



Inspire

coastal challenges



Lucie COCQEMPOT

IFREMER/EuroGOOS



European Pavilion

Digital Ocean

Nice | France
2 - 13 JUNE 2025

Advancing Observation
of the Land-Sea Interface
with Cost-Effective
Technologies and
Community Engagement



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LandSeaLot

Land-Sea interface:
Let's observe together !

Powered by



International Centre
for Advanced Studies
on River-Sea Systems



ICOS

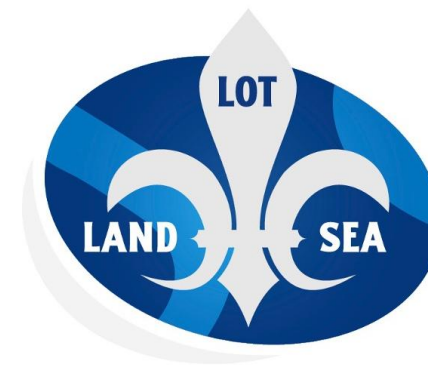
...
Integrated
Carbon
Observation
System



Co-funded by
the European Union



UK Research
and Innovation



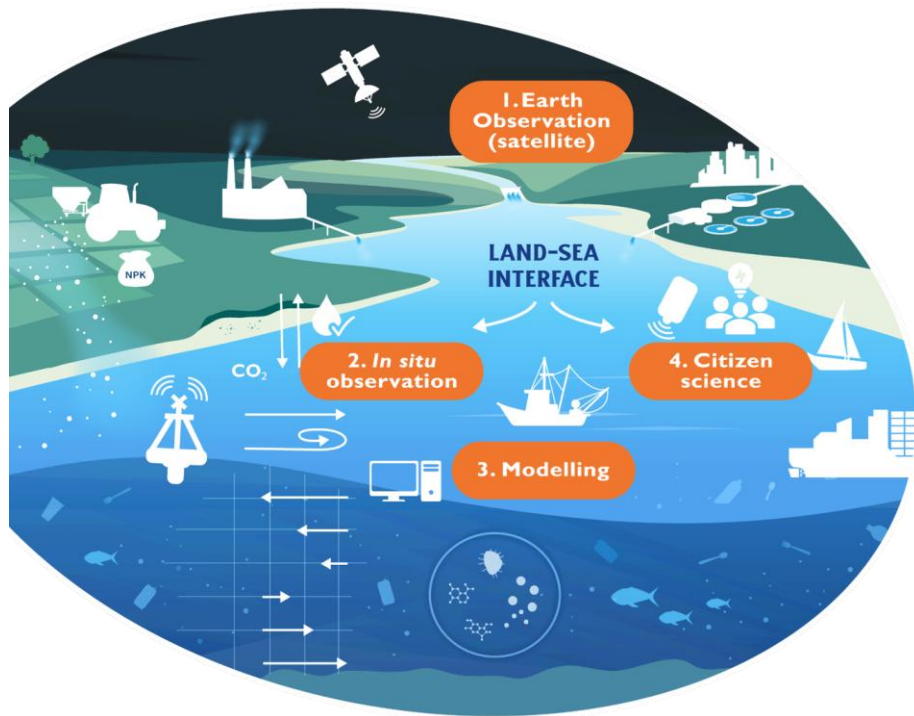
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LandSeaLot has received funding from the European Union's Horizon Europe Framework Programme for Research and Innovation under grant agreement No 101134575. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or European Research Executive Agency. Neither the European Union nor the granting authority can be held responsible for them. UK participants in Horizon Europe Project LandSeaLot are supported by UKRI grant numbers: 10109592 University of Stirling and 10107554 Plymouth Marine Laboratory.



About LandSeaLot



Project Objectives:

LandSeaLot seeks to **integrate, scale-up and enhance existing observation efforts**, conducted by satellites or *in-situ*, including by citizen scientists, **together with numerical simulations**, to better study the **land-sea interface**, where terrestrial and marine habitats meet.





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About LandSeaLot

A European project co-funded by Horizon Europe



- ✓ Funding: € 9,199,778.5
- ✓ EU & UKRI funding





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- ✓ Funding: € 9,199,778.5
- ✓ EU & UKRI funding

- ✓ 20 partners (12 nations)
- ✓ 4 years, starting February 2024



Deltares
COORDINATOR

UNIVERSITY of
STIRLING



NORCE



PML | Plymouth Marine
Laboratory



NO

NL

UK

BE

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PT

FI

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DE

RO

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SMHI





Co-designing a common observation strategy

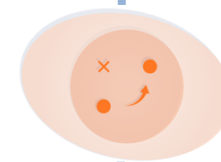
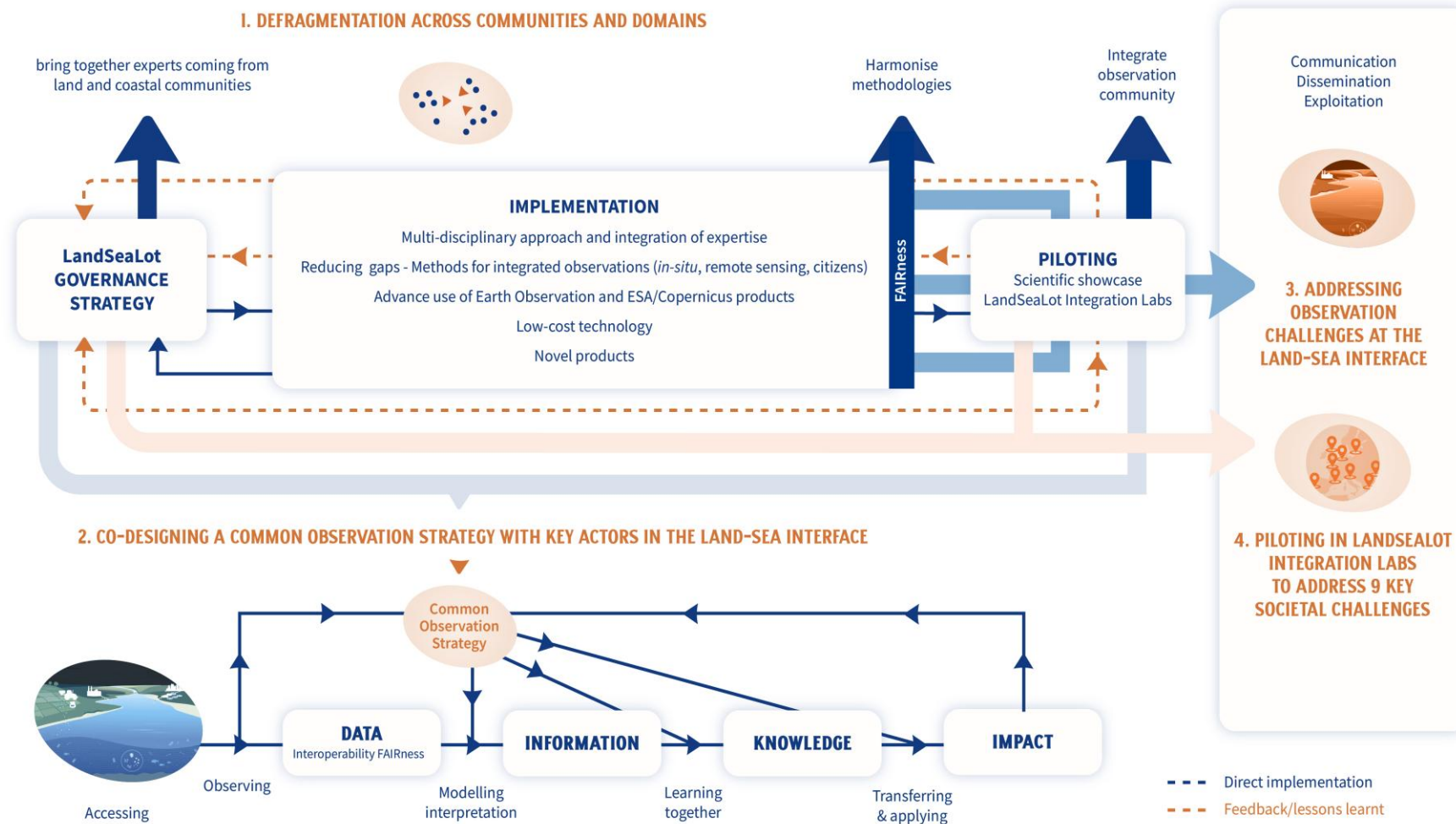
Project Concept:





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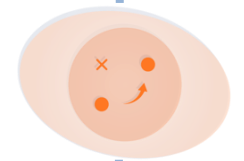
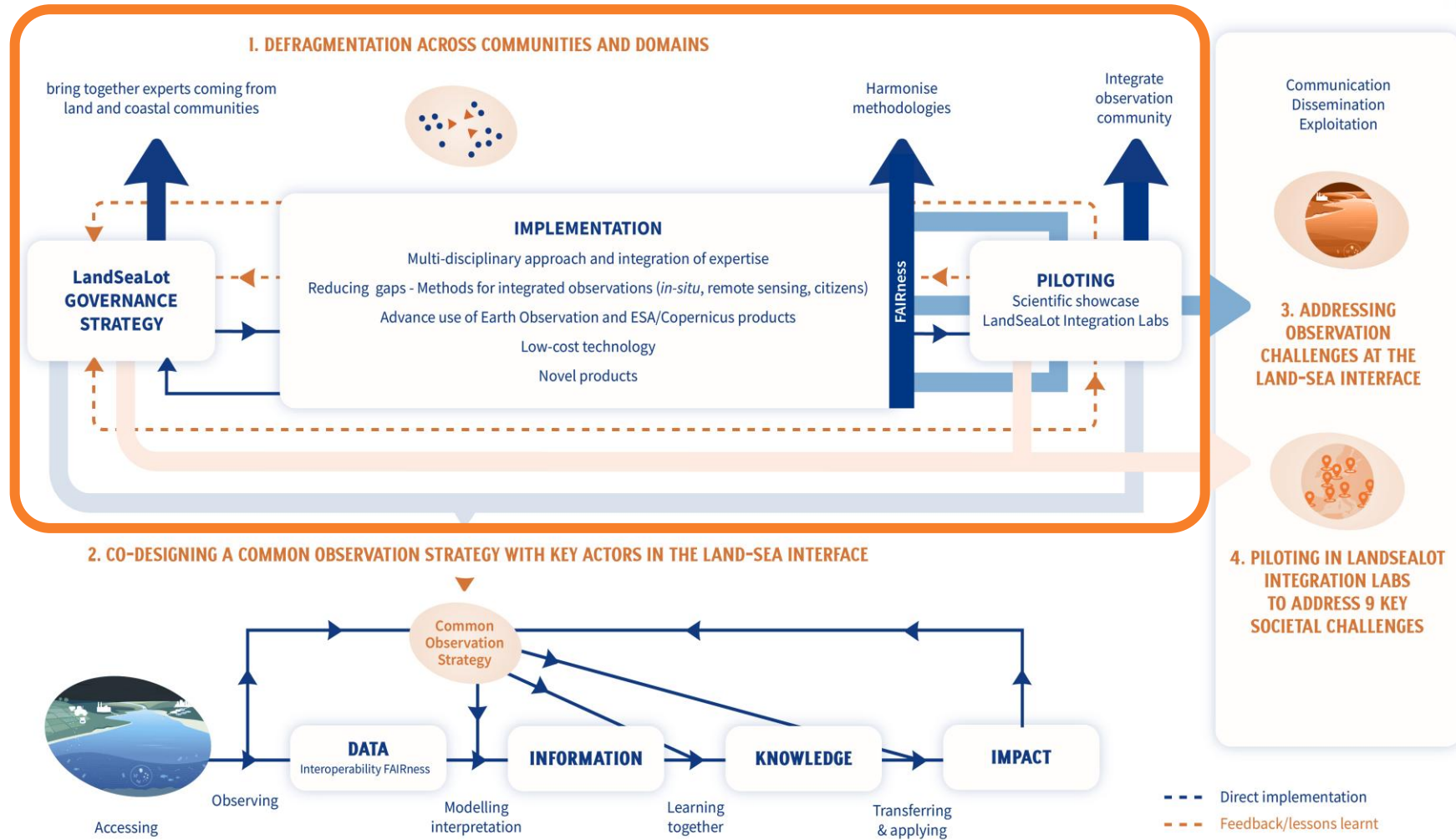
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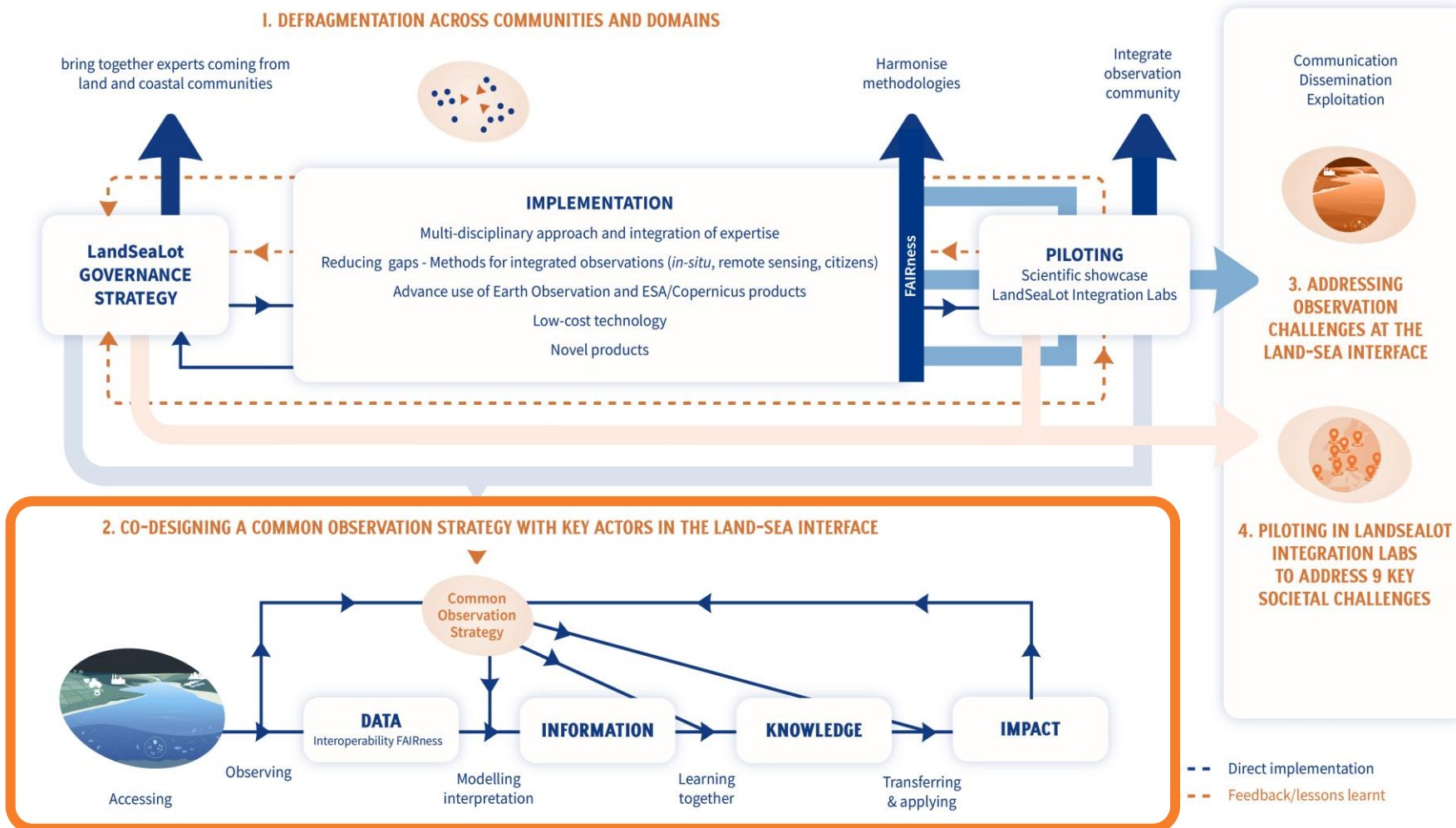
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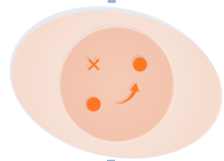
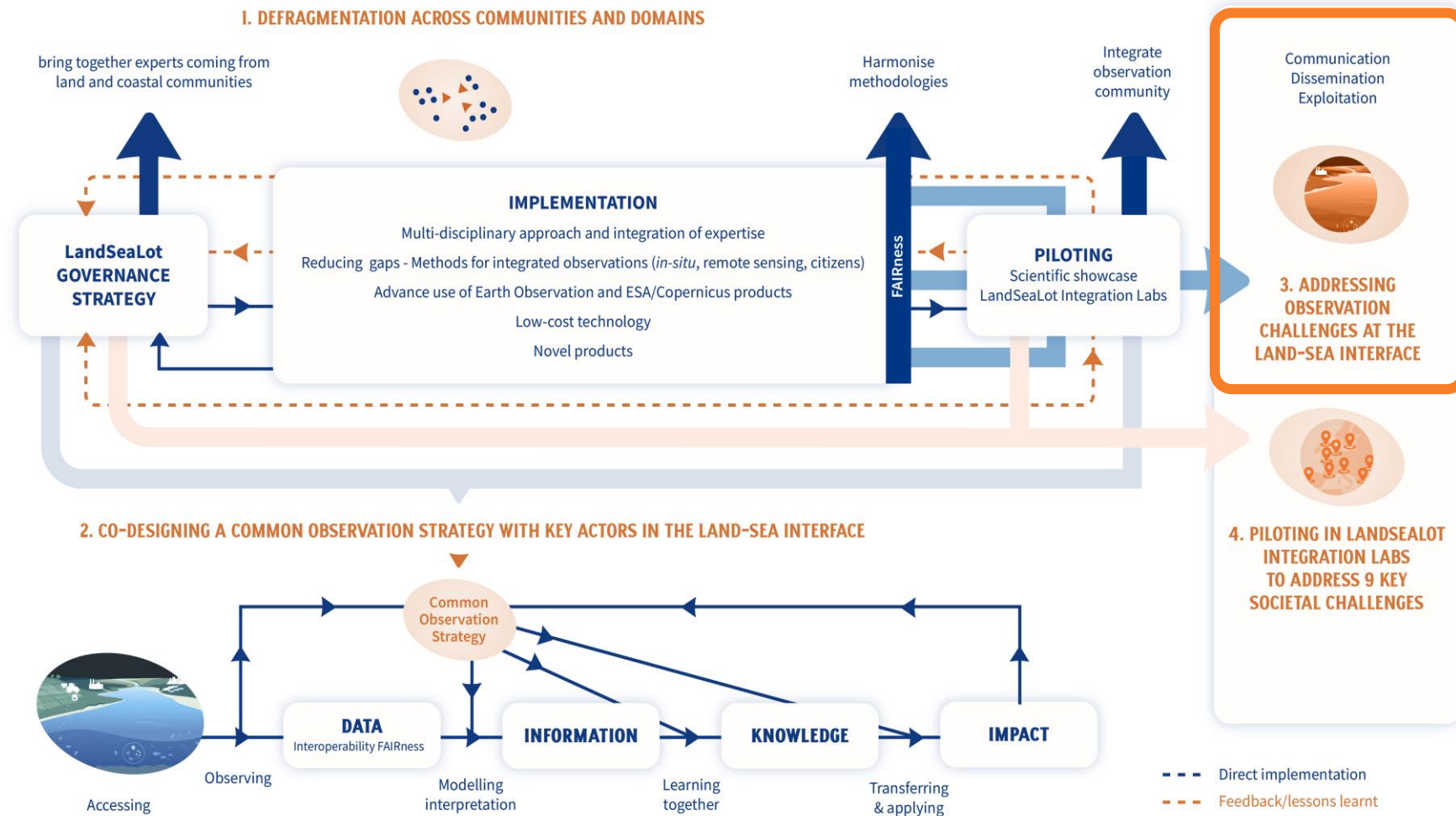
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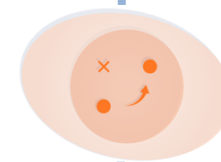
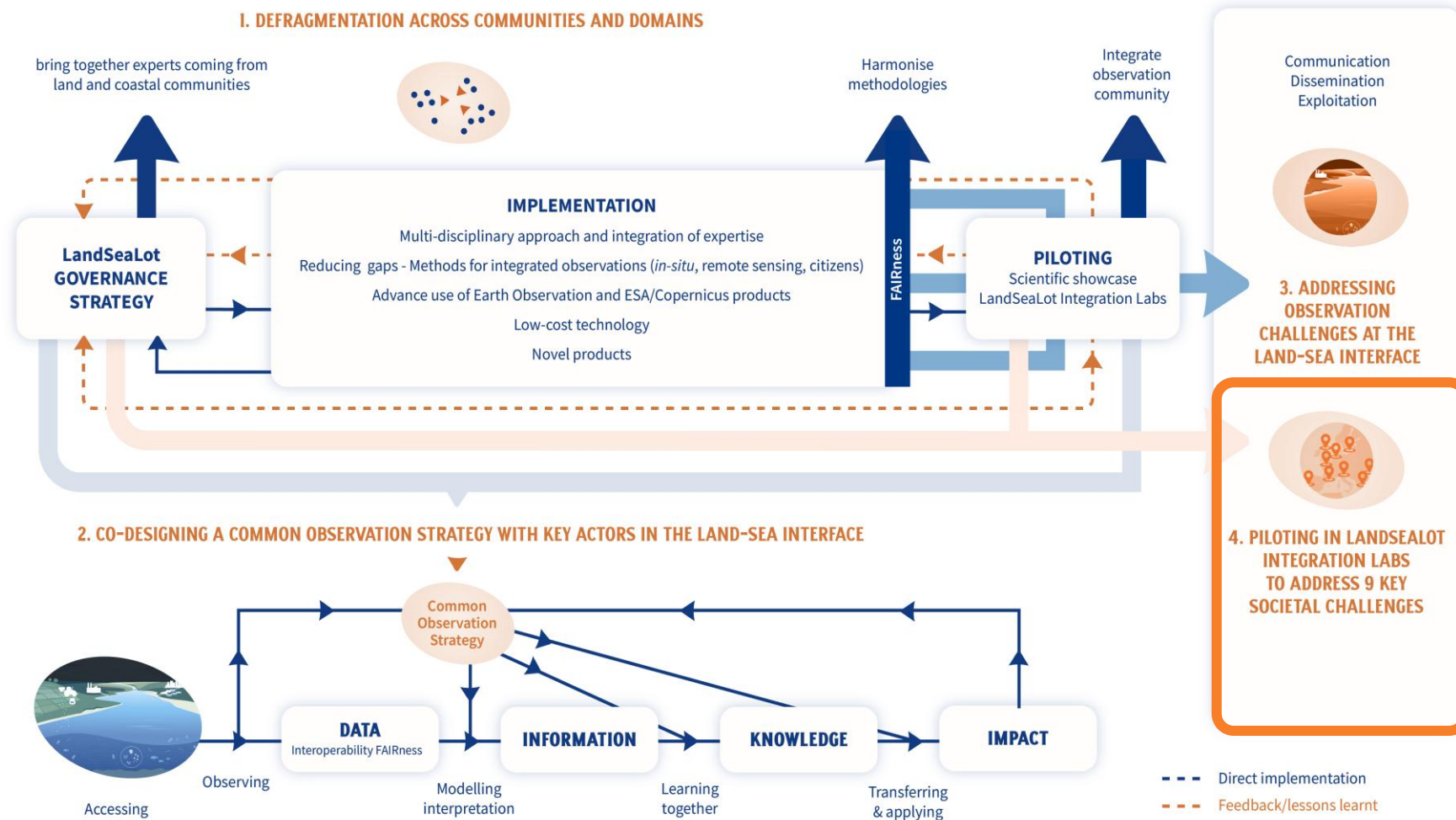
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Project workplan:



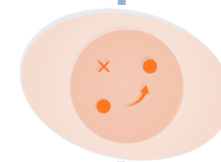


Co-designing a common observation strategy

Project workplan:



WP1
✓ Coordination & Management





Co-designing a common observation strategy

Project workplan:



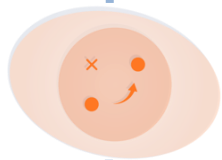
WP1

✓ Coordination & Management



WP2

✓ Common Observation Strategy for the Land-Sea Interface





Co-designing a common observation strategy

Project workplan:



WP1

✓ Coordination & Management



WP2

✓ Common Observation Strategy for the Land-Sea Interface



WP3

✓ Integrated Observation & Model Frameworks





Co-designing a common observation strategy

Project workplan:

Deltares



WP1

✓ Coordination & Management

COVARTEC

Coastal Ocean Valorisation through Research & Technology

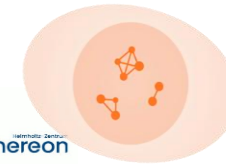


WP2

✓ Common Observation Strategy for the Land-Sea Interface



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WP3

✓ Integrated Observation & Model Frameworks

UNIVERSITY of STIRLING



SMHI

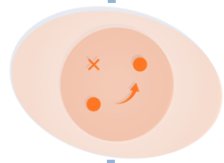


WP4

✓ Increasing the Observation Capacity



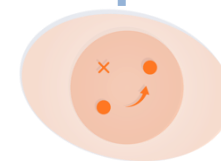
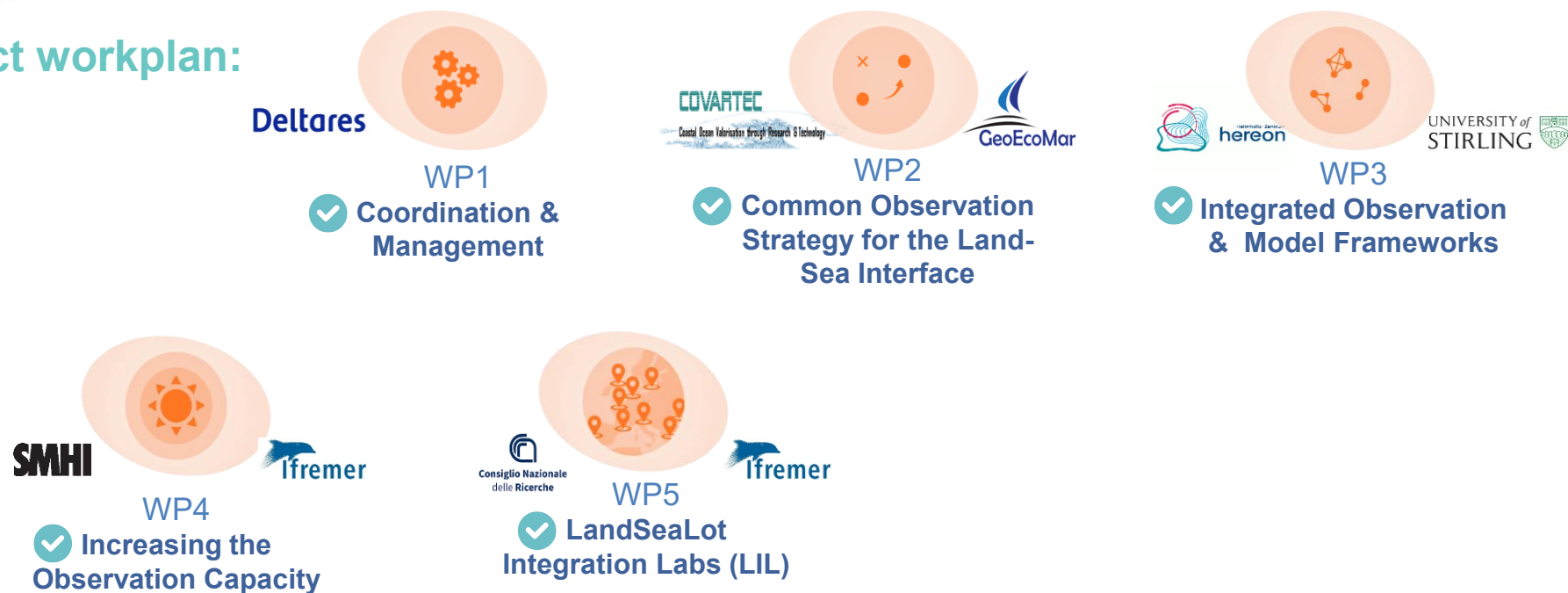
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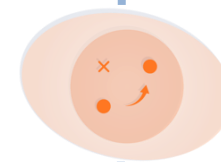
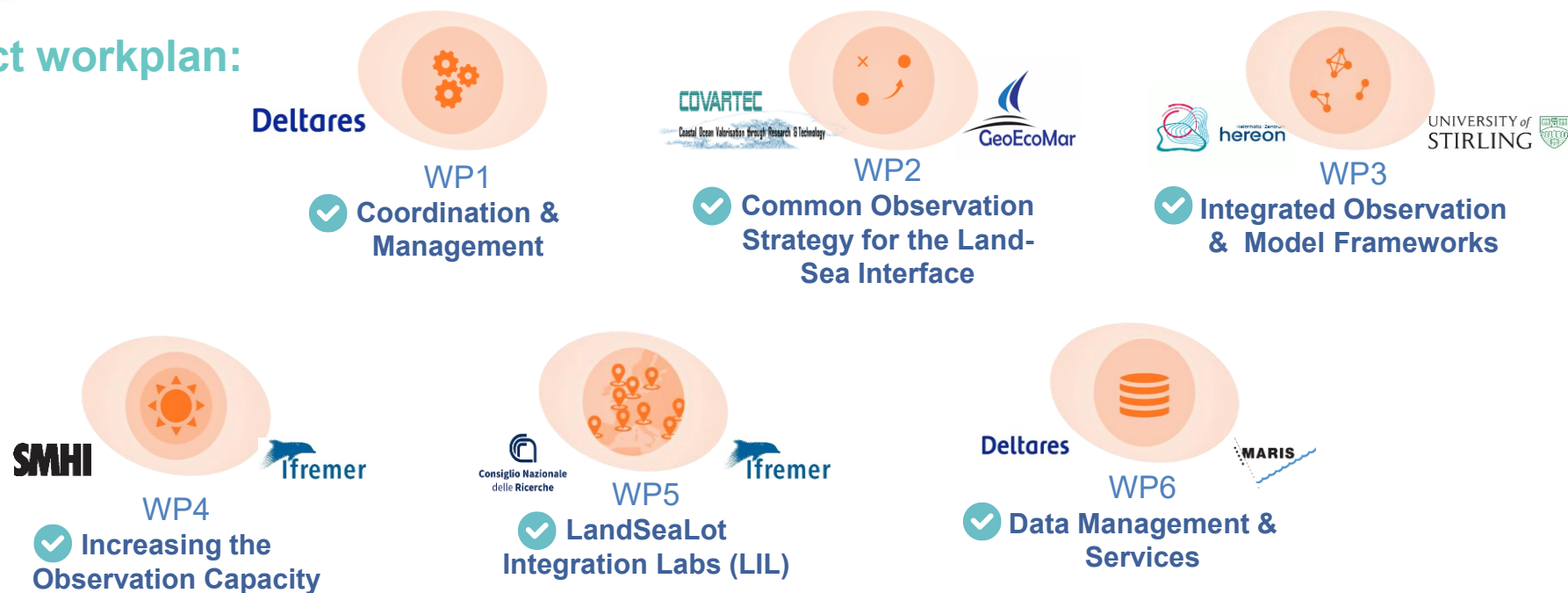
Project workplan:





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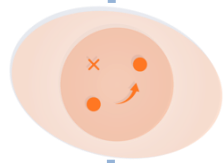
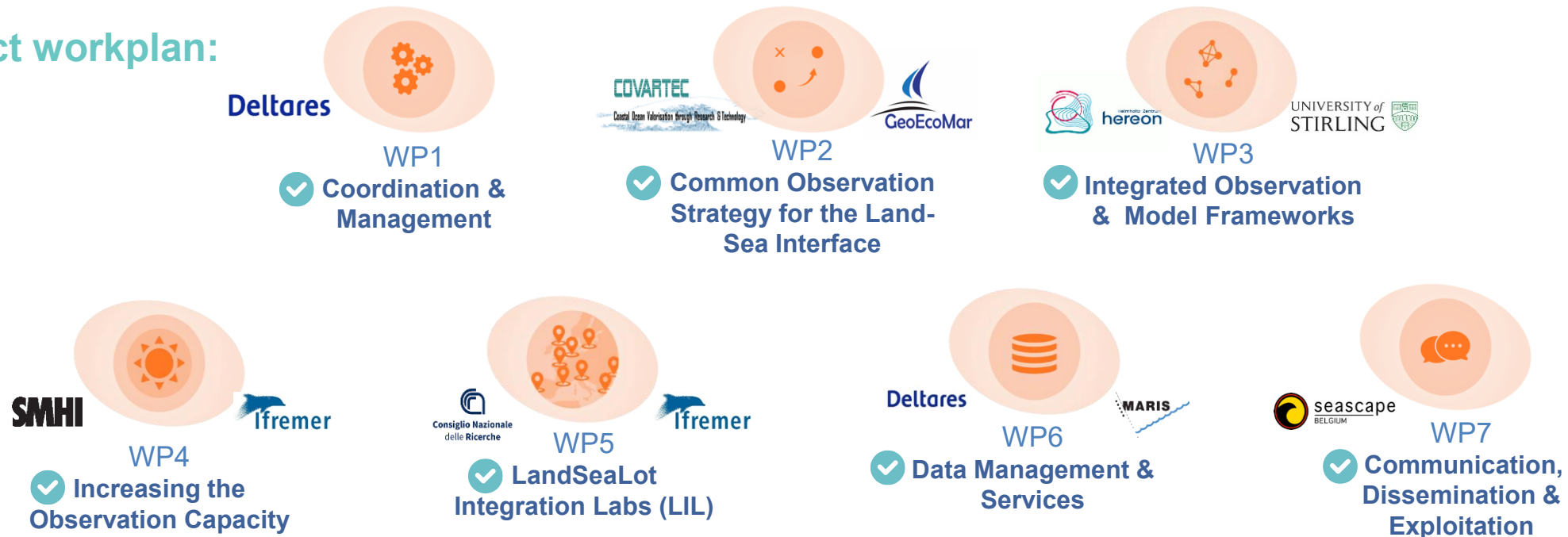
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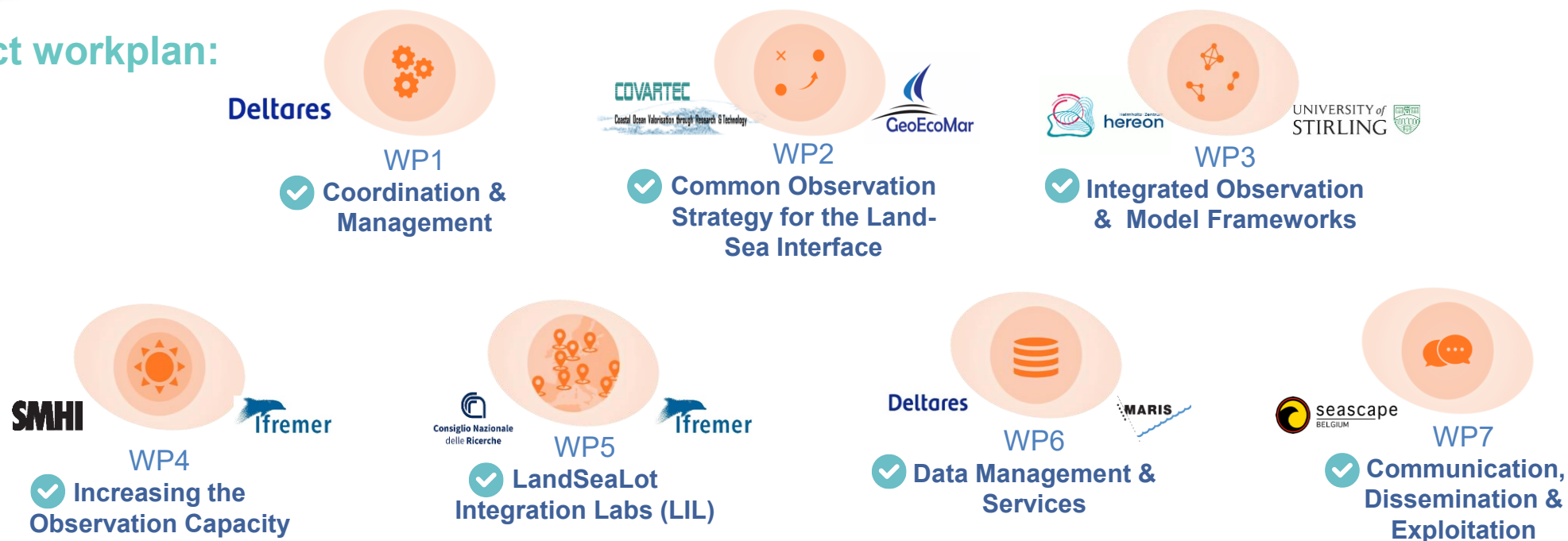
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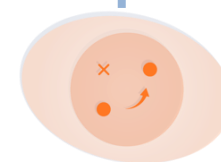
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"We look forward to the output of LandSeaLot in terms of **improved process understanding, monitoring and prediction capabilities** for a wide range of phenomena impacting coastal populations".

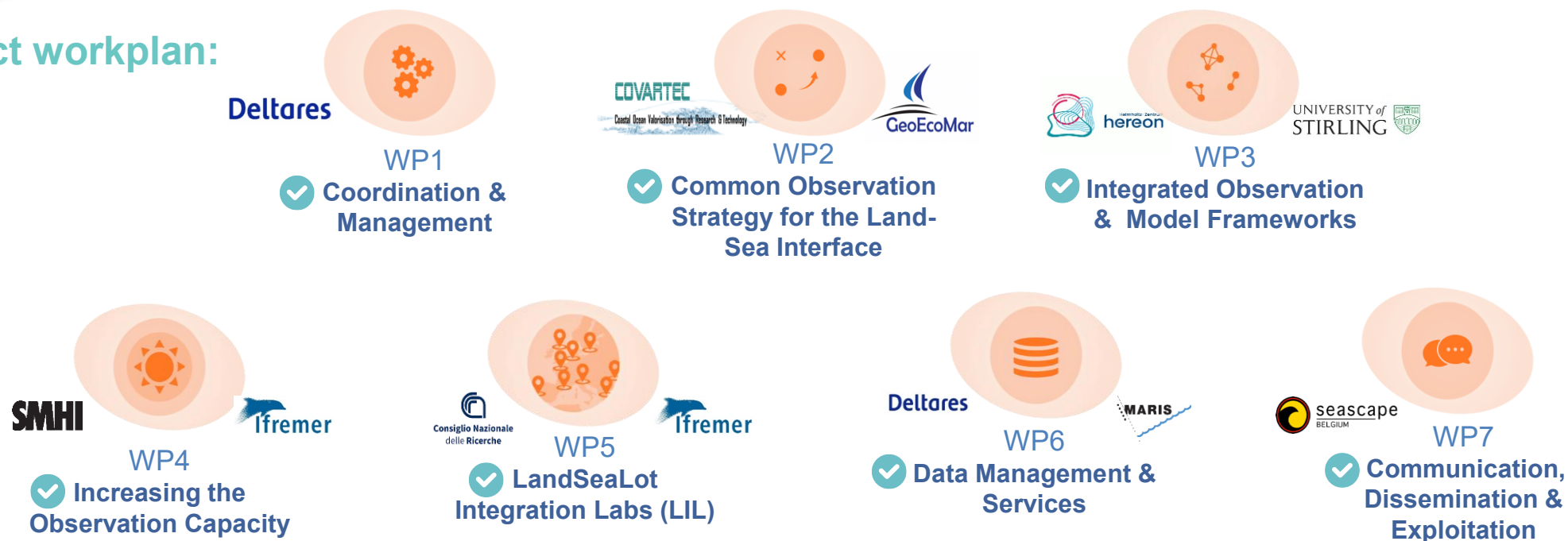
European Space Agency





Co-designing a common observation strategy

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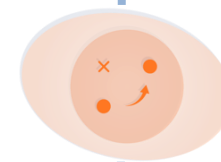


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“Observations within LandSeaLot would certainly **enable us to concentrate on assessments rather than handling information**”

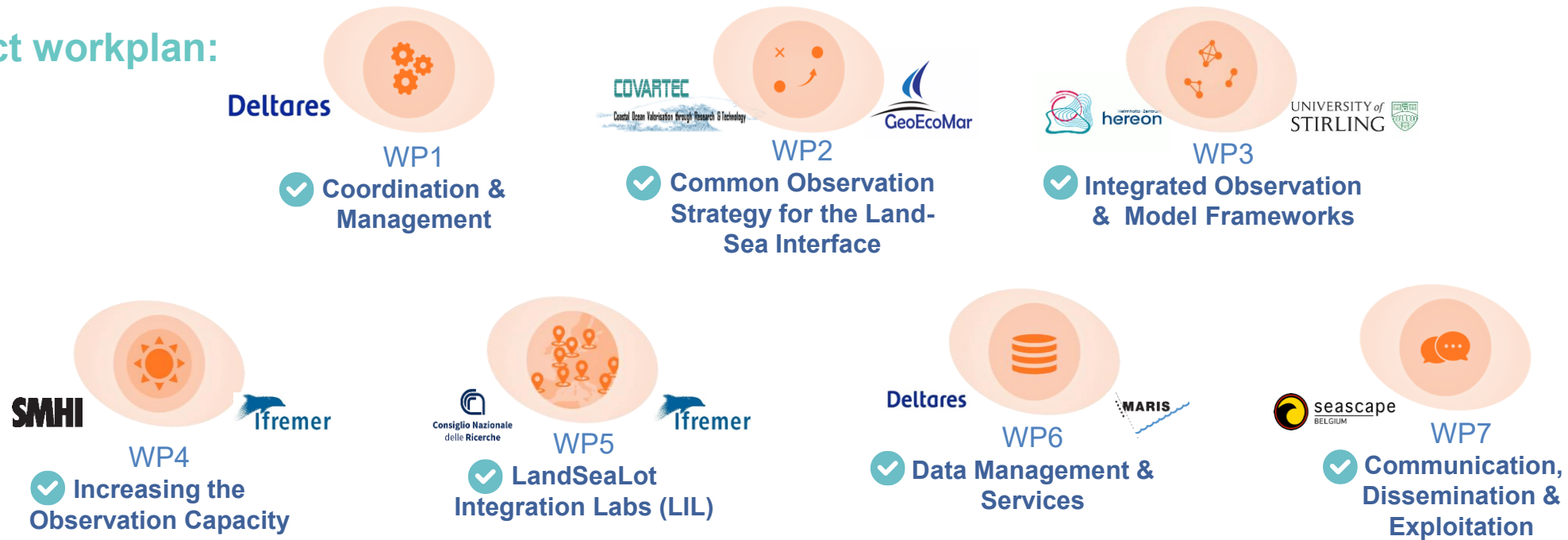
OSPAR & HELCOM





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OSPAR & HELCOM

"LandSeaLot will help define how the land-sea interface can be better observed and **how the new observations will be easily integrated as new inputs into our suite of models**"

EDITO ModelLab





Engaging key actors & communities



Target Stakeholder Groups:





Engaging key actors & communities



Target Stakeholder Groups:

✓ LandSeaLot Co-design Forum

- **Long-term EU marine data services & relevant EU initiatives**
Copernicus, EMODnet, European Digital Twin Ocean, EuroGOOS, etc
- **Water quality reporting organisations:**
EEA, Regional Sea Conventions (i.e., OSPAR, HELCOM, Black Sea Commission, Barcelona Convention), national Member States reporting to MSFD & WFD
- **European Space Agency (ESA)**
- **Local and regional stakeholders in LandSeaLot Integration Labs (via Citizen Forum)**
- **EU & international policy and governance bodies**
European Commission (DG ENV, DG MARE, DG DEFIS), International Ocean Commission
- **International ocean observing efforts & UN Agenda 2030 initiatives**
GEOSS, UN Decade of Ocean Science and UN Decade of Ecosystem Restoration
- **Research Infrastructures**
JERICO, DANUBIUS, ICOS-ERIC and other relevant environmental RIs





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- **Researchers & data scientists and managers**
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Data managers working in marine and freshwater domains





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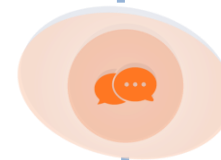
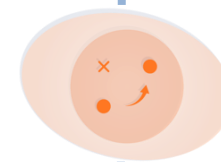
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✓ LandSeaLot Citizen Science Hub

- **Users & managers of the land-sea environment**
Delta & estuaries management organisations, Protected Area managers, Port Authorities, fishermen & aquaculture professionals, agricultural communities in delta areas affected by saltwater intrusion and reduction of freshwater availability (e.g., farmers), communities affected by the loss of land (e.g., coastal tourism destination management organisations and operators, inhabitants of urban areas exposed to extreme events), local NGOs
- **Citizen science leaders & multipliers**
Citizen scientists, citizen science networks and organisations, TEM associated marinas and educational organisations
- **Innovators (SMEs)**
Producers and/or distributors of low-cost remote sensors and technologies
- **Mission Lighthouses & Blue Parks initiatives:**
CSA supporting Mission Lighthouses and Blue Parks initiatives





Piloting & Testing



LandSeaLot Integration Labs:

Demonstrate how increased observation capabilities and innovative integrative methodologies provide essential knowledge to **address nine key societal challenges** at the LandSeaLot Integration Labs (LILs)





Piloting & Testing

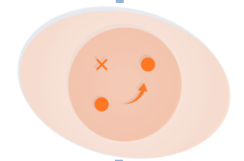
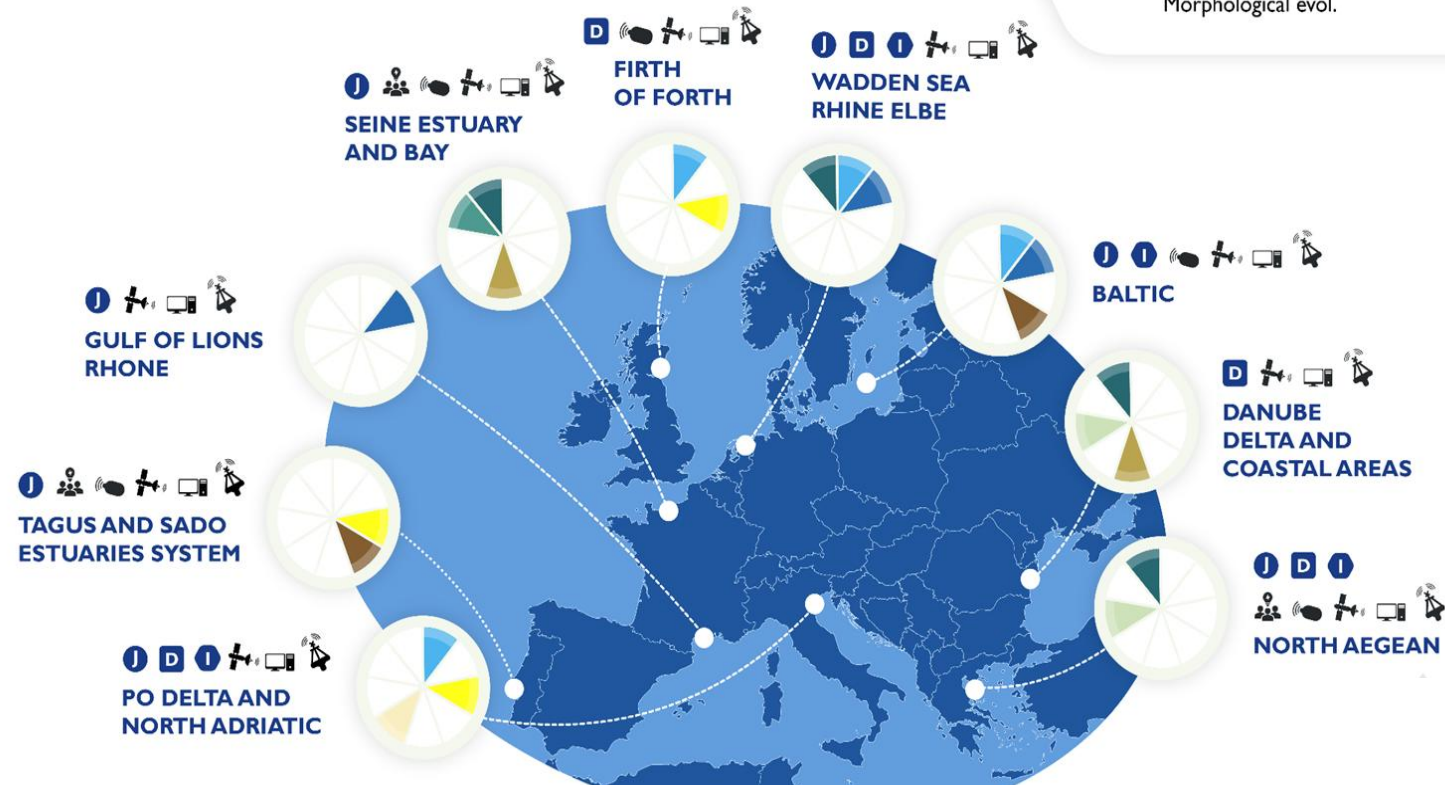
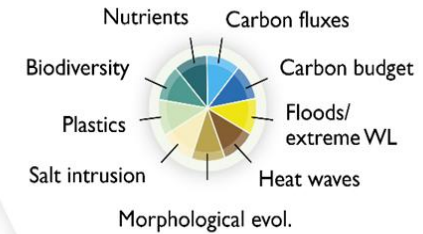
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LEGEND

- J JERICO-RI
- D DANUBIUS-RI
- I ICOS-ERIC
- CS Citizen science
- LS Low-cost sensors
- EO Earth observation
- NM Numerical modelling
- IS In situ observation

Key societal challenges

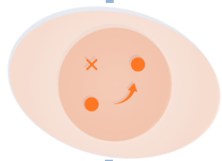




Join the LandSeaLot Fora & Communities!



LET'S OBSERVE
TOGETHER!



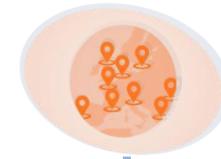
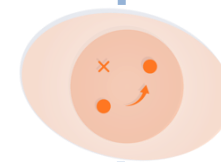


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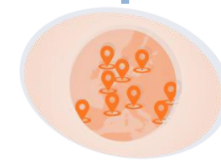
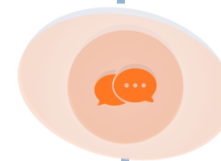
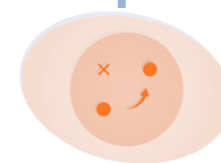
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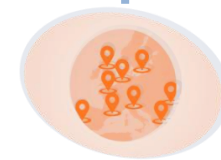


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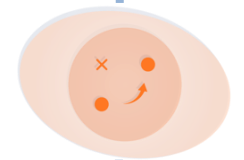


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If yes is the answer, we want to hear from you!

Visit landsealot.eu
and fill out the stakeholder contact form





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Thank you

