SeaDataCloud

Interoperable Publication of Sensor Observation Data: The SeaDataCloud SWE Ingestion Service

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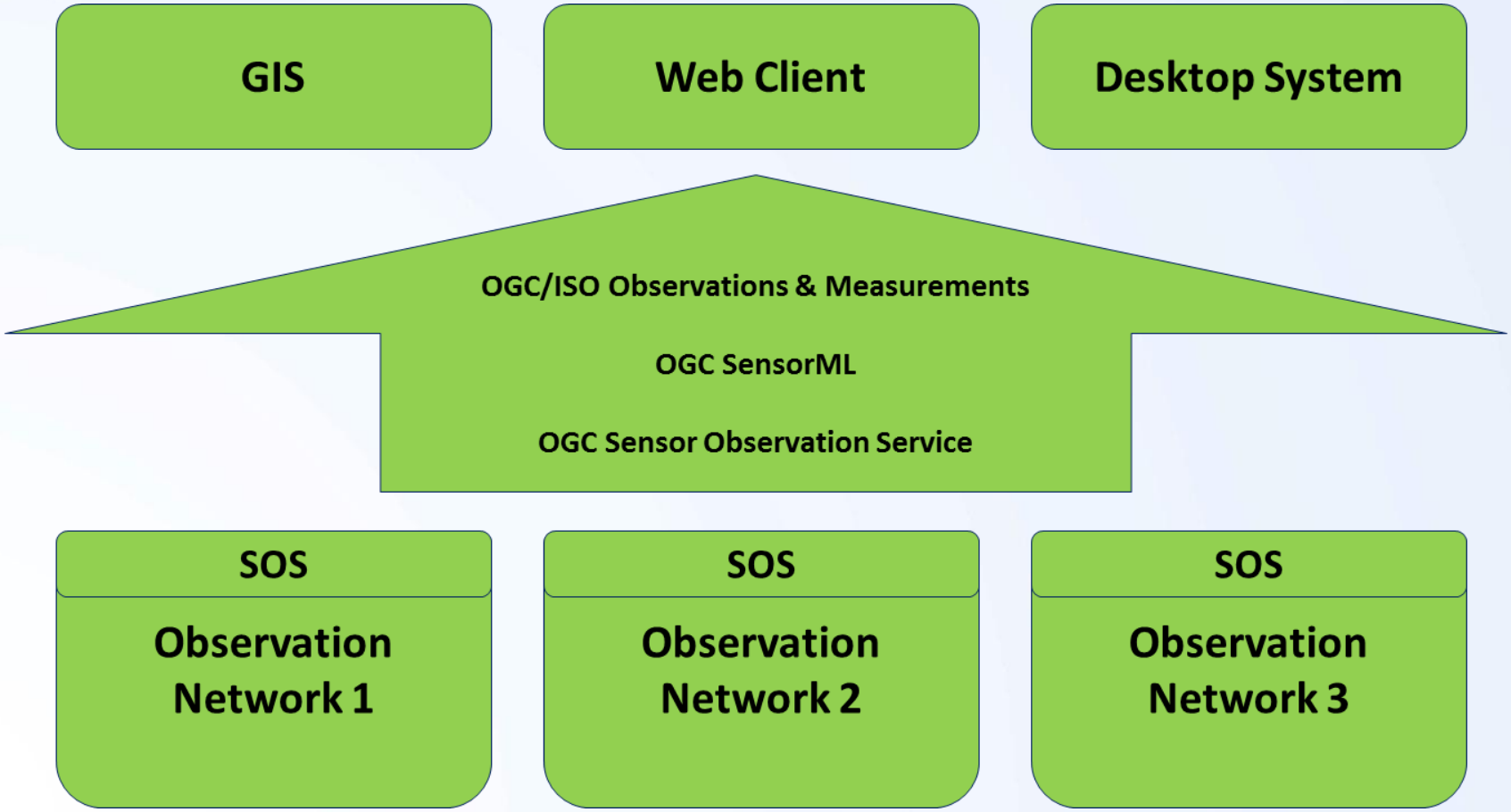
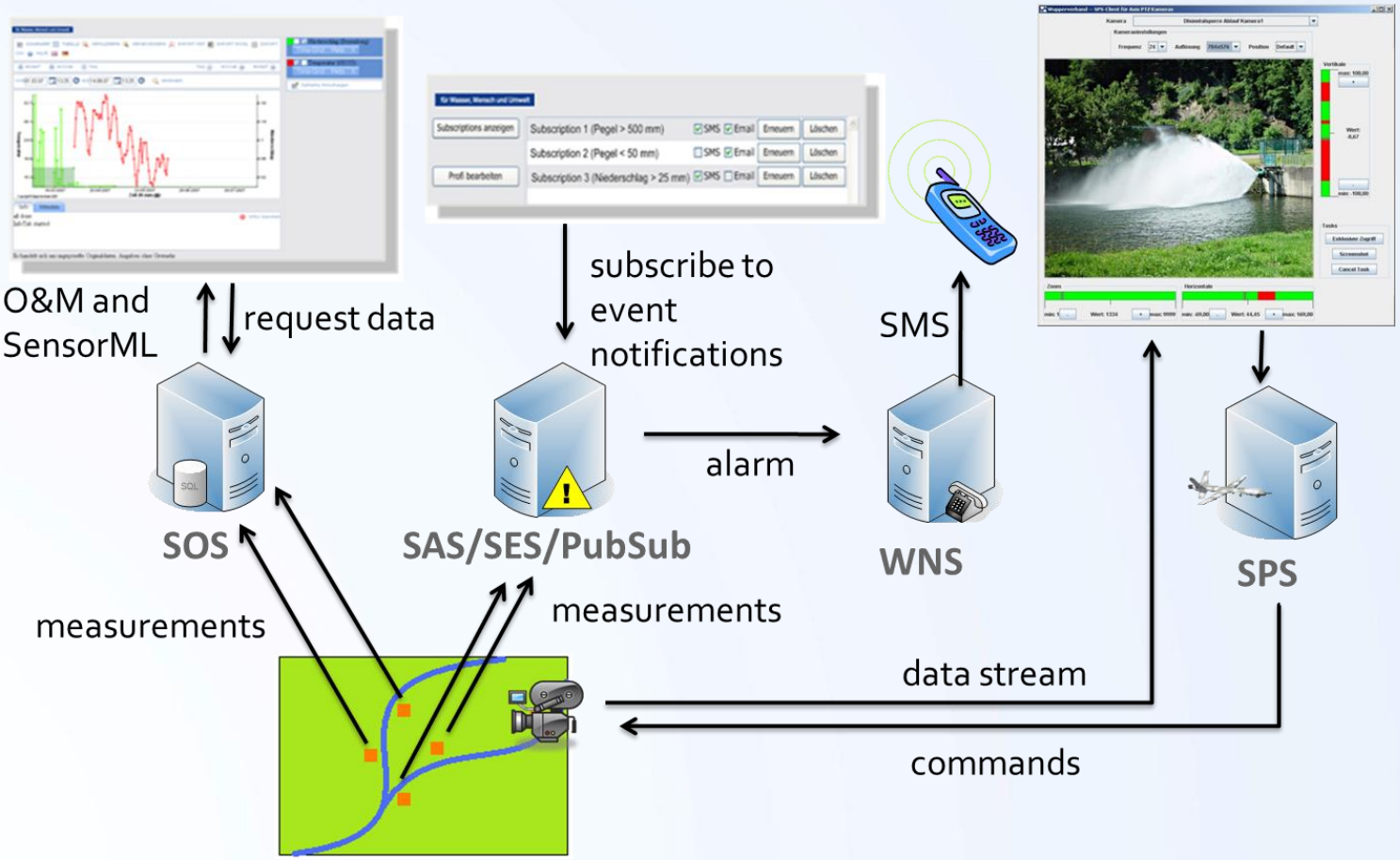
Objectives

- Facilitate the publication of observation data (streams)
- Describe observatories (or networks of observatories)
- Ingestion service
  - Receive, decode and check data
  - Operated under the supervision of the PI of the observatories
  - Use SensorML descriptions of the observatories for data decoding
  - Accept SWE-based observation data streams

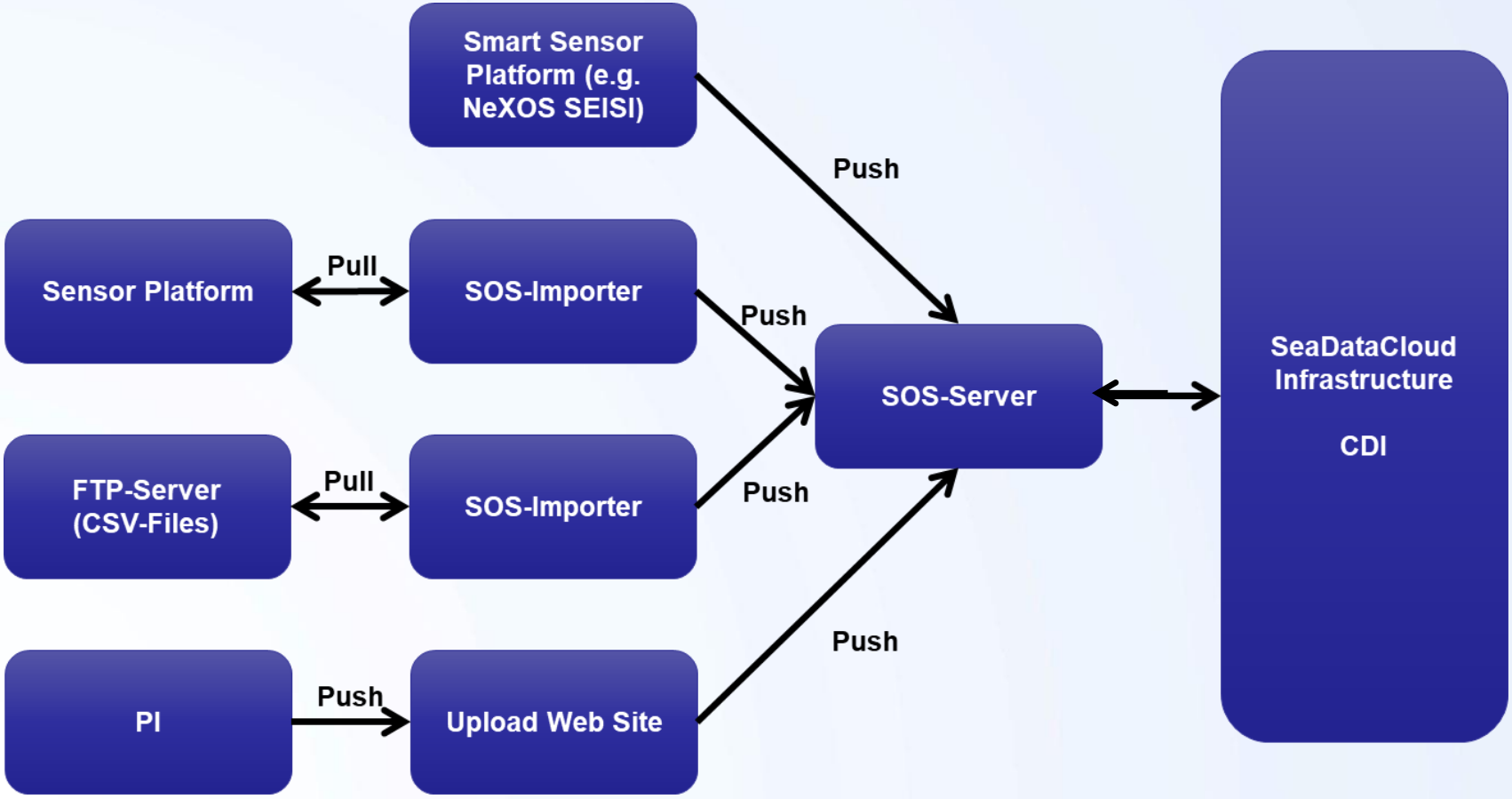
Short Introduction into Sensor Web



Short introduction into Sensor Web



SWE Ingestion Service: Overview



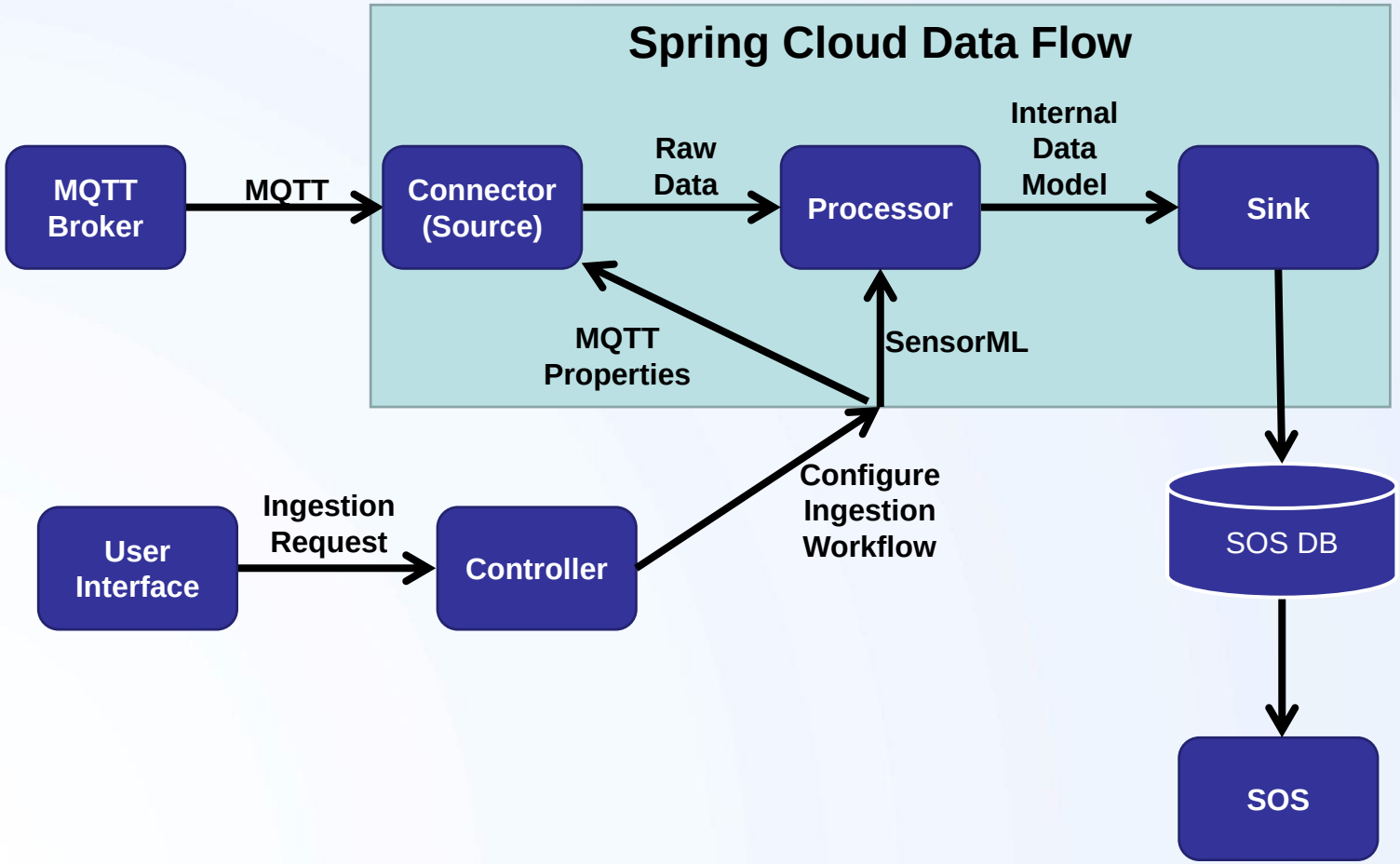
Pull-based Workflow

- Actively read data from different data sources, e.g.
  - FTP servers
  - Directories in file system
  - Sensor interface
- Push collected to SOS database

Push-based Workflow

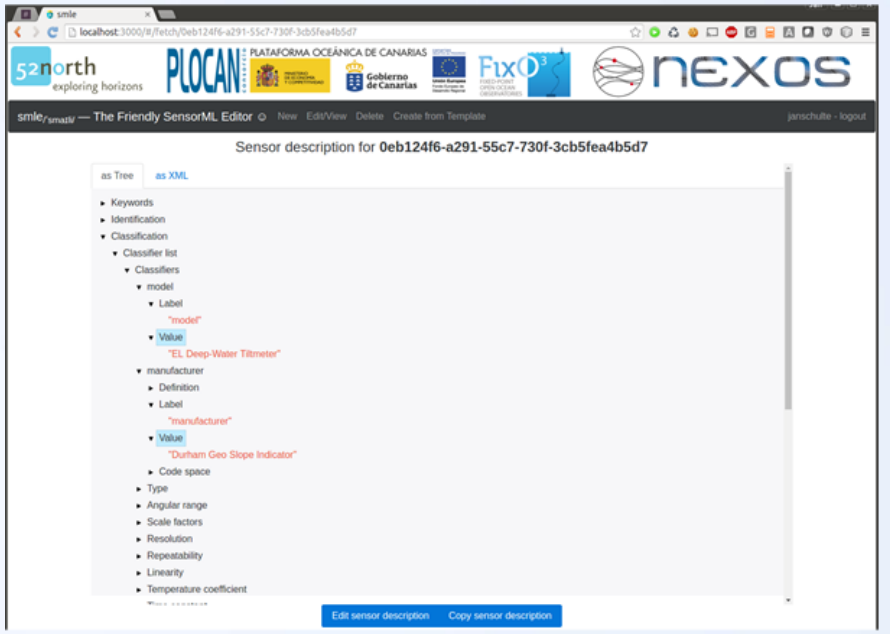
- Receive continuous incoming data streams, e.g.
  - MQTT streams
- Push received data to SOS database

Architecture



User Interface

- Editing sensor descriptions: smle
- Extended to support commands, outputs and vocabularies
- Full text search for stored sensor metadata documents



User Interface

- Feedback to Data Providers
- Relevant information
  - Details about successfully /unsuccessfully inserted sensors (metadata)
  - Amount of successfully/ unsuccessfully inserted observations
- This information shall be made accessible through a dedicated operation

Status and Next Steps

- Implementation ongoing
- First version expected for May
- Current focus: MQTT input
- Several SeaDataCloud partners will provide data sources for first set-ups

Thank you for your attention!

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https://52north.org/conference