GROUP ON EARTH OBSERVATIONS

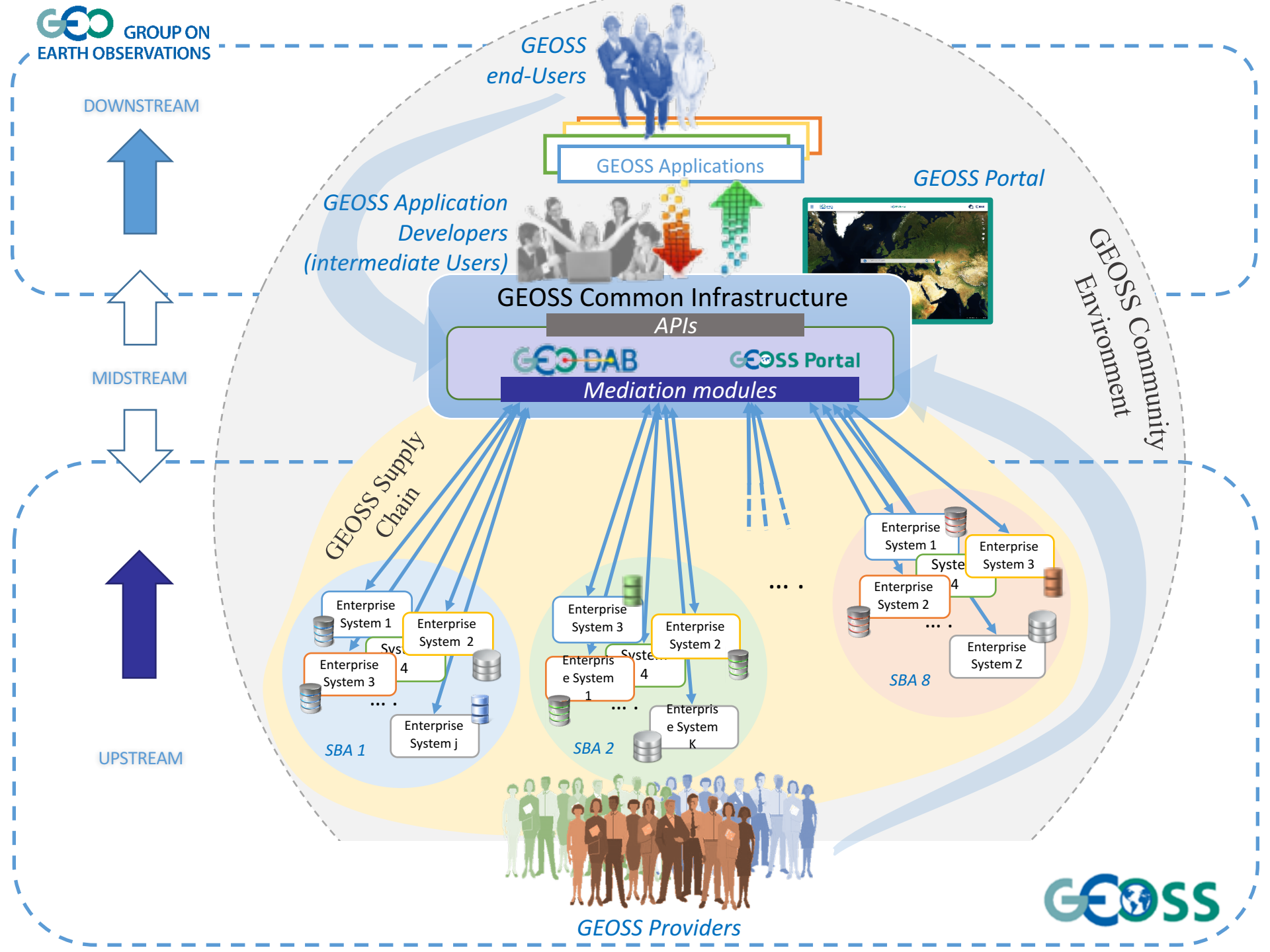
WGISS-43

The GEO Discovery and Access Broker

*S. Nativi (1), **M. Santoro** (1)*

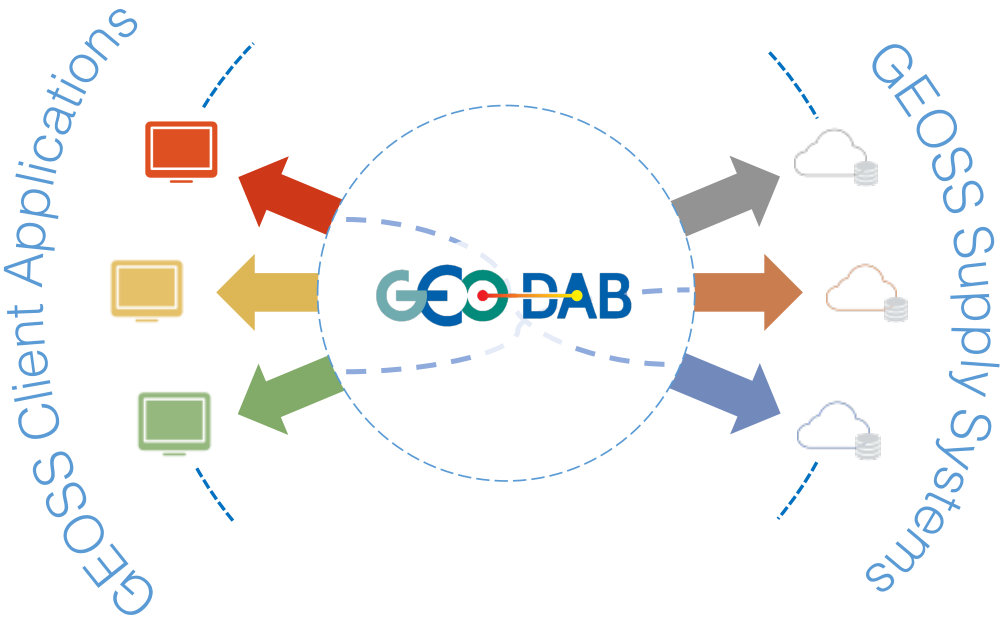
(1) Institute of Atmospheric Pollution Research, National Research Council of Italy

Florence Division ESSI Lab


GROUP ON EARTH OBSERVATIONS
DOWNSTREAM
MIDSTREAM
UPSTREAM
GEOSS end-Users
GEOSS Applications
GEOSS Application Developers (intermediate Users)
GEOSS Portal
GEOSS Common Infrastructure
APIs
GEOSS Portal
Mediation modules
GEOSS Community Environment
GEOSS Supply Chain
Enterprise System 1
Enterprise System 2
Enterprise System 3
Enterprise System j
SBA 1
Enterprise System 1
Enterprise System 3
Enterprise System 2
Enterprise System 1
Enterprise System K
SBA 2
Enterprise System 1
Enterprise System 3
Enterprise System 2
Enterprise System Z
SBA 8
GEOSS Providers
GEOSS

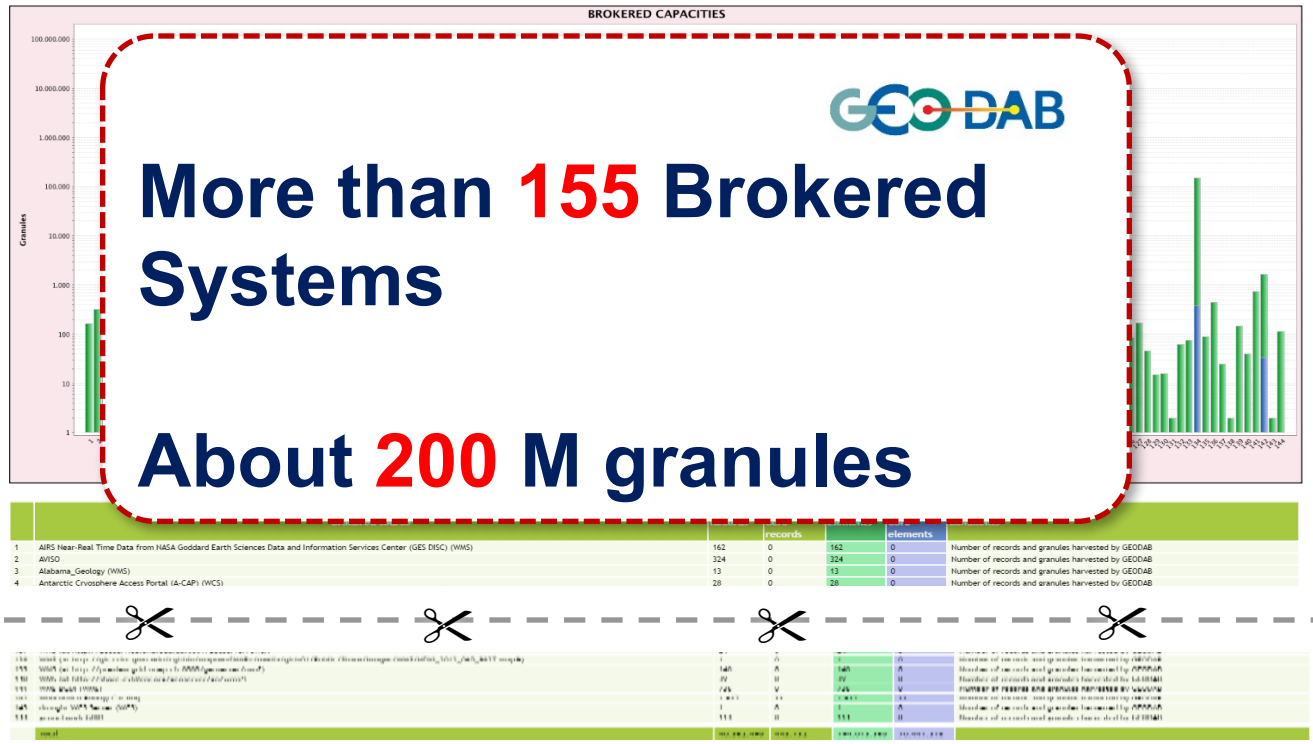
GEO Discovery and Access Broker (DAB)

GEO DAB is a **brokering framework** that interconnects hundreds of heterogeneous and autonomous supply systems (the enterprise systems constituting the GEO metasystem) by providing mediation, harmonization and transformation capabilities.



Brokered Sources

Date 2016-06-14



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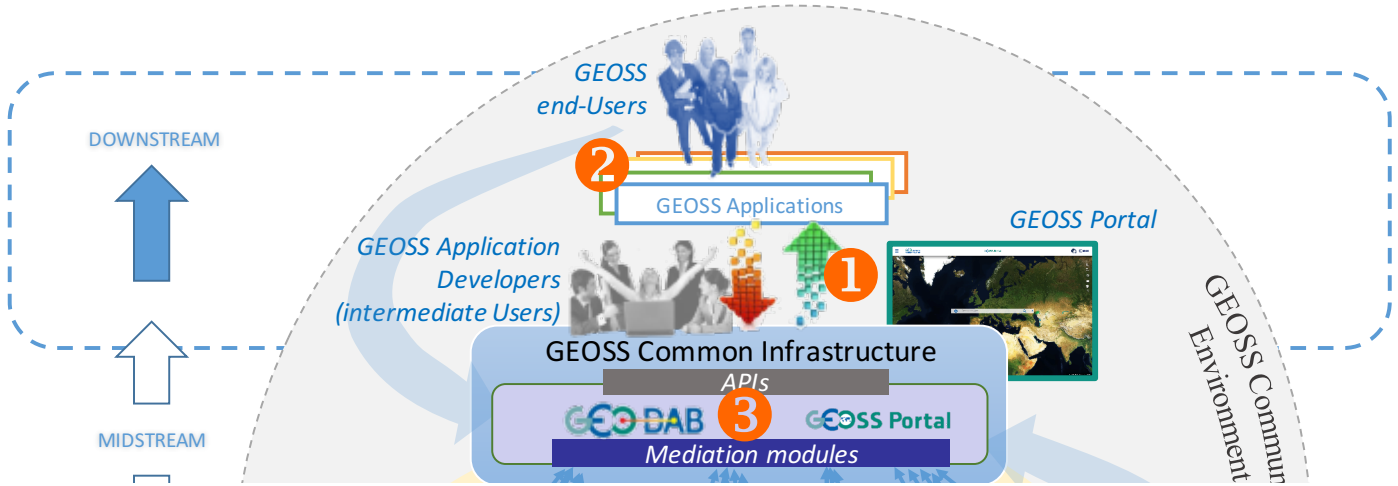
GEO DAB Supported Services

OGC CSW 2.0.2 AP ISO 1.0	INPE
OGC CSW 2.0.2 ebRIM EO	CKAN
OGC CSW 2.0.2 ebRIM CIM	DCAT
ESRI GEOPORTAL 10	GI-cat
OAI-PMH 2.0	ESRI GEOPORTAL 10
OpenSearch 1.1	NCML-OD
OpenSearch 1.1 ESIP	BCODMO
OpenSearch GENESI DR	NCML-CF
CKAN	NetCDF-CF 1.4
CUAHSI HIS-Central	FTP populated with supported metadata types
ESRI REST API 10.3	WAF Web Accessible Folders
OGC WCS	GeoNetwork (2.2.0 or greater)
OGC WMS	Ecological Markup Language 2.1.1
OGC WFS 1.0.0, 1.1.0, 2.0.0	NERRS (National Estuarine Research Reserve System)
OGC WMTS	HMA CSW 2.0.2 ebRIM/CIM
OGC SOS 1.0.0, 2.0.0, 2.0.0 Hydro Profile	HDF
OGC WPS 1.0.0	IADC DB (MySQL)
OGC CSW 2.0.0 Core	GrADS-DS
OGC CSW 2.0.2 AP ISO 1.0	FedEO
OGC CSW 2.0.2 ebRIM/EO AP	ARPA DB (based on Microsoft SQL)
OGC CSW 2.0.2 ebRIM/CIM AP	ESRI Map Server
IRIS Station	SHAPE files (FTP)
IRIS Event	KISTERS Web - Environment of Canada
HYRAX THREDDS SERVER 1.9	Environment Canada Hydrometric data (FTP)
OAI-PMH 2.0 - Harvesting	OpenSearch 1.1
GBIF	Earth Engine
DIF	RASAQM
HYDRO	EGASKRO
UNAVCO	SITAD (Sistema Informativo Territoriale Ambientale Diffuso)
CDI 1.04, 1.3, 1.4	File System
ISO19115-2	GDACS
THREDDS 1.0.1, 1.0.2	GeoRSS 2.0
THREDDS-NCISO 1.0.1, 1.0.2	Degree catalog service 2.2
THREDDS-NCISO-PLUS 1.0.1, 1.0.2	OpenSearch GENESI DR

GEO DAB APIs



Different APIs for serving diverse Application development use cases (environments)

1. A set of standard ***Web service interfaces***:
   - e.g. **OGC service interfaces**, **CKAN**, **OAI-PMH**, **FTP**, etc.

2. A set of APIs for software developers:
   - *Client side* APIs:
     - (high-level) **JavaScript library**
     - … . (Python)

3. - *Server side* APIs:
     - **REST/JSON APIs**
     - **OpenSearch APIs**
     - … .

The GEOSS Discovery and Access Broker APIs

GEO DAB View

- Definition:
  - Subset of the whole GEOSS resources defined by applying, via the DAB, a set of clauses
    - *Discovery clauses* (e.g. spatial envelope, keywords, sources, etc.)
    - *Access clauses* (e.g. data format, access protocol, CRS, etc.)
  - Defined "View" exposed on the GEOSS Portal

Consumer-defined View – i.e. Client-side These views are available only for the client application which defined the view.

Provider-defined View –i.e. Server-side These views are available for all client applications.

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Thank you