SeaDataCloud

Facilitating the Publication of Real-Time Marine Observation Data : The SeaDataCloud SWE Ingestion Service

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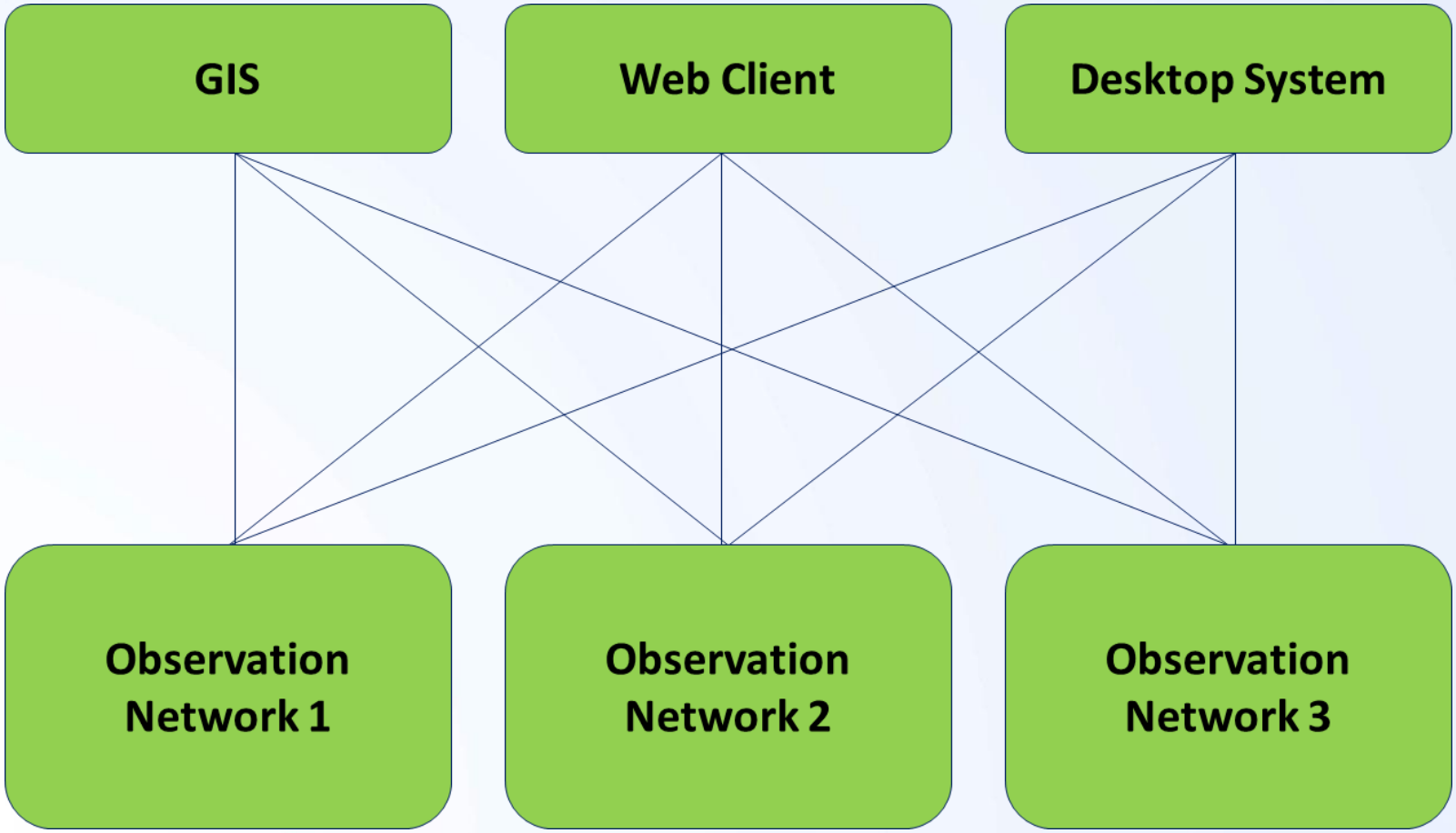
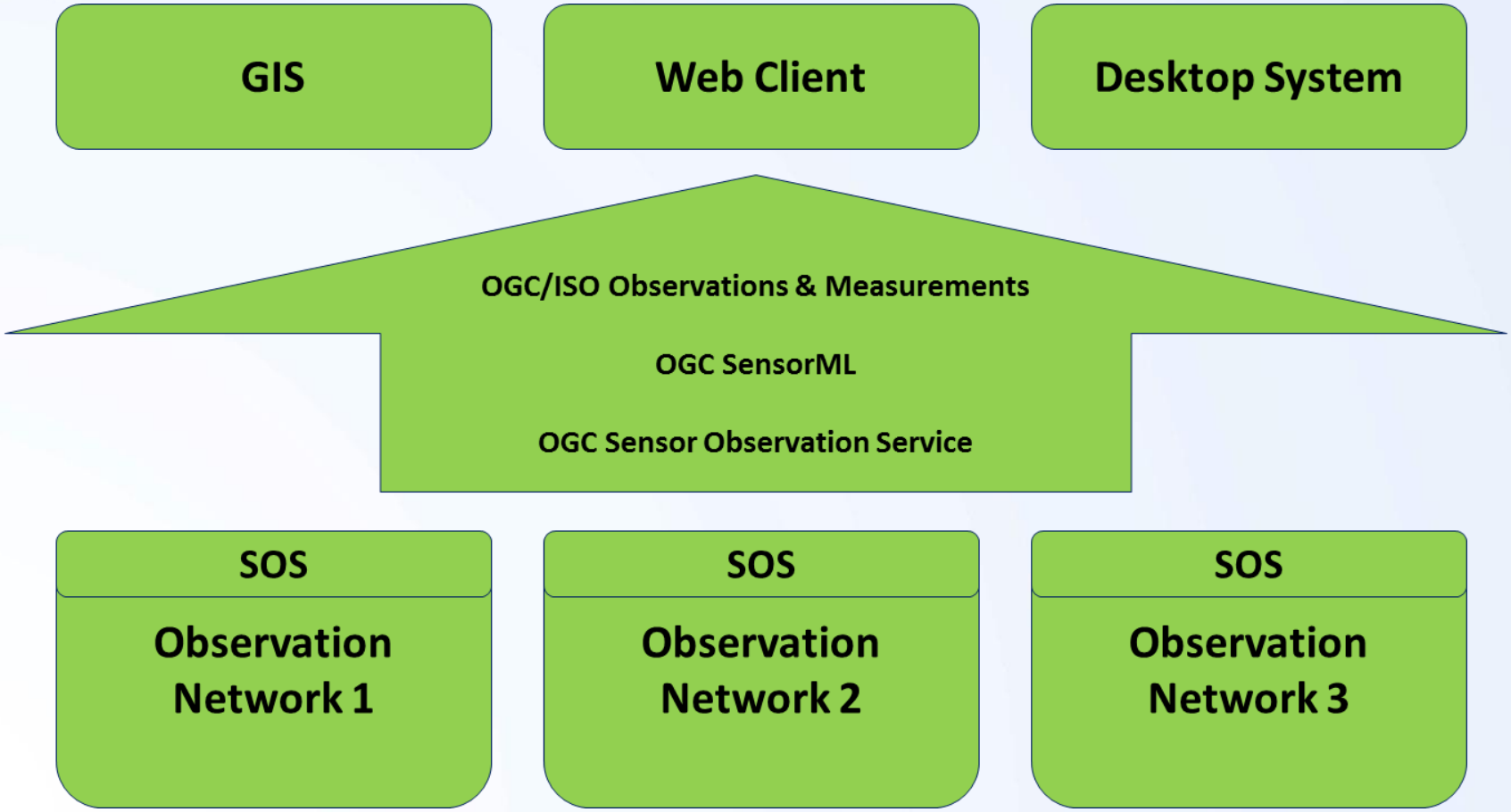
IMDIS, Barcelona, Spain, 5-7 Nov 2018
sdn-userdesk@seadatanet.org – www.seadatanet.org

Sensor Web

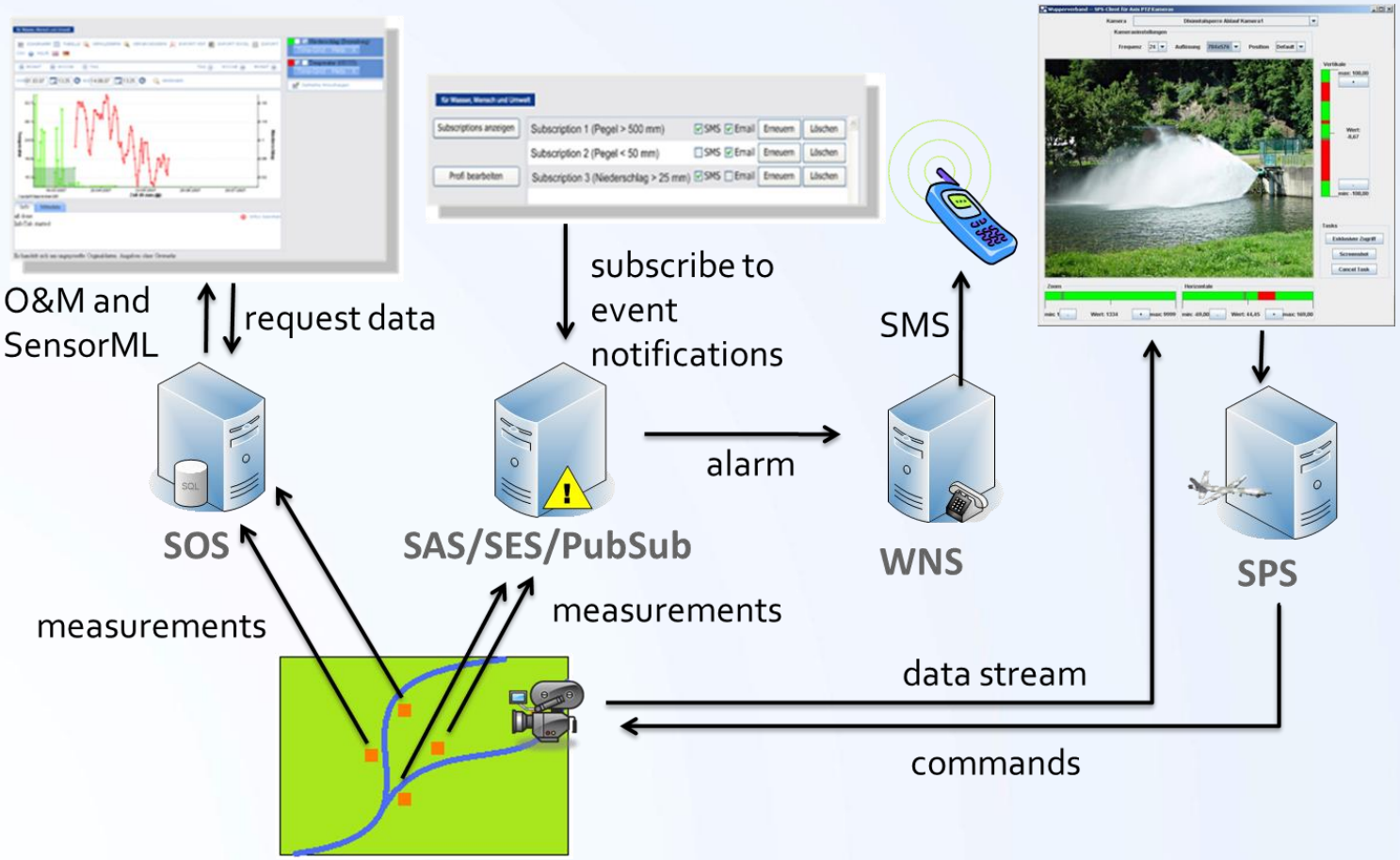
What is Sensor Web?



What is Sensor Web?



What is Sensor Web?



SeaDataCloud

SWE Ingestion Service

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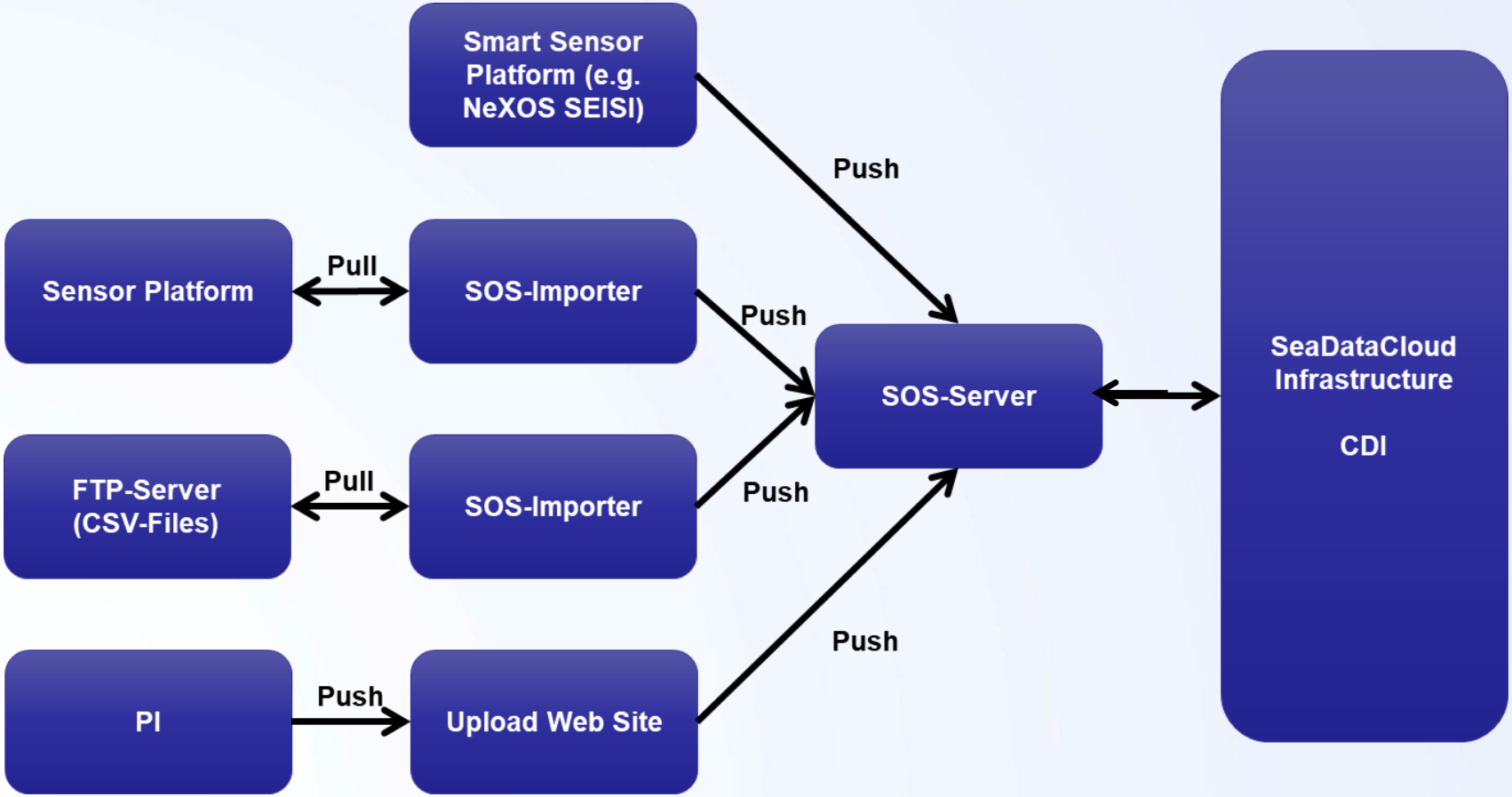
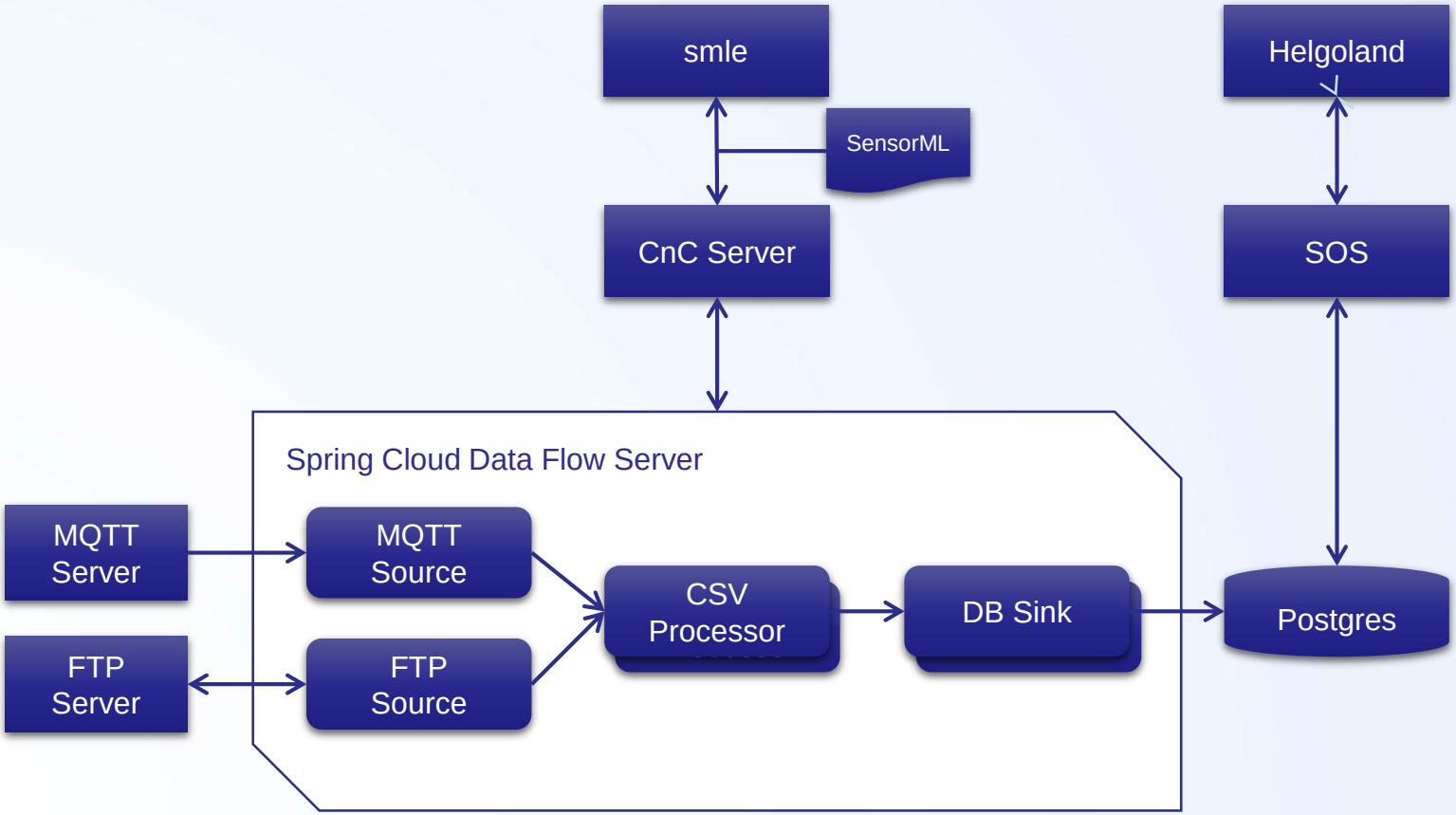
Objectives

- Facilitate the publication of observation data (streams)
  - Operate under the supervision of the PI of the observatories
  - Link from CDIs to (possibly unvalidated) near-real-time data
- Describe observatories (or networks of observatories) to
  - Receive, decode and check data
  - Enrich CDI metadata with detailed information about sensors

SWE Ingestion Service



SWE Ingestion Service



SWE Ingestion Service

```
<sml:SimpleProcess>
    <sml:inputs>
        <sml:InputList>
            <sml:input name="csv-input" xlink:href="#outputStreamStructure"/>
        </sml:InputList>
    </sml:inputs>
    <sml:outputs>
        <sml:OutputList>
            <sml:output name="csv-output" xlink:href="#outputStreamStructure"/>
        </sml:OutputList>
    </sml:outputs>
    <sml:parameters>
        <sml:ParameterList>
            <sml:parameter name="file-filter-config">
                <swe:Count definition="https://52north.org/swe-ingestion/csv-file-filter#header-line-count">
                    <swe:label>Header Line Count</swe:label>
                    <swe:description>The number of lines to strip from the csv file</swe:description>
                    <swe:value>3</swe:value>
                </swe:Count>
            </sml:parameter>
        </sml:ParameterList>
    </sml:parameters>
    <sml:method xlink:href="https://52north.org/swe-ingestion/csv-file-filter"/>
</sml:SimpleProcess>
```

SWE Ingestion Service

```
<sml:SimpleProcess gml:id="sos-sink">
    <sml:parameters>
        <sml:ParameterList>
            <sml:parameter name="date-format">
            <swe:Text definition="https://52north.org/swe-ingestion/sos-database-sink#uri">
                <swe:label>SOS database connection URI</swe:label>
                <swe:description>SOS database connection URI</swe:description>
                <swe:value>postgresql://postgres:postgres@localhost:5432/sos</swe:value>
            </swe:Text>
            </sml:parameter>
        </sml:ParameterList>
    </sml:parameters>
    <sml:method xlink:href="https://52north.org/swe-ingestion/sos-database-sink"/>
</sml:SimpleProcess>
```

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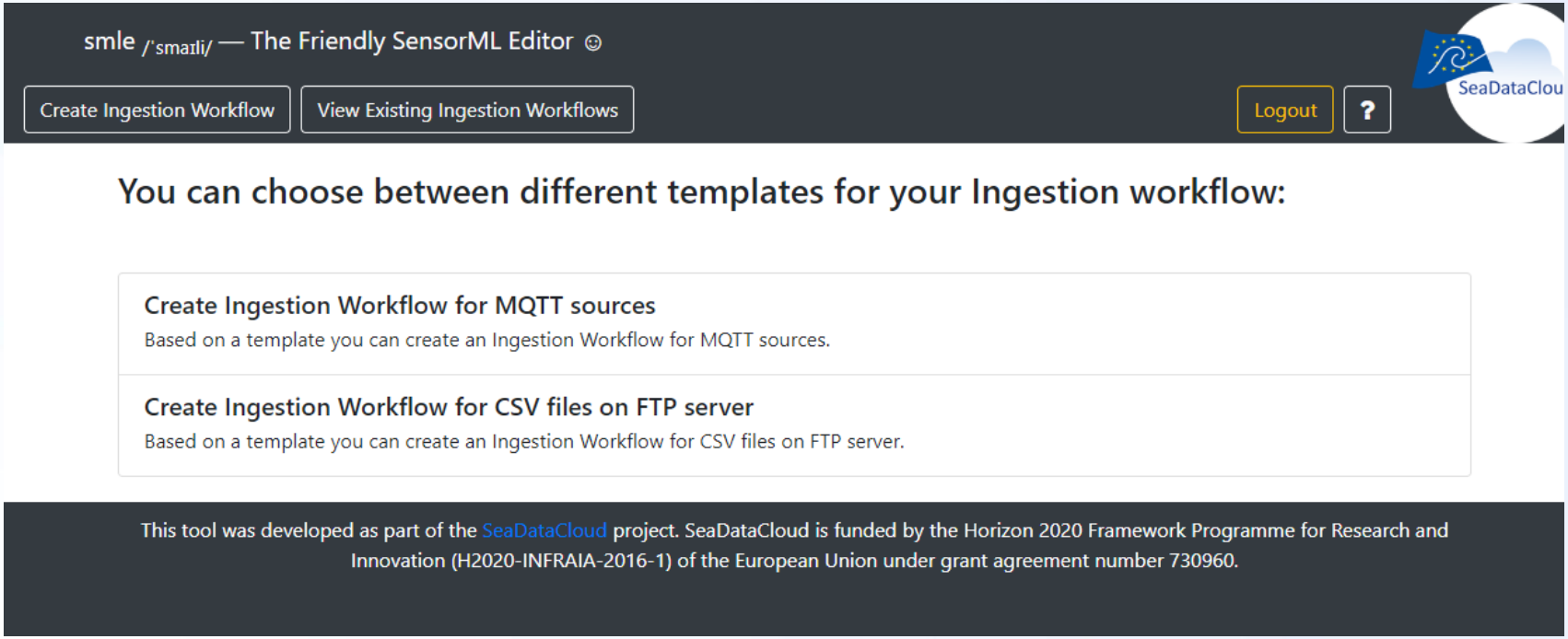
smle /ˈsmaɪli/ — The Friendly SensorML Editor ☺
Create Ingestion Workflow
View Existing Ingestion Workflows
Logout
?
SeaDataClou
You can choose between different templates for your Ingestion workflow:
Create Ingestion Workflow for MQTT sources
Based on a template you can create an Ingestion Workflow for MQTT sources.
Create Ingestion Workflow for CSV files on FTP server
Based on a template you can create an Ingestion Workflow for CSV files on FTP server.
This tool was developed as part of the SeaDataCloud project. SeaDataCloud is funded by the Horizon 2020 Framework Programme for Research and Innovation (H2020-INFRAIA-2016-1) of the European Union under grant agreement number 730960.

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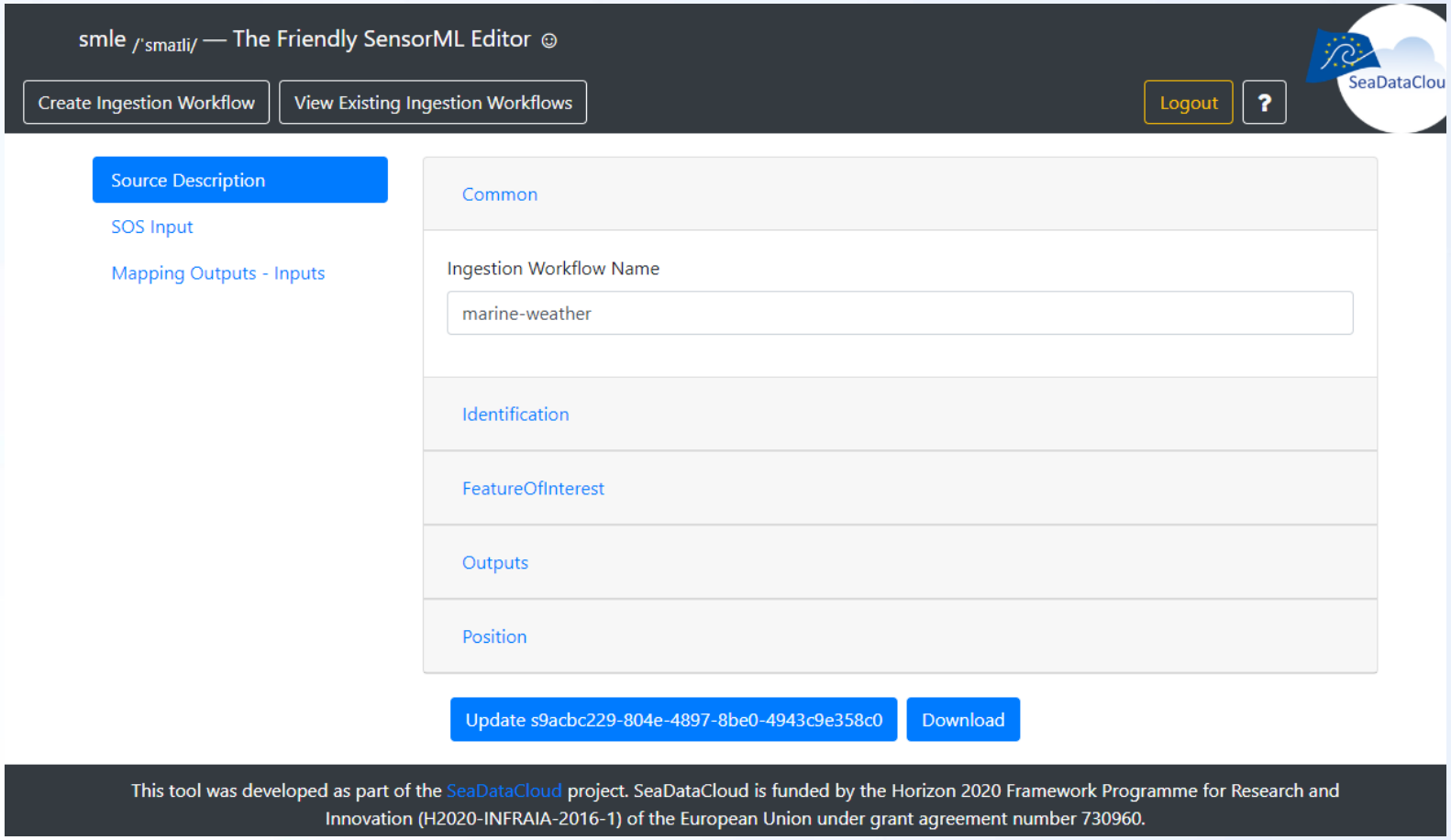
smle /ˈsmaɪli/ — The Friendly SensorML Editor ☺
Create Ingestion Workflow
View Existing Ingestion Workflows
Logout
?
SeaDataClou
Source Description
SOS Input
Mapping Outputs - Inputs
Common
Ingestion Workflow Name
marine-weather
Identification
FeatureOfInterest
Outputs
Position
Update s9acbc229-804e-4897-8be0-4943c9e358c0
Download
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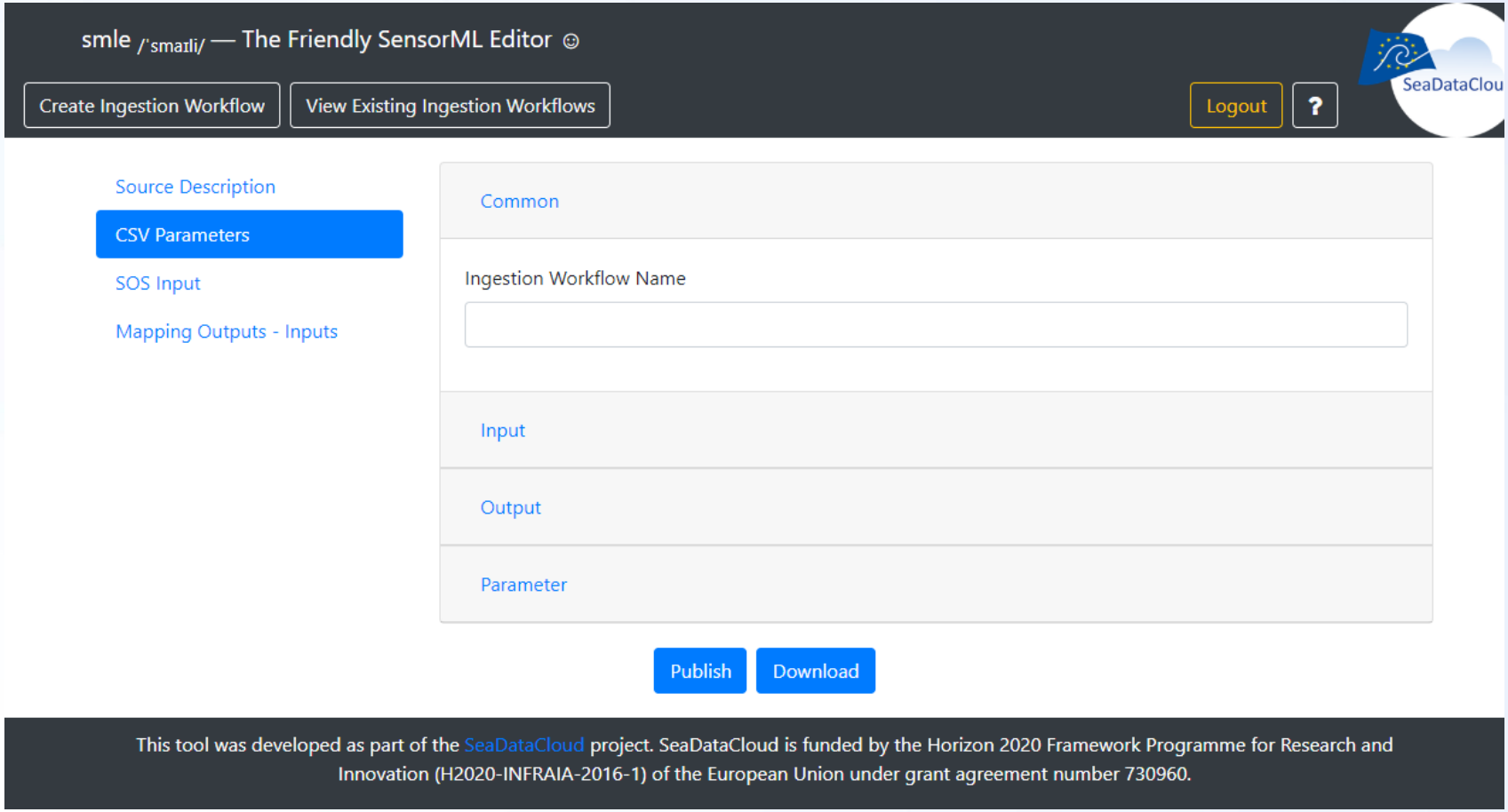
smle /ˈsmaɪli/ — The Friendly SensorML Editor ☺
Create Ingestion Workflow
View Existing Ingestion Workflows
Logout
?
SeaDataClou
Source Description
CSV Parameters
SOS Input
Mapping Outputs - Inputs
Common
Ingestion Workflow Name
Input
Output
Parameter
Publish
Download
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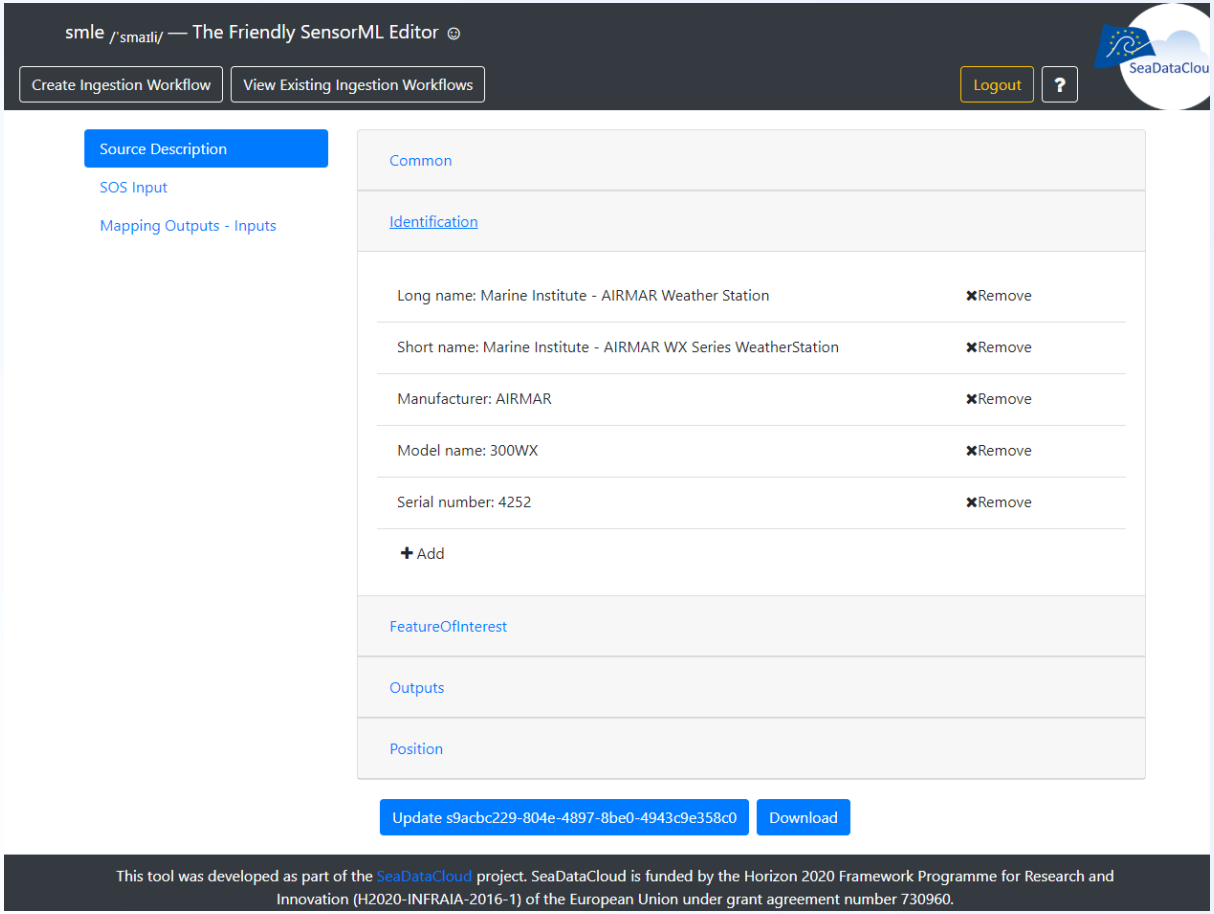
smle /ˈsmaɪli/ — The Friendly SensorML Editor ☺
Create Ingestion Workflow
View Existing Ingestion Workflows
Logout
?
SeaDataClou
Source Description
SOS Input
Mapping Outputs - Inputs
Common
Identification
Long name: Marine Institute - AIRMAR Weather Station
✖Remove
Short name: Marine Institute - AIRMAR WX Series WeatherStation
✖Remove
Manufacturer: AIRMAR
✖Remove
Model name: 300WX
✖Remove
Serial number: 4252
✖Remove
✚ Add
FeatureOfInterest
Outputs
Position
Update s9acbc229-804e-4897-8be0-4943c9e358c0
Download
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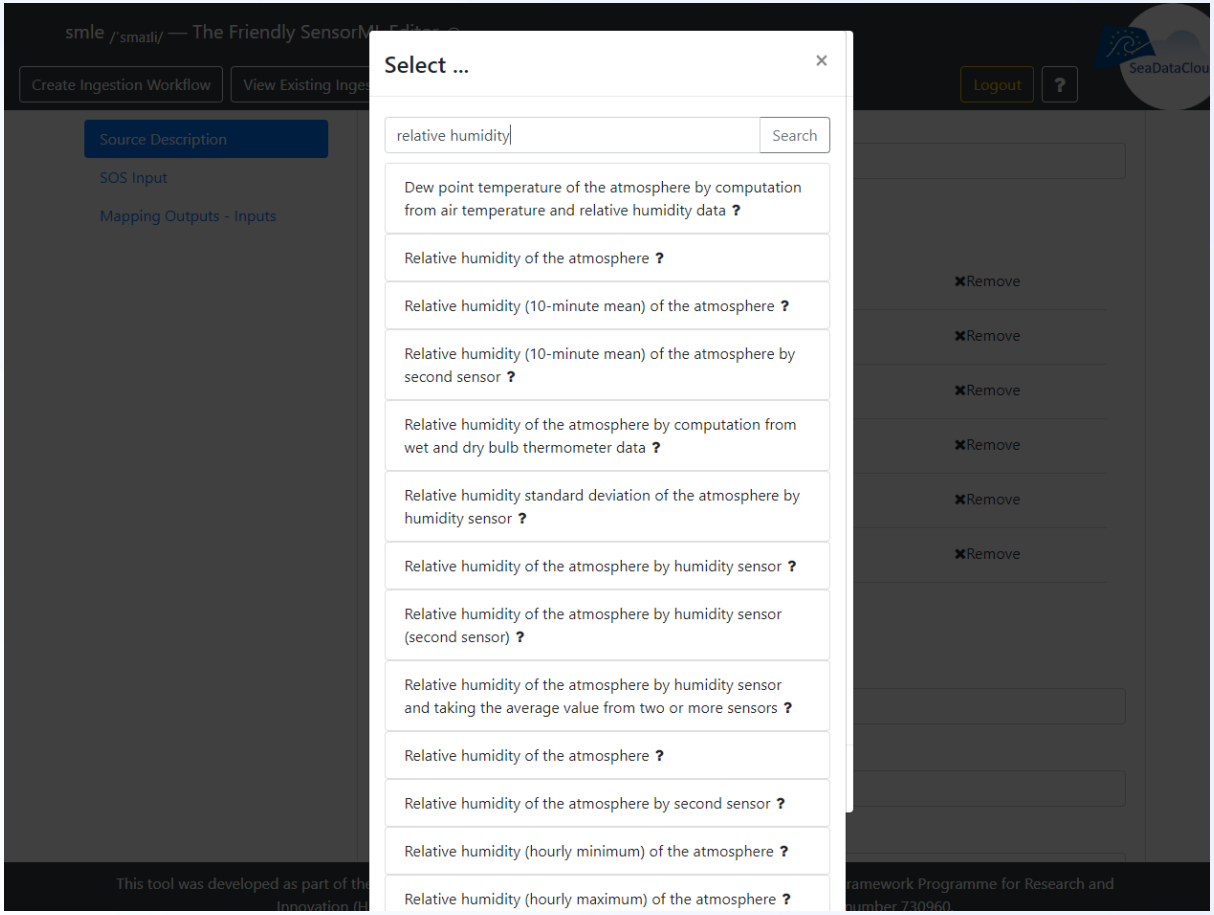
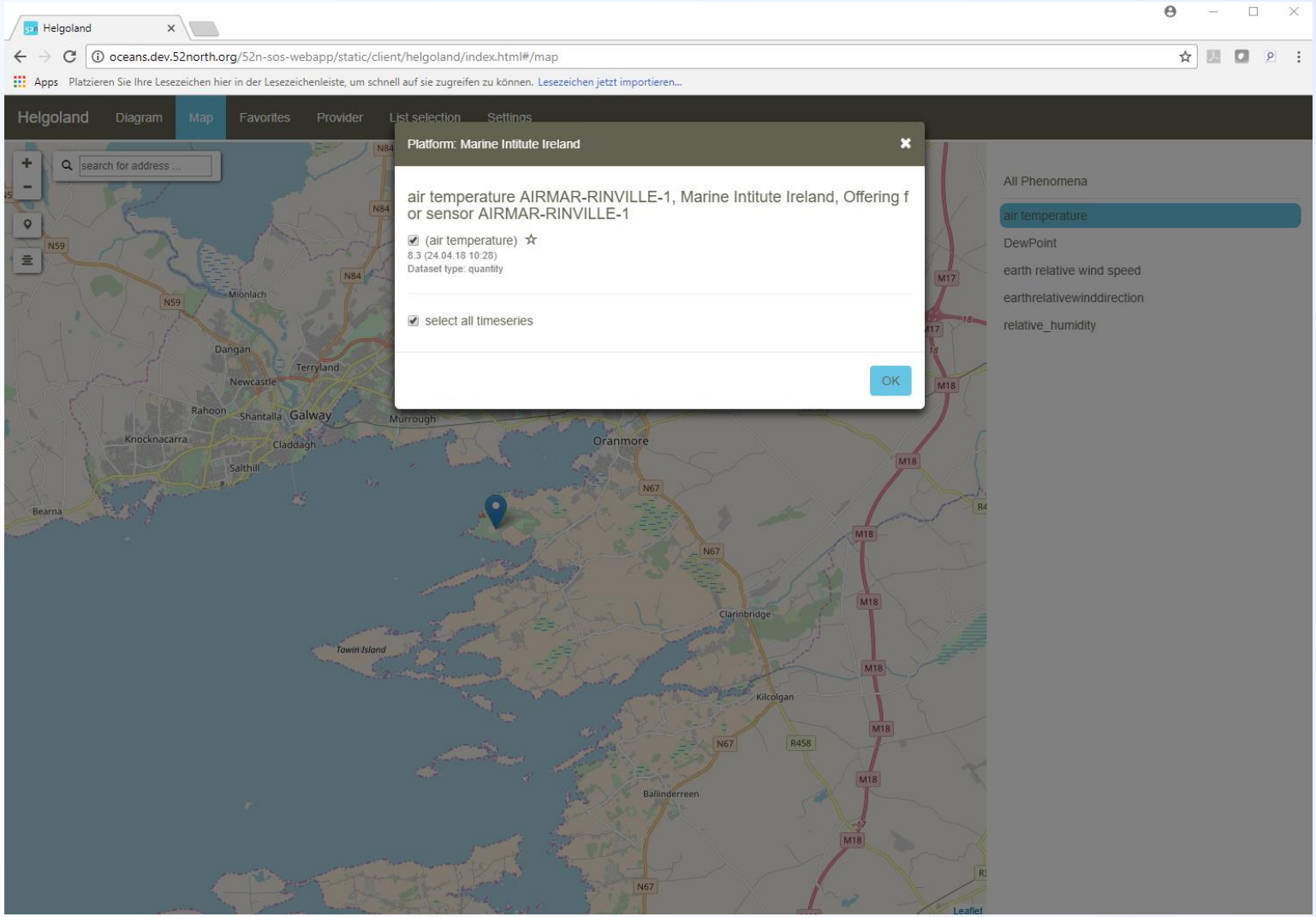
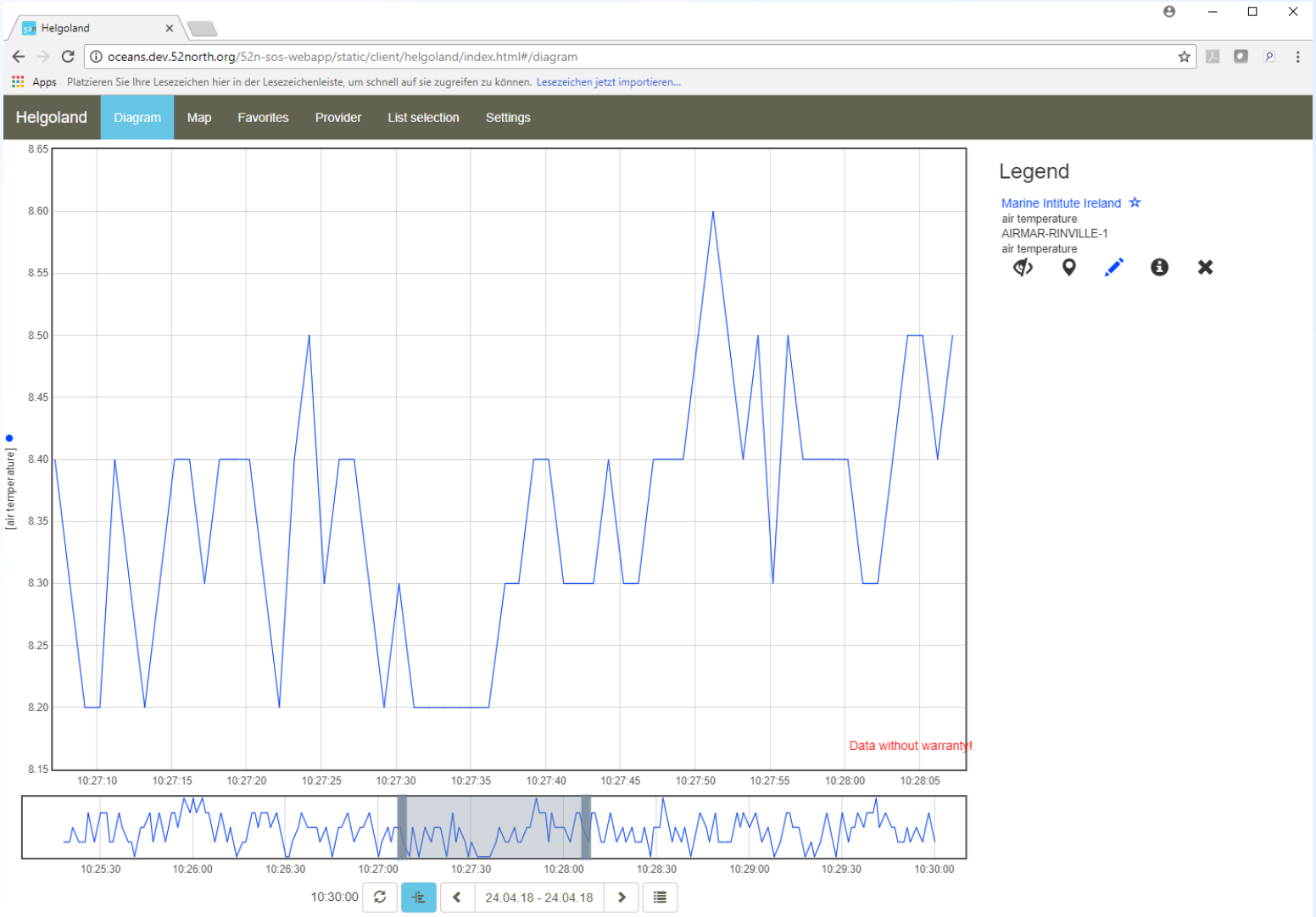
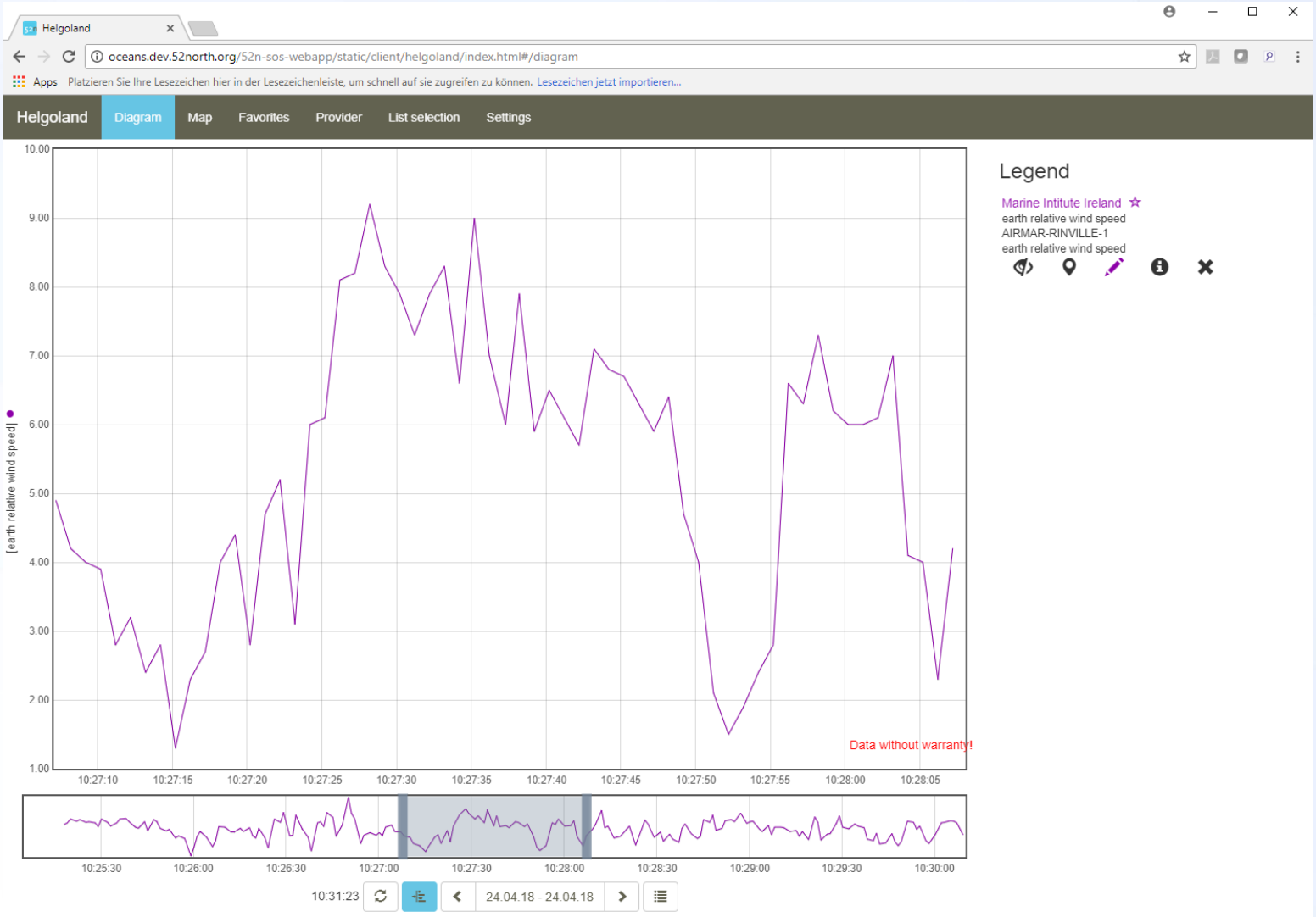

smle /ˈsmaɪli/ — The Friendly SensorML Editor
Create Ingestion Workflow
View Existing Inge
Logout
Source Description
SOS Input
Mapping Outputs - Inputs
Remove
Remove
Remove
Remove
Remove
Select ...
relative humidity
Search
Dew point temperature of the atmosphere by computation from air temperature and relative humidity data ?
Relative humidity of the atmosphere ?
Relative humidity (10-minute mean) of the atmosphere ?
Relative humidity (10-minute mean) of the atmosphere by second sensor ?
Relative humidity of the atmosphere by computation from wet and dry bulb thermometer data ?
Relative humidity standard deviation of the atmosphere by humidity sensor ?
Relative humidity of the atmosphere by humidity sensor ?
Relative humidity of the atmosphere by humidity sensor (second sensor) ?
Relative humidity of the atmosphere by humidity sensor and taking the average value from two or more sensors ?
Relative humidity of the atmosphere ?
Relative humidity of the atmosphere by second sensor ?
Relative humidity (hourly minimum) of the atmosphere ?
Relative humidity (hourly maximum) of the atmosphere ?
This tool was developed as part of the
ramework Programme for Research and

Helgoland


Helgoland
oceans.dev.52north.org/52n-sos-webapp/static/client/helgoland/index.html#/map
Helgoland
Diagram
Map
Favorites
Provider
List selection
Settings
Platform: Marine Intitute Ireland
air temperature AIRMAR-RINVILLE-1, Marine Intitute Ireland, Offering for sensor AIRMAR-RINVILLE-1
(air temperature)
8.3 (24.04.18 10:28)
Dataset type: quantity
select all timeseries
OK
All Phenomena
air temperature
DewPoint
earth relative wind speed
earthrelativewinddirection
relative_humidity
search for address ...
Mionlach
Dangan
Terryland
Newcastle
Rahoon
Shantalla
Galway
Murrough
Knocknacarra
Claddagh
Salthill
Bearna
Oranmore
Clarinbridge
Kilcolgan
Ballinderreen
Tawin Island
Leaflet


Helgoland
oceans.dev.52north.org/52n-sos-webapp/static/client/helgoland/index.html#/diagram
Apps
Platzieren Sie Ihre Lesezeichen hier in der Lesezeichenleiste, um schnell auf sie zugreifen zu können. Lesezeichen jetzt importieren...
Helgoland
Diagram
Map
Favorites
Provider
List selection
Settings
[air temperature]
8.65
8.60
8.55
8.50
8.45
8.40
8.35
8.30
8.25
8.20
8.15
10:27:10
10:27:15
10:27:20
10:27:25
10:27:30
10:27:35
10:27:40
10:27:45
10:27:50
10:27:55
10:28:00
10:28:05
Data without warranty!
10:25:30
10:26:00
10:26:30
10:27:00
10:27:30
10:28:00
10:28:30
10:29:00
10:29:30
10:30:00
10:30:00
24.04.18 - 24.04.18
Legend
Marine Intitute Ireland
air temperature
AIRMAR-RINVILLE-1
air temperature


Helgoland
oceans.dev.52north.org/52n-sos-webapp/static/client/helgoland/index.html#/diagram
Apps
Platzieren Sie Ihre Lesezeichen hier in der Lesezeichenleiste, um schnell auf sie zugreifen zu können. Lesezeichen jetzt importieren...
Helgoland
Diagram
Map
Favorites
Provider
List selection
Settings
[earth relative wind speed]
10.00
9.00
8.00
7.00
6.00
5.00
4.00
3.00
2.00
1.00
10:27:10
10:27:15
10:27:20
10:27:25
10:27:30
10:27:35
10:27:40
10:27:45
10:27:50
10:27:55
10:28:00
10:28:05
Data without warranty!
10:25:30
10:26:00
10:26:30
10:27:00
10:27:30
10:28:00
10:28:30
10:29:00
10:29:30
10:30:00
10:31:23
24.04.18 - 24.04.18
Legend
Marine Intitute Ireland
earth relative wind speed
AIRMAR-RINVILLE-1
earth relative wind speed

Thank you for your attention!

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- jirka@52north.org