

# → ATLANTIC FROM SPACE WORKSHOP

23–25 January 2019  
National Oceanography Centre  
Southampton, UK

Using the Earth Observation Exploitation Platform Common Architecture (EOEPCA) to Integrate an Atlantic Regional Platform within the Network of EO Resources

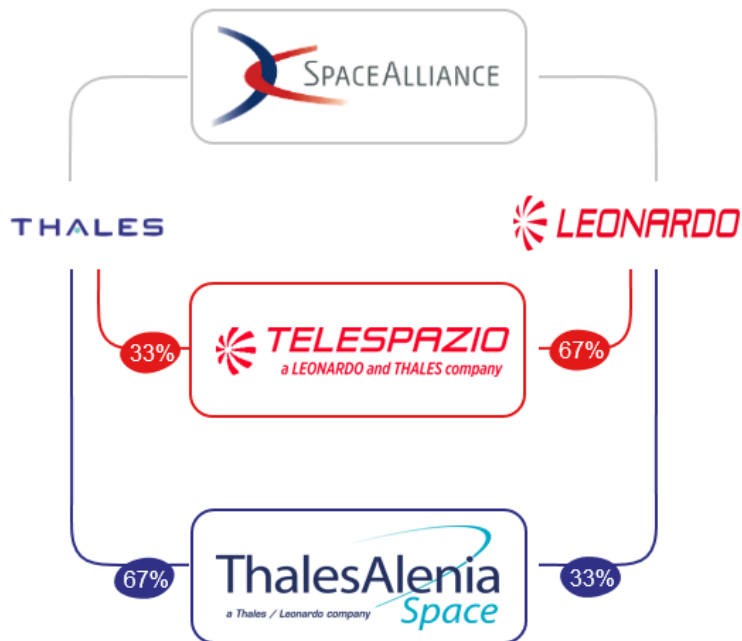
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Telespazio VEGA UK Ltd

- Context
- Earth Observation Exploitation Platform Common Architecture
- Architecture and Domain Areas
- Recommendations for the Atlantic Initiative

	Telespazio VEGA UK	Telespazio Group	Leonardo
Employees	130	2,500	67,400

Global player in satellite solutions and service delivery



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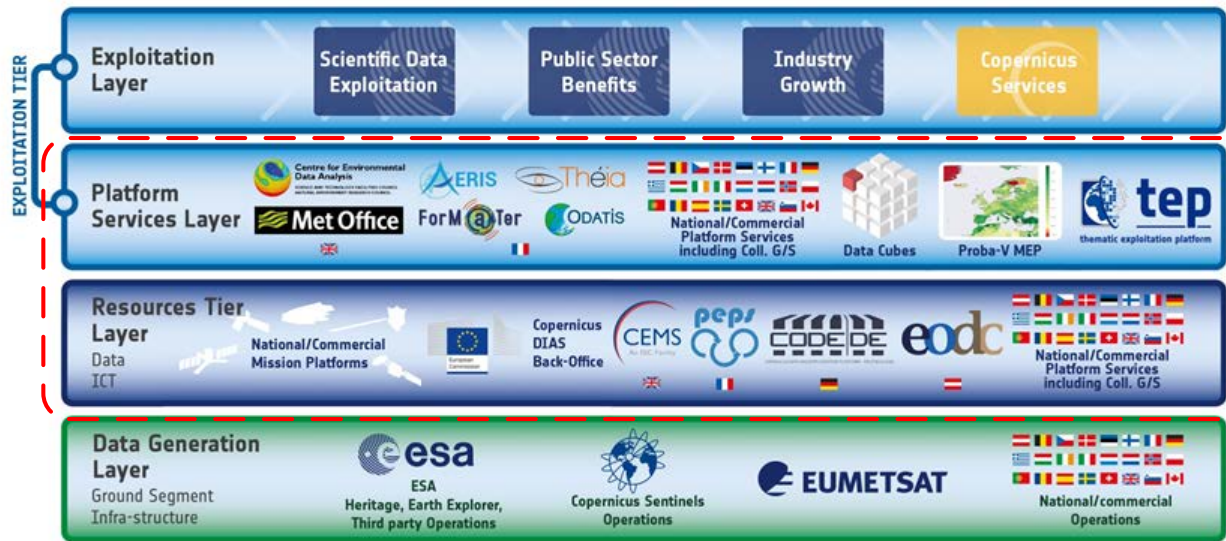


# 'Traditional' EO Data Exploitation



- Users discover/download data for processing on their own infrastructure
- Mission Ground Segments provide data for download
- Datasets growing
- Difficult/expensive to handle with User's own infrastructure
- Difficult/expensive to access/integrate different datasets.

# Moving Forward – Bringing the User to the Data



- Exploitation Platform(s)
- Collaborative, virtual work environment providing access to EO data, algorithms, tools and ICT resources
- Network of EO Resources
- Federation of EO Exploitation Platforms (as whole) or of (individual) Platform Services

# [EO] Earth Observation, [EP] Exploitation Platforms, [CA] Common Architecture



## What is it?

- Open, consensus based architecture for Exploitation Platform within Network of EO Resources
- Interoperability facilitated by use of Open Standards for interfaces/data
- Aims at becoming a Reference Architecture with reusable Reference Implementation

## Goal

The overall goal is that the generic architecture and related implementation become the reference architecture and reference implementation for the future exploitation of EO data in a distributed environment.

## What are the benefits?

- End-users benefit from a consistent experience
- Experts benefit with 'portable' services across platforms
- Ability to access datasets from other domains
- Possibility to build workflows that bring in processing at other facilities
- Platform providers can more easily integrate with other similar platforms
- Re-use of Reference Implementation as building blocks



## Engage

Analyse/evolve use cases  
Identify/consult stakeholders  
Capture feedback



## Consolidate

Validate use cases  
Appraise standards  
Recommend

## Design Architecture

Identity/analyse activities  
Define building blocks (MSDD and MICD)

## Operate

Demonstrate architecture  
Collect user feedback



## Explore & Innovate

Run Testbeds  
Run Pilots  
Consolidate architecture

## Implement

Select domain area experts  
Refine MSDD and MICD  
Implement

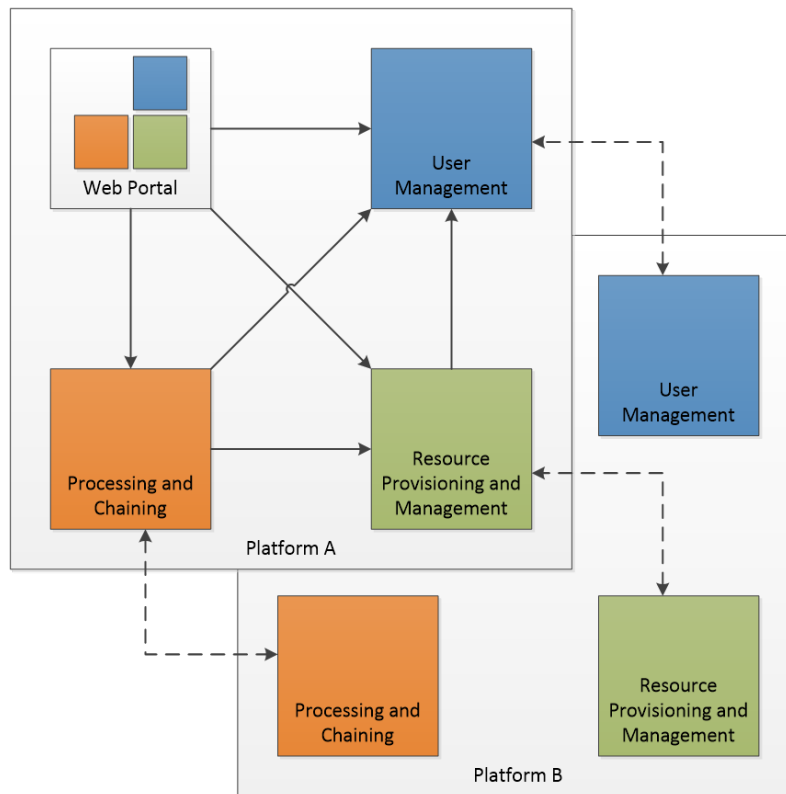


**Domain Area Experts** procured to perform detailed design and develop **Reference Implementation**



# Architecture: Domain Areas

The System Architecture must provide a solution stack that meets the needs of an EO Exploitation Platform in delivering its individual service provision, and at the same time must provide an architecture that allows each such deployment to share its services within the federation of EO Exploitation Platforms



## Design

Master System Design Document

<component> Design Document

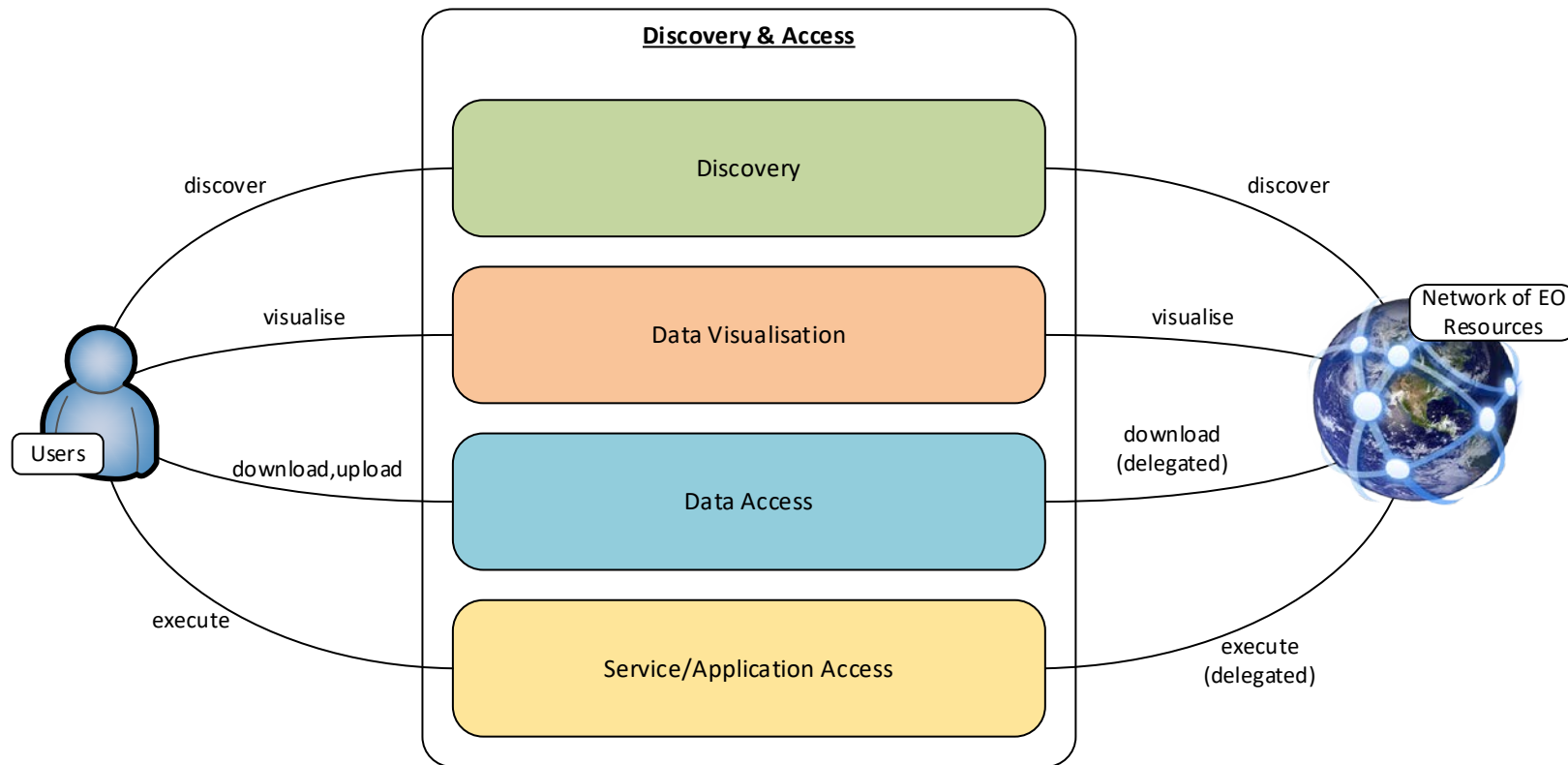
## Interfaces

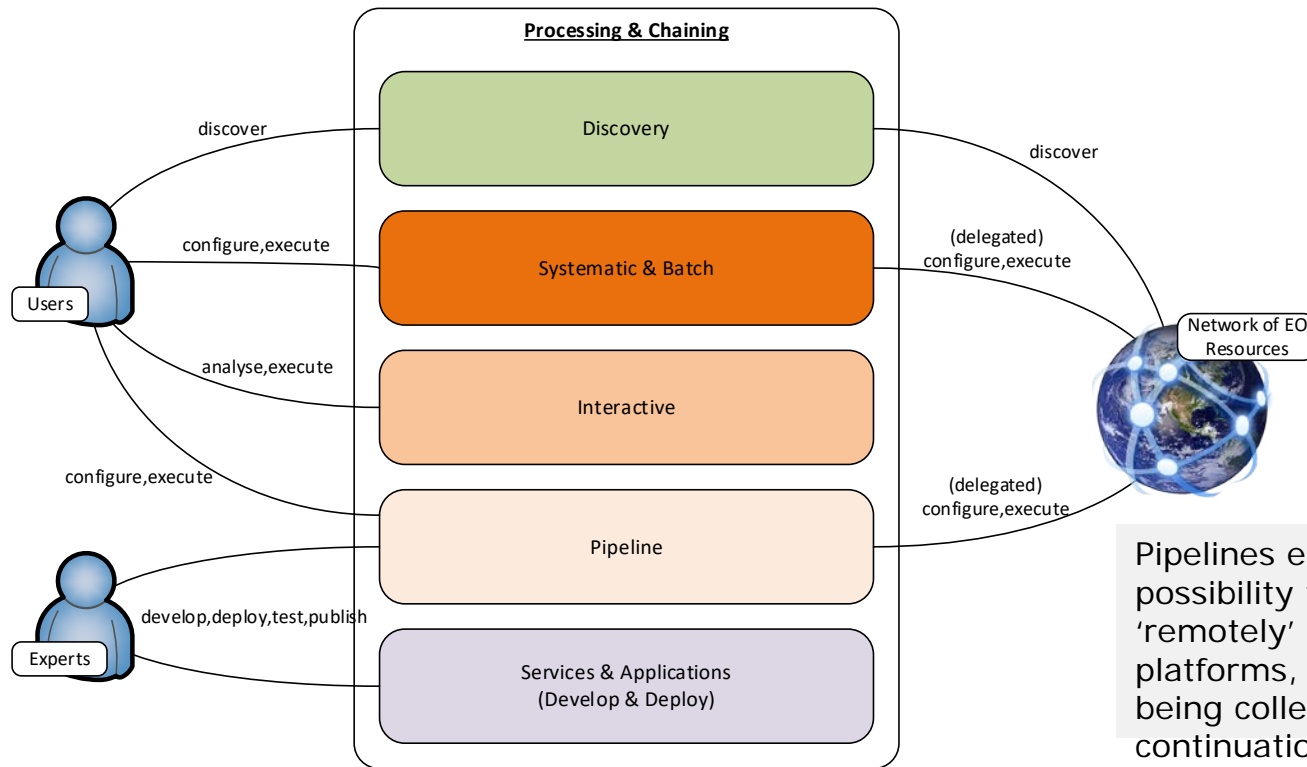
Master Interface Control Document

<component> Interface Control

***Community participation in the review of the architecture***







# Schedule and Upcoming Activities



- Initial phase lasting 24 months
- Kicked-off Nov 2018
- ITT for OGC Testbed-15 Sponsored Task (Jan 2019)
- Draft MSDD / MICD review/consensus (Mar 2019)
- ITTs for Domain Experts (Apr 2019)
- Reference Implementation (July 2019 to Nov 2020)

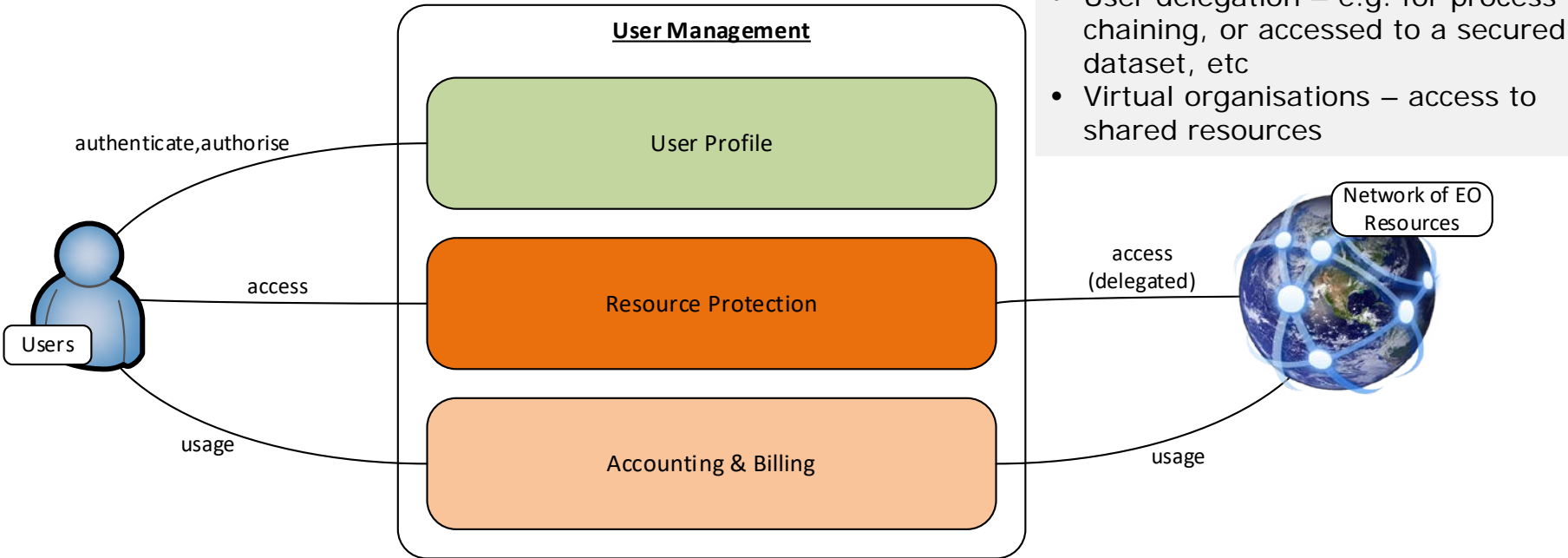
## Benefits

- Access to Network of EO Resources inc. existing set of users / communities
- Ability to access datasets from other domains
- Re-use of Reference Implementation as building blocks
- Reduced technical risk, development and operating costs

## How to get involved

- Register interest with the project ([simon.farman@telespazio.com](mailto:simon.farman@telespazio.com))
- Contribute to OGC sponsored activities ([See current and future ITTs on EMITS](#))
- Participate in Architecture Review
- Contribute as Domain Experts ([See future ITTs on EMITS](#))





- Federated Identity Management *Authentication, authorisation and accounting services*
- User delegation – e.g. for process chaining, or accessed to a secured dataset, etc
- Virtual organisations – access to shared resources