

## HMA Follow-On Task 3

# Online Data Access in the frame of ESA's Heterogeneous Missions Accessibility (HMA) initiative

HMA-FO ODA

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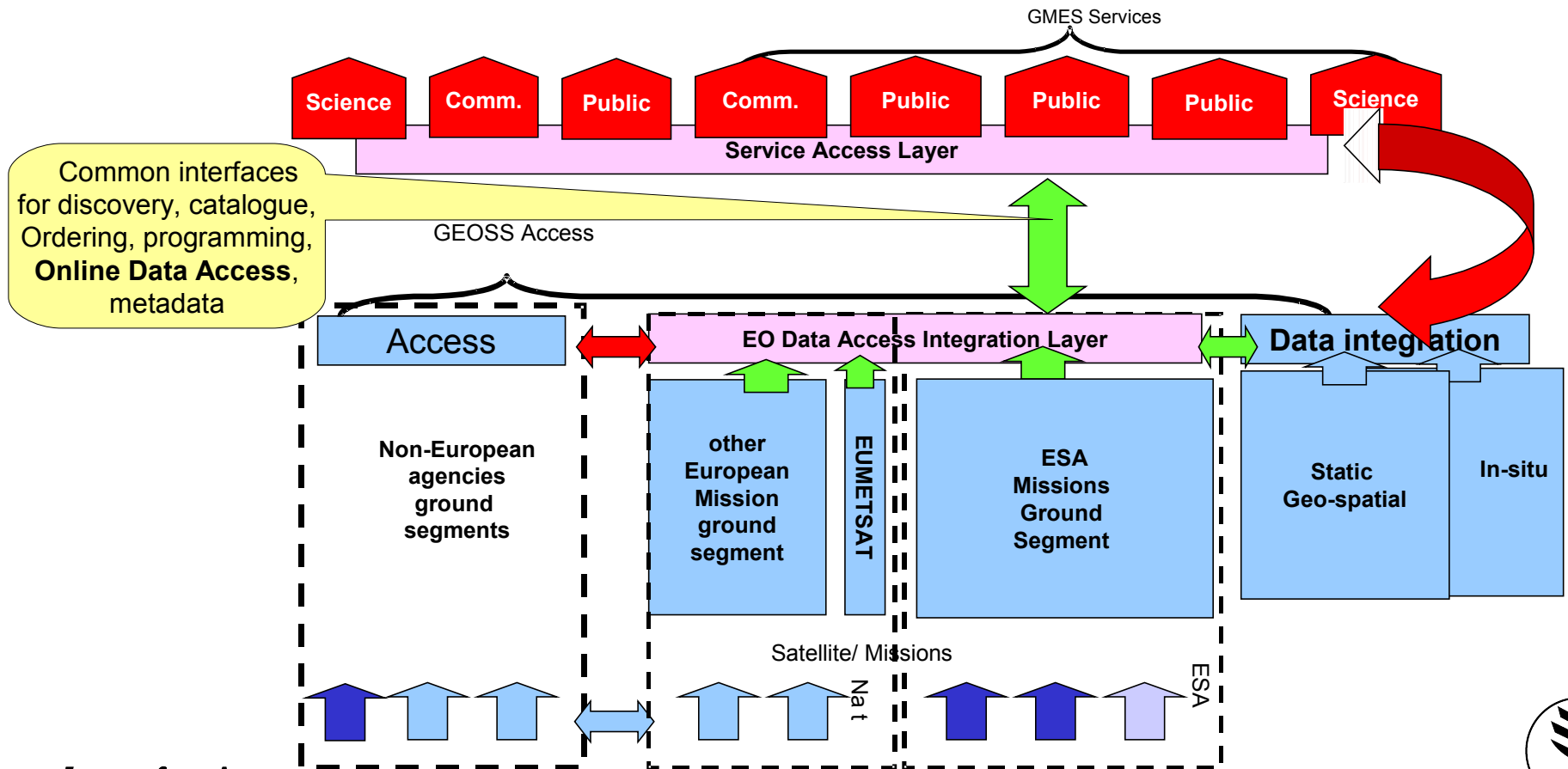
With the drastic increase of computer power and network accessibility the analysis of multi-layer datasets and large scale processes have moved to the fingertips of users. Europe's electronic infrastructure backbones are now maturing and reaching a level of capability to deliver the high-volume geospatial data required for environmental information.

With OGC WCS, users do not any more need to bother about data piecemeal clipped into single file containers. WCS delivers user selected contiguous geographical or temporal coverage of geophysical phenomena. The EO-WCS profile shall particularly cater for the requirements identified as Use Cases in EO scenarios and shall provide a specification to WCS implementers for building WCS with exactly identical functional behaviour when dealing with EO data.

## HMA-FO Task 3 Online Data Access (ODA)

- Context
- Objectives
- Approach
- Project details

- "HMA": Harmonised interfaces to heterogeneous EO missions. Being operationally implemented



- Next evolution of online distribution of EO products ("FTP not enough")
- Web Coverage Service for EO data
- EO Application Profiles for Catalogue and WMS → WCS next step
- Major challenges
  - Coverages / mosaics instead of single scenes
  - Time series
  - Multispectral characteristics
  - Higher level products / metadata e.g. bitmaks
- Cross-links between OGC services

- Identify Use Cases & Scenarios
- Review existing standards
- Where needed propose changes to WCS
- Identify applications of and extensions to WCS and WCS-T specifications
- Feed EO-WCS Application profile into OGC consensus process
- Implement and/or extend Open Source Software to support the above

- Work in accordance with ESA intentions and requirements
- Collect Requirements
  - Various initiatives e.g. GMES Space Component – Data Access (GSC-DA)
  - Optical & Radar Data
  - Marine & Land User Community
  - Metadata content and structure
  - File / data formats
- Define Use Cases & Scenarios

- Tight cooperation with OGC
  - Proactive participation in WCS SWG
  - Prepare Application Profile for Earth Observation Sensors (EO-WCS)
  - Conformance testing
  
- Extend SSE WebMapView to demonstrate and test servers implementing EO-WCS



- Open Source Software
  - Implement and/or extent to comply to EO-WCS
  - Based on MapServer or GeoServer (TBD)
  - ESA ECSS Standards
  - Cooperation with OSGeo
  - Install, run, and test demonstration servers
- Study advanced concepts e.g. WCPS, P2P

- **ESA, ESRIN**
- **Duration Sep. 2009 – Feb. 2011**
- **HMA Wiki:**  
[https://wiki.services.eoportal.org/tiki-index.php?page=HMA-FO Task 3](https://wiki.services.eoportal.org/tiki-index.php?page=HMA-FO%20Task%203)

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