



Towards GEOSS Ecosystem and Platform

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www.earthobservations.org
www.geoportal.org

GEOSS-Evolve Initiative

Established in 2016



Ecosystem Design

GEO GROUP ON
EARTH OBSERVATIONS

GEO Secretariat

- Secretarial support
- Coordination with GCI Operations FT and User Requirements FT

Co-chairs

Ivan DeLoatch
Max Craglia



WP1

**GEOSS
Architecture
Evolution**

(Lead: USGS and
CNR-IIA)



WP2

**Functionality and
Usability testing**

(Lead: China-RADI
and CNR-IIA)



WP3

**DMP Guidelines
Implementat. &
Process**

(Lead: ESIP and
CODATA)



WP4

**Standard &
Interoperab.
Forum**

(Lead: IEEE)



WP5

**Demonstration
Pilots**

(Lead: OGC)



WP6

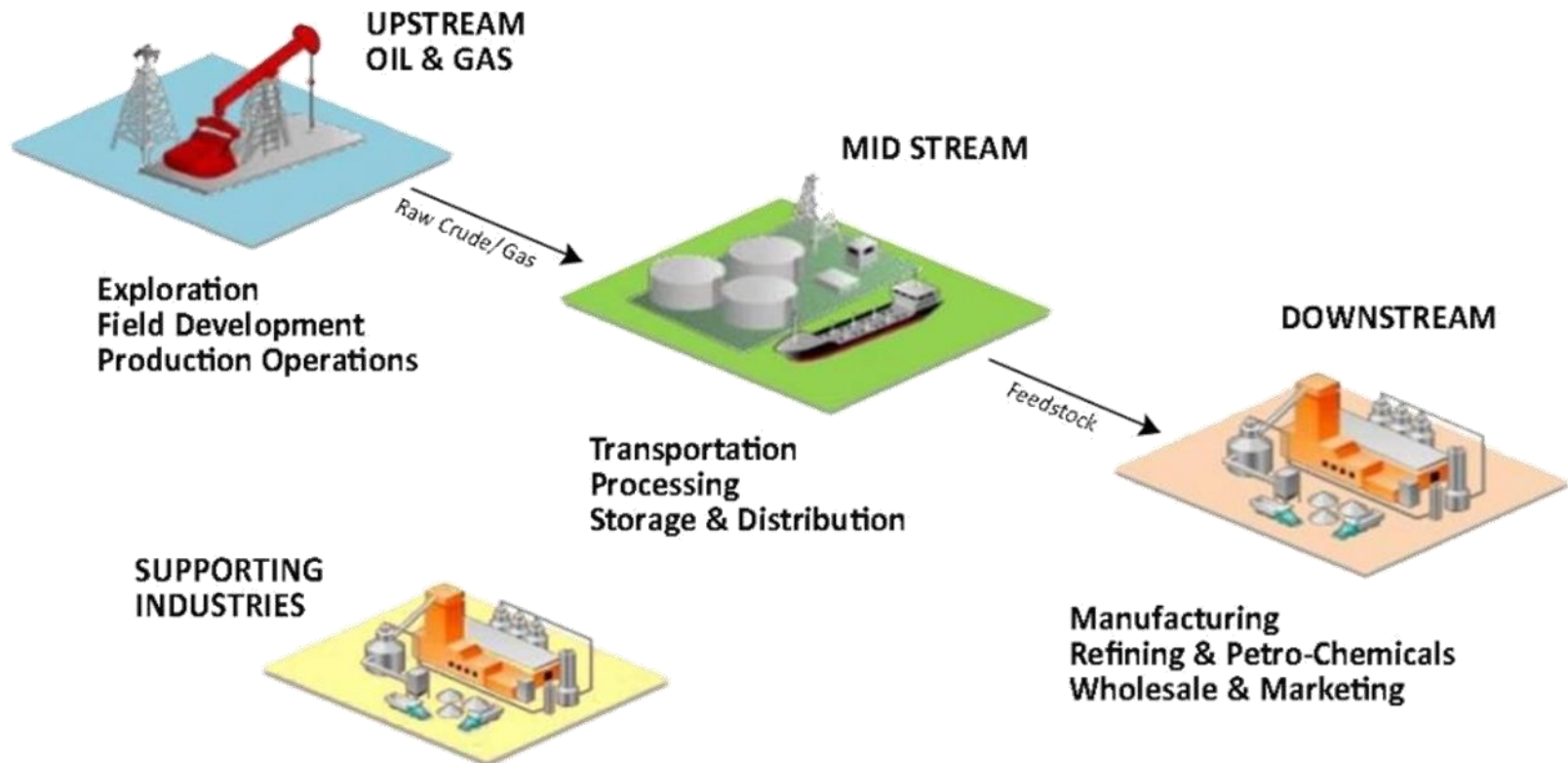
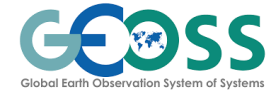
**Community
Portals**

(Lead: NOAA)



Ecosystem: Supply-chain model

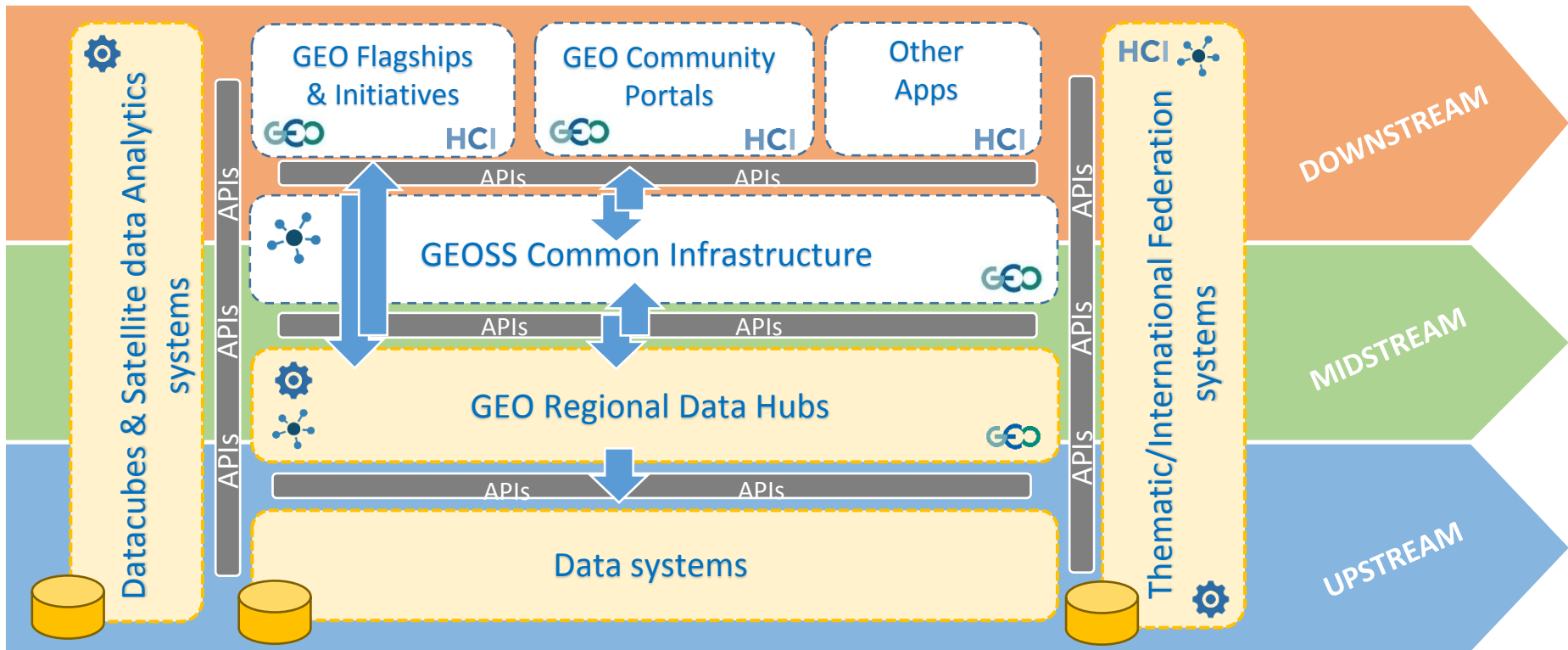
Data/information is the new “oil”



GEOSS supply-chain SECO

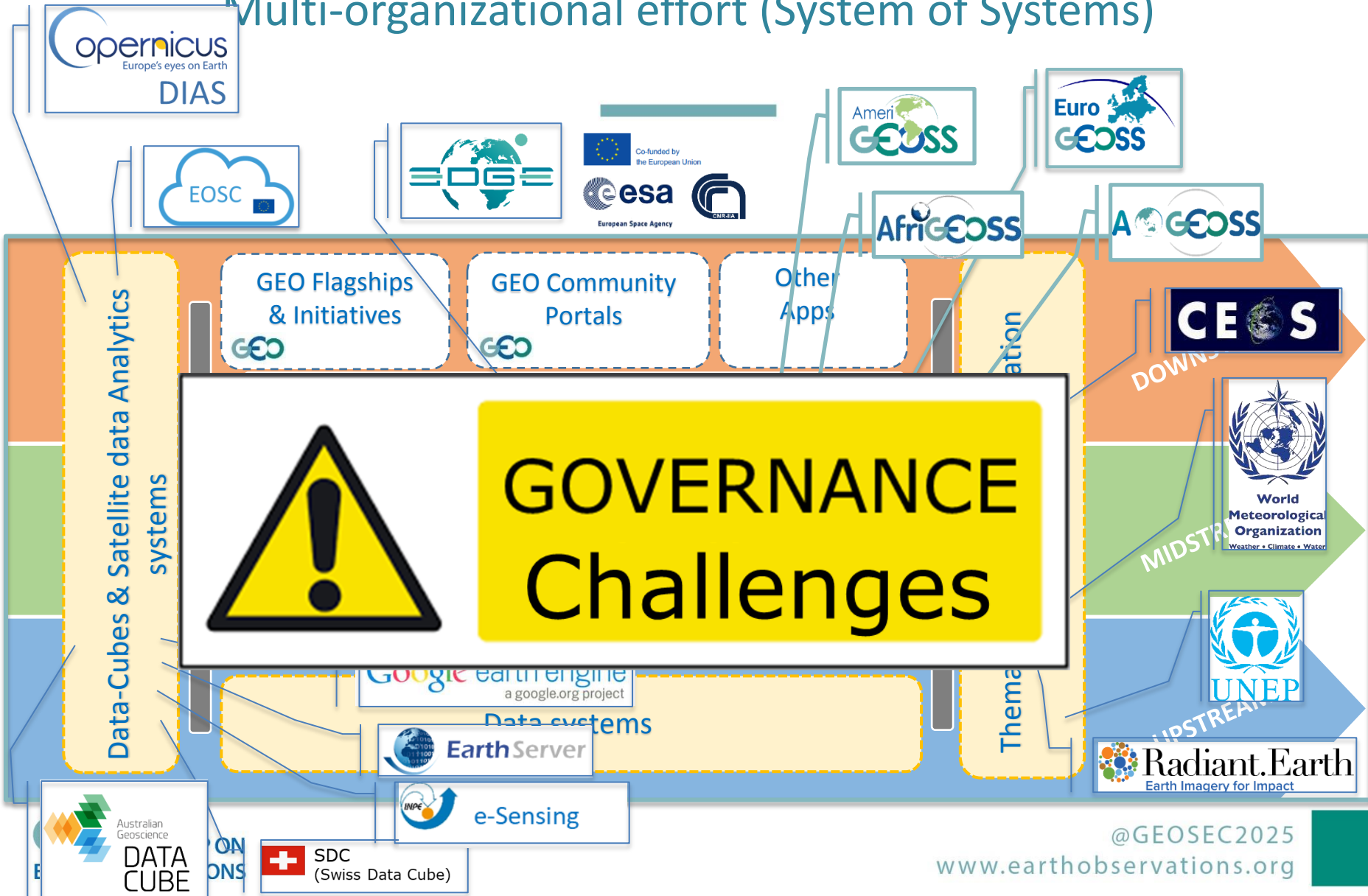
From GCI to GEOSS Platform

- HCI** Human Computer Interface
- Harmonization capacity
- Storage capacity
- Computing capacity



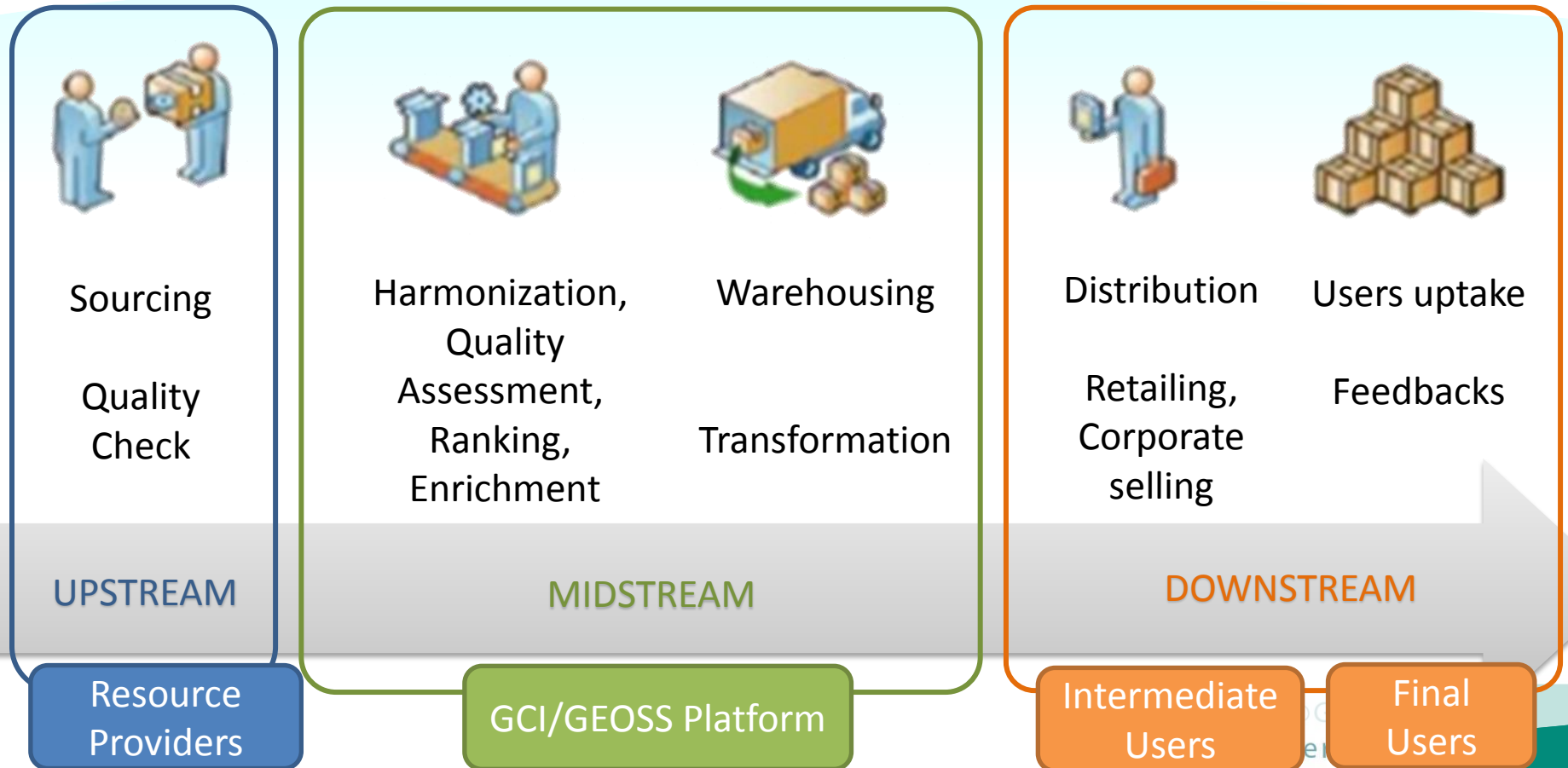
GEOSS Ecosystem

Multi-organizational effort (System of Systems)

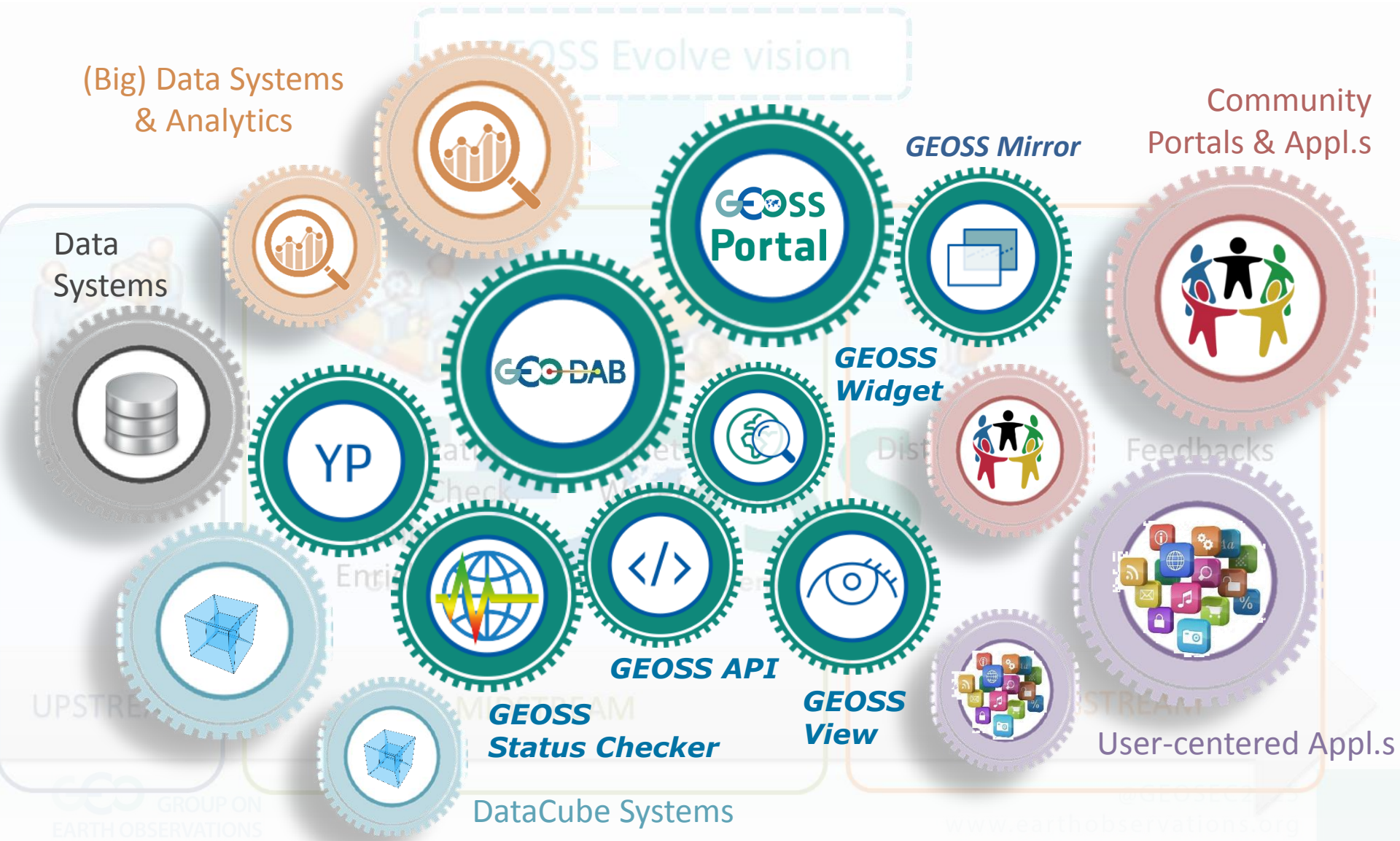


Ecosystem: Supply-chain model

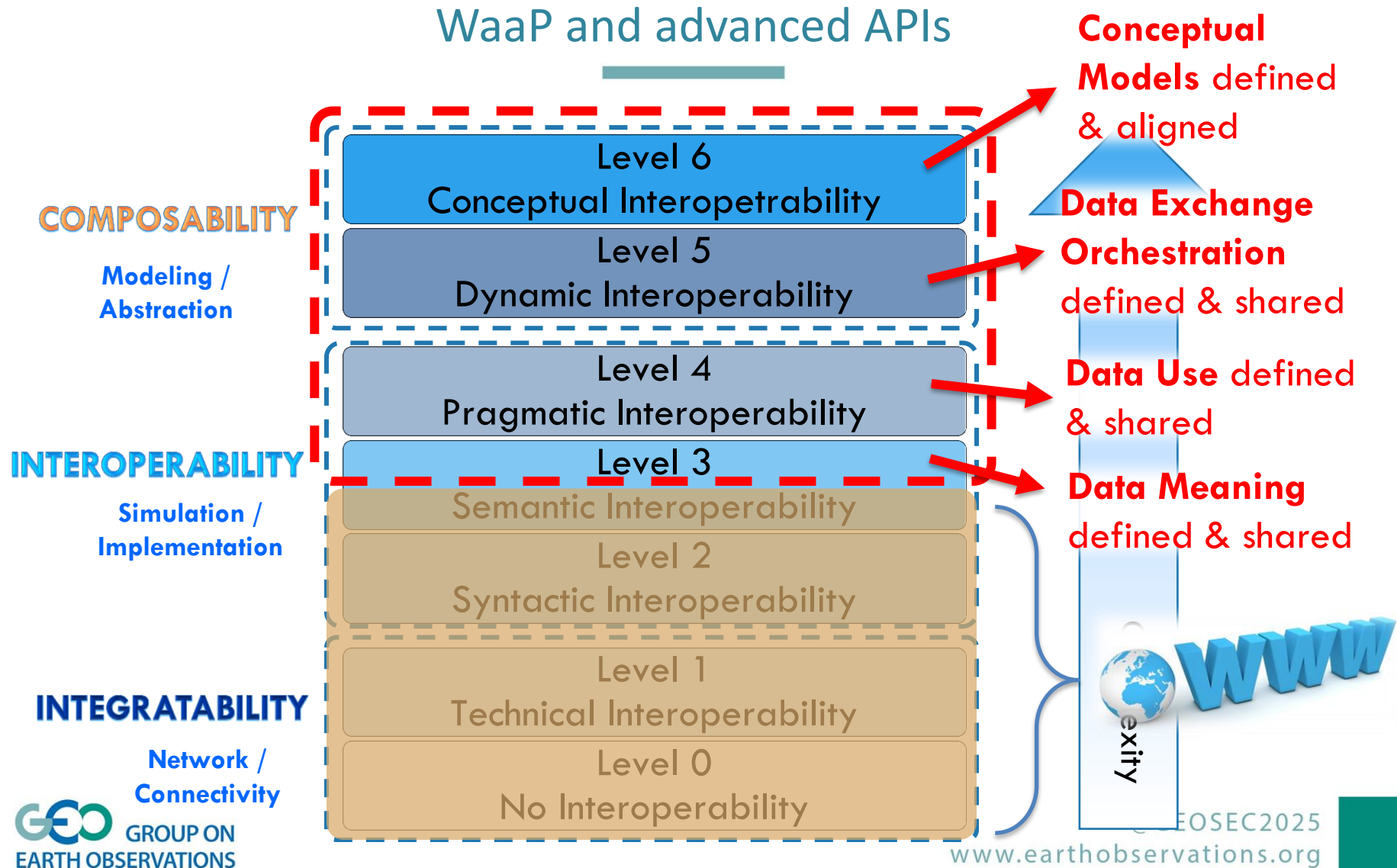
GEOSS Work Program



Ecosystem model: GCI evolution



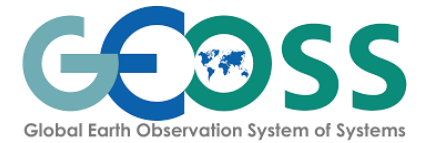
Interoperability Levels and Challenges



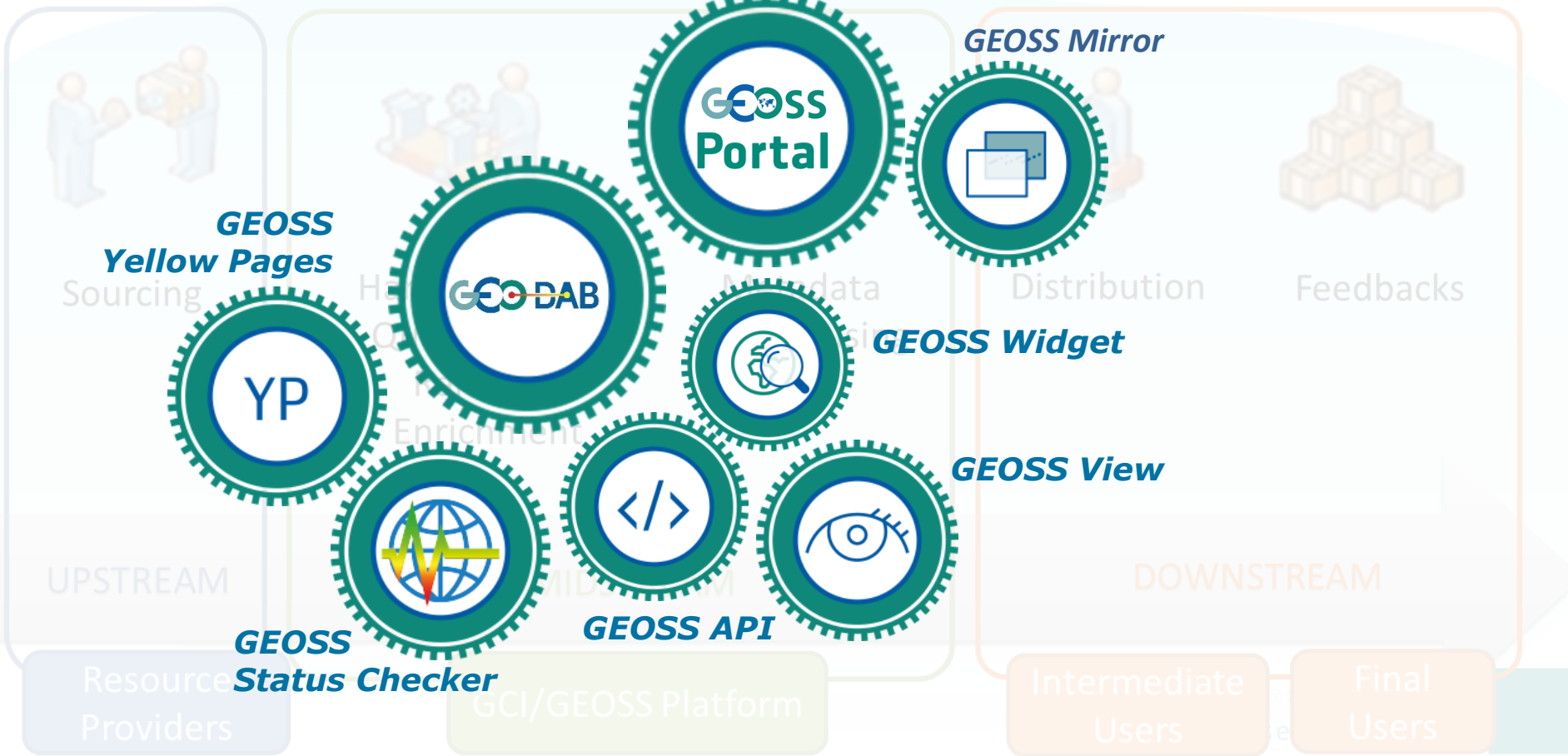


GCI/GEOSS Platform services and APIs

Ecosystem: Supply-chain model



GEOSS Work Program



Services for Up-Stream

GEOSS Work



Main functionalities

- **Broker** GEOSS Provider resources
- **Publish Report**
- **Harmonize** its content model
 - Mediate between the GEOSS internal model and the content model
- (statically) **Rank** resource

YP

<http://www.geodac.net/>

<http://www.geoportal.org/>

Services for Down-Stream



Main functionalities

- **Support harmonized Discovery**
 - Support Harvesting and query Distribution
 - (dynamical) Rank resources
 - Support advanced Semantic discovery
- **Evaluate & Filter** query Results set
 - Support Facets
 - Support Second level query
- **Access Resource**
 - Support Personalized Access (implement simple Transformations)
 - Pre-view resources
- **Define and Apply** GEOSS Content personalization
 - Support “Views” instrument

GEO DAB



Res
Prov

http://

...s.net/

WWW

http://www.geoportal.org/

Intermediate
Users

Final
Users

Services for Down-Stream

GEOSS Work Program



Main functionalities

- Expose (intermediate) User Interfaces for Developing downstream Applications
 - Expose **GEOSS APIs**
 - Client and Server side
 - Web services
 - Support **Widgets toolkit**

GO DAB

<http://www.geodab.net/>

<http://www.geoportal.org/>

Services for Mid-Stream

Main Services

- **Improve ranking and discovery**
 - Manage Users' Feedbacks
 - Enrich Metadata
- **Tile (Big) data**
- **Cache (Big) data**
- **Support User's personalization settings**

<http://www.geodab.net/>

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Thank You

Communicate and Collaborate with GEO:



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