Kartverket

National report Norway

ARHC11

9 + 10 November 2021, Virtual

Marine Base Maps for the Coastal Zone, Norway

No: Marine grunnkart i kystsonen

- The *Marine Base Maps for the Coastal Zone, Norway* project was officially announced October 2019.
- 3 years duration as a pilot project, focusing on three locations along the coast.
- .. then hopefully established as a program in 2023.
- The Norwegian Hydrographic Service (NHS) leads the pilot.
- Partners:
  - Geological Survey of Norway (NGU)
  - Institute of Marine Research (HI)

https://www.kartverket.no/en/Prosjekter/marine-grunnkart-i-kystsonen/

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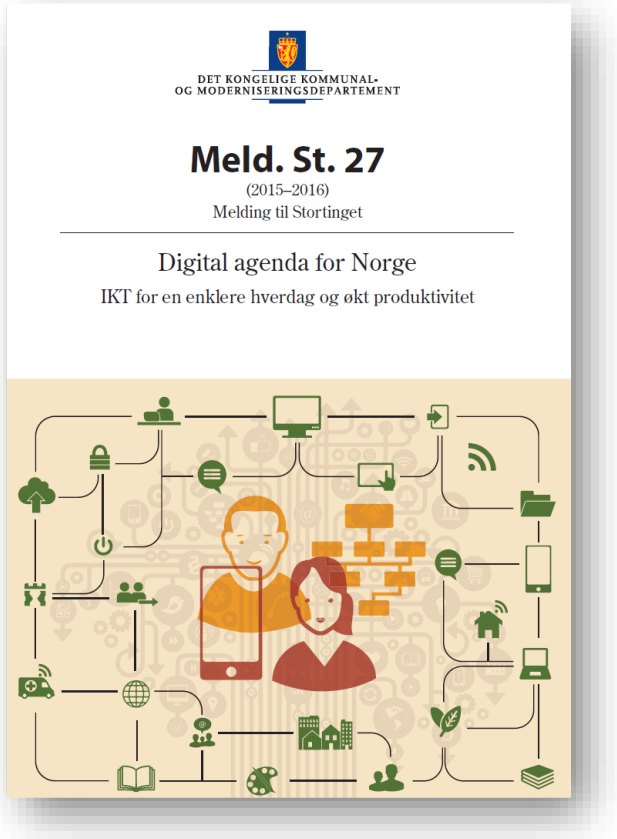
National Geodata coordinator

- Geodata act
- Geodata strategy
- Digital agenda

- Key to digitisation and value adding in public and private sector



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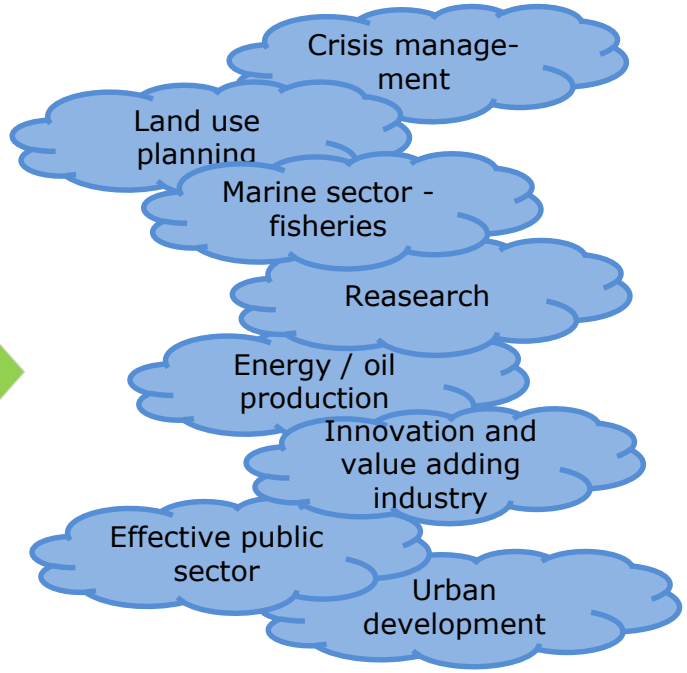
Authoritative

Unless we provide stable, trustworthy data for free with easy access; users, public or private, will not use the NSDI products. As a result their investments may fail.

Data owners

National geoportal

National geodata coordinator



Users – trust is needed!!!

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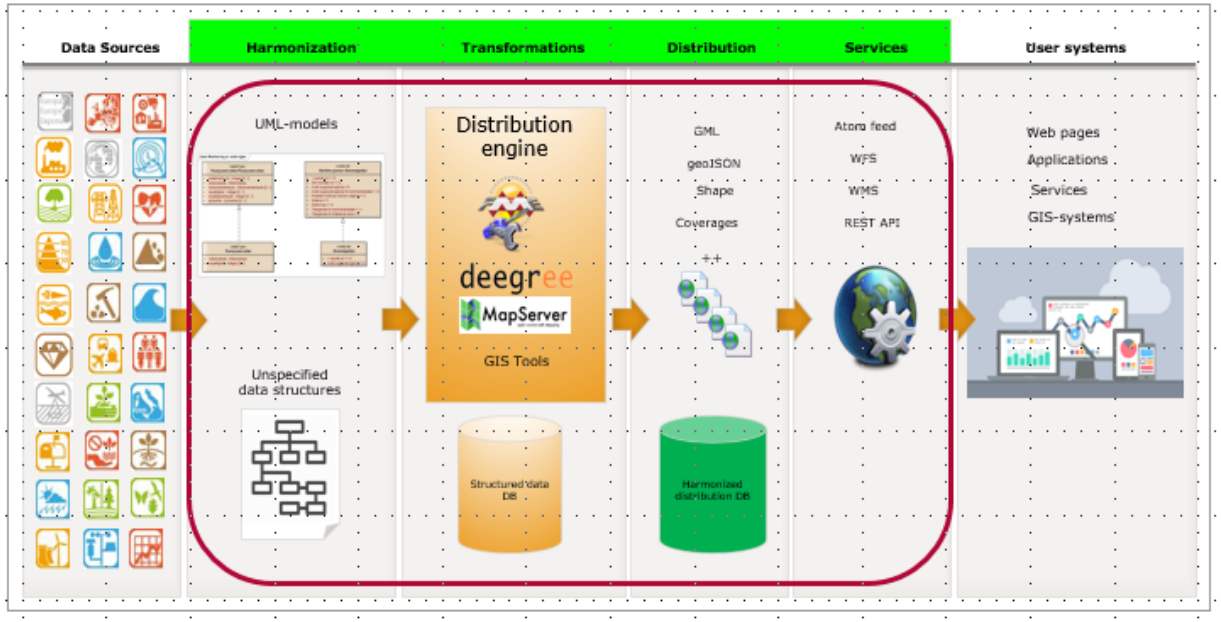
Marine base maps

The data foundation

Key elements:

- Thematic datasets provided by the corresponding sectoral authority (data owners)
- Data available through standardized geospatial services by the individual data owner. (Mainly OGCs WMS, WMS-T, and WFS at the moment).
- Datasets and services documented by the data owner through metadata registrations in the national SDI (official announcement / productification of a dataset / service)
- Terminology and cartography harmonized and adjusted to the user needs



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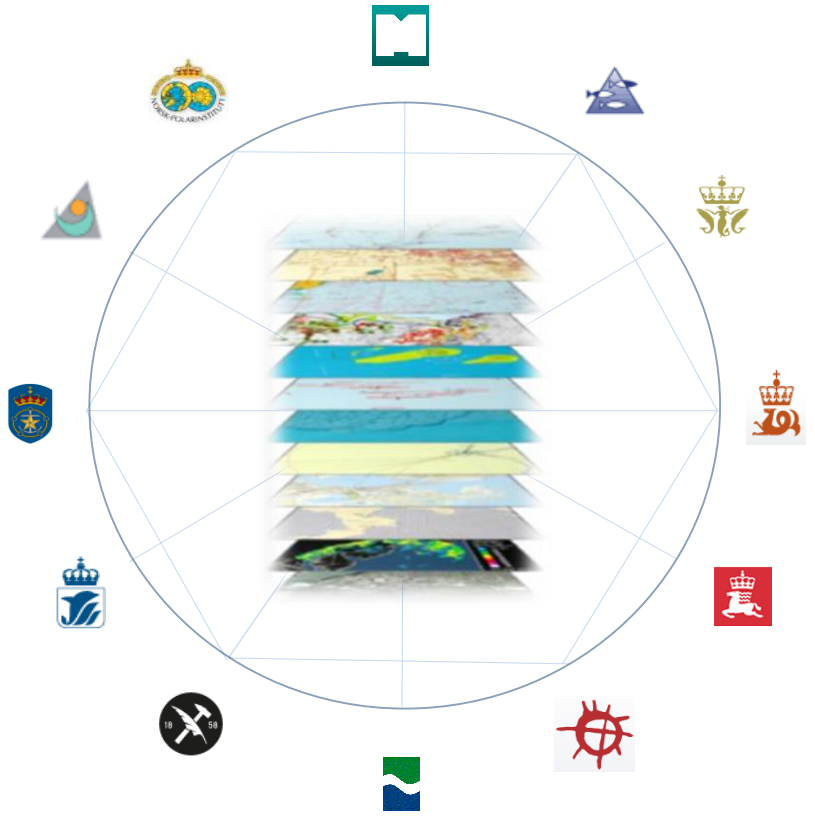
Marine base maps

Support the marine spatial planning process in Norway with authoritative data

Main stakeholders

- Norwegian Environment Agency
- Norwegian Mapping Authority
- BarentsWatch
- Directorate of Fisheries
- Institute of Marine Research
- Norwegian Coastal Administration
- Norwegian Maritime Authority
- Norwegian Petroleum Directorate
- Petroleum Safety Authority
- Norwegian Radiation Protection Authority
- National Institute of Nutrition and Seafood Research
- Norwegian Polar Institute
- Norwegian Mapping Authority



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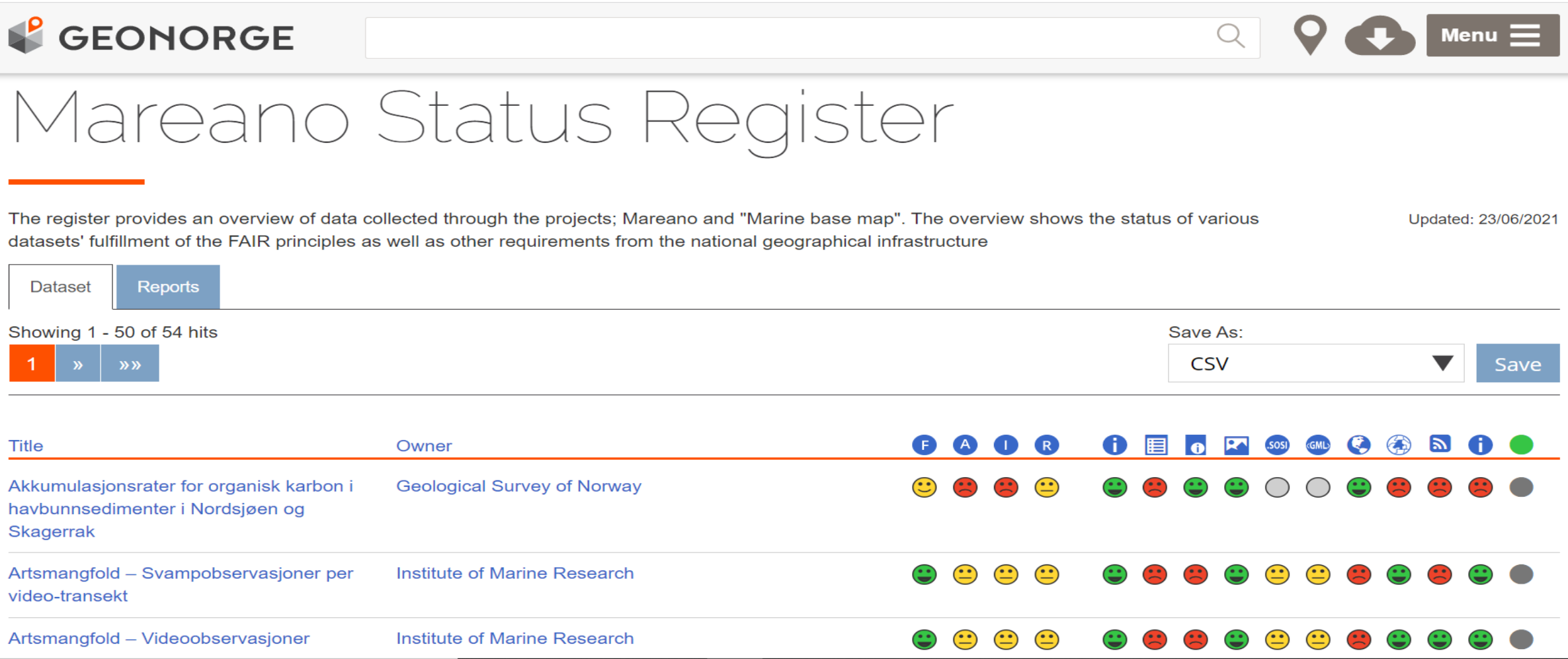
FAIR principles

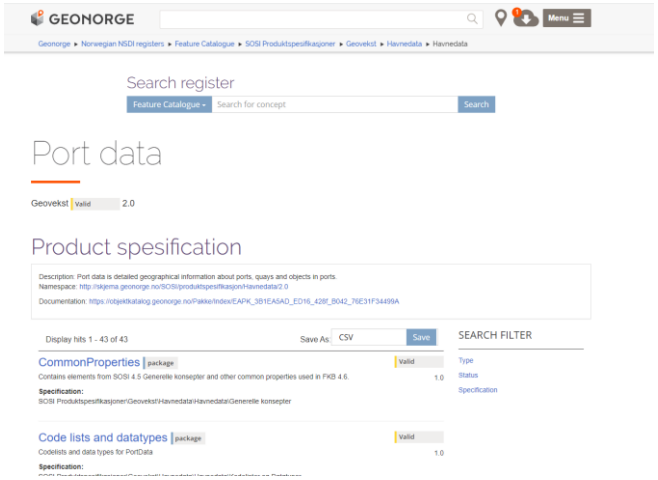


Standardization and digitalization of Port data

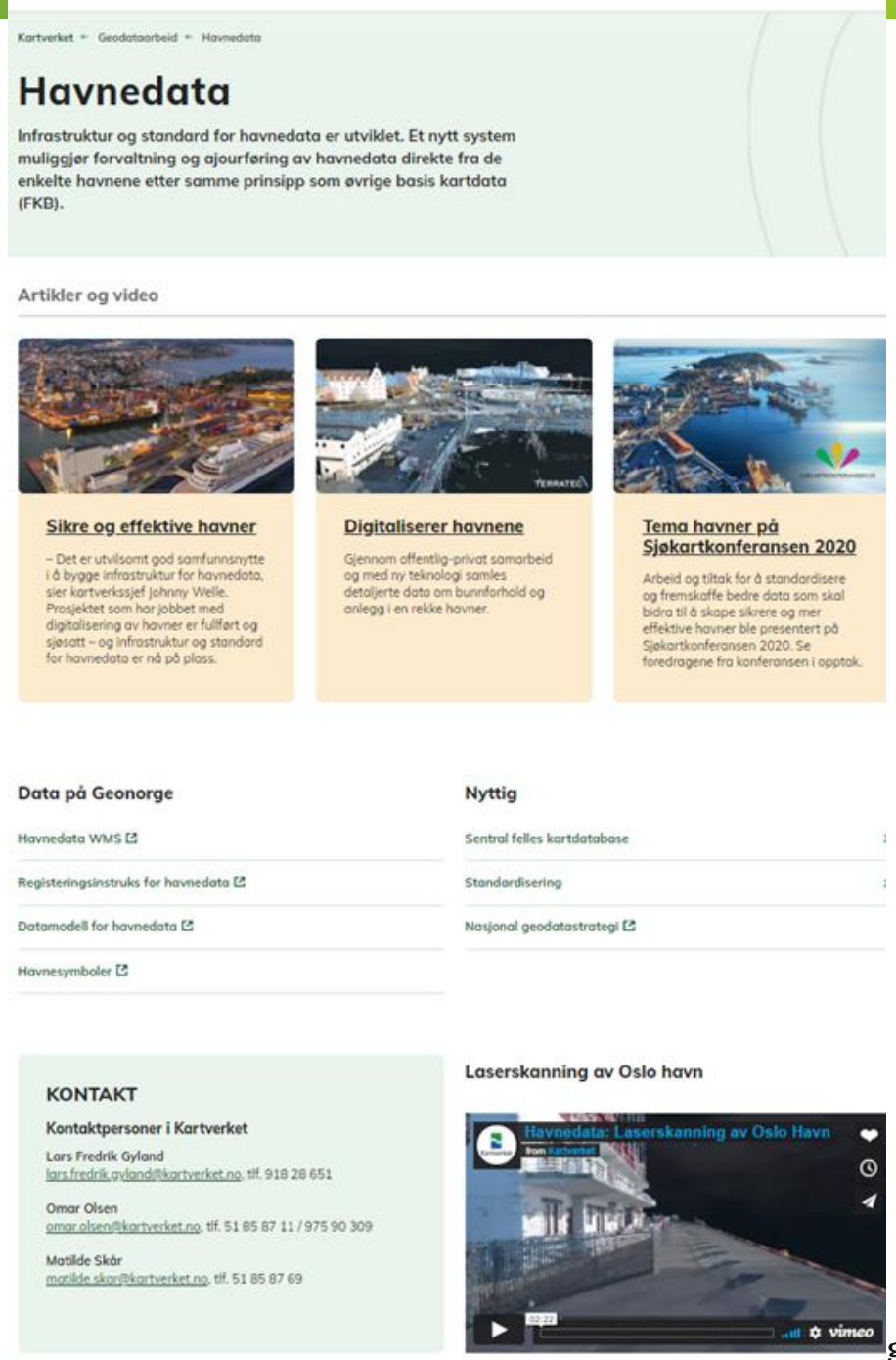
Photo: Port of Kristiansand

Port Data 2020

Project goal for Havnedata 2020:
Make it easy to share and update port data through common national infrastructure for spatial information.



NORKART · GRIEG CONNECT · TERRATEC · INPORT ADDNODE GROUP · KONGSBERG · asplan viak · Norconsult · GEODATA



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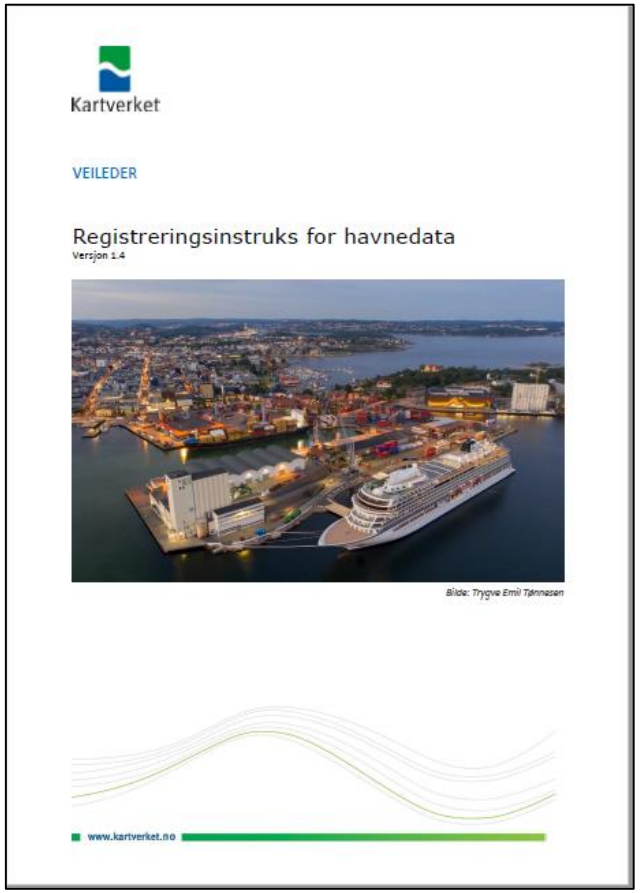
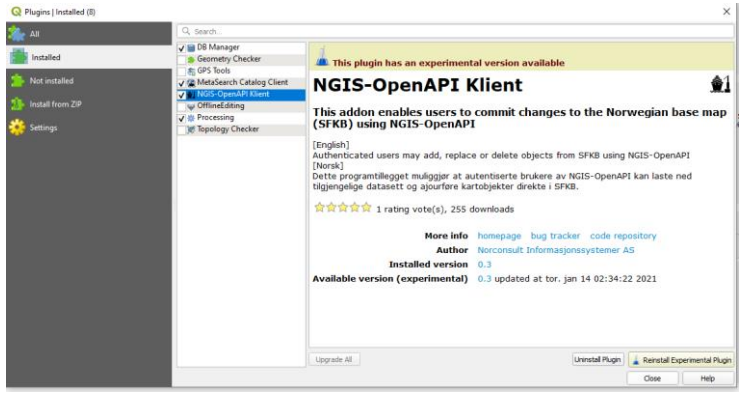


Guidance document
Practical guide that ensures quality and uniform registration.

Mapping
Digitization in 17 ports
Bathymetry in 10 ports

Standarized drawing rules
WMS-services



Database management
Common database for Port data, with access via Plugin i QGIS/NGIS Open API

Port Data 2021

A continuation from «Port data 2020»

Project goal:

Make it easy to share and update port data through a common national infrastructure.

Joint project with:

Coastal Administration

Maritime Authority

Environment Agency

Mapping Authority

Port Data version 2.0

- Port data version 2.0 was published 15.oct -21:
  - Updated version of the Port Data standard
  - Updated Guidance document
  - UML-model available in norwegian and english

- Next version (3.0):
- Summer 2022
- Product specification and guidance document (no/en)
- Approved as official product specification

Latest project : «Norwegian digital port infrastructure»

- Financial support from the Norwegian Coastal Administration
- Budget 32 million NOK
- Ends in december 2022
- Port of Oslo is project owner
- Norwegian Mapping Authority is project leader
- 9 major Norwegian ports

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OSLO HAVN

BÅTSFJORD HAVN K/F

Arendal Havn

KRISTIANSAND HAVN

Bergen Havn

KARMSUND HAVN

Trondheim Havn

BODØ HAVN

KRISTIANSUND & NORDMØRE HAVN

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Norwegian Mapping Authority

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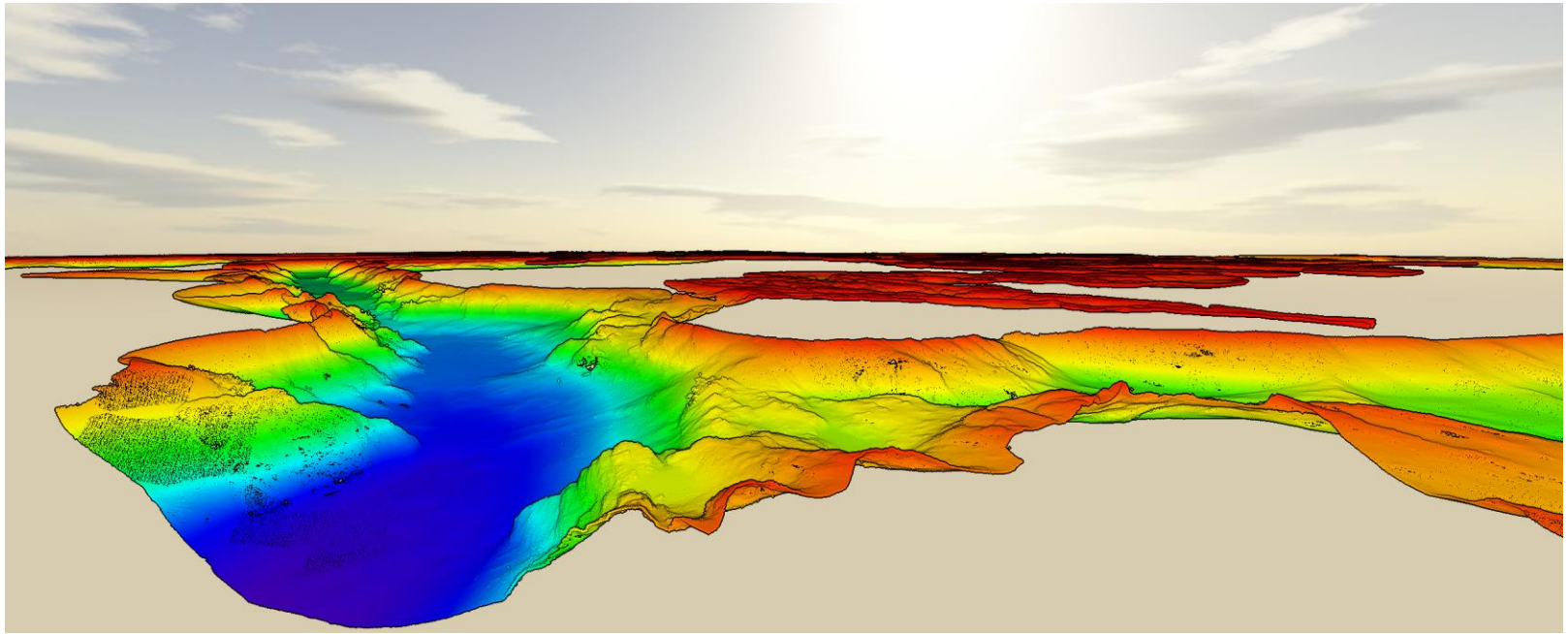
NAUTILUS

for Reception, Management and Dissemniation of Hydrographic Data



Nautilus shall ensure a reception, management and dissemination of high-resolution depth data and other hydrographic data to all users:

- Will ensure **access to high quality source data** that will generate value and improve decision making in Norwegian waters (sea, coastal and port areas)
- Strengthen **public private cooperation**
- The Norwegian Mapping Authority, as a charting authority, will meet required **international standards,** and will meet expected quality and product diversity
- Enable and improve **use of authoritative data**, obtained from the national geodata infrastructure (Geonorge.no), for a more efficient production
- **Increase safety** at sea, in the coastal zone and in ports, through new and improved products and services
- **Better preparedness**, for emergency operations, at sea, in the coastal and in ports
- **Increased availability** of hydrographic data

A modern solution, allowing more data faster accessible to more users

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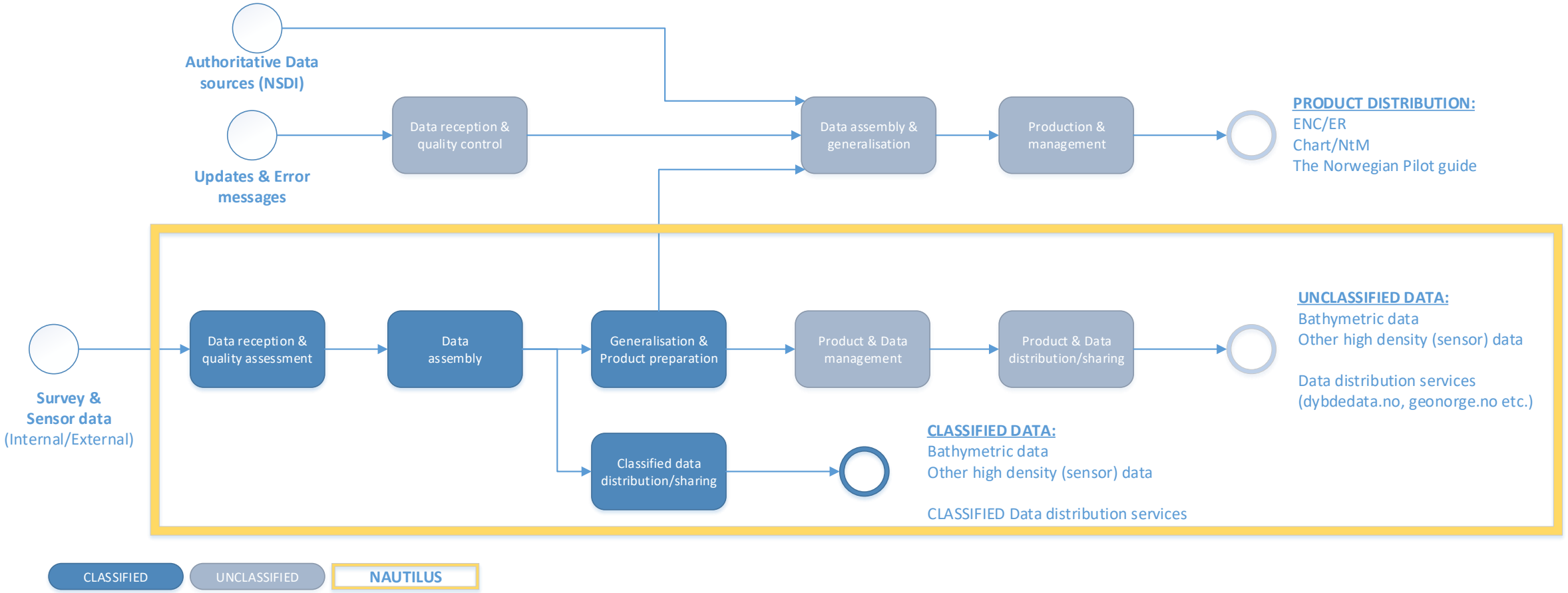
Rational / benefits

- Nautilus is mainly based on **user requirements and expectations**
- Ensure **effective access** to and **dissemination** of high resolution hydrographic data
- Enable and actively **seek innovation**, **machine-to-machine** solution, **automation** and **machine learning**
- Continued focus on **safe and efficient navigation** - ***safety of life at sea***
- Better data will allow for **a more effective and environmentally** friendly maritime and marine business
- Significant **operational and financial values**, both in the form of increased activity and cost savings, for shipping, aquaculture, port operations, environmental activities, coastal zone planning for municipalities & counties etc. are expected with better access to high quality data.
- Improved ocean **knowledge and competence** that can be applied at national projects such as marine base maps
- Full alignment to NMA's **strategic roadmap**

NHS process
(simplified)



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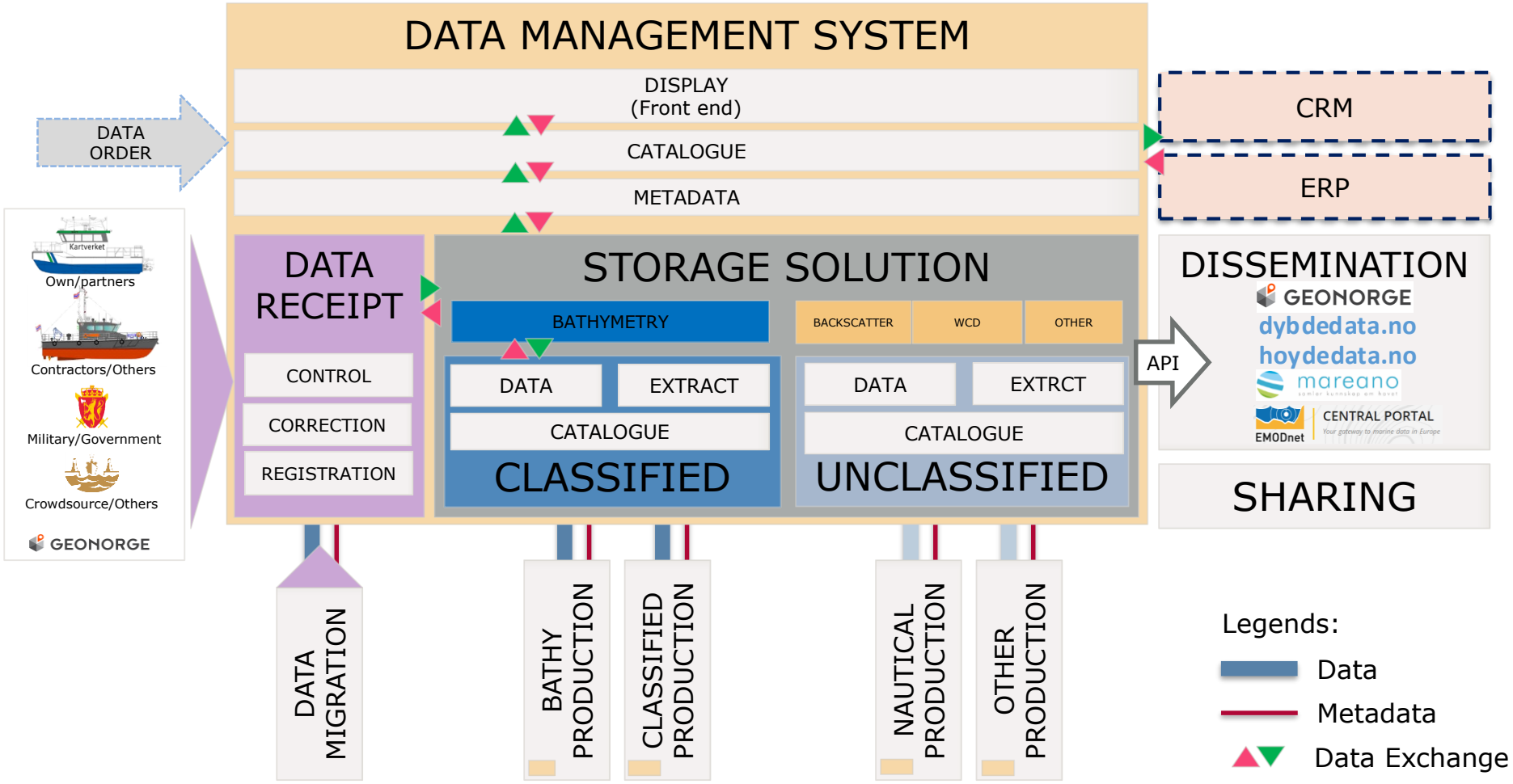
NAUTILUS modules



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NAUTILUS 2022 - 2026

- Nautilus (as scoped) is planned to take 5 years to complete
- Estimated total cost is appr. €12,1 Mill. EUR
- Funded over the national budget from 2022
- The project will focus on both organizational as well as technological changes.