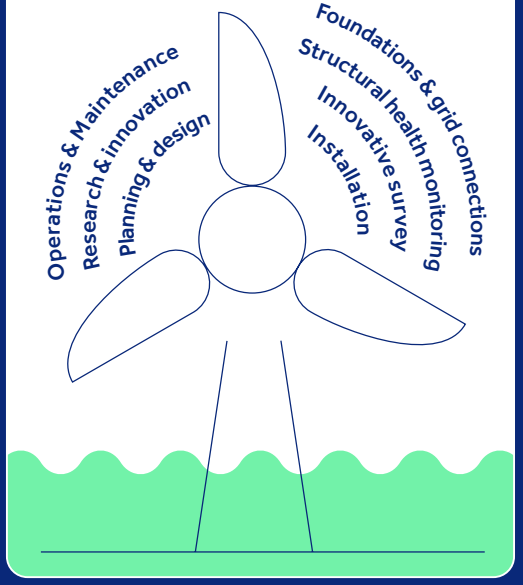
The Flemish Coast:
Offshore Renewable Energy

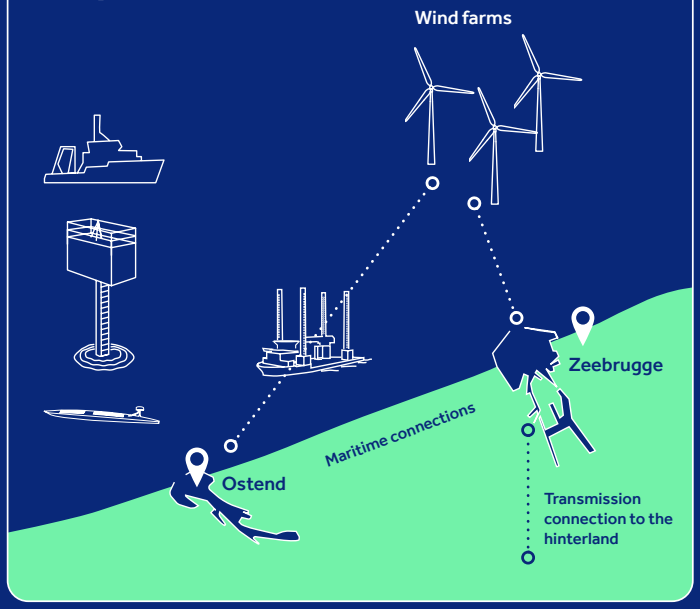
Value chain



Technology innovations

- (Critical) infrastructure protection
- Floating solar PV
- Floating wind
- Decommissioning
- H_2 Green hydrogen
- Wave & tidal energy converters

Map



9 wind farms (2021)

2.3 GW (2021) → **6** GW (2030)

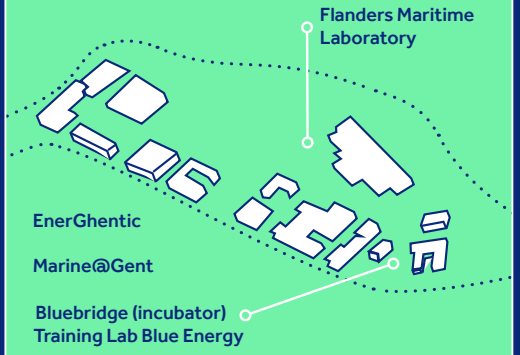
2 development zones

399 turbines

193m
75m
102m

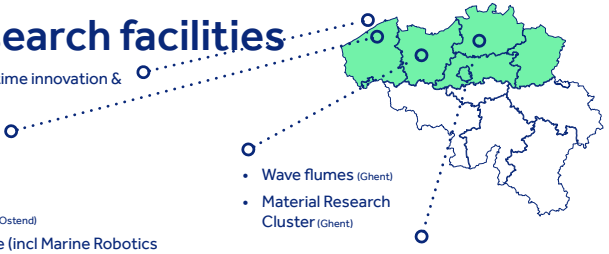
Ostend Science Park

Ostend Science Park is a high-tech knowledge hub entirely dedicated to marine and maritime business. It is the perfect breeding ground to boost your blue business.



Test & research facilities

- Blue Accelerator - maritime innovation & development platform (500m from Ostend's coast)
- Port Oostende
- Salt water flume (Ostend)
- Research vessel Simon Stevin & Zeekat (Ostend)
- Ocean Innovation Space (incl Marine Robotics Center (Ostend)
- Flanders Maritime Laboratory (Coastal and Ocean Basin-COB; towing tank) (Ostend)



- Wave flumes (Ghent)
- Material Research Cluster (Ghent)
- Climatic test chamber (Antwerp)
- Wave basin (Antwerp)
- Current flumes (Antwerp)

Ostend offshore hub

- 130 companies active in the blue economy
- Research institutions
- Blue economy clusters & gamechangers

Cross-cutting themes

Multi-use

- Other forms of renewable energy
- Aquaculture and passive fisheries
- Blue tourism
- Nature-inclusive-Design and nature restoration
- Marine Multifunctional Landscape Infrastructures

Smart sea applications

- From planning to operational phase
- Digitalisation and IoT
- Data-driven solutions
- Smart applications and AI

Ecosystem-based approach

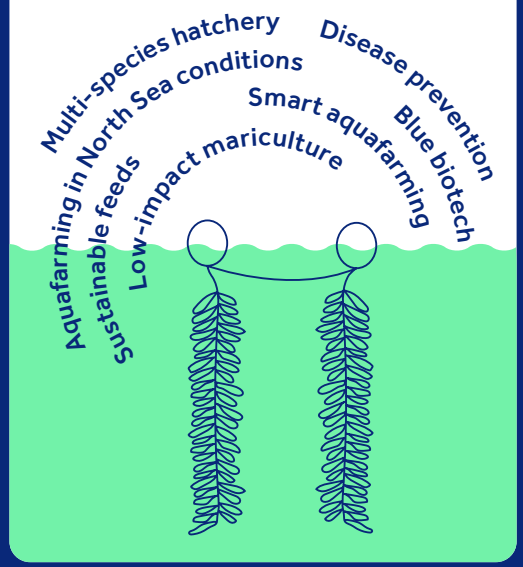
- Environmental footprint reduction
- Sustainable materials
- Biodiversity enhancement
- Nature creation

Contact us for more information

West Flanders Gateway to Europe

The Flemish Coast:
Aquaculture & Blue Biotech

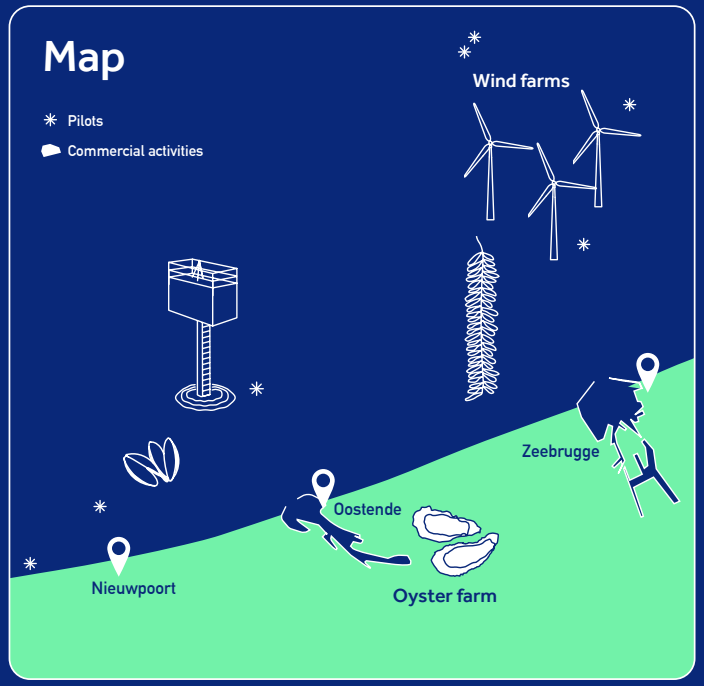
Our expertise



Upcoming technologies

- Integrated multi-trophic aquaculture
- Bioprospecting
- Biorefinery
- Recirculating aquaculture system
- Aquaponics

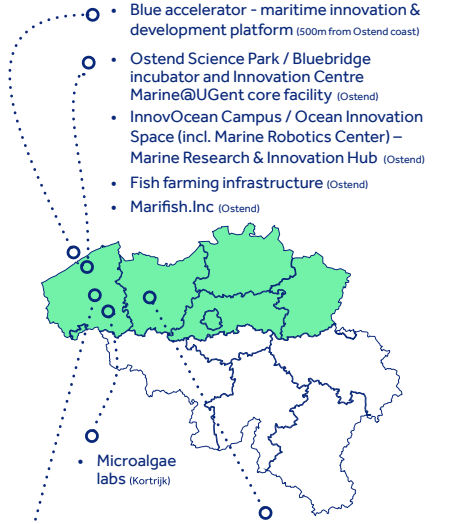
Map



Research roadmap

- Farming
- Harvesting
- Storage & processing (incl. biorefinery)
- Applications
- Environmental impact & ecosystem services

Research & innovation infrastructure



Types of species farmed

Applications of marine species

Cross-cutting themes

Multi-use

- Combined use of marine areas
- Integration into offshore wind farm zones
- Combination with passive fisheries

Smart sea applications

- Data-driven solutions
- Smart applications and AI
- Digitalisation and IoT

Ecosystem-based approach

- Environmental footprint reduction
- Nature conservation and restoration
- Biodiversity enhancement
- Use of sustainable materials

Contact us for more information

West Flanders Gateway to Europe

The Flemish Coast:
Drones

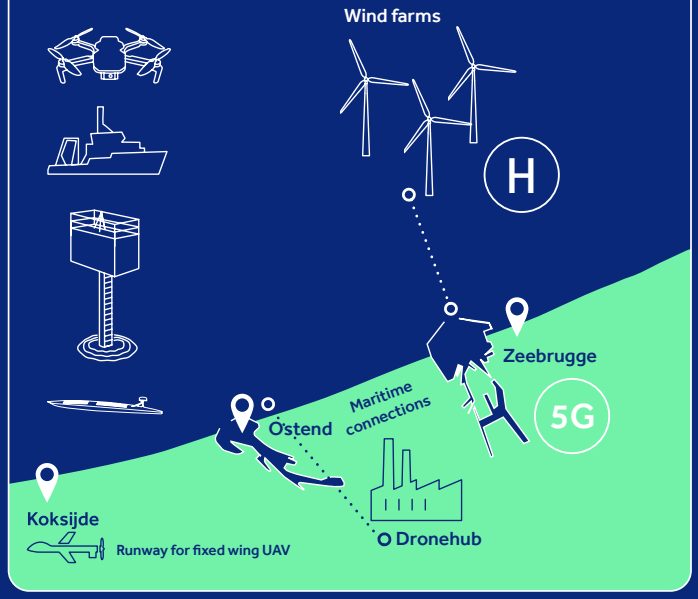
Our expertise

Pioneering legislation
Advanced software development
Cutting-edge technologies
Aerial & aquatic
Unique test facilities

Upcoming activities

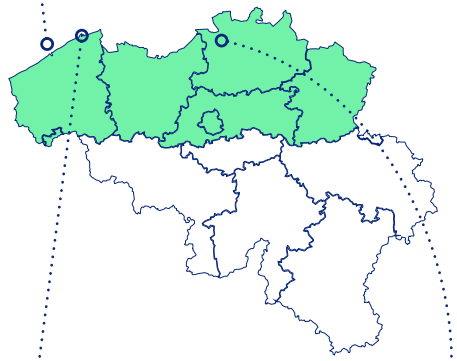
- Environmental mapping and monitoring
- Wind farm inspection
- Onboard deliveries
- Search & rescue
- Aquaculture inspections

Map



Test & research facilities

- Blue Accelerator - maritime innovation & development platform (500m from Ostend's coast)
- Research Vessel Simon Stevin & Zeekat (Ostend)
- Ocean Innovation Space (incl. Marine Robotics Center) (Ostend)
- Port Oostende (Ostend)
- Dronehub Oostende (Ostend)
- Droneport West-Vlaanderen (Ostend)



- Port of Zeebrugge (Zeebrugge)
- UAV Geozone Zeebrugge (Zeebrugge)
- Climate chamber- Sirris (Antwerpen)

Aerial drones

Monitoring & inspection

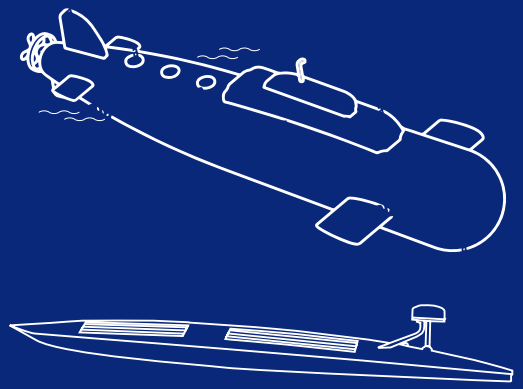
- Detection of marine pollution
- Fast mapping for emergency response and public safety (real-time coastline monitoring)
- Inspection of offshore infrastructure

Safety & security

- Safety in ports (cfr. fire in Port...)
- Inspection/safeguarding European external borders
- Offshore search & rescue (SAR)

Aquatic drones

- Inspection of underwater infrastructure
- Environmental monitoring
- Cleaning up of marine pollution
- Surveying & mapping
- Mine countermeasure
- Patrolling and surveillance



Contact us for more information

West Flanders Gateway to Europe

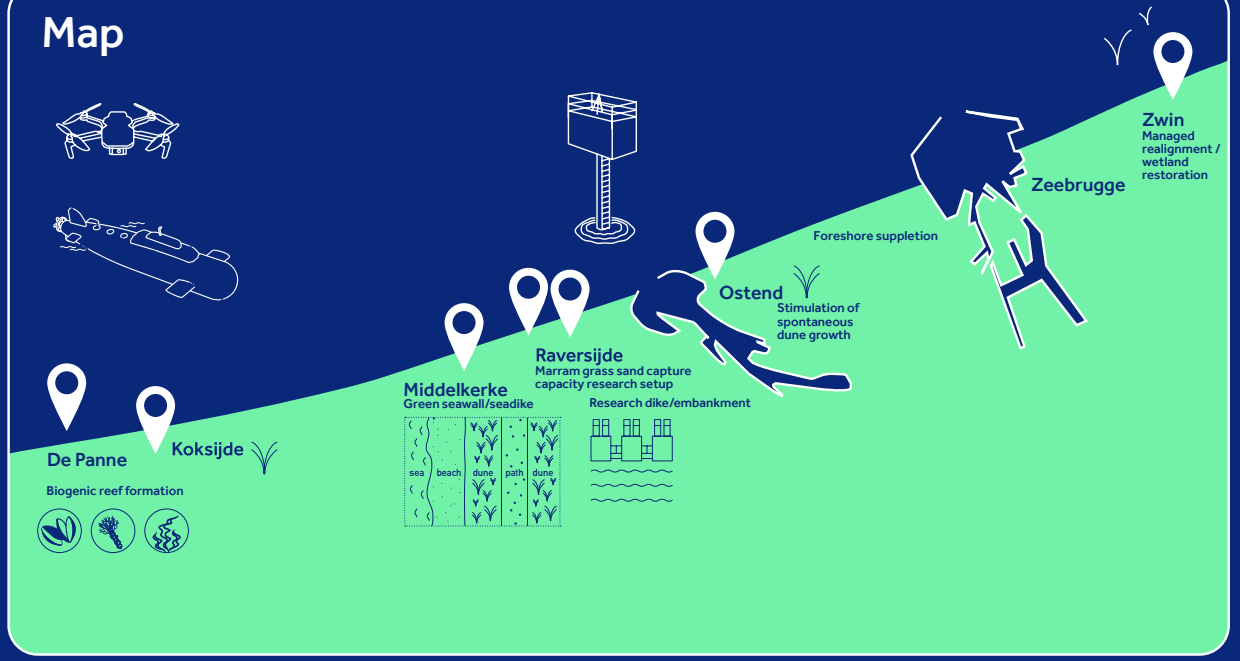
The Flemish coast:
Nature based solutions coastal protection

Our expertise

Upcoming activities

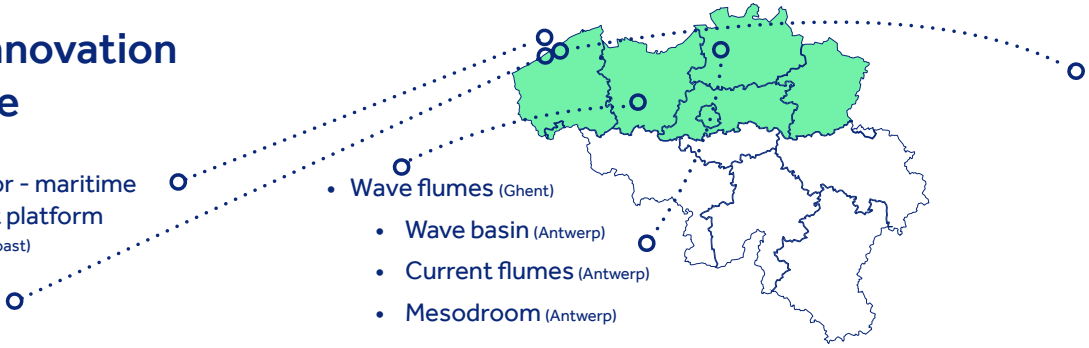
- Use of biodegradable materials to facilitate the growth of organisms
- Design of multi-use infrastructure allowing nature development
- Reuse of dredged material to support the recovery of natural tidal areas
- Scaling up of nature based solutions within coastal zone management

Map



Research & innovation infrastructure

- Blue Accelerator - maritime & development platform (500m from Ostend's coast)
- Living lab (Raversijde)



- Wave flumes (Ghent)
  - Wave basin (Antwerp)
  - Current flumes (Antwerp)
  - Mesodroom (Antwerp)

- InnovOcean Campus/Ocean Innovation Space (incl. Marine Robotics Center) (Ostend)
- Salt water flume (Ostend)
- Flanders Maritime Laboratory (Coastal and Ocean Basin – COB; towing tank) (Ostend)
- Wave flumes (Ostend)
- Wet lab (Ostend)

Cross-cutting themes

Multi-use

- Optimising benefits to multiple users of the area
- Combination with different marine activities sush as blue tourism
- Provision of additional goods and services

Smart sea applications

- Monitoring such as erosion and biodiversity
- Real-time monitoring of the coast line (using drones)
- Early warning systems for flooding
- Preventive maintenance via machine learning (AI)

Ecosystem-based approach

- Reducing environmental footprint
- Nature conservation and restoration
- Enhancing biodiversity
- Use of sustainable materials

Contact us for more information

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