

PATRICIO ALEMANY

Rovimatica

AERODEFECTSCAN

- Automated generation of thermal and RGB multilayer orthomosaics
- Automated solar panel defect detection



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PAUL MCCORMACK

Belfast Met

Hydrogen Optimisation



Exploiting the Hydrogen value chain

1. **Optimising** hydrogen production, storage and use.
2. **Actualising** the CH₂F to valorise and maximise the green energy outputs
3. **Evaluation** parameters of performance and benefits realisation
4. **Validating P2X** H₂ technologies to be deployed in emerging scenarios
5. **Developing** long term strategies for the advancement in adoption of hydrogen technologies
6. **Mapping** Energy Navigation Routes for the transition of the EU energy system to the green destination

'Hydrogen is the catalyst driving Europe's energy transition. We are seeking to accelerate this journey to net zero through valorization of the hydrogen supply chain, production, storage and use - key to creating a successful hydrogen Europe.'

**Partner skills -
Extensive development and demonstration
proficiencies & experience in innovation driven
Hydrogenewable projects delivering
GreenH₂ and importantly SMARTH₂**



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MAGNUS NILSSON

Glava Energy Center

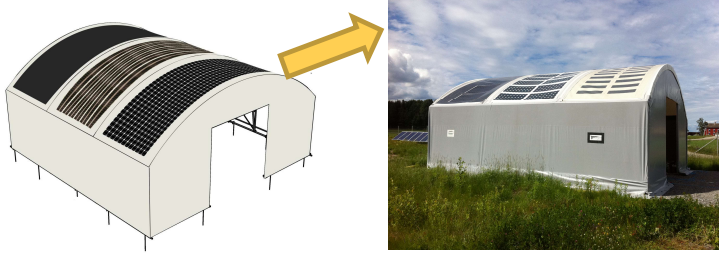


Glava Energy Center

Developing Innovations in Solar Energy and Energy Systems

Innovation cluster
Living Lab
Test bed

Fast innovation process 3w - 6m



>70 Innovations since 2009

Agrivoltaic – PV for agriculture

Snow melting with PV

PV Magazine Gold Business Model Award 2020

GEC Deca Helix

Solar Heat Pump

Solar Cooking for school with 700 students in Tanzania

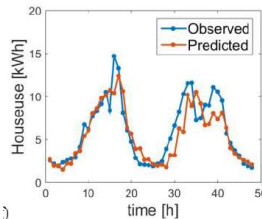


Solar tent to UNDP



SweModule PV factory

Micro grid to 112 medical stations in Zimbabwe UNDP



Adaptive control of battery Storage
ICS Award 2019



SINA BLIX PRESTMO

ECCSEL ERIC



What is ECCSEL?

European Carbon Dioxide Capture and Storage Laboratory Infrastructure

- ECCSEL is the European Research Infrastructure for CO₂ Capture, Utilisation, Transport and Storage (CCUS)
- ECCSEL is a distributed, integrated research infrastructure encompassing interlinked national nodes and facilities
- The ECCSEL infrastructure consists of over 80 research facilities
- ECCSEL covers research infrastructure across the CCUS value chain, such as:
 - Capture: membranes, solvents, sorbents, combustion, cryogenic, integrated CCUS system
 - Storage: pressure/injection, migration, caprock/well integrity, leakage, mitigation/remediation, microseismicity, reactivity/mineralisation, leakage, monitoring, static modelling, dynamic modelling
 - Transport Storage: Security/troubleshooting, fluid characterisation, flow characterisation, material testing, CO₂ pipeline transport and integrity, shipping of CO₂
 - Utilisation: thermochemical conversion and hydrogenation of CO₂, electrochemical and photochemical conversion of CO₂, CO₂ conversion to solid carbonates, smart integrations with carbon capture and re-use into valuable products



www.eccsel.org

What does ECCSEL offer?

- Access to leading research facilities for users worldwide
- Single contact point for the facilities included in the ECCSEL Research Infrastructure
- Facilitation of fundamental and applied research leading to commercial applications that help advance CCUS deployment in Europe and worldwide
- Increased researcher mobility
- Improvement of the competitiveness of the European industry and SMEs by raising their CCUS TRLs

Destination 5.3 Sustainable, secure and competitive energy supply

Carbon capture, utilisation and storage (CCUS)

ECCSEL ERIC offer to be partners or third parties in proposals addressing CCUS under destination 5.3

ECCSEL partnership secures inclusion of state-of-the art facilities into the proposal

Inclusion of an ERIC is considered positive for the proposal as a whole

Contact: sina.prestmo@ntnu.no



“ My experience with ECCSEL widened my horizons both scientifically and personally. The program granted me the opportunity to collaborate in a multicultural environment with experts in CCUS and access state-of-the-art methods and equipment.

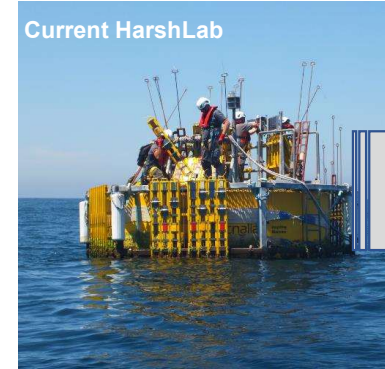
Eirini, Transnational Access Facility User, National Technical University of Athens

PABLO BENGURIA

Fundación Tecnalia Research &
Innovation

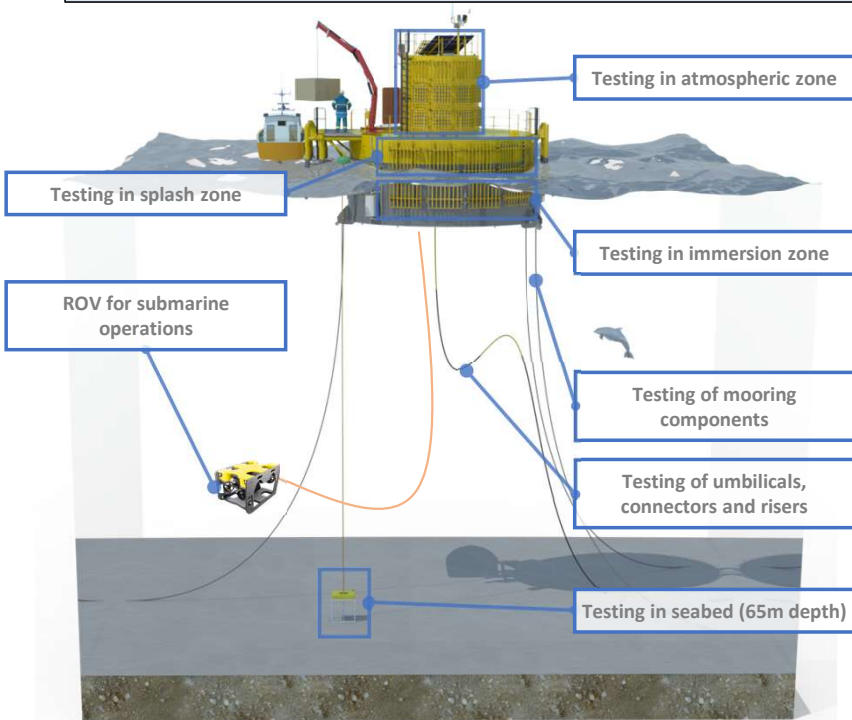
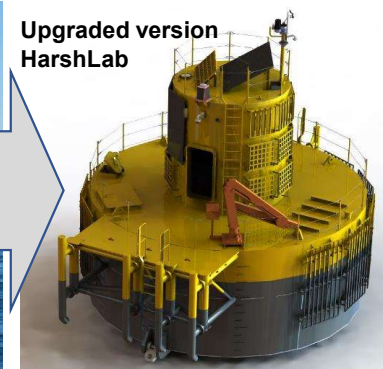
WHAT IS HARSHLAB?

- ✓ HarshLab is an **offshore floating laboratory** moored at Bimep Area (Bay of Biscay) to evaluate and demonstrate any given solution for the offshore industry (novel coatings, mooring systems, connectors, trackers,...).
- ✓ Current version of HarshLab has been testing samples and materials in real offshore environment in Bimep area **since September 2018**.
- ✓ An upgraded version of HarshLab will be commissioned in the same site in **September 2021**. This new HarshLab will have not only **more space** for testing bigger equipment and accessories, but also will be **grid connected** to Bimep's submarine cable, so **testing equipment in service** will be possible.



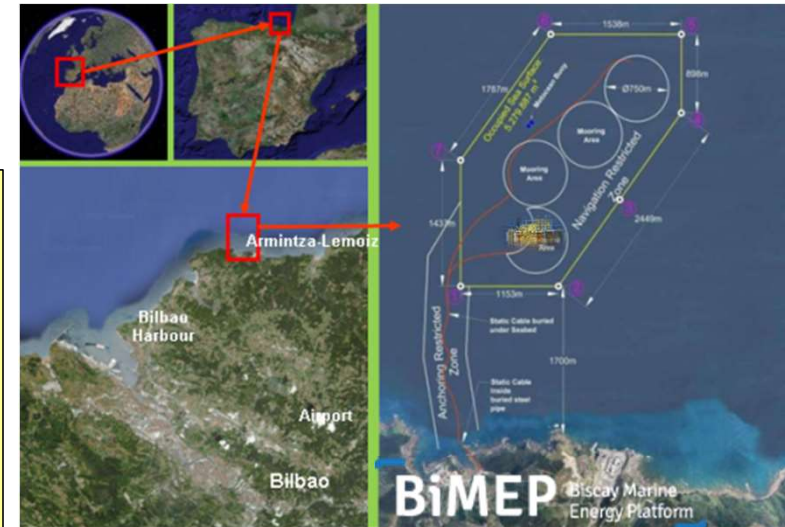
Current HarshLab

Upgraded version HarshLab



TECHNICAL SHEET

- Dimensions: 8,5m diameter x 7,0m high
- Maximum payload: 9 ton.
- Space for component testing: 120m² (60m² outdoor deck, 57 m² indoor)
- Space for samples exposition: >2000 samples in immersion, splash and atmospheric zones
- Main crane capacity: 1 ton @ 5,25 m
- Auxiliar davit capacity: 300 kg @ 1,5m
- Connection to land: Umbilical cable (690V, 160kVA) for power and communications
- Connection for equipment onboard: AC (400V and 230V) and DC (24V and 12V)



Topics of interest for Horizon Europe Call

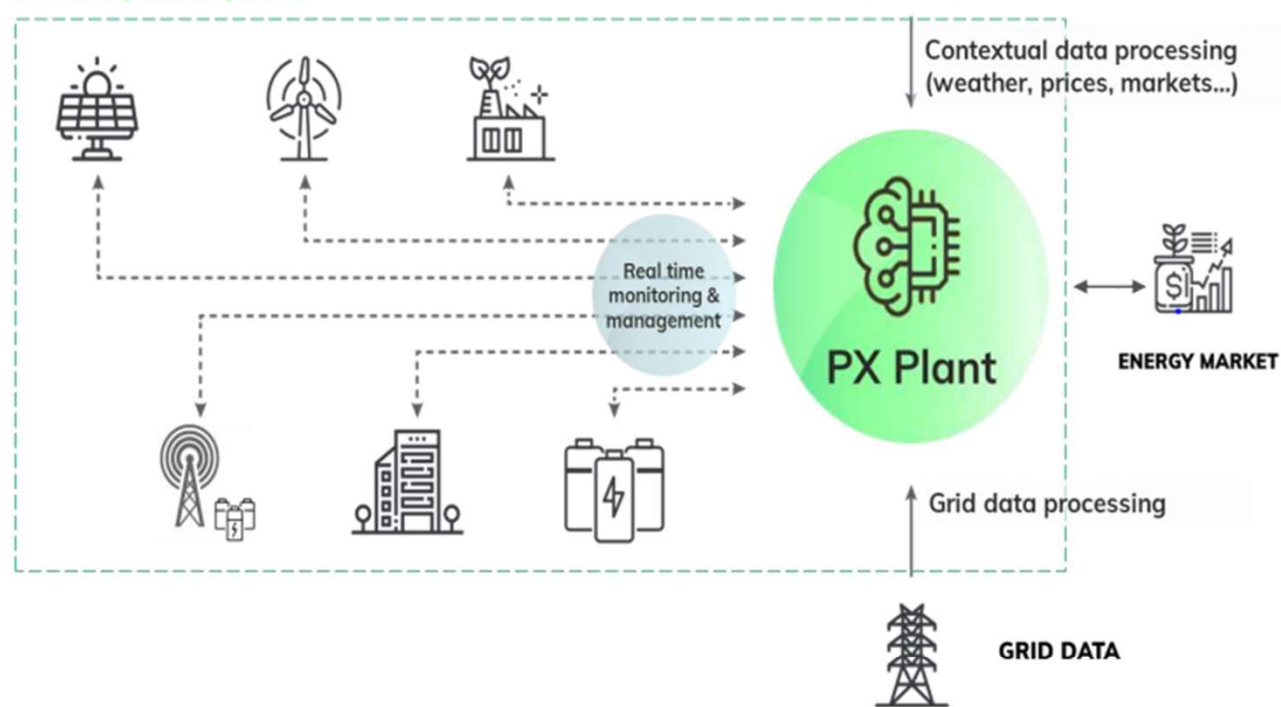
- ✓ **HORIZON-CL5-2021-D3-03-10**: Innovative foundations, floating structures and connection systems for floating PV and ocean Energy devices (RIA)
- ✓ **HORIZON-CL5-2021-D3-03-12**: Innovation on floating wind energy deployment optimized for deep waters and different sea basins (IA)

MICHAL CHUDY

Powerex

Intelligent control of energy systems

Virtual power plant



AI driven Virtual Power Plant platform: PX Plant

- **Monitoring&Control of energy assets:**
 - **Development of Energy Management Systems**
 - **System optimization -value stacking**
 - **Flexibility supply**
- **Predictions based on Big Data and machine learning:**
 - **Renewable power production**
 - **Consumption in system nodes**
 - **Power System imbalance**
 - **Electricity stock market prices**
- **Smart solutions for entities responsible for energy imbalance**
- **Virtual Power Plant operation**
- **Ancillary services provider**

FARID KARIMI

Novia University of Applied Sciences

Energy Transition & Society Research Group

- **Areas of interest** : risk perception; social acceptance/acceptability; communication; energy politics; energy security; energy policy
- **Keywords:** renewable energy; wind energy; CC(U)S; biomass; energy transition; electricity system; Nord Stream 2
- **Potential roles:** member of WPs or leader of a WP. We are open to negotiation
- **Contact:** Dr Farid Karimi
farid.karimi@novia.fi ; www.novia.fi

Skills & Assets

- **Qualitative methods:** designing interviews; discourse analyses; the regime and landscape analysis of technology development.
- **Quantitative methods:** survey; data analysis; statistical modelling
- **A diverse team** with social sciences, ecology, chemistry and engineering background
- **Extensive international network**
- **High capacity** for accommodating international collaboration

ANN OVERMEIRE

Blue Cluster

Blue Cluster (Flanders - Belgium)

Value proposition of the Blue Cluster:

- * communication and dissemination activities, with special focus on industrial dissemination
- * identification of innovation challenges and business case definition
 - * validation of pilots from industrial/business perspective
- * foster networking and ecosystem building activities involving the wider blue economy stakeholder community



COASTAL PROTECTION and USE OF MINERAL RESOURCES



RENEWABLE ENERGY and FRESHWATER PRODUCTION



MARITIME CONNECTION



SUSTAINABLE SEAFOOD and MARINE BIOTECHNOLOGY



BLUE TOURISM



OCEAN HEALTH and WASTE SOLUTIONS



FRANCISCO JAVIER Díez Trinidad

Tekniker

Capacities

- **Demand Respond and flexibility optimization** for the different energy sources, carriers, and flexibilities based on heuristic optimization techniques and AI.
- **Energy management at building and district level including DHC networks** via the combination of real-time optimization, model predictive control (MPC) and adaptive control
- **Artificial Intelligence** (software or embedded chip) **at the edge** or device/equipment level
- **Semantics**: Ontologies of the energy domain and its composition with other domains such as SAREF4ENER, OntoWind, EEPsA, ... through linked data.
- **BIM integration**: Integration of data and applications (SCADA, CMMS, ...) with the building data model for operation and maintenance (7D).
- **Data sovereignty**: Data usage control following the IDSA architecture.

Spanish consortium and pilot use case building

Projects

- Integrated demand REsponse Solution towards energy POsitive Neighbourhoods
- Next Generation, Intelligent, High Performance And Affordable District Cooling Systems
- Renewable Energy for self-sustAinable island CommuniTies
- Highly Innovative building control Tools Tackling the energy performance gap
- Energy-Hubs for Energy Positive Intermodal Critical Infrastructures
- Autonomous Management System Developed for Building and District Levels

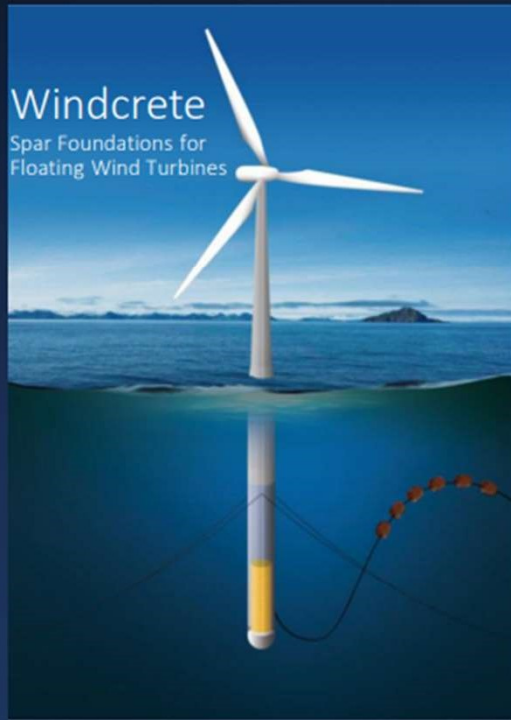


Contact: Francisco Javier Díez
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DUNCAN CAMERON

Windcrete



The Opportunity

- Essential for the future, Next Generation Floating Wind is enjoying Exponential Growth
- Floating Wind is a 30+year Opportunity
- By 2030 between €360million and €2billion predicted to be invested in floating foundations
- Floating Wind is a Long Term Business - Most of the Opportunity lies Beyond 2030

Why Windcrete ?

- Proven Ultra Stable Technology
- Minimal Cross Sectional Area – Better for Harsh Marine Conditions
- Patented by Windcrete
- Concrete Construction
- Extended Spar Life
- Use of Waste Materials
- Not Affected by Corrosion
- No Moving Parts – Minimal O&M
- Horizontal Transportation – Many locations for production
- Well Suited to Industrialised Production
- Competitive with Other Floating Technologies
- Lower LCOE with Larger Turbines

Next Steps

- 2MW Demonstrator at pre-determined location
- Design of Next Generation (14MW+) Spars
- Full Commercialisation in 5 years

Contact

Duncan Cameron
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 +44 7912 614086

Windcrete is a development of



January 2021
 www.windcrete.com

Windcrete Mission Statement

The Windcrete mission is to deliver the most sustainable, cost effective and durable foundation to the global market for floating wind energy

MARIE PROUTEAU

2IA Consulting



Maximising the impact of your EU projects through tailored actions in DISSEMINATION & COMMUNICATION

2IA Consulting can be:

- A WP leader
- A project partner

HEu interests: Hydro, PV, CSP, Wind, ...

For more information?

Marie.prouteau@2iaconsulting.com

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DISSEMINATION



To develop the dissemination and communication plan



To support Research Data Management and writing of the DMP



To build the stakeholder database



Organising scientific conferences and dissemination events



Boosting delivery of open access scientific publications



Management and monitoring of the actions

COMMUNICATION

Social networks

Twitter, LinkedIn, Youtube channel

Website

Creation of public part and intranet, updates, news, blogs, ...



Press relations

Press kit, press releases, newsletters, articles in specialized magazines



Events

Generic conferences, popularization events, final infoday, webinars, ...



Communication materials

Brochures, infographics, videos, kakemonos, interviews, podcasts, ...



Visual identity

Logo, templates, graphical chart, written identity with taglines and messages



Impact monitoring

Creation of KPI's for communication actions, monitoring



TOM BAUR

POM West-Vlaanderen



Blue Accelerator

Project development & demonstration in Marine Renewable Energy

- Open for industry, large and small SMEs, developers, project consortia, knowledge centres
- One-stop shop approach in testing and demo's: optimised support for developers

Project development and implementation in:

- Floating solar PV - (scaled) units and arrays
- Floating multi-use (e.g. with aquaculture)
- Offshore automated/robotic O&M for energy devices and turbines (air-surface-submerged drones)
- Innovation in sensors and monitoring (corrosion, biofouling, protected species)



Located offshore, near O&M harbour of Ostend (BE)



BIRGITTA MARTINKAUPPI

University of Vaasa

Horizon Europe Cluster 5 & 6 - Digital Matchmaking event

DEMONSTRATIONS OF MULTI-SOURCE DHC SYSTEM INCLUDING ENERGY STORAGES TO INTEGRATE POWER AND HEAT



**E.g. call: HORIZON-CL5-2021-D3-01-05: Energy Sector Integration
Partner preferably**



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Vaasan yliopisto
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