



TOWARDS ACCESSIBLE DATA SETS FOR RESEARCH AND INNOVATION

EUROS Seminar Presentation | Sjoerd van der Putten

TNO innovation
for life

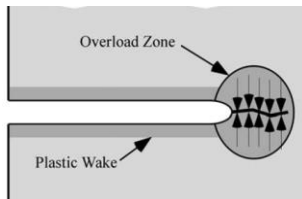
WHAT ABOUT TNO

- › TNO connects people and knowledge to create innovations that boost the sustainable competitive strength of industry and well-being of society.

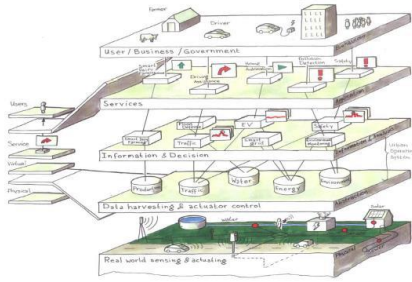


APPLIED RESEARCH IN OFFSHORE WIND

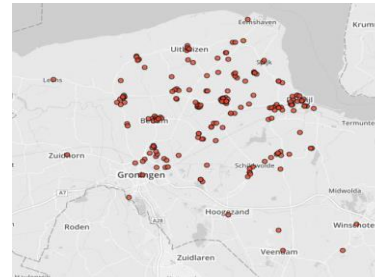
- › Optimal monitoring strategy for clusters of similar structures during operation
- › Application of probabilistic methods for inspection optimization
- › Integrity of sensor systems in highly dynamic conditions and long term sea water exposure
- › Research and demonstration of new inspection methods, self-healing technology, robotics
- › Effect of variable loading on fatigue degradation of (welded) connections in sea water



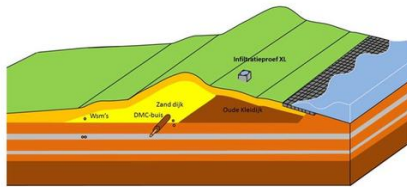
APPLIED RESEARCH AND A LARGE AMOUNT OF DATA



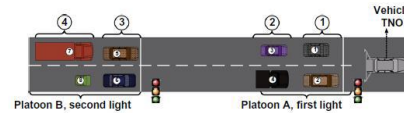
Integrity of
water and gas
pipes



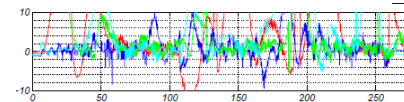
Real-time
monitoring of
350 buildings in
Groningen



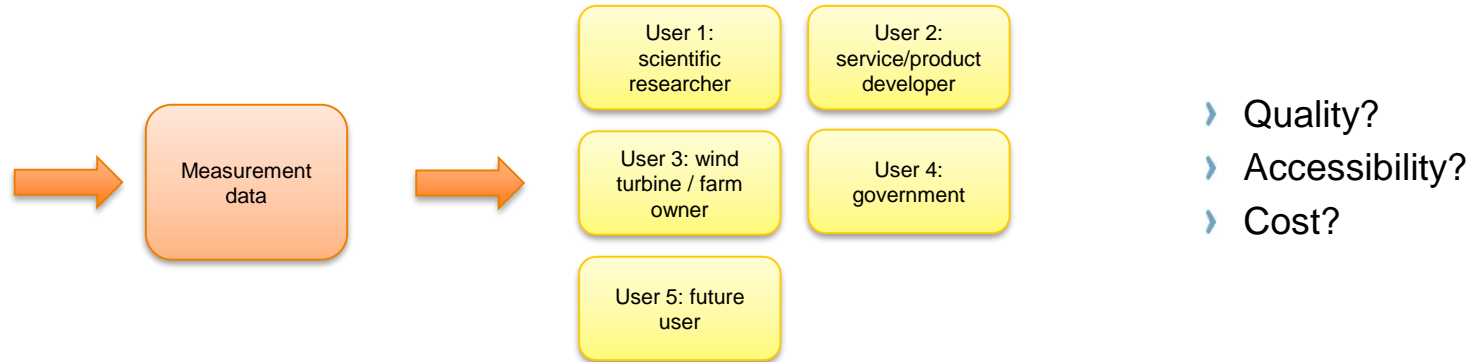
LiveDijk
monitoring



Cooperative
automated driving

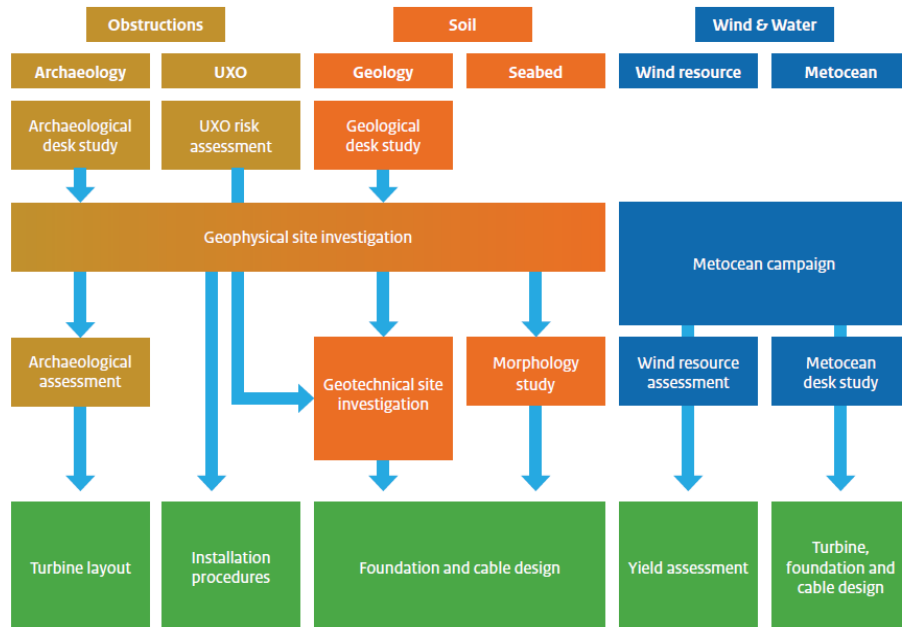


WINDFARM DATA AVAILABLE FOR PUBLIC



- › Test site Alpha Ventus
- › Offshore wind farm Egmond aan Zee OWEZ
- › ...
- › Various wind and wave measurement locations

TNO STUDY ON DATA COLLECTED DURING WIND FARM ZONE STUDIES

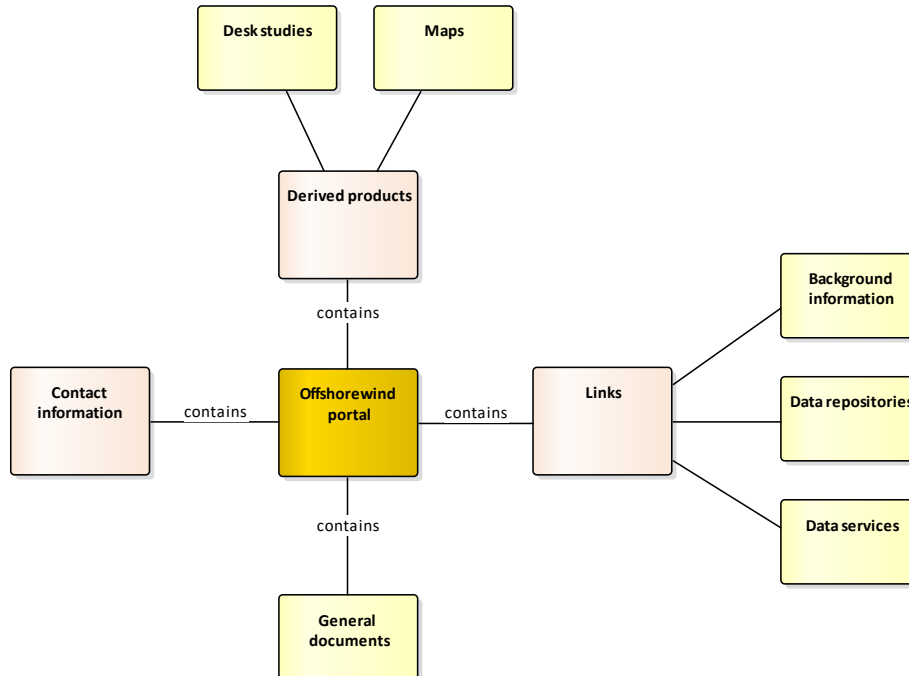


RVO picture

European Open Science Cloud (EOSC) principles

- › To enable users and society at large to reap the benefits of data-driven science
- › To make science more efficient and productive and let millions of researchers share and analyze research data in a trusted environment across technologies, disciplines and borders.
- › A virtual environment with free at the point of use, open and seamless services for storage, management, analysis and re-use of research data, across borders and scientific disciplines

TNO STUDY ON DATA COLLECTED DURING WIND FARM ZONE STUDIES



- › In order to be useful for research, data should be Findable, Accessible, Interoperable and Reusable
- › Data as open as possible and as closed as necessary
- › A one-stop-shop for all offshore wind related data (...)

DUTCH OFFSHORE WIND DATA PLATFORM INITIATIVE

- › Offshore wind is more and more digitalized via the introduction of sensors and sensor systems that serve multiple purposes and are mainly focussed on wind farm development and operation
- › Large amounts of data are produced and will be produced in the future with several potential user types
- › TNO and ECN aim to assist industry and government to improve data quality and manage ownership, security, sharing and use of data in general
- › Set up a Dutch Offshore Wind Data Platform in the Netherlands:
 - › Take care of legal aspects and perform quality check
 - › Provide easy access for different type of users
 - › Connect to (other) European initiatives
 - › Start simple



A nighttime photograph of a city street. On the left is a brick building with lit windows. In the center, a modern building with a curved facade and glass panels is illuminated. A long-exposure light trail of a green vehicle is visible, curving across the scene. The overall atmosphere is urban and modern.

› **THANK YOU FOR YOUR
ATTENTION**

Take a look:
TIME.TNO.NL

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