

## Conclusions, comments

**Cooperation needed around Baltic** (infrastructures, research and operational) because

- With the Copernicus programme and Sentinel satellites the amount of EO data will increase dramatically → "BigData" solutions needed, duplicating data and "efforts" should be avoided, **network (cluster) of processing centres around Baltic with one central node?**
- Basic pre-processing for EO data should be done only once
- Services for different (level) users should be developed: raw data, products, processing facilities, ...
- Specific EO algorithms needed for Baltic Sea and its drainage basin → algorithm and product development for these conditions is important as well as continuous
  - Common R&D projects

# Conclusions, comments

Making data freely available is only the first step, **interoperability** and **maximizing the use of data** should be the goal

- Easy access to EO, in-situ, and GIS data without any need for extra resources
- Commonly agreed standards (OGC) should be used for data services (download, view, metadata search, ...)
- Data quality/uncertainty information must be known and follow the data
- Data harmonisation is important and makes the use of data and products easier
- SYKE's vision is to develop "multi source" environmental monitoring

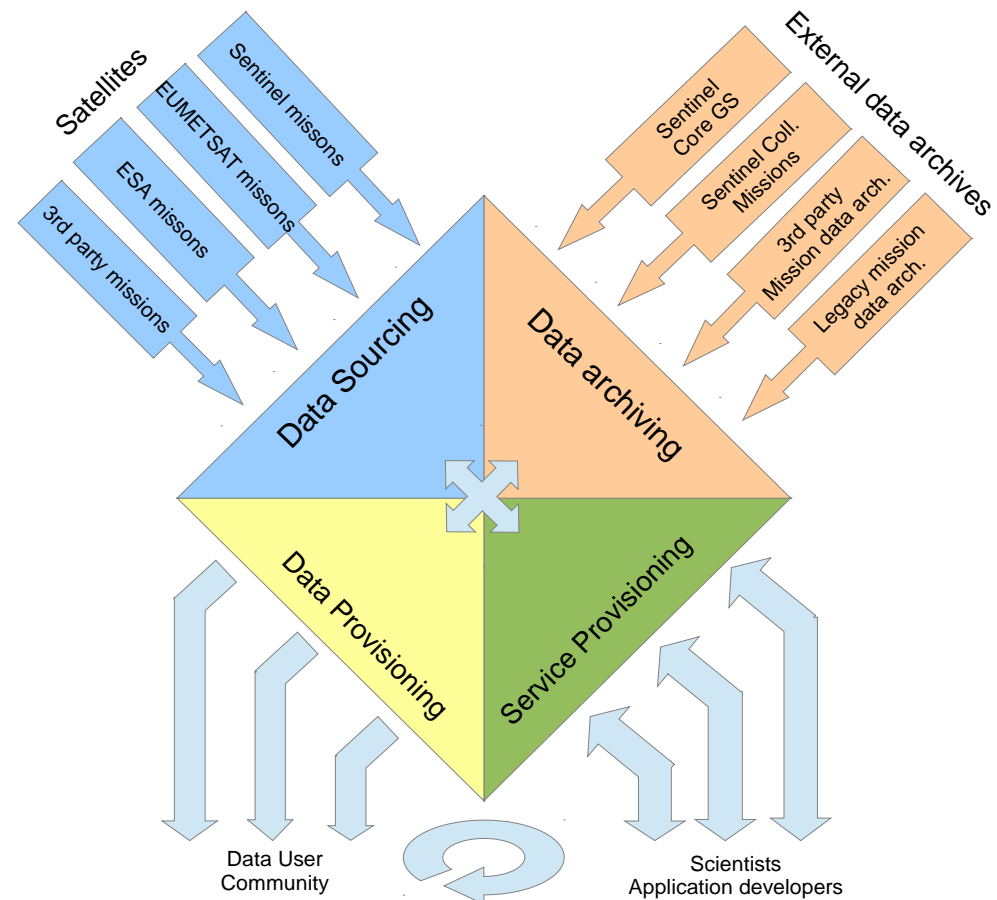
## How can SYKE contribute (with partners)

- Infrastructure available for R&D and operational processing (funded by several ministries)
  - National Satellite Data Centre's Calvalus processing environment,
  - GI infrastructure under development
  - Citizen observation and research data
  - Lot of in situ data
- Scientific expertise: SYKE is and has been developing EO algorithms and products for "Nordic conditions" (water quality, land cover, cryosphere, hydrology,...)
- Experience in user oriented service development



# Proposal for Baltic Regional Exploitation Platform infrastructure: Sodankylä NSDC as a Finnish contribution

- Satellite data traditionally processed in monolithic processing centres
  - Paradigm change towards distributed centres
  - **Thematic/Regional Exploitation Platform provides:**
    - Fast access to thematic/regional data
    - CAL-VAL + in situ
    - Processing capacity: cloud, grid, clusters (IaaS)
    - Processing software: toolboxes, commercial sw (PaaS)
- ⇒ **Cloud services enabling product development and value-added services of private sector and other users**





# The Data/Product Hypercube

- Environmental data analysis paradigm is changing
- Plethora of data:
  - Spatial satellite images
  - Temporal series
  - Multiple data sources
  - **In-situ** references
  - Un-structured data
- Plethora of applications

