



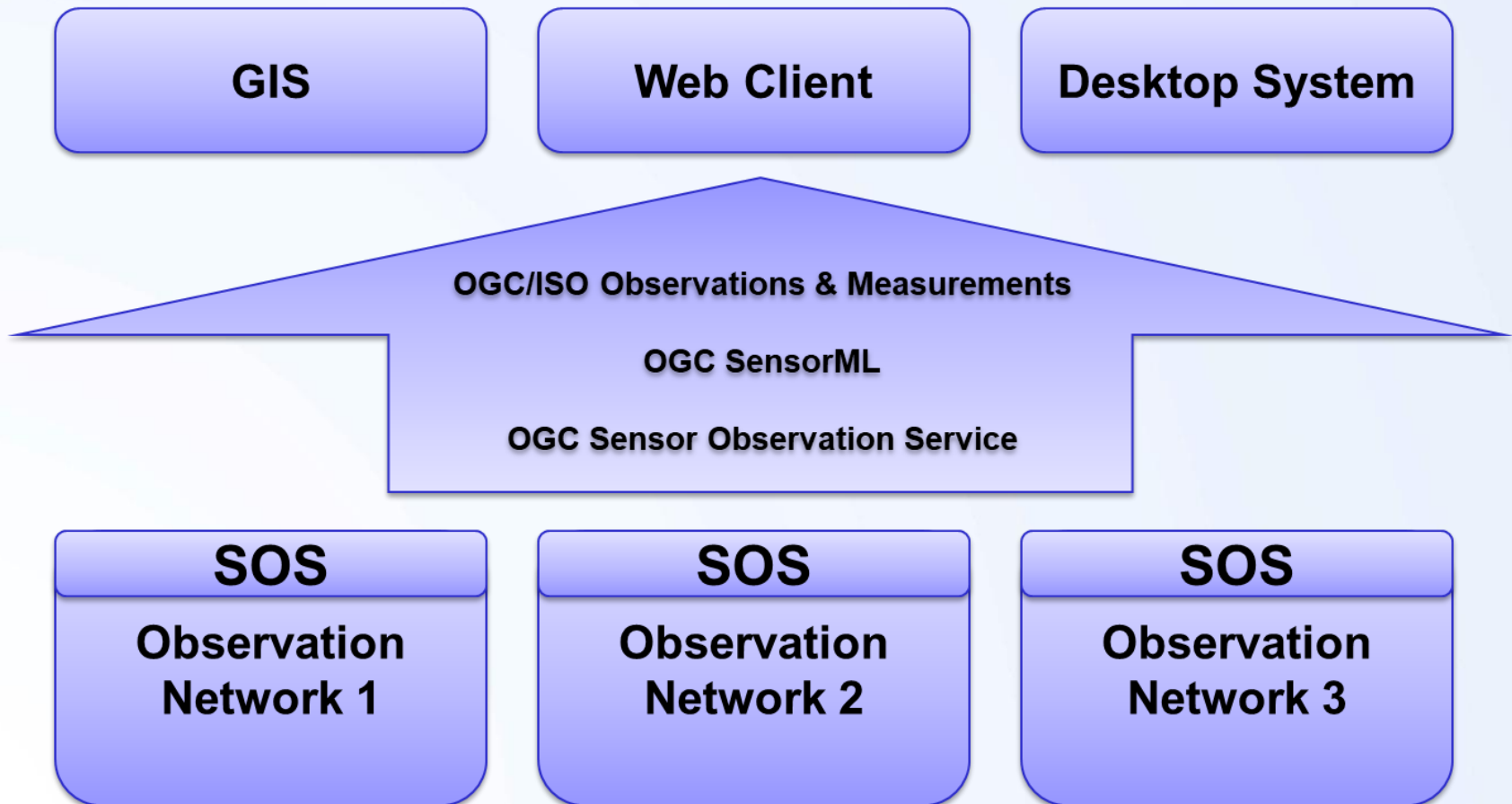
# SeaDataCloud

## How to set-up and configure SWE for operational oceanography stations

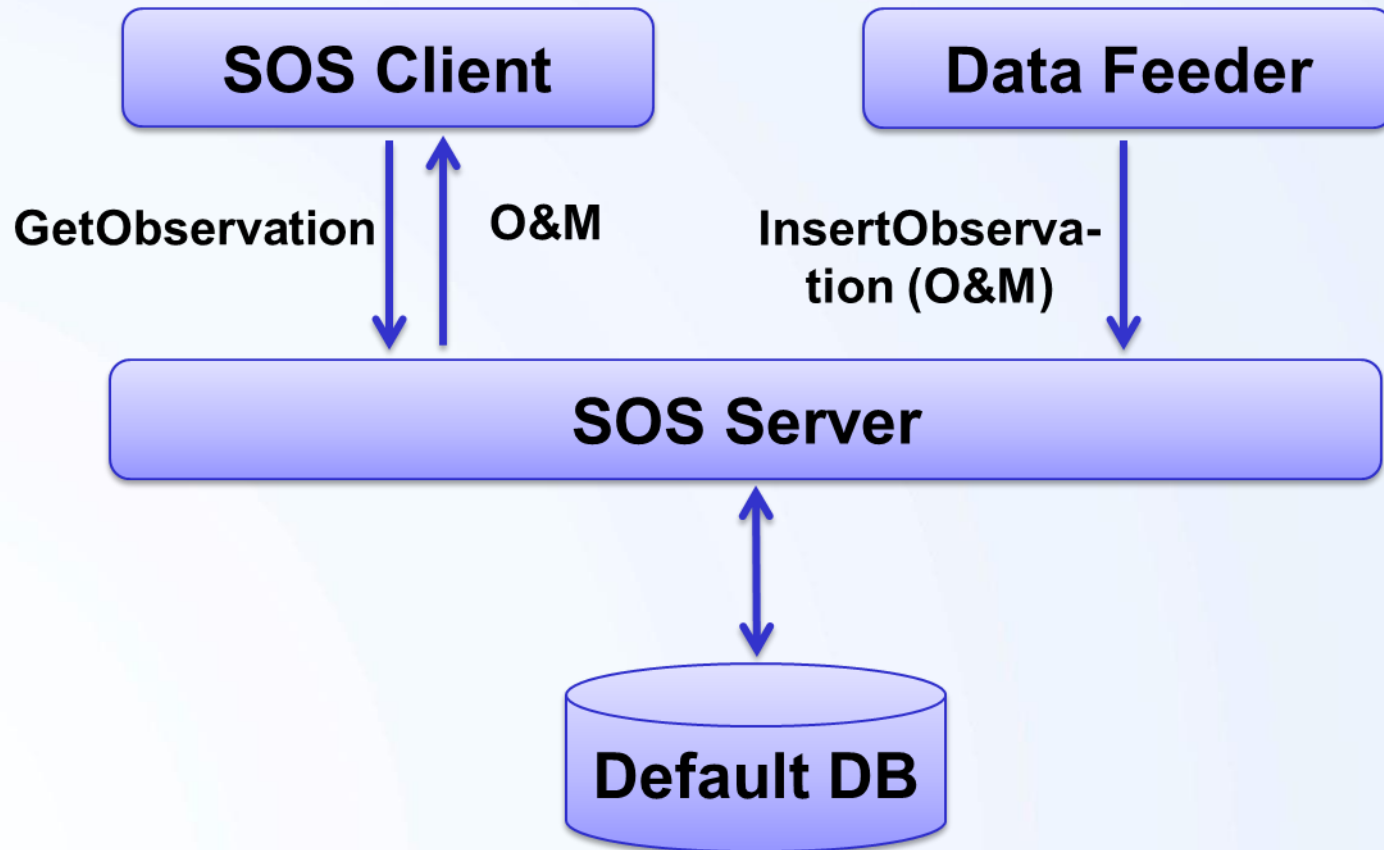
Christian Autermann, 52°North GmbH

# 52° North Sensor Observation Service

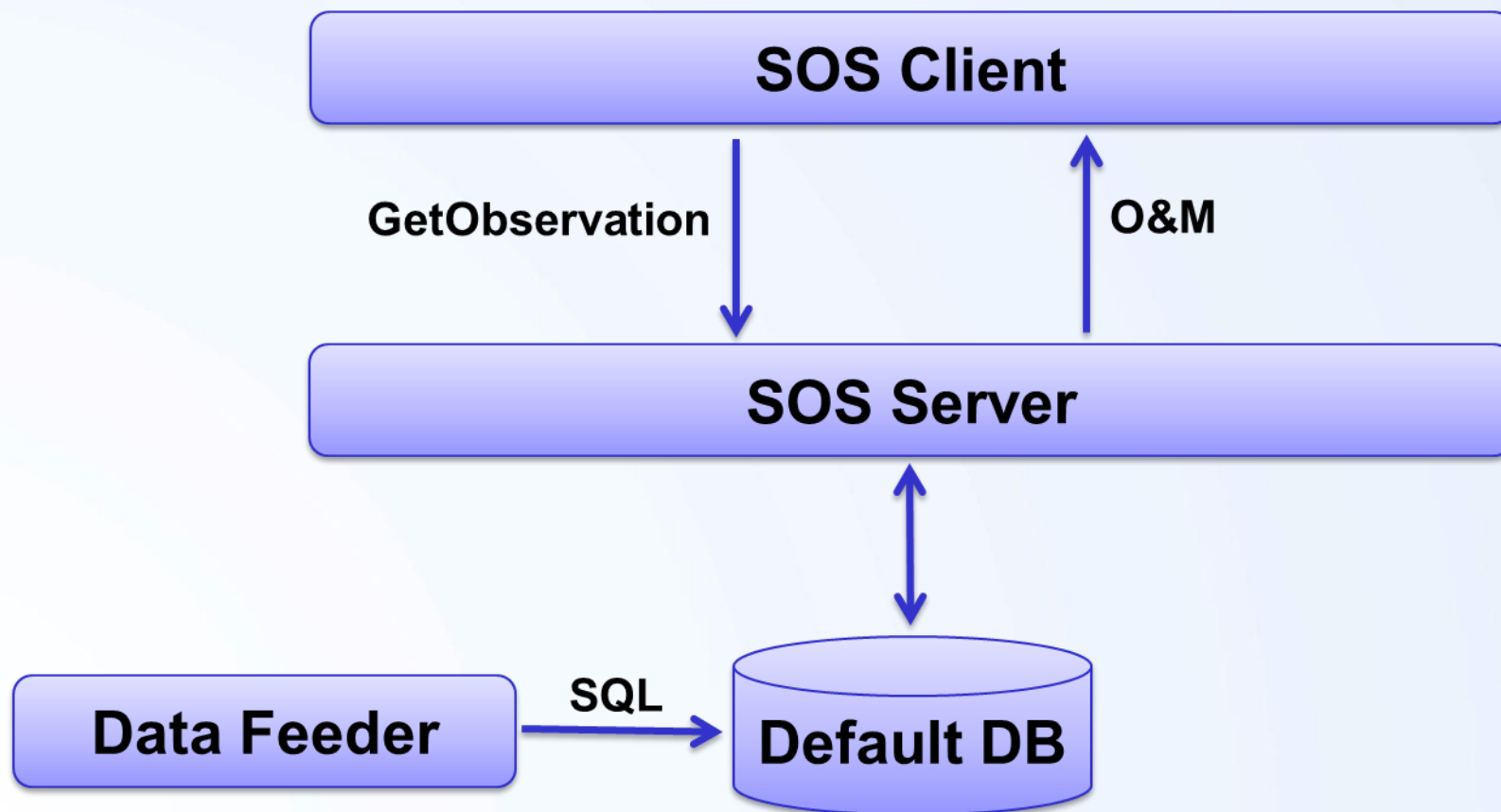
# Sensor Web



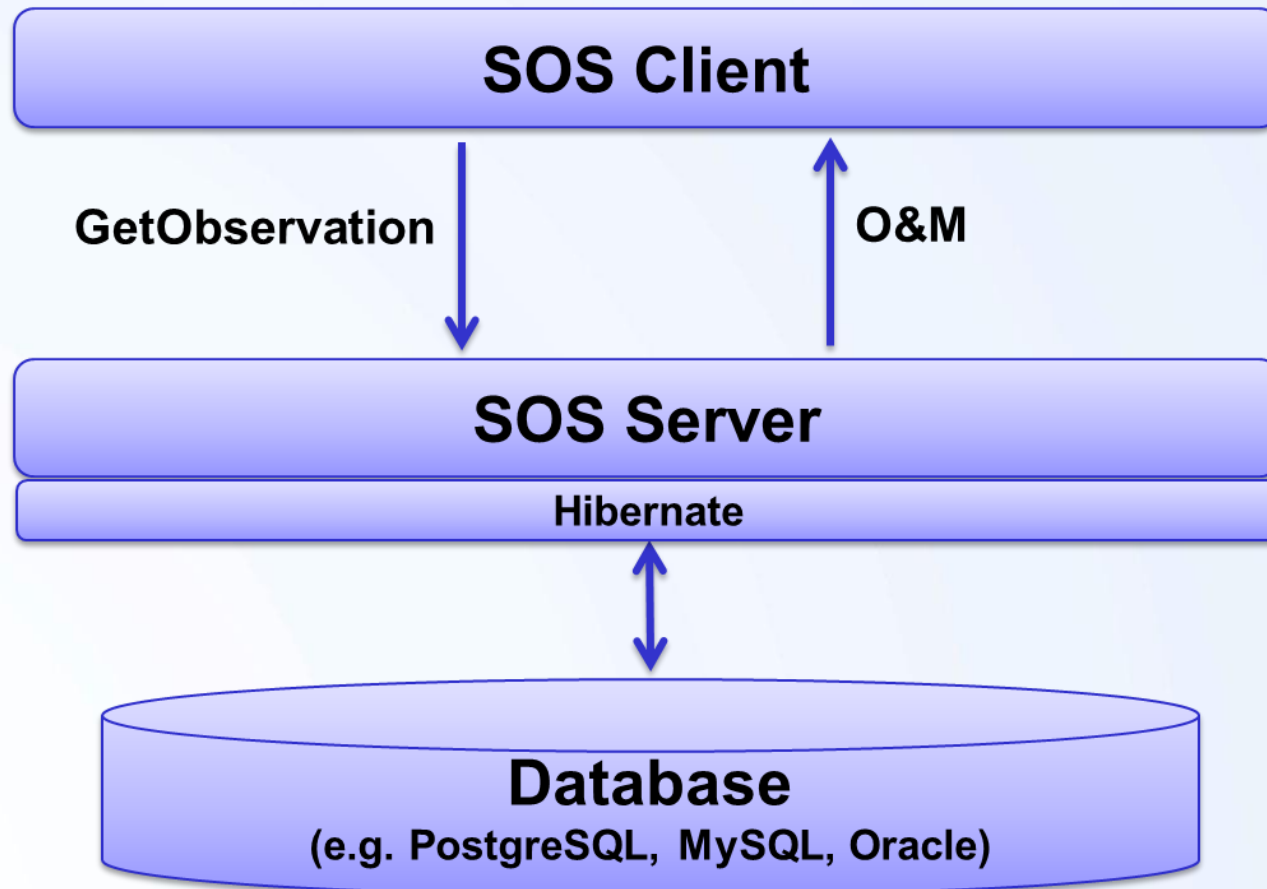
# Default SOS DB with Transactional Feeding



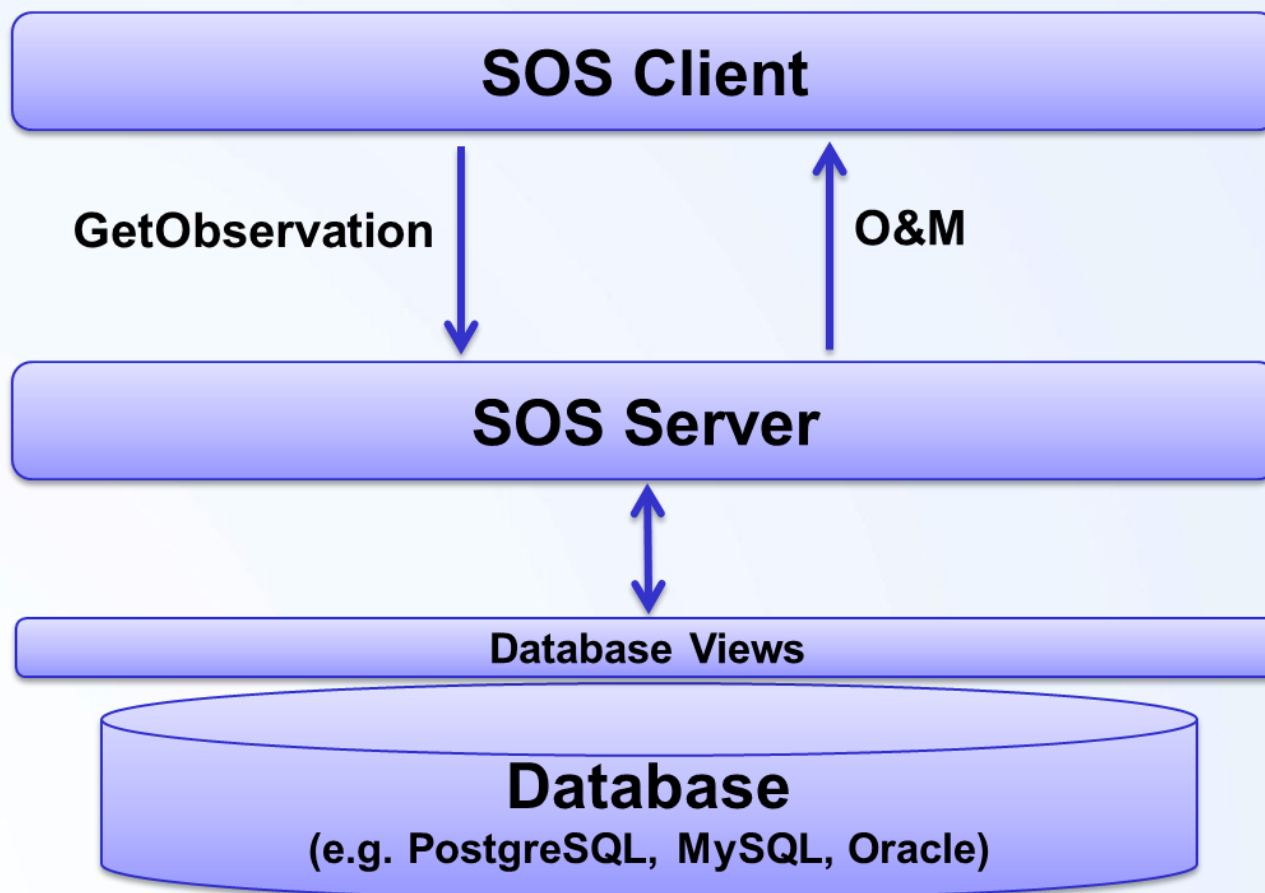
## Data Ingestion via Dedicated Service



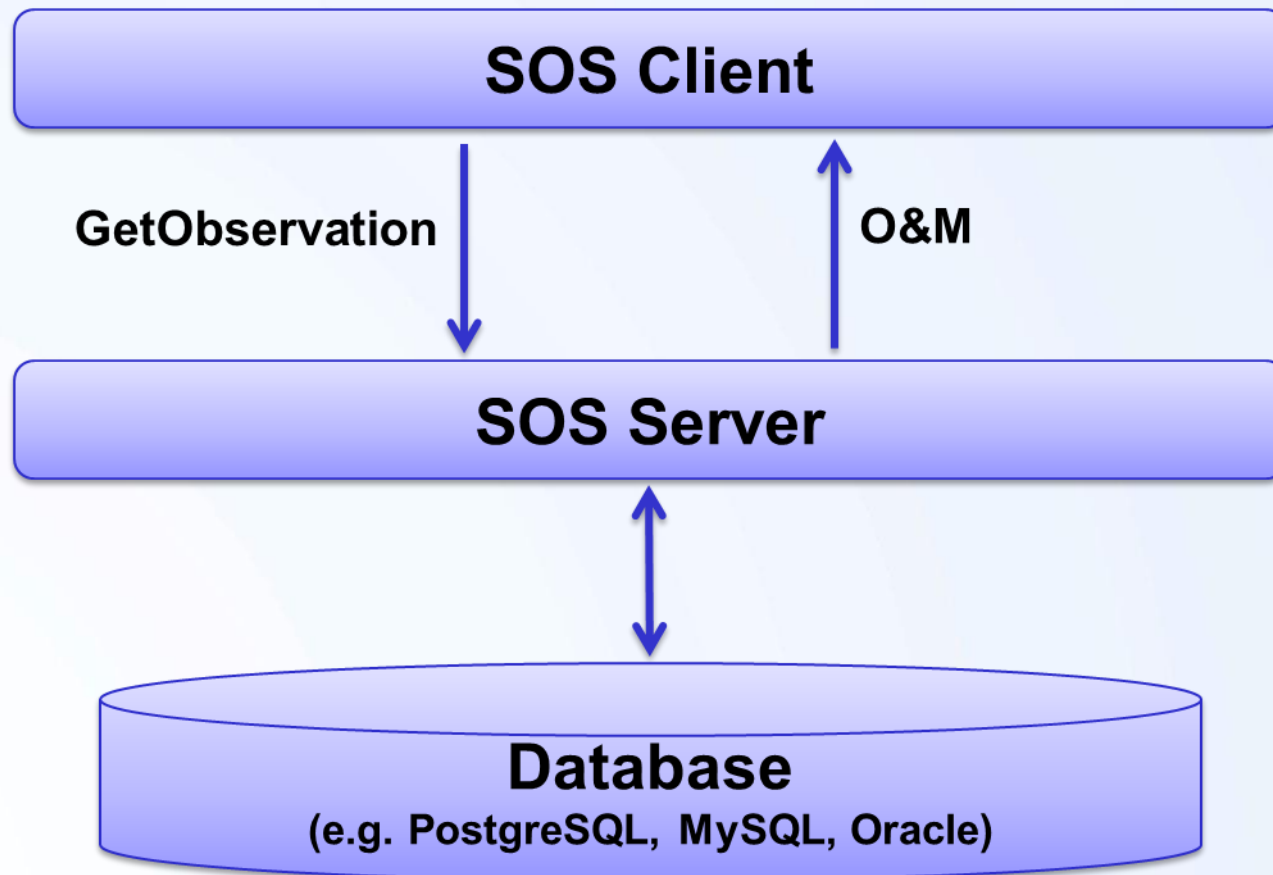
# Existing DB via Hibernate



## Existing DB via Views

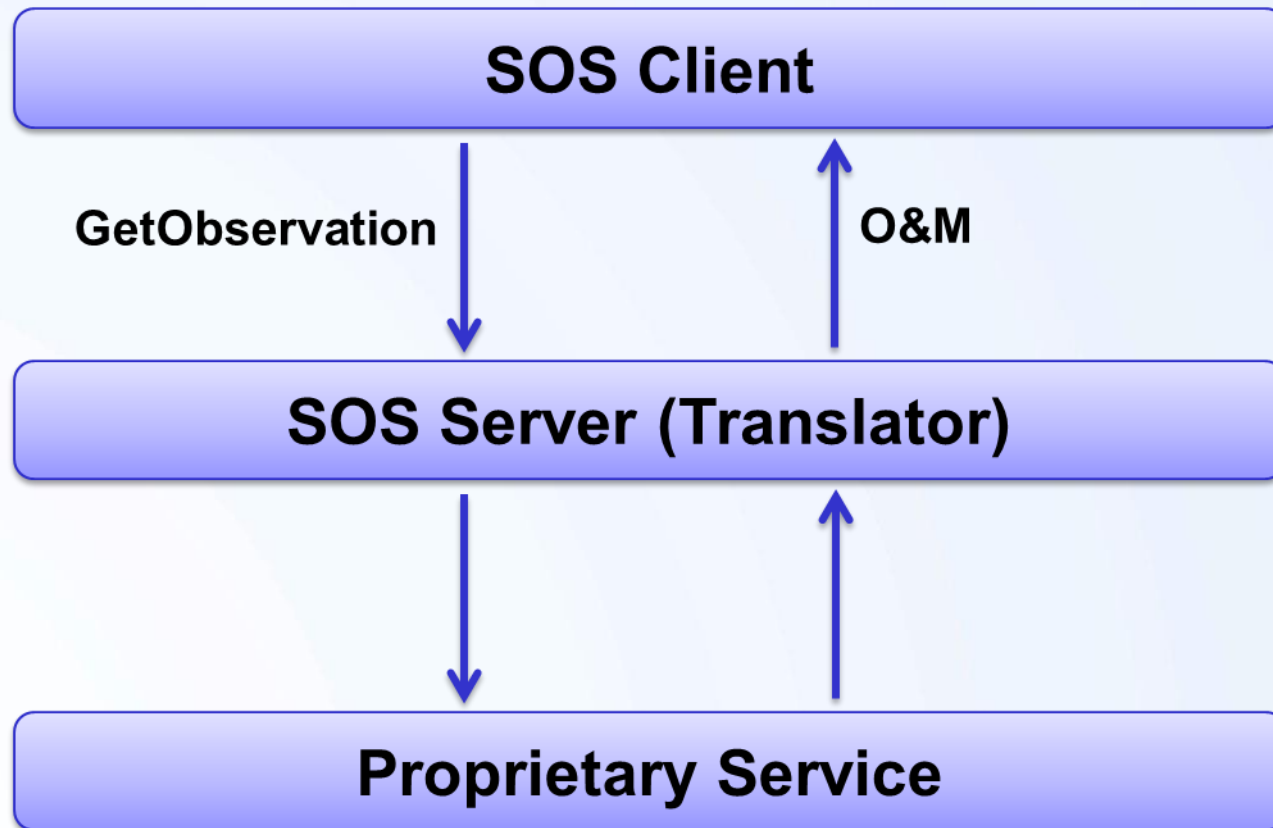


# Existing DB via new SOS Data Access Layer



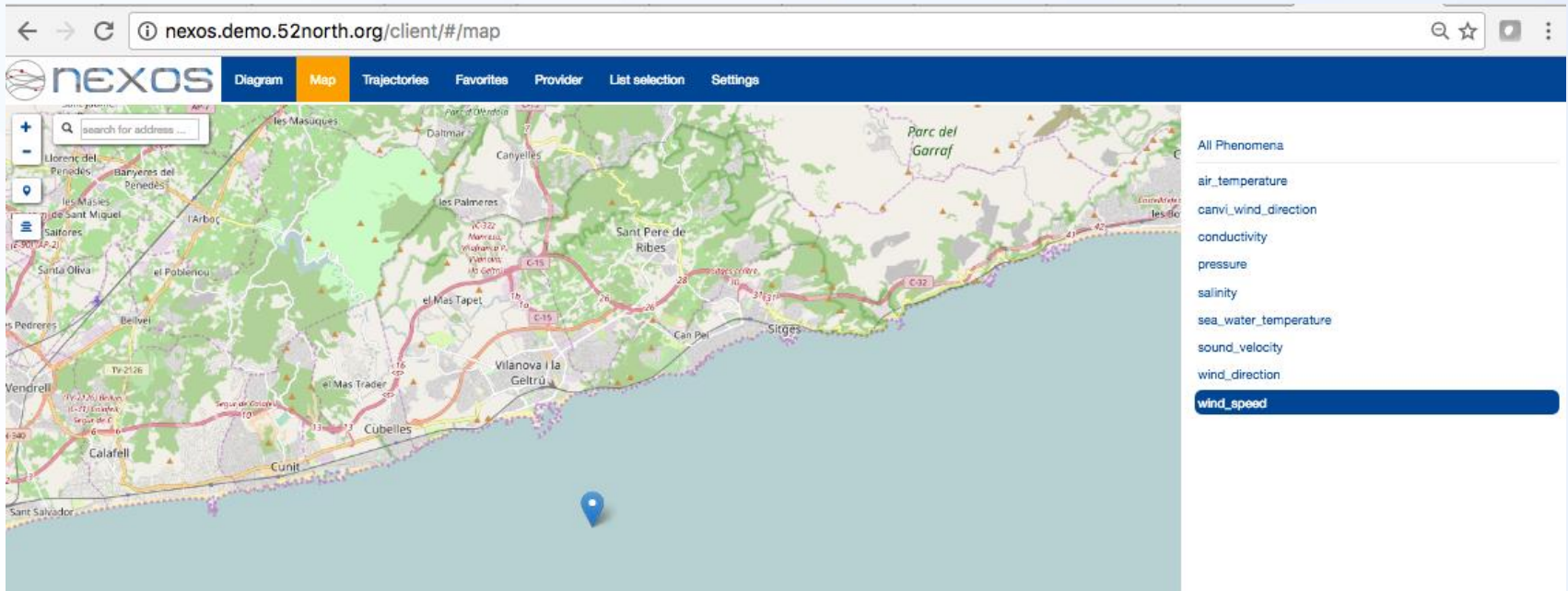


## SOS as Proxy



# Helgoland

# Helgoland

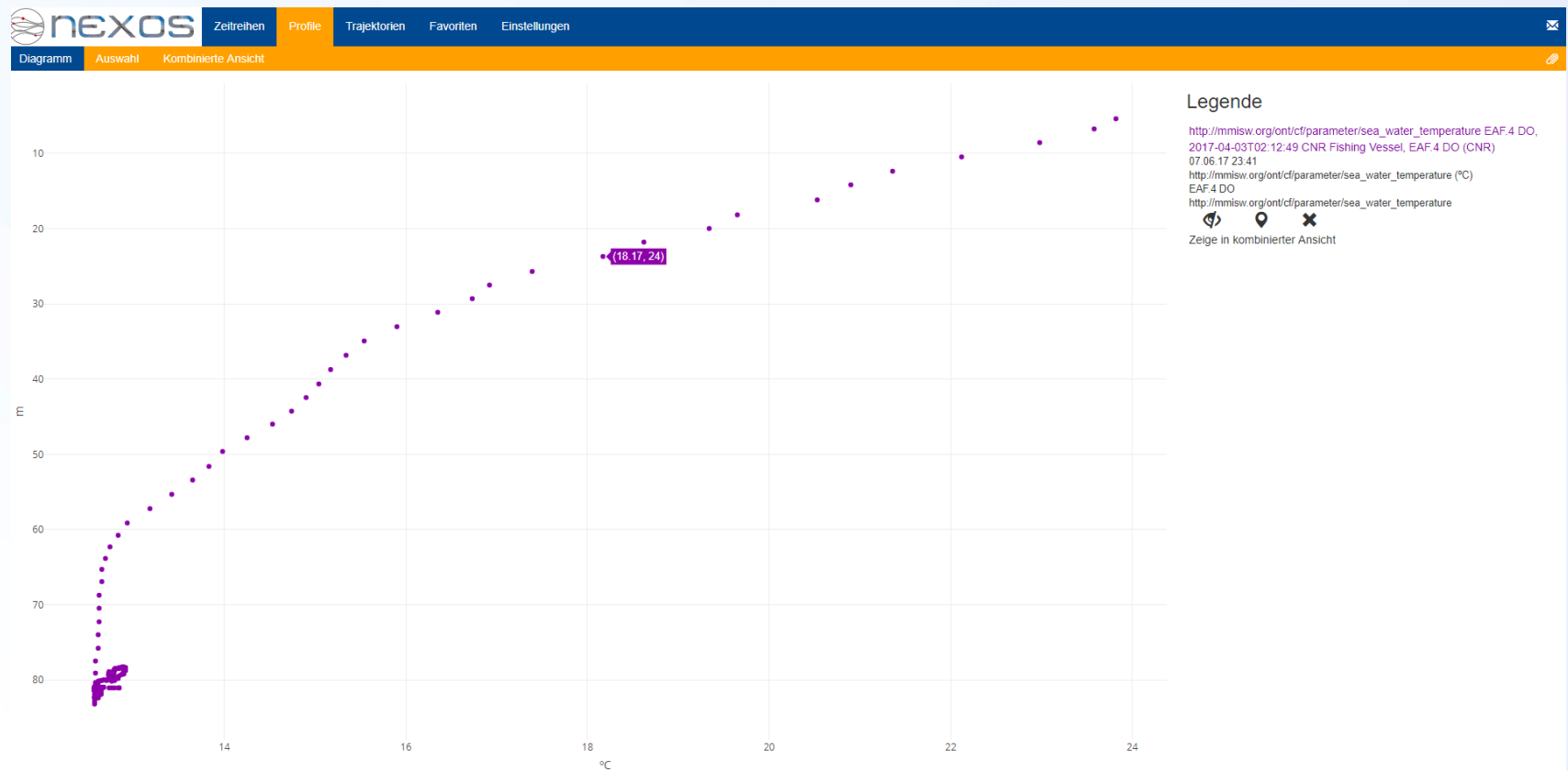


The screenshot shows a web browser window displaying the 'nexos' application. The address bar shows the URL 'nexos.demo.52north.org/client/#/map'. The application has a dark blue header with the 'nexos' logo and a navigation menu with options: Diagram, Map (selected), Trajectories, Favorites, Provider, List selection, and Settings. Below the header is a map of a coastal area with various locations labeled, including Vilanova i la Geltrú, Sant Pere de Ribes, and Sitges. A blue location pin is placed on the map. On the right side, there is a panel titled 'All Phenomena' with a list of sensor data types: air\_temperature, canvi\_wind\_direction, conductivity, pressure, salinity, sea\_water\_temperature, sound\_velocity, wind\_direction, and wind\_speed. The 'wind\_speed' item is highlighted with a dark blue background.

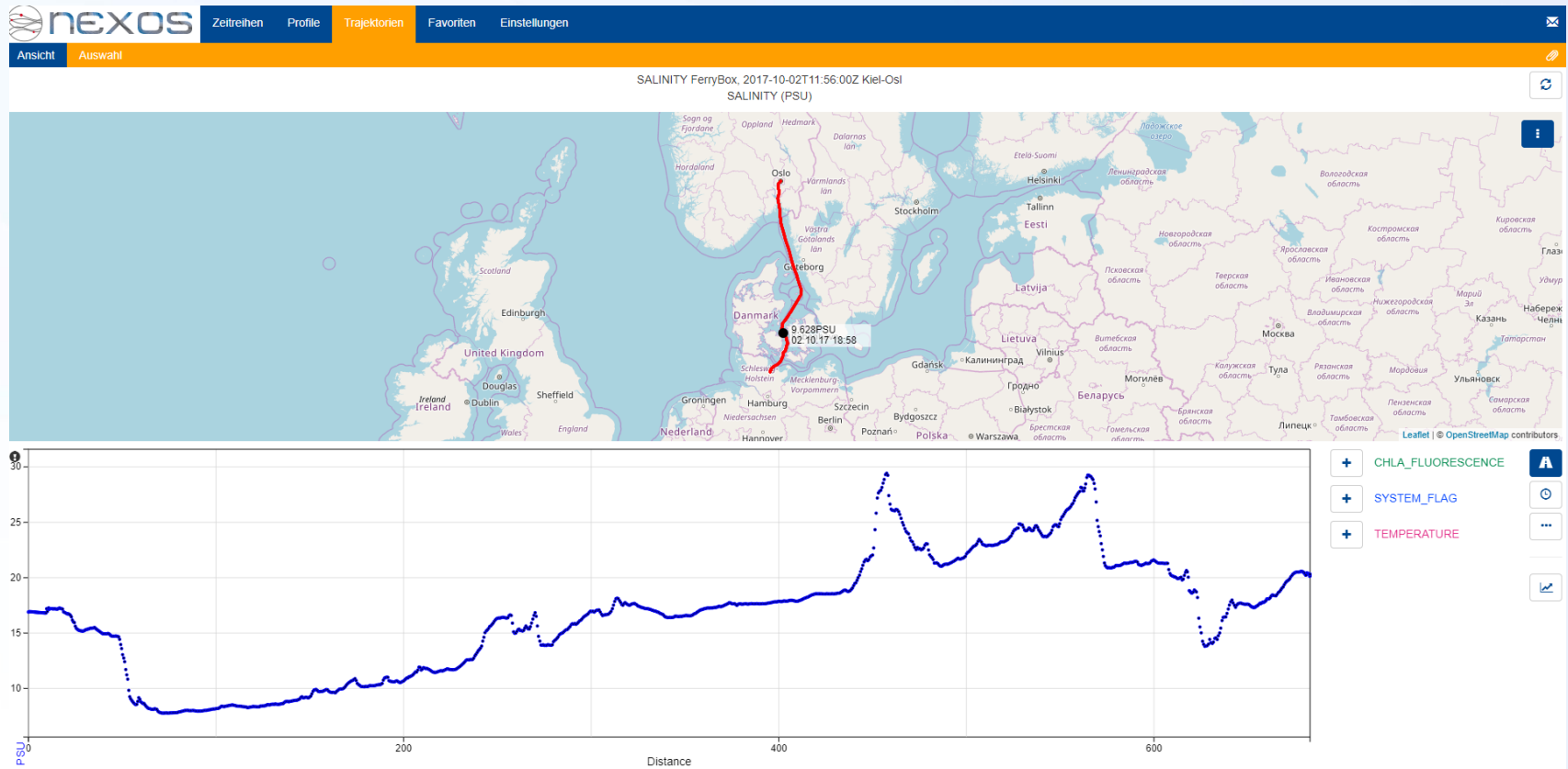
# Helgoland



# Helgoland



# Helgoland

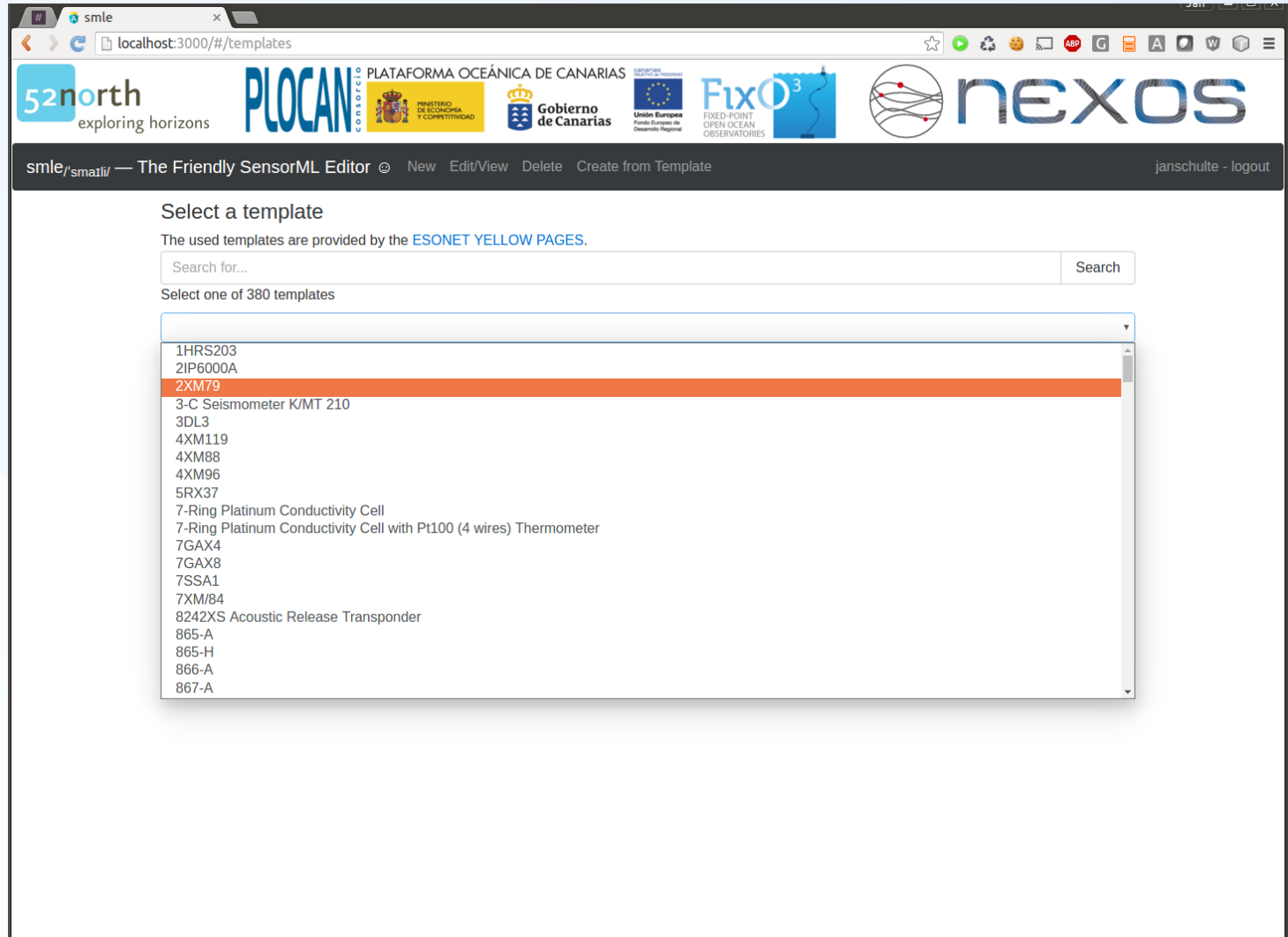




SensorWeb Colloquium, Sopot (Poland), 26/04/2018

# smle

smle



The screenshot shows a web browser window with the URL `localhost:3000/#/templates`. The page header includes logos for 52north, PLOCAN, PLATAFORMA OCEÁNICA DE CANARIAS, Gobierno de Canarias, Unión Europea, and FixO3. The main content area is titled "Select a template" and contains a search bar and a list of 380 templates. The template "2XM79" is currently selected and highlighted in orange.

smle/sma11/ — The Friendly SensorML Editor © New Edit/View Delete Create from Template janschulte - logout

### Select a template

The used templates are provided by the [ESONET YELLOW PAGES](#).

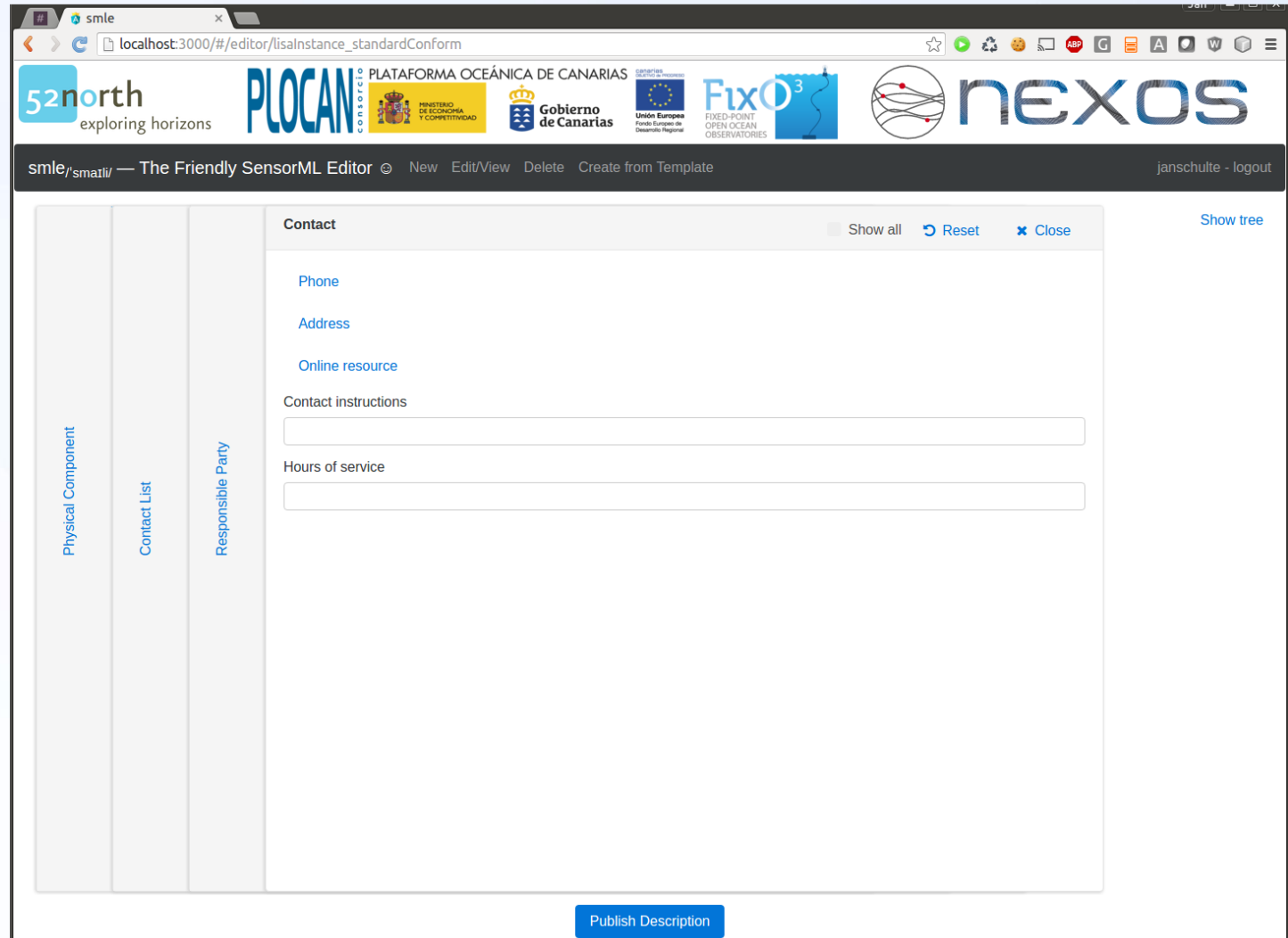
Search for...  Search

Select one of 380 templates

- 1HRS203
- 2IP6000A
- 2XM79**
- 3-C Seismometer K/MT 210
- 3DL3
- 4XM119
- 4XM88
- 4XM96
- 5RX37
- 7-Ring Platinum Conductivity Cell
- 7-Ring Platinum Conductivity Cell with Pt100 (4 wires) Thermometer
- 7GAX4
- 7GAX8
- 7SSA1
- 7XM/84
- 8242XS Acoustic Release Transponder
- 865-A
- 865-H
- 866-A
- 867-A

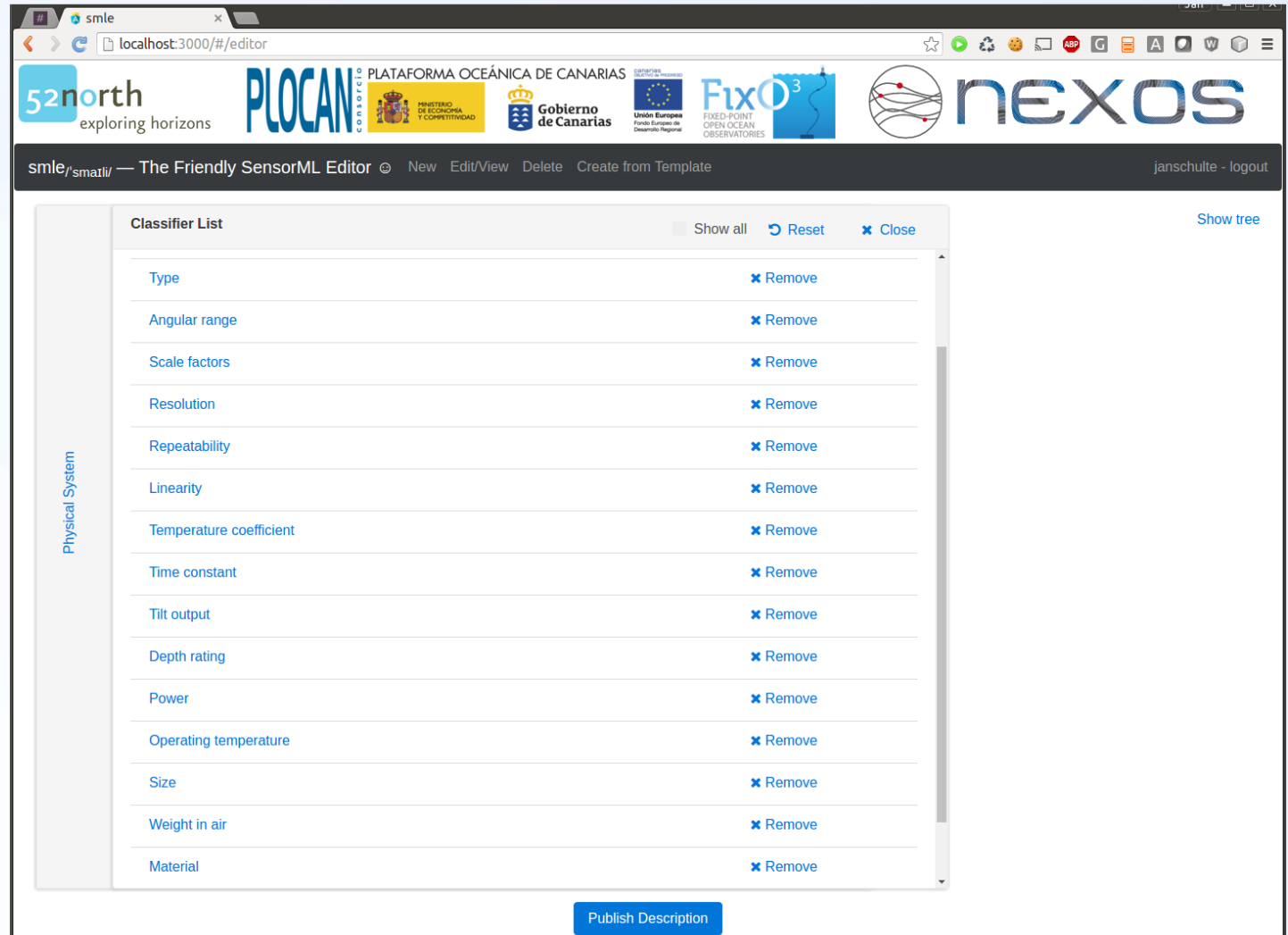


smle



The screenshot shows a web browser window with the URL `localhost:3000/#/editor/lisaInstance_standardConform`. The browser's address bar and tabs are visible. The page header contains several logos: 52north (exploring horizons), PLOCAN (CONSEJO PLATAFORMA OCEÁNICA DE CANARIAS), the Spanish Ministry of Economy and Competitiveness, the Government of the Canary Islands, the European Union (Fondo Europeo de Desarrollo Regional), FixO3 (FIXED-POINT OPEN OCEAN OBSERVATORIES), and NEXOS. Below the header, the main content area is titled "smle/'smaliv' — The Friendly SensorML Editor" and includes navigation links: "New", "Edit/View", "Delete", and "Create from Template". The user "janschulte" is logged out. The main interface features a sidebar with three vertical panels: "Physical Component", "Contact List", and "Responsible Party". The "Contact" panel is active, displaying a form with the following fields: "Phone", "Address", "Online resource", "Contact instructions" (with a text input field), and "Hours of service" (with a text input field). At the top right of the "Contact" panel, there are buttons for "Show all", "Reset", and "Close". A "Show tree" link is also present. At the bottom center of the page, there is a blue button labeled "Publish Description".

smle



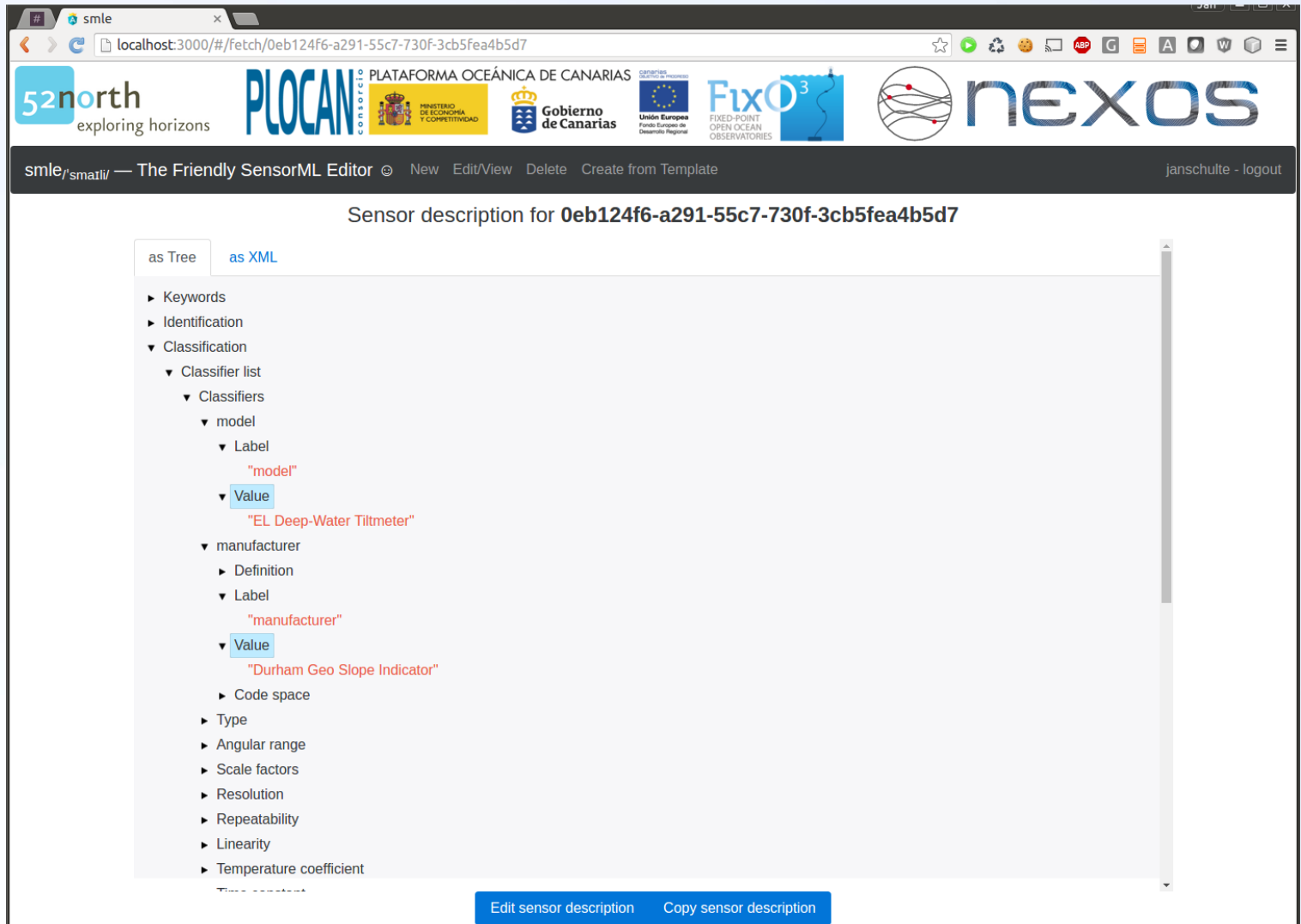
The screenshot shows the 'smle' web application running in a browser. The browser address bar shows 'localhost:3000/#/editor'. The page header includes logos for '52north', 'PLOCAN', 'PLATAFORMA OCEÁNICA DE CANARIAS', 'Gobierno de Canarias', 'Union Europea', 'FixO3', and 'nEXOS'. The main content area is titled 'smle / sma111 - The Friendly SensorML Editor' and includes a 'Classifier List' dialog box. The dialog box has a 'Physical System' sidebar and a list of classifiers with 'Remove' buttons. A 'Publish Description' button is located at the bottom of the dialog.

Classifier List	Show all	Reset	Close
Type			Remove
Angular range			Remove
Scale factors			Remove
Resolution			Remove
Repeatability			Remove
Linearity			Remove
Temperature coefficient			Remove
Time constant			Remove
Tilt output			Remove
Depth rating			Remove
Power			Remove
Operating temperature			Remove
Size			Remove
Weight in air			Remove
Material			Remove

Physical System

Show tree

Publish Description

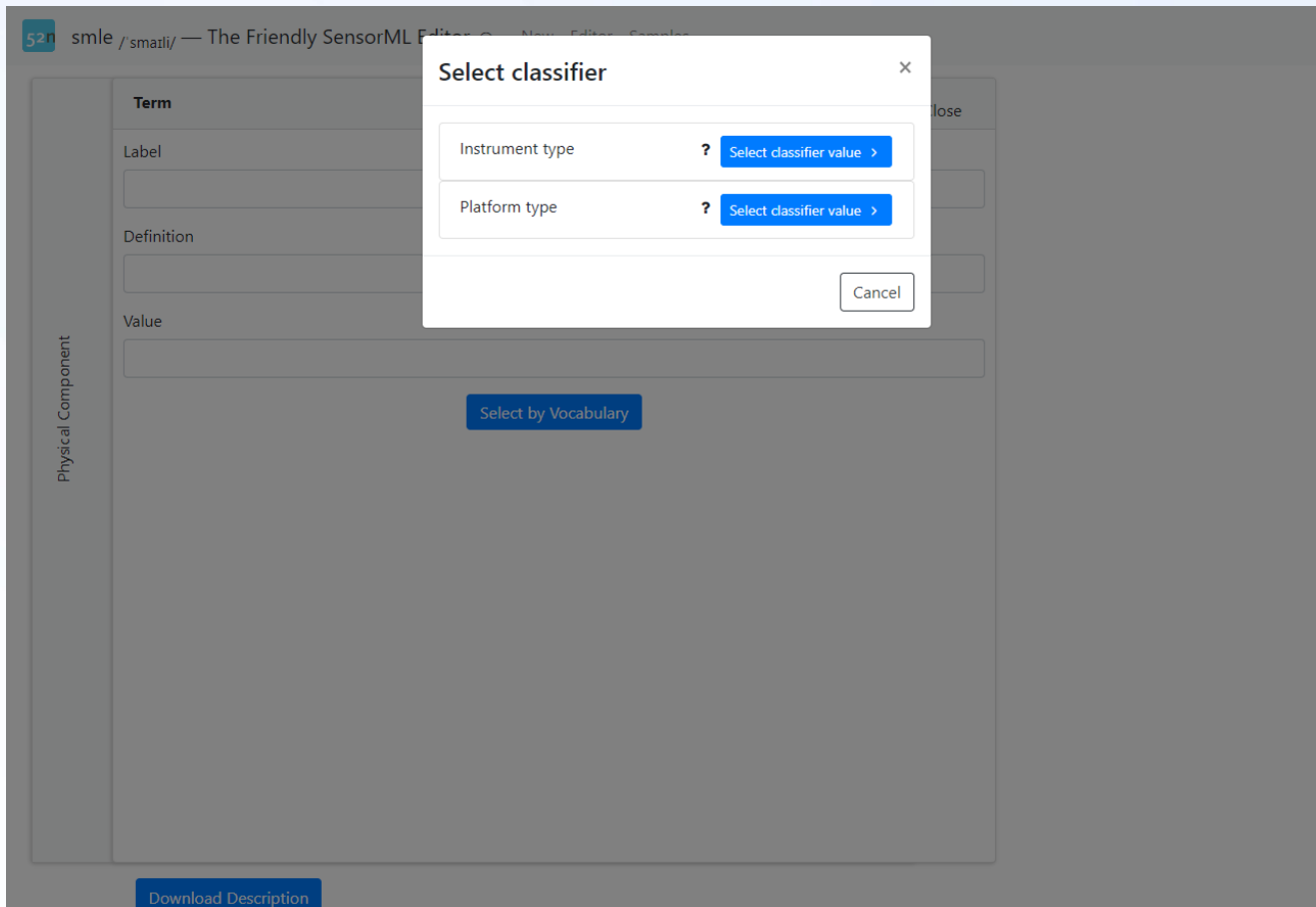


The screenshot shows a web browser window with the URL `localhost:3000/#/fetch/0eb124f6-a291-55c7-730f-3cb5fea4b5d7`. The browser's address bar and tabs are visible. The page header includes logos for 52north, PLOCAN, Gobierno de Canarias, and NEXOS. The main content area displays the sensor description for ID `0eb124f6-a291-55c7-730f-3cb5fea4b5d7`. The description is shown as a tree structure with two tabs: 'as Tree' (selected) and 'as XML'. The tree structure is as follows:

- Keywords
- Identification
- Classification
  - Classifier list
    - Classifiers
      - model
        - Label
          - Value: "EL Deep-Water Tiltmeter"
      - manufacturer
        - Definition
        - Label
          - Value: "Durham Geo Slope Indicator"
- Code space
- Type
- Angular range
- Scale factors
- Resolution
- Repeatability
- Linearity
- Temperature coefficient

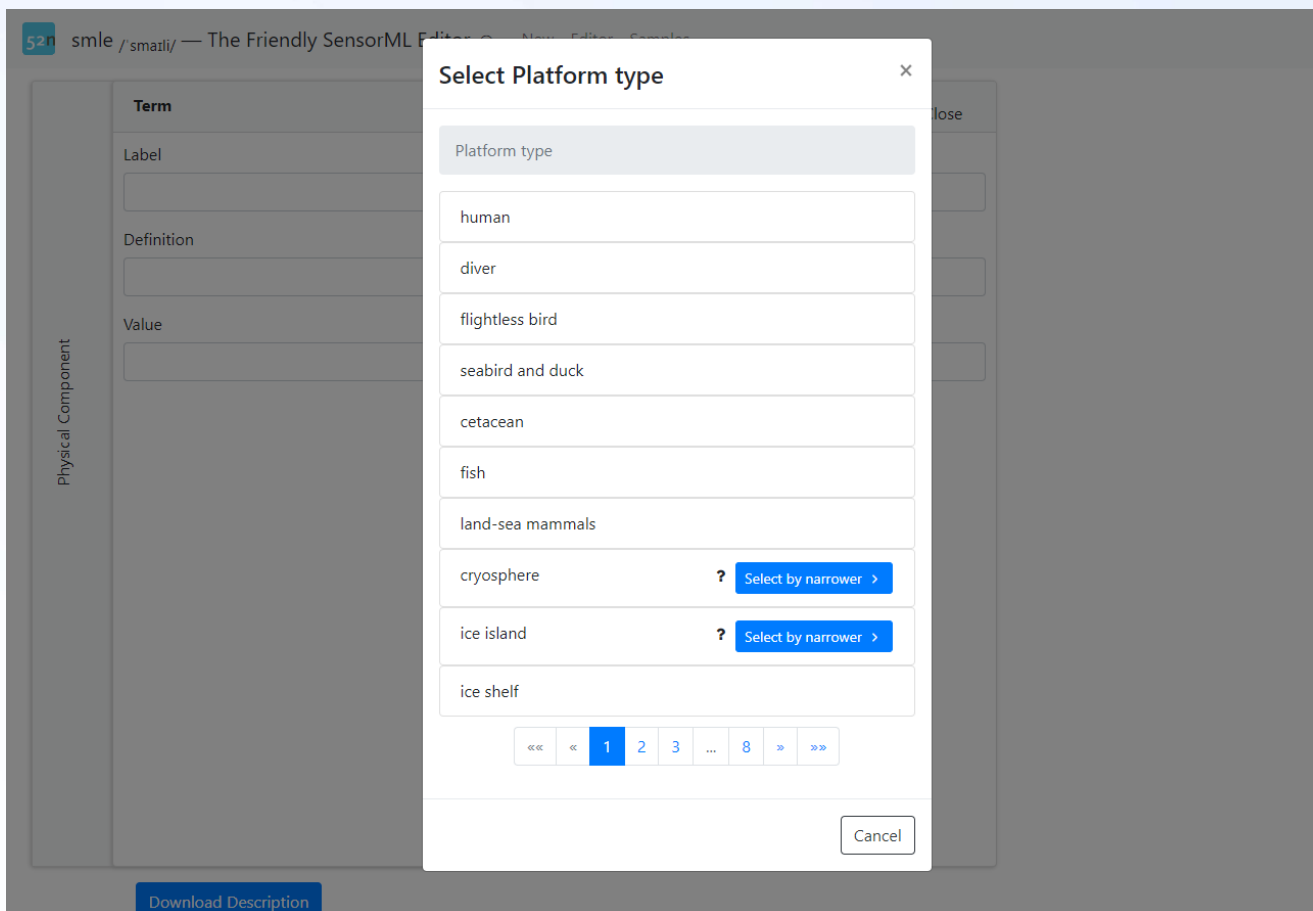
At the bottom of the page, there are two buttons: 'Edit sensor description' and 'Copy sensor description'.

# smle



The screenshot shows the 'smle /smatli/ — The Friendly SensorML Editor' web interface. A modal dialog box titled 'Select classifier' is open, featuring two rows of input fields. The first row is for 'Instrument type' and the second is for 'Platform type'. Each row contains a question mark icon and a blue button labeled 'Select classifier value >'. A 'Cancel' button is located at the bottom right of the dialog. The background interface is dimmed, showing a 'Term' section with fields for 'Label', 'Definition', and 'Value', and a 'Physical Component' label on the left. A 'Select by Vocabulary' button is visible below the dialog, and a 'Download Description' button is at the bottom of the page.

# smle



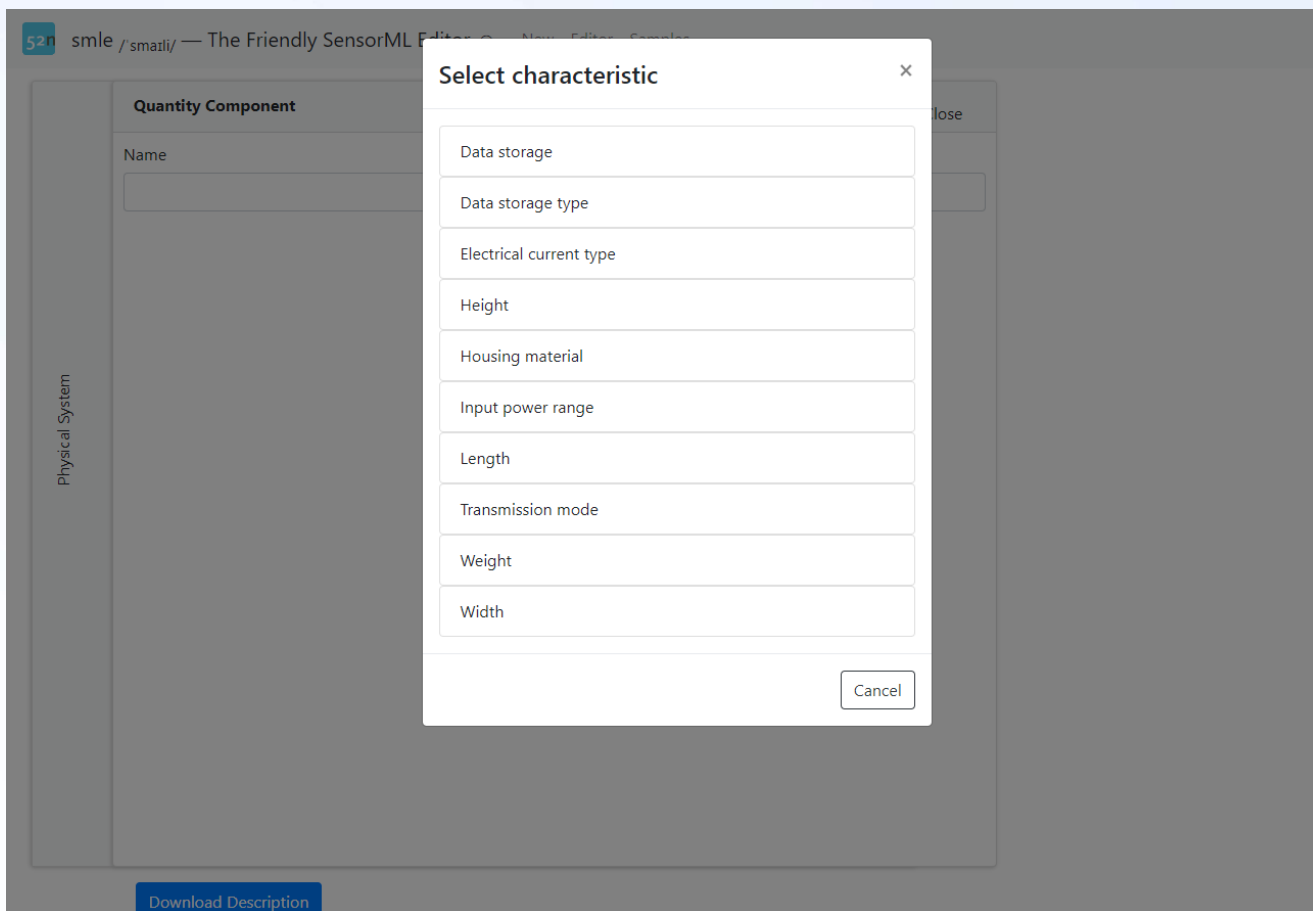
The screenshot shows the 'smle /smali/ — The Friendly SensorML Editor' web application. A modal dialog box titled 'Select Platform type' is open, displaying a list of platform types. The background interface includes a 'Physical Component' sidebar with fields for 'Term', 'Label', 'Definition', and 'Value', and a 'Download Description' button at the bottom.

Platform type
human
diver
flightless bird
seabird and duck
cetacean
fish
land-sea mammals
cryosphere ? <a href="#">Select by narrower &gt;</a>
ice island ? <a href="#">Select by narrower &gt;</a>
ice shelf

Navigation: <<< < 1 2 3 ... 8 >> >>>

Cancel

# smle



## Summary

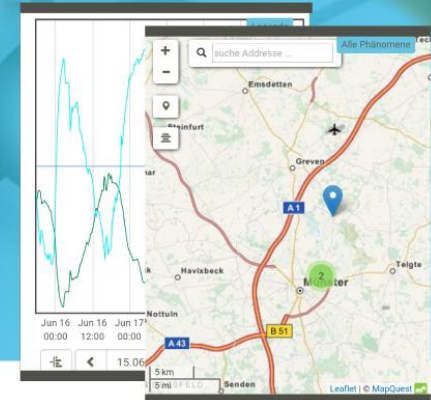
- Multiple ways of providing existing data sets to Sensor Web applications
- Integration into existing IT infrastructures
- Viewing tools such as Helgoland
- Metadata management through SensorML-based editors and portals

# Thank you for your attention!

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- [jirka@52north.org](mailto:jirka@52north.org)

September 3 – 5, 2018 Muenster, Germany

## Geospatial Sensor Webs Conference 2018



<https://52north.org/conference>