




Flood infrastructure
Asset management & Investment in
Renovation, adaptation, optimization and maintenance

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Outline

- The motivation for FAIR
- The consortium and WP structure
- What are we hoping to achieve
- How we propose to achieve it
- Next steps



The motivation for FAIR

Across the North Sea Region (and globally):

- **Infrastructure is aging:** Sunk investment in the England alone is estimated at £20bn
- **Performance is uncertain:** Climate change and deterioration mean performance may no longer be at the desired level.
- **But money is limited:** How can we 'best' protect people, communities, essential services and the economy from the impacts of flooding with the resources we have.





The FAIR Consortium

AGENTSCHAP PLANTEN, DIERENVERLENING en KUST
 Vlaanderen
 Rijkswaterstaat
 Ministerie van Infrastructuur en Water
 Landbouw, Natuur, Duurzaamheid en Overheid

UNESCO-IHE
 Institute for Water Education
 Deltares
 Institute for Water Education
 Wageningen University & Research

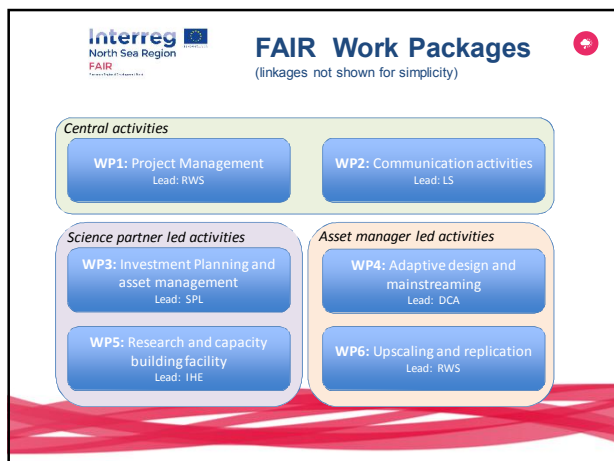
Asset managers: Bringing real problems and challenges



Science partners: Bringing domain expertise and innovations

Ministry of Environment and Food of Denmark
 Coastal Authority
 Provincie van Schiedam en de Krimpenerwaard
 NVE
 Länsstyrelsen Skåne
 HELSINGBORG

SAYERS
 TUHH
 Technical University of Hamburg



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What are we hoping to achieve?

We have set ourselves clear and ambitious objectives to:

- Help **do more for less** – through better targeting of investment
- Encourage **multi functionality** – and discourage mono-functionality
- Extend **asset life** – through smarter maintenance and renovation

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How we will achieve these objectives

Despite the heterogeneity of the NSR, asset managers face common challenges:

- **Where to act:** Which asset would yield the greatest benefit (and reduce risk most)?
- **When to act:** Is action required now, or can investment be postponed?
- **How to act:** Should we collect more data or intervene? If we intervene what approach is best?

By **sharing experience and knowledge** FAIR will promote improved practice across the NSR

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How we will achieve these objectives

The **proof is in the eating....**

FAIR includes **Asset Owners** and **Science Partners**. This provides an opportunity to share and improve 'real world practice' across a **series** of quite different **demonstration sites....**

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Denmark
Danish Coastal Authority



Netherlands
Rotterdam waterboard



A varied set of pilot sites

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Belgium
MDK



Germany
LSBG, Hamburg



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Sweden
Länsstyrelsen Skåne



The Netherlands
Rijkswaterstaat



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Work in progress

Results so far:

- An inventory of procedures, data and tools used nationally
- Framework for asset management
- Maturity analysis: where are the weakness and the strengths, where are the opportunities for improvement

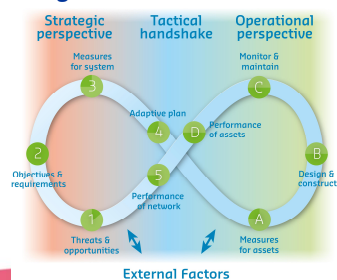
Immediate next steps:

- Adaptive designing including opportunities for multifunctionality

Suggest innovations and provide science support

- The Asset Owners lead the pilots with the Science team providing suggestions and guidance

Assetmanagement framework



Project performance

Output

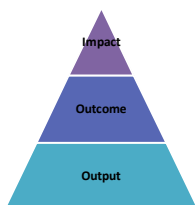
Outputs are the direct immediate term results associated with a project (often the deliverables of the project). Outputs are measurable and readily determined.

Outcome

Outcomes refer to the medium term consequences of a project. An outcome is a change that occurred because of the outputs.

Impact

Impacts are the long-term or indirect effects of the outcomes. Ideally, impacts aligns with the strategic objectives of an organization.



Upscaling and Replication

Collaboration with and between project partners

Early involvement: from stakeholders to shareholders

