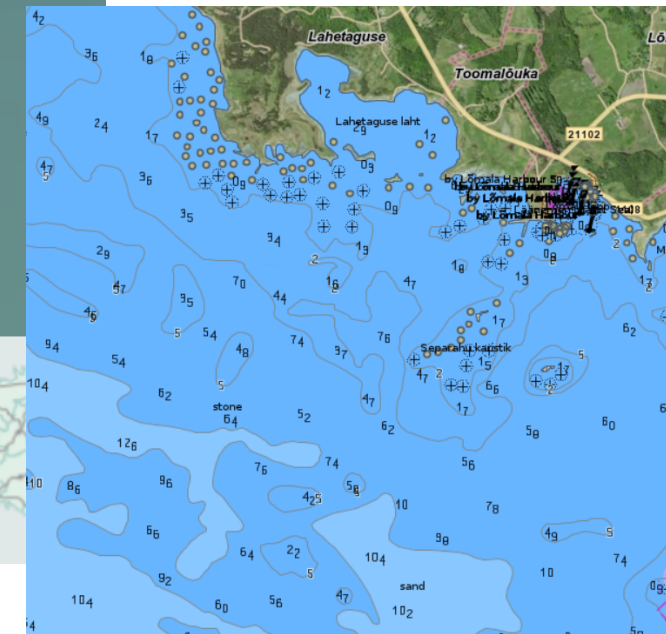
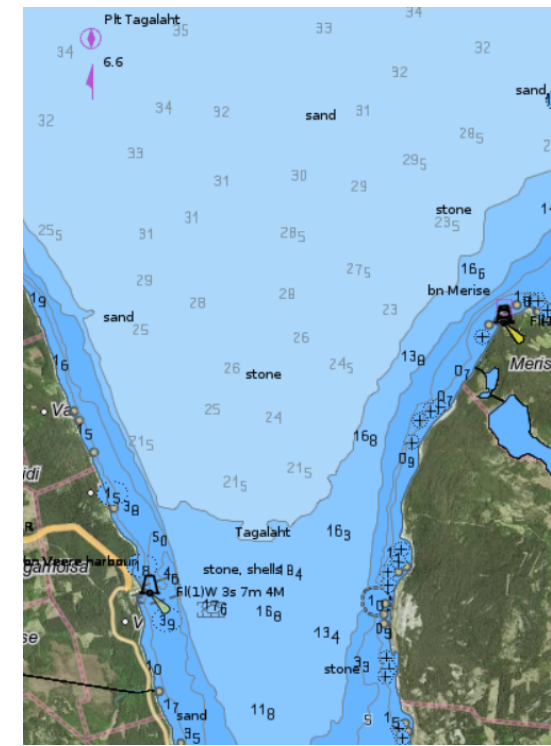
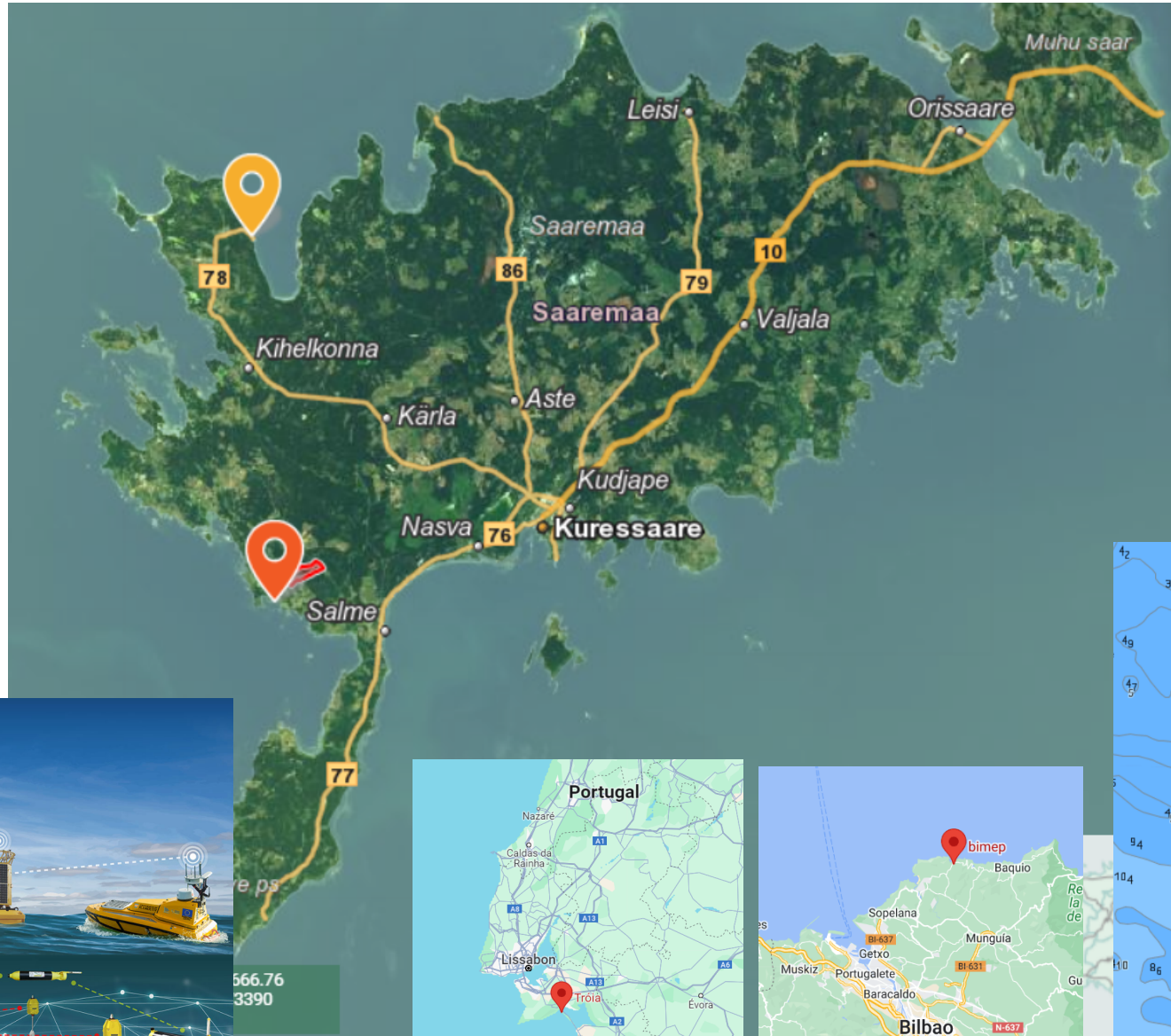


Eesti  
tuleviku heaks



# BIG PROGRESS INSPIRES EVEN BIGGER DREAMS I

- Innovation area -> practical testbed (BiMEP, Troia, Plymouth)
- O&M port to Saaremaa



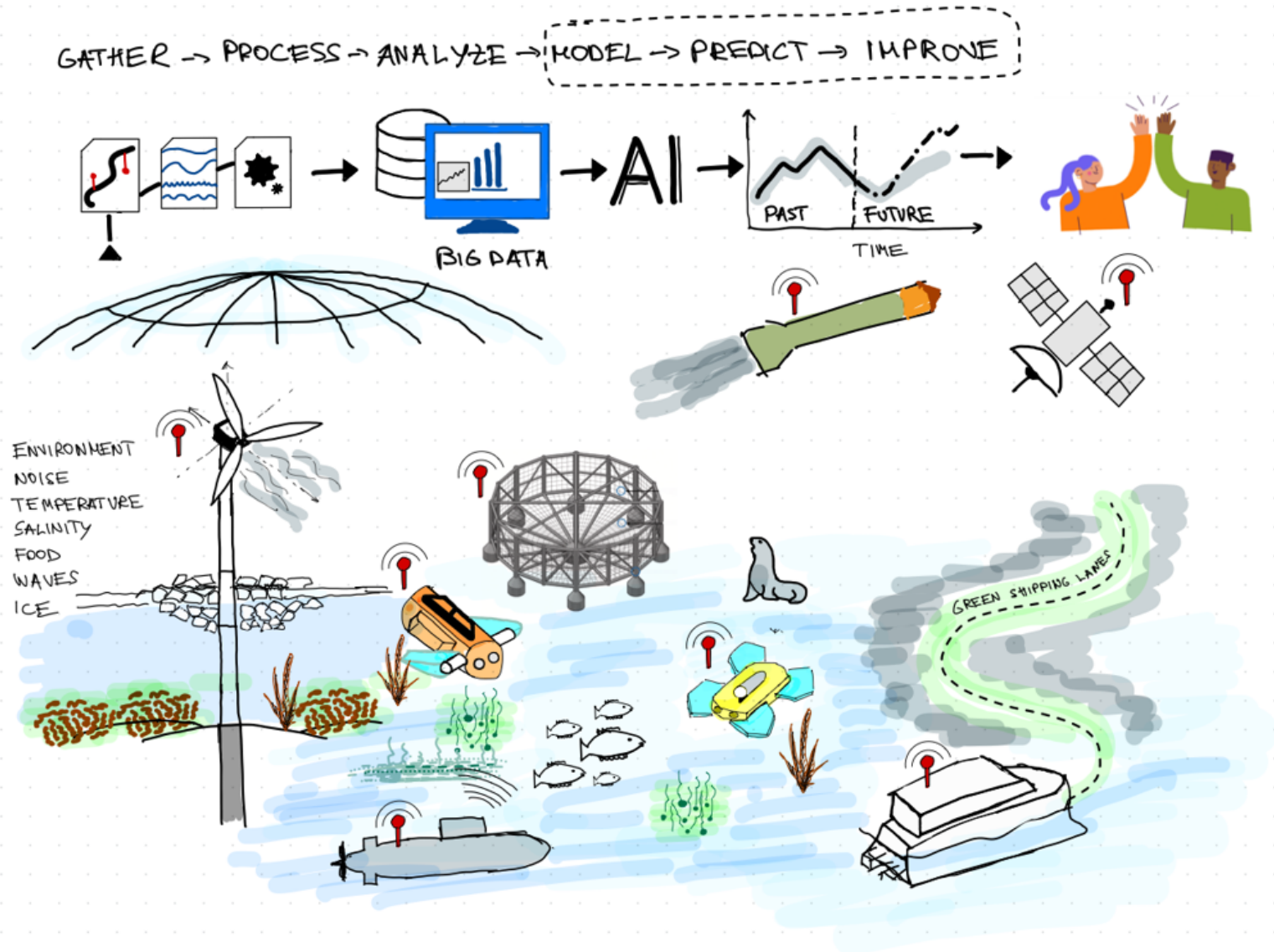
# BIG PROGRESS INSPIRES EVEN BIGGER DREAMS II

## Smart Sea – Centre of Excellence

*“Our ambition is to tell you what you think before you know it.”*

### Systematic growth of competence:

- 2025 3+4 MEUR (ESF)
- 2025 2 MEUR (testbed, phase 1)
- 2026-2027 30+ MEUR (CoE)
- 2024-2030 O&M port (for CTV-s, 5+ MEUR)





2035

**TAL  
TECH**

**TALLINN UNIVERSITY OF TECHNOLOGY**

**taltech.ee**

**TALLINN UNIVERSITY  
OF TECHNOLOGY**