

Geospatial Sensor Web Conference

# 52° North Sensor Web Community and Roadmap

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# Overview

- 52°North Sensor Web Components
  - Sensor Observation Service
  - Helgoland
  - Sensor Web REST API
  - smle
- Projects
  - Marine observation data: ODIP II, FixO<sup>3</sup>, NeXOS, BRIDGES
  - COLABIS
  - TaMIS
  - INSPIRE/SOS: JRC and BRGM
  - ConnectinGEO
  - WaterInnEU
  - OGC Testbed-12

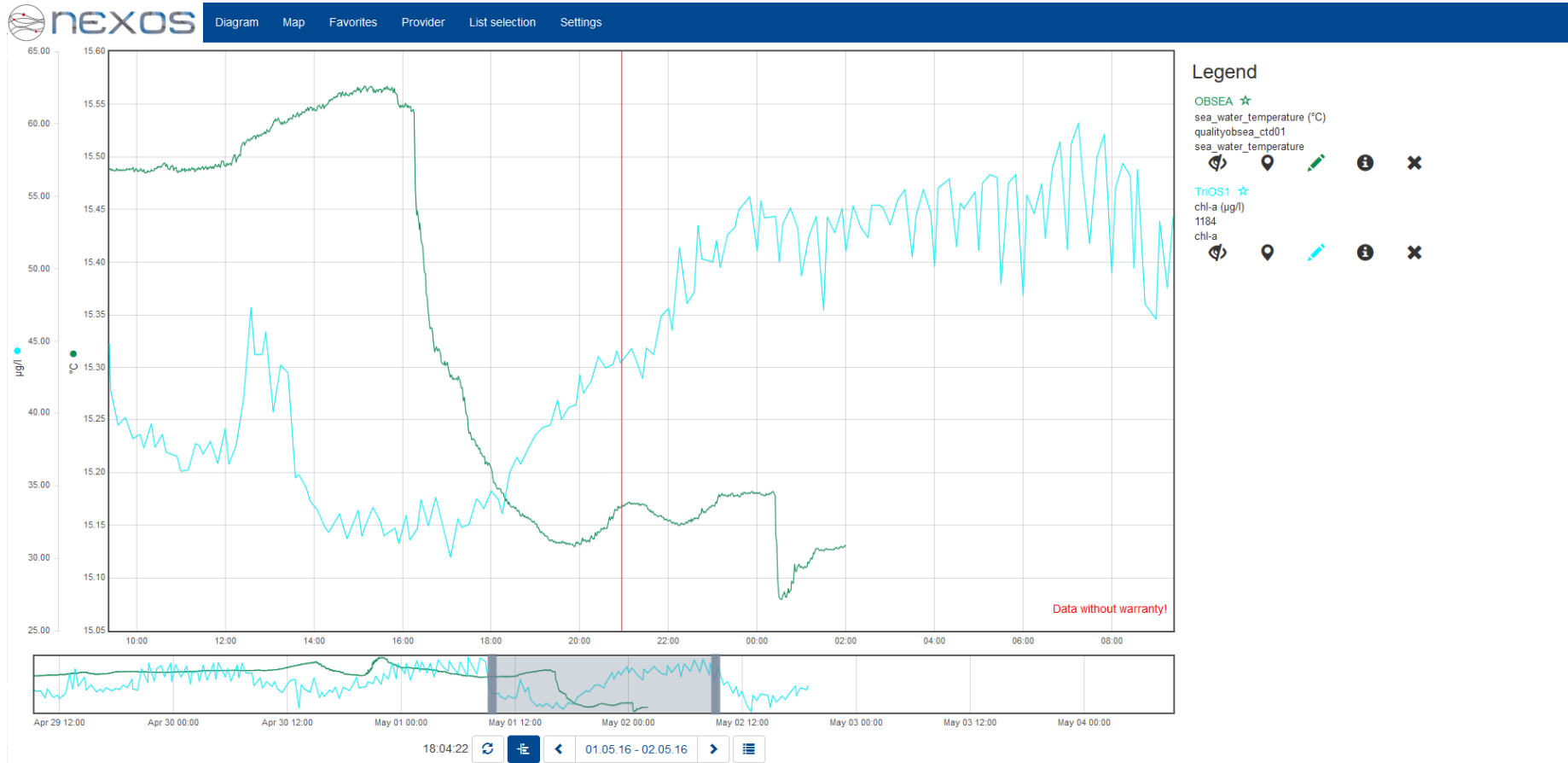
# Sensor Observation Service

- Continuous development
- New features
  - Hierarchical offerings and procedures
  - Enhanced GetDataAvailability operation
- Support of INSPIRE observation types:
  - PointObservation
  - PointTimeSeriesObservation
  - MultiPointObservation
  - ProfileObservation
  - TrajectoryObservation

# Helgoland

- New version of the 52°North JavaScript SOS client
- Separation between business logic/core and the user interface → facilitates customisation
- New: Mobile sensor view
- In development
  - Support for access control
  - Event subscriptions

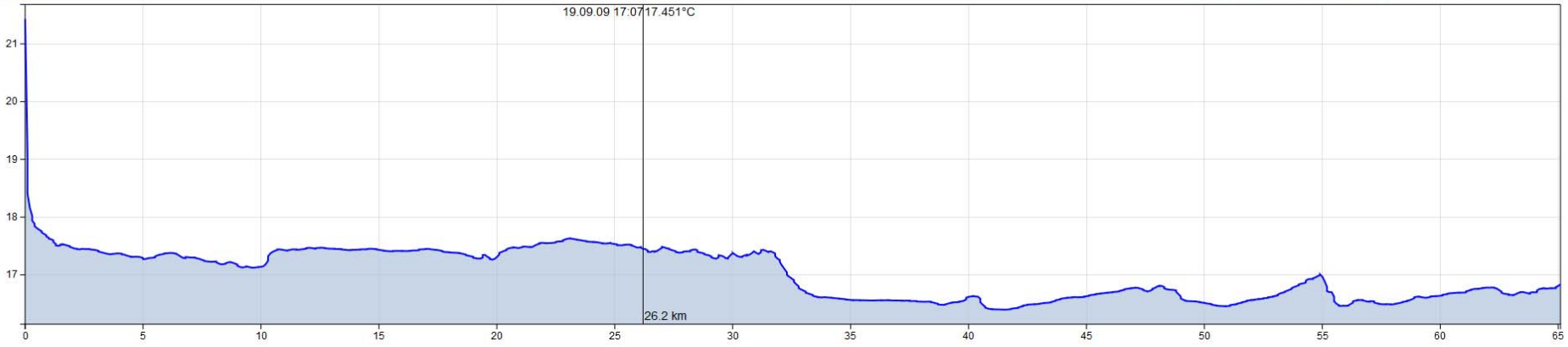
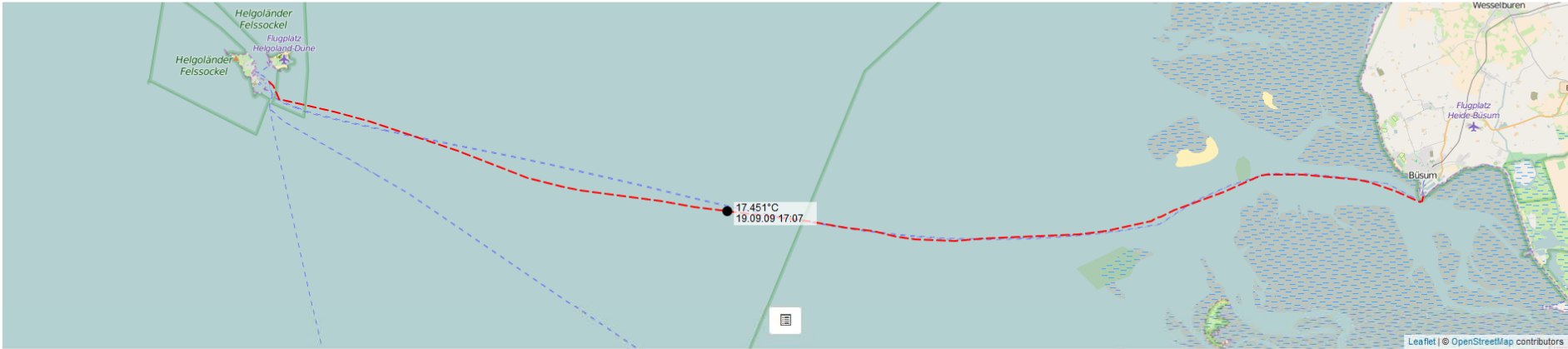
# Helgoland



# Helgoland

Helgoland Diagram Map Trajectories Favorites Provider List selection Settings

WaterTemp\_FSI FerryBox, Helgo-Bues  
WaterTemp\_FSI (°C)



# Sensor Web REST API

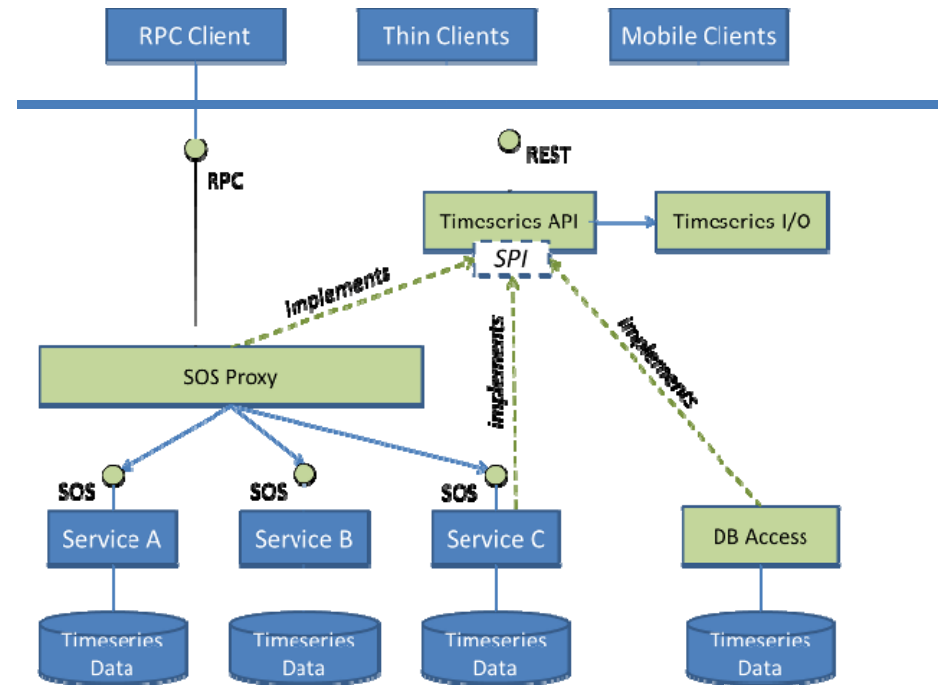
- Extensions

- Mobile sensors
- Remote sensors (e.g. Web cams)
- Profile measurements

- New modules

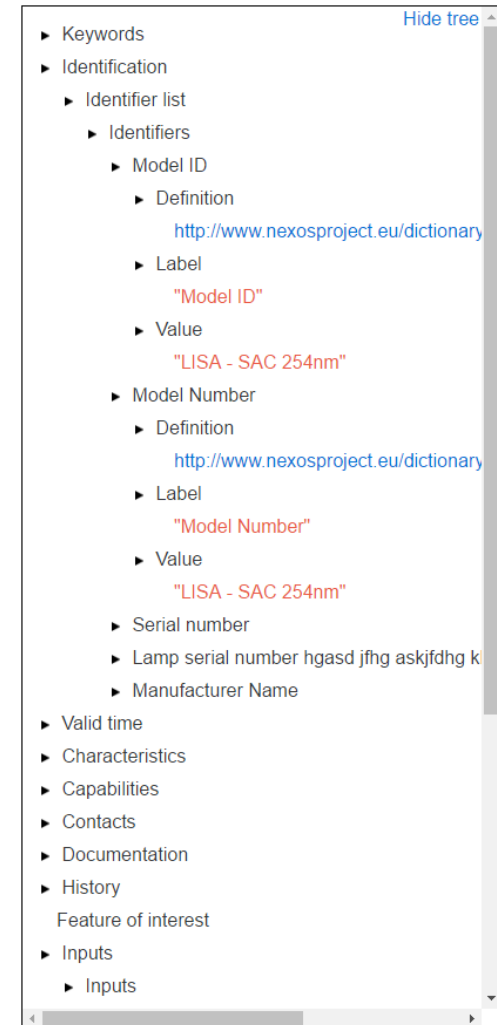
- Event subscriptions
- Tasking
- Accessing conventional geospatial data sets
- Geo-processing

- Developed within COLABIS, TaMIS, and NeXOS



# smle

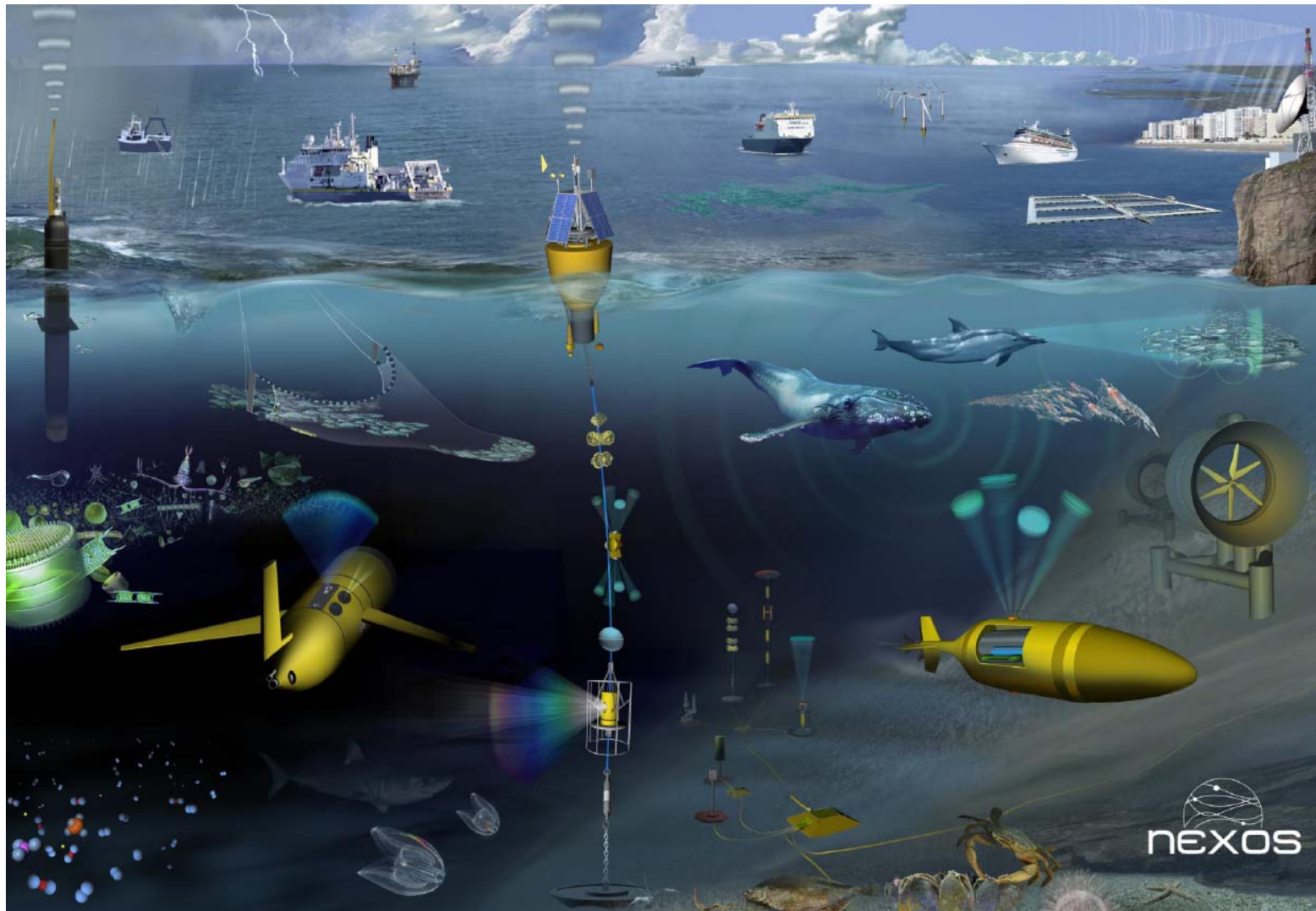
- SensorML editor
- Use SOS as metadata repository
- User sensor type descriptions as templates
- Developed in the context of NeXOS and FixO<sup>3</sup>
- Google Summer of Code project: Aleksandr Shevchenko





# Marine observation data:

ODIP II, FixO3, NeXOS, BRIDGES

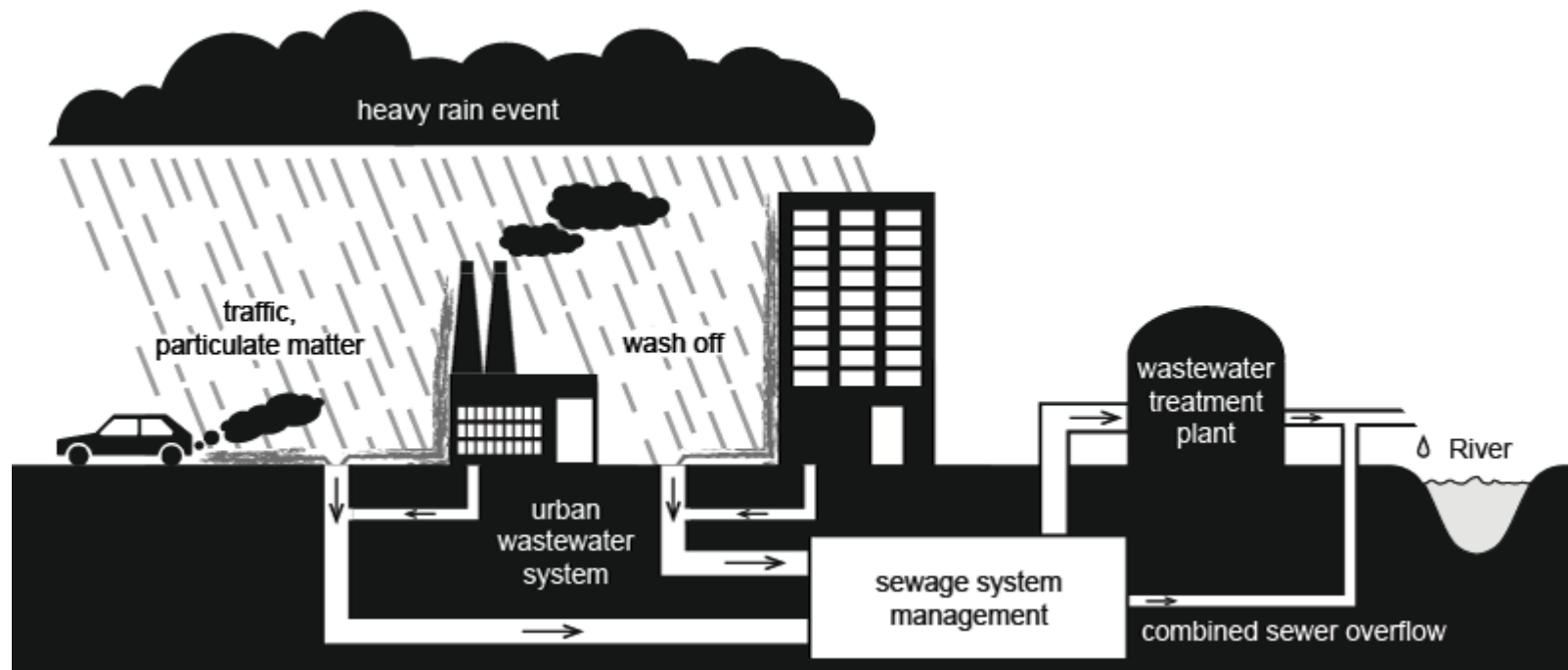


# Marine observation data:

ODIP II, FixO3, NeXOS, BRIDGES

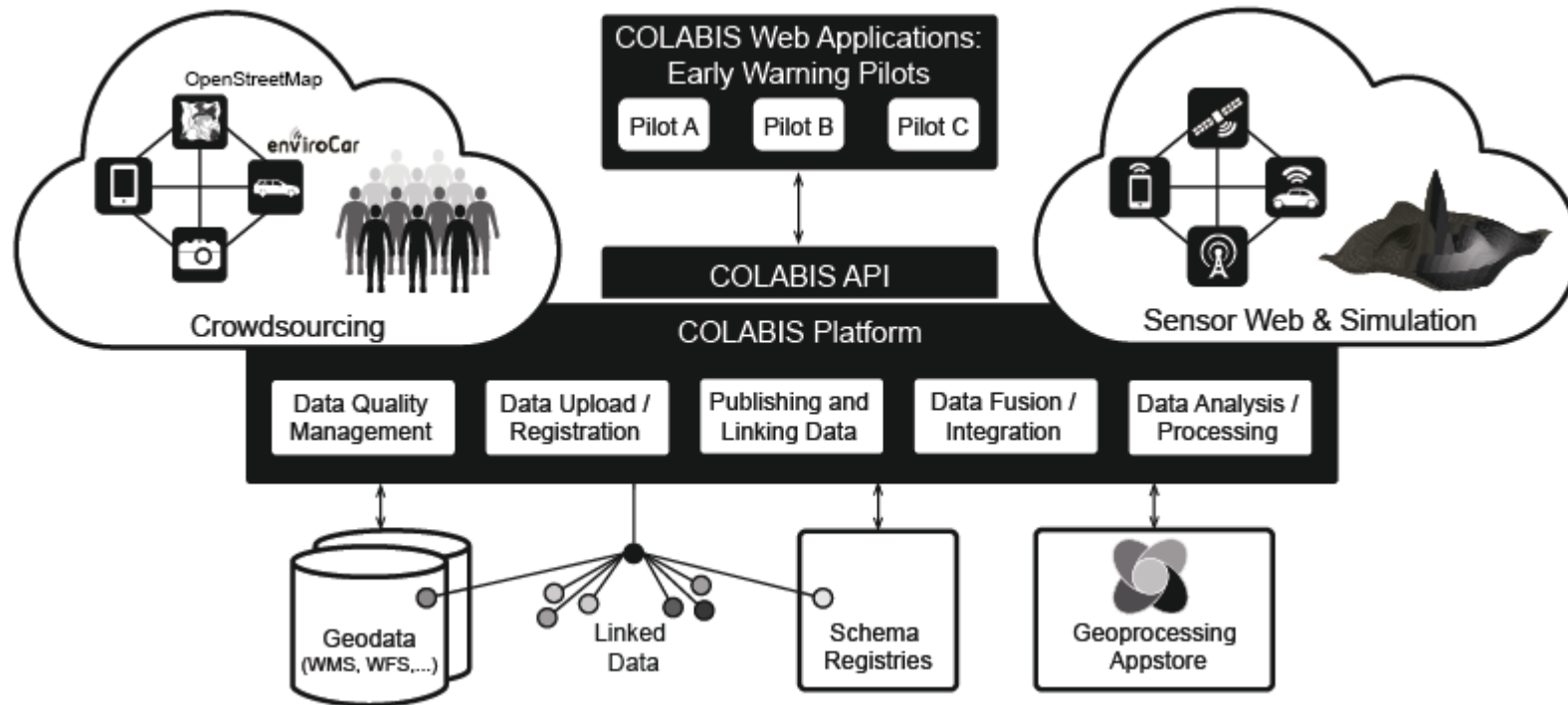


# COLABIS



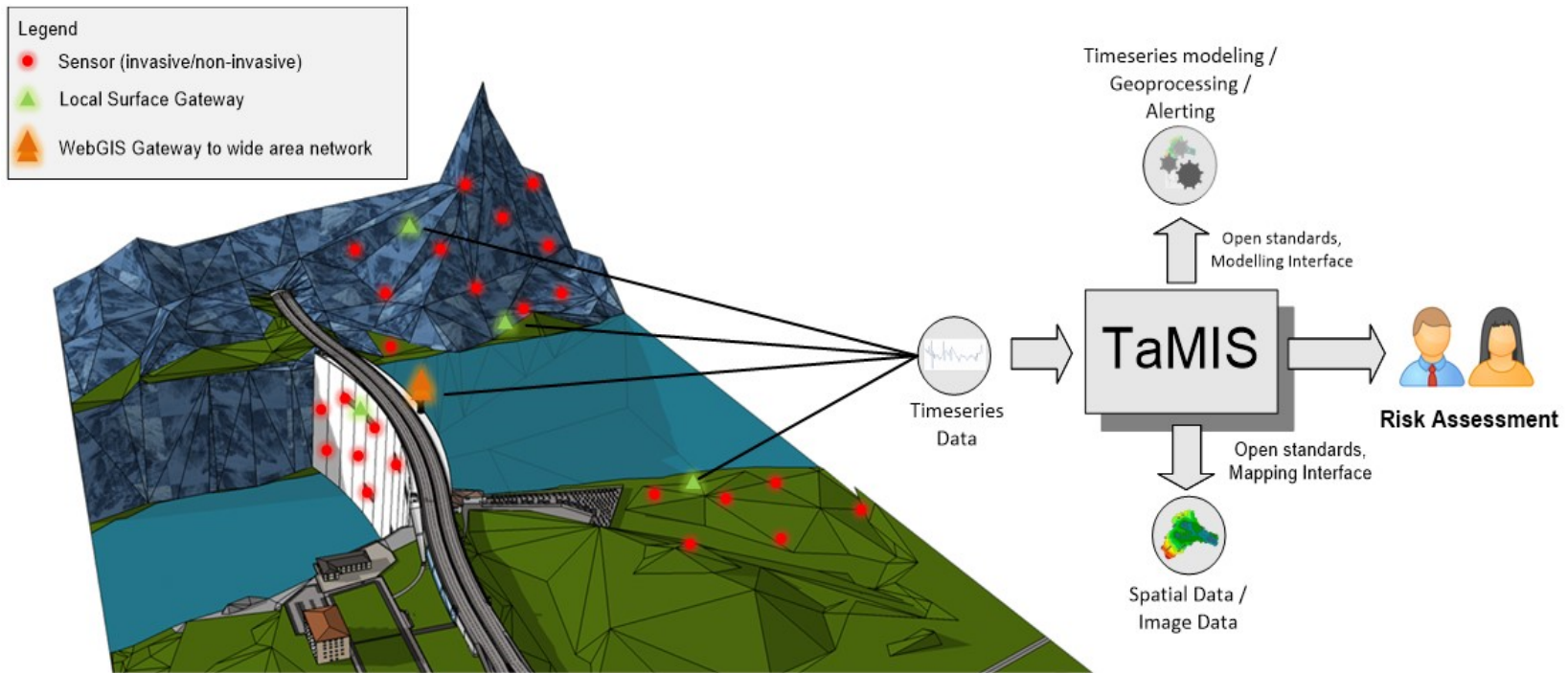
Source: <https://colabis.de/>

# COLABIS



Source: <https://colabis.de/>

# TaMIS



Source: <http://tamis.kn.e-technik.tu-dortmund.de/index.html>

## INSPIRE/SOS: JRC and BRGM

- Cooperation on using the SOS as INSPIRE Download Service
- Add support for INSPIRE Observation types to 52°North SOS
- BRGM: Use SOS for accessing several hydrological databases
- Further SOS extensions: GetDataAvailability, Offering structure, mapping to further INSPIRE concepts



# WaterInnEU

- “Applying European market leadership to river basin networks and spreading of innovation on water ICT models, tools and data”
- CSA: Marketplace for the exploitation of EU funded ICT models, tools, protocols and policy related to water
- Started in March 2015
- Coordinator: CREAM
- Role of 52°North:  
Review of standards; marketplace for a knowledge exchange platform in the water management domain



# ConnectinGEO

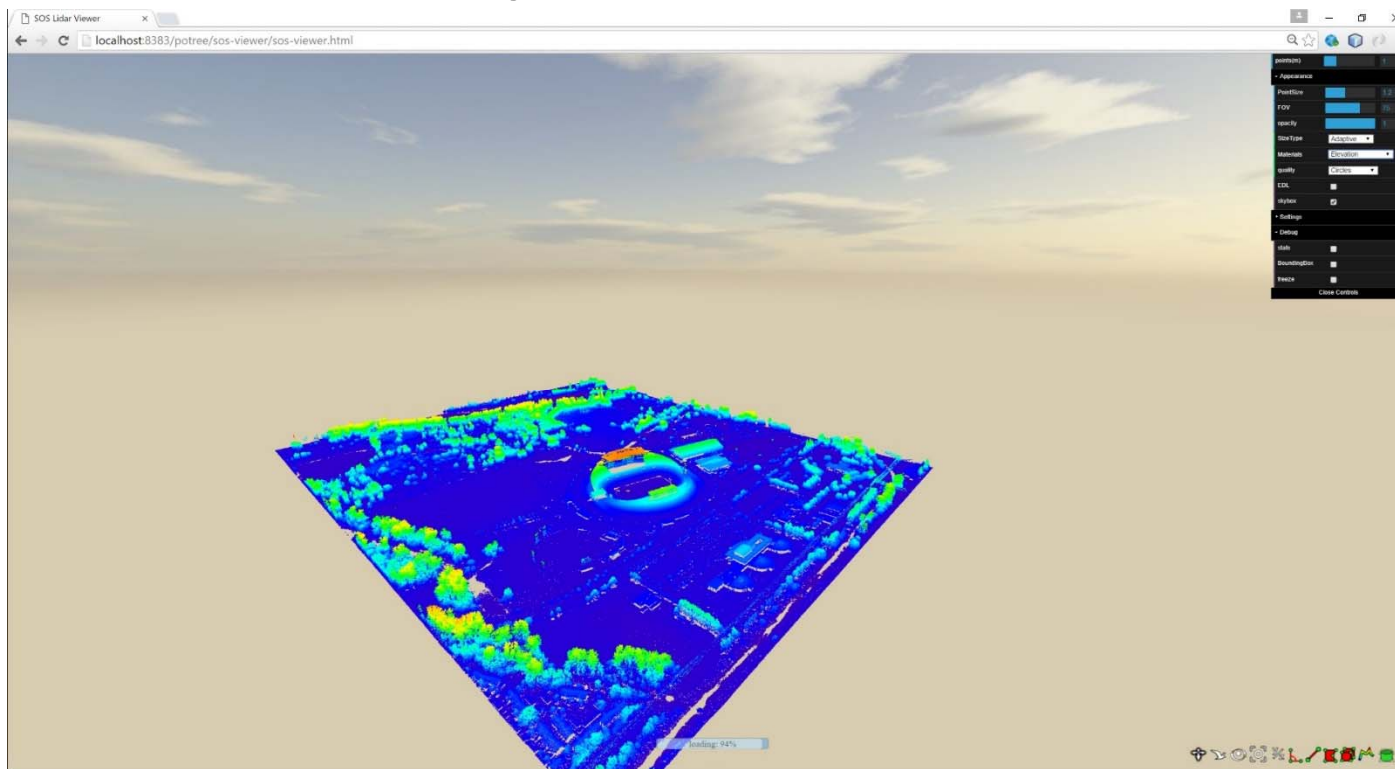
- “Coordinating an Observation Network of Networks EnCompassing saTellite and IN-situ to fill the Gaps in European Observations”
- CSA: Provide list of critical gaps in observations within the European Union
- Comparing the GEO SBA needs and the UN sustainable development goals with information provided by a satellite, airborne and in-situ networks
- Started in February 2015
- Coordinator: CREAM
- Role of 52°North:  
Catalogue for in-situ data





# OGC Testbed-12

- LiDAR SOS
  - JPIP-like streaming of point cloud data
  - Uses Potree and pgpointcloud



## Questions?

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