Supporting Marine Research
Knowledge Exchange for Blue Growth
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Business development & Innovation

sirris
driving industry by technology

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Content of this presentation

- Introduction
- Insights in OWI-Lab governance & working concept
- Tackling innovation thresholds through strong academic and industrial partnerships
- Fostering entrepreneurship at university and research centers through partnership with industry
- Results of providing access to public funded testing infrastructure to companies
- Clustering the clusters – international collaboration and smart specialization

Introduction

- **Sirris - collective technology centre in Belgium**

sirris

driving industry by technology

  - Supporting companies with implementing technology innovations
  - Multidisciplinary R&D and innovation projects in technology industry
  - Different technology sectors: Automotive, Energy, Aerospace, ICT, …
  - Different expertise: ICT, Manufacturing, Mechatronics, Materials
  - High-tech test and R&D infrastructure

- **OWI-Lab - RD&I platform for wind energy in Belgium**

  - Set-up in 2010 as a new application lab at Sirris to support wind energy R&D
  - Scope: wind energy in general - focus on '**offshore wind'**
  - Range of new and unique test & monitoring infrastructures (enabler of RD&I)
  - Triple helix:
    - Partnership with Industry and Government organizations
    - Partnership with 3 Belgian universities for fundamental wind energy research (VUB, KU Leuven, UGent)

History & Concept of 'OWI-Lab': Industry needs as initiator

.AGORIA

GENERATIES.NET

- Started as an Industry driven R&D project
- Certain need for test & monitoring infrastructure to conduct R&D (innovation threshold)
- Bottom-line need: 'data' to feed R&D (innovation threshold)

History & Concept of 'OWI-Lab' : Industry needs as initiator

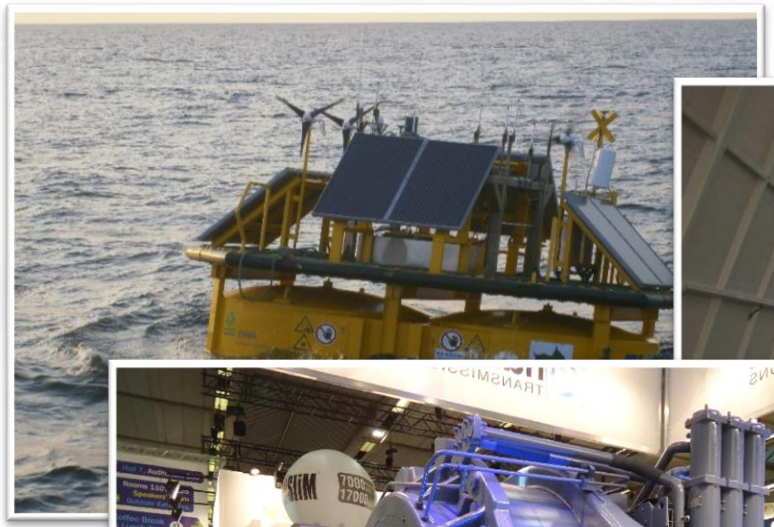
2008

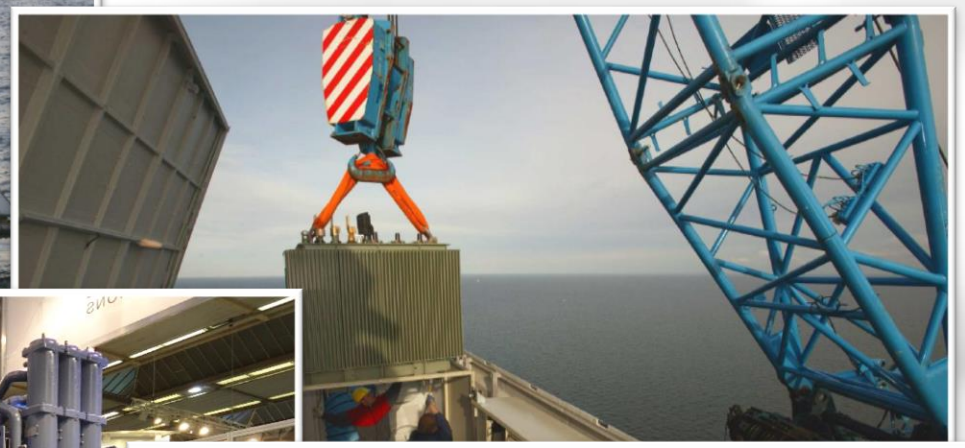
3E
NOT FACING BUT SHAPING THE CHANGES

Smart solutions.
Strong relationships.

ZF

DEME
Dredging, Environmental & Marine Engineering





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History & Concept of 'OWI-Lab': funded R&D project

2008 2010

Steering members: ±6 month strategic and high level reporting of project status, progress investments and first R&D results

User-group: Other universities, large companies, SME's and start-ups.

- ±30-40 partners
- Interaction with the full value chain
- Meeting 2-times a year
- Knowledge sharing

- **IWT funded OWI- project (5,5milj€)**
- **Investment in niche test infrastructure**
- **Industrial coordination: Sirris**
  Decision to set-up a 4th Application Lab
- **Academic R&D coordinator: VUB**
- **Initiation of steering committee & user committee to drive interaction and collaboration**

History & Concept of 'OWI-Lab': governance

2008 2010 2012-2016

(expanded) Steering committee

User-group

Involved universities

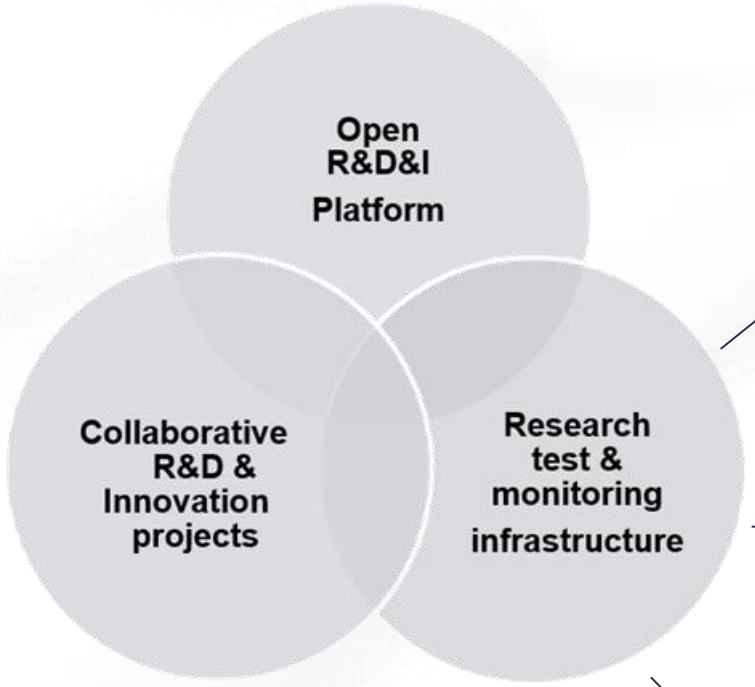
Open R&D&I Platform

Collaborative R&D & Innovation projects

Research test & monitoring infrastructure

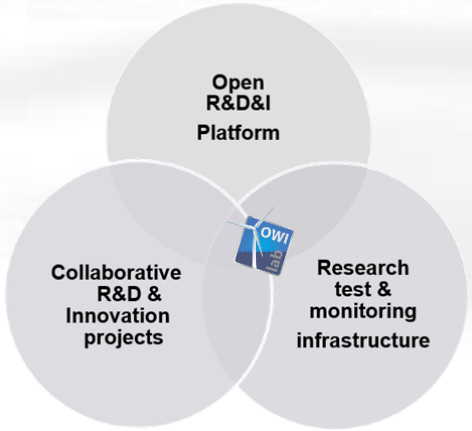
- Operational phase of 'OWI-Lab platform' and it's 3 pillars
- 'governance' in place to work with all stakeholders
  - Expanded steering committee (offshore wind farm developers / operators involved)
  - New members user-group
  - New academic members + coordination of R&D topics
- Operational phase of investments: field tests, measurement campaigns, climatic test center

Test & Monitoring infrastructure as enabler to R&D



History & Concept of 'OWI-Lab': clustering the BE clusters

2008 2010 2012-2016 2016- …



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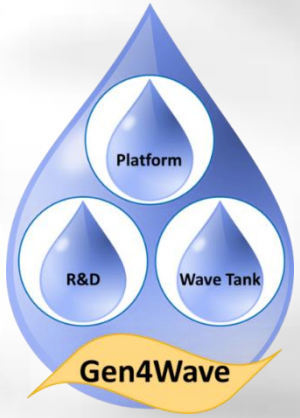
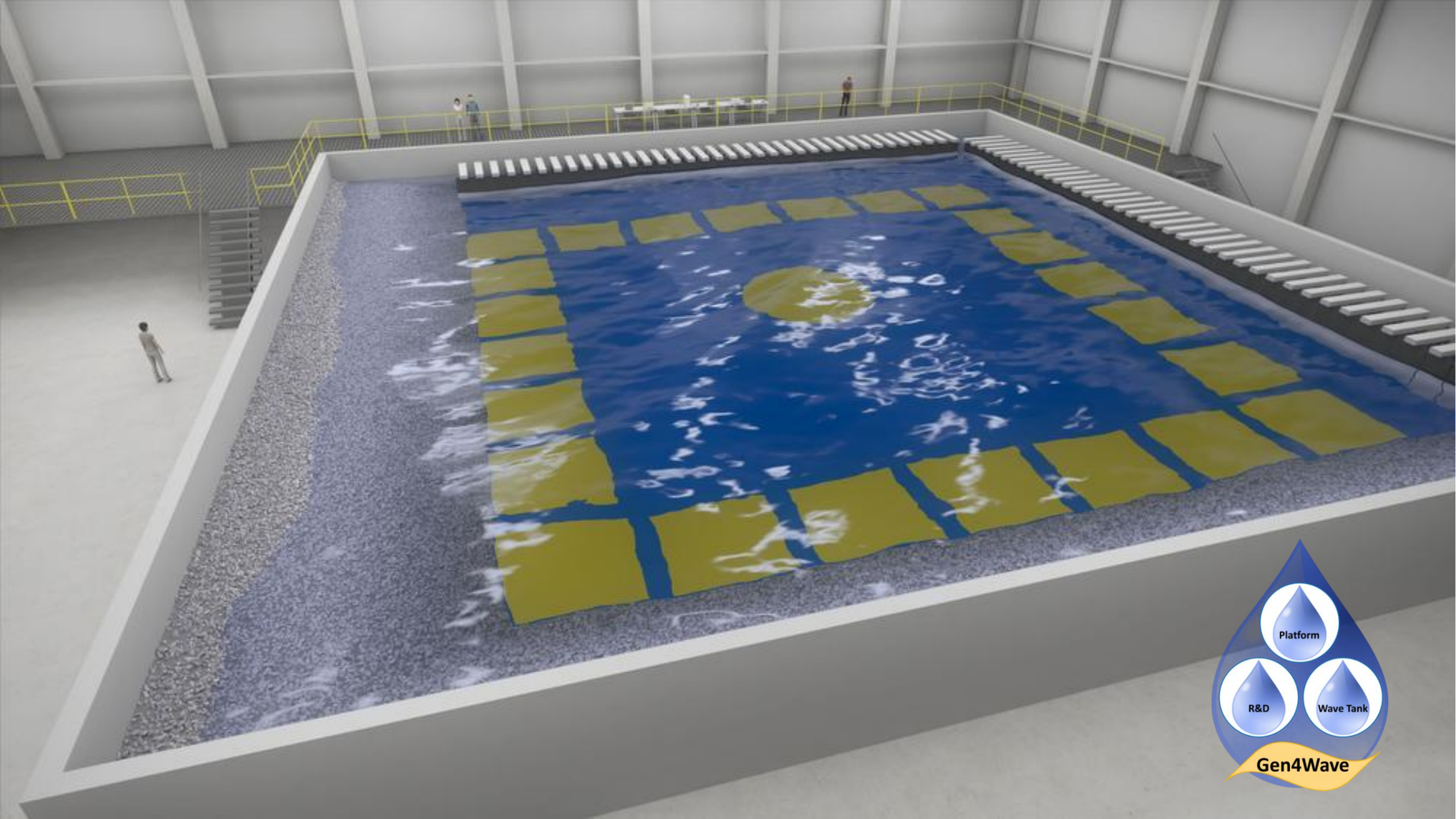


- Creation of IBN Offshore Energy (cluster) since 09/16
- Industry driven
- Similar academic and industrial actors as OWI-Lab
- Funding: 50% Flanders and 50% Flemish Industry
- Governance: industrial steering, strong interaction with research


Platform
R&D
Wave Tank
Gen4Wave

Taking away innovation thresholds through partnerships

Access to real offshore turbines, specific field-datasets, setting-up measurement campaigns

C-Power parkwind Belwind Offshore Energy Nobelwind Offshore energy Northwind Offshore Energy

BE Offshore park operators as key R&D partner

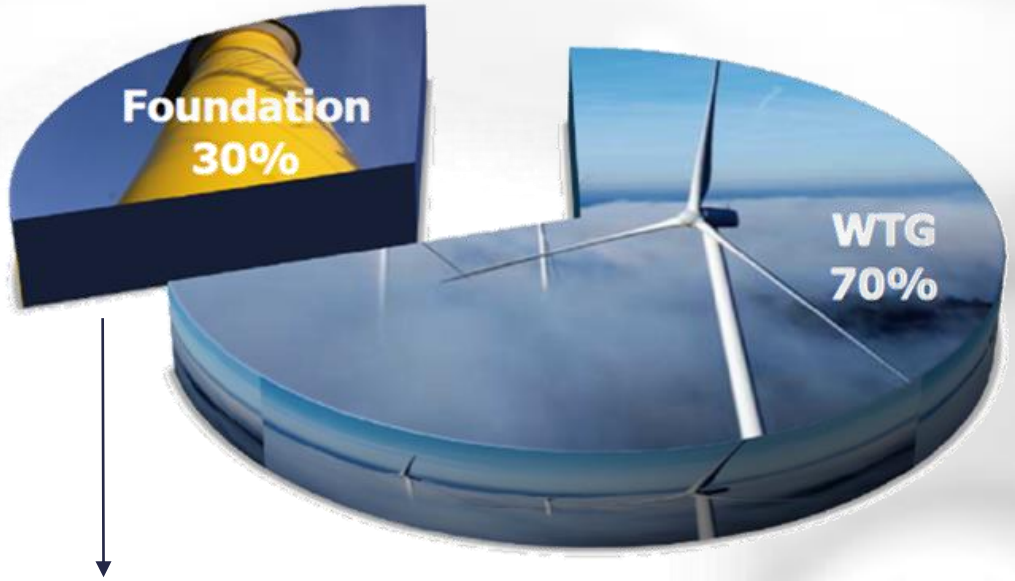
- Win-win partnership
- Initiator to many R&D and innovation projects
- Started with Belwind in 2011 ; expanded to 4 operational farms
- OWI-Lab gets access to turbines and essential R&D data
- Instrumentation & analysis by OWI-Lab
- Operators gain insights in measurement results to

    1) Optimize certain O&M activities
    2) Optimized new offshore farms: cost, risk, lifetime,…

- Unique knowledge built-up on the topic of foundations and FSHM (foundation structural health monitoring)
- Key research topic at VUB

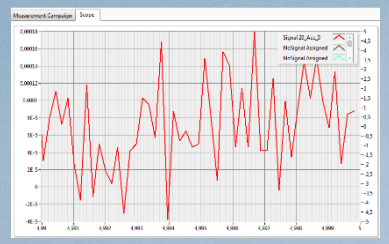
Taking away innovation thresholds through partnerships

Access to real offshore turbines, specific field-datasets, setting-up measurement campaigns



- Focus topic within OWI-Lab (smart specialization)
- Strong knowledge at partner university
- Interest from the BE industry

2011



- Design Input for new offshore wind farm
- Reduction of uncertainty (= cost)