

Copernicus & Big Data

20th EISC
Legal session

Commission, DG GROW, Unit I3

Space



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THE BIG DATA CHALLENGE

- **Massive amounts of data**
- **Full, open and free-of-charge**
- **Ease of access and use**

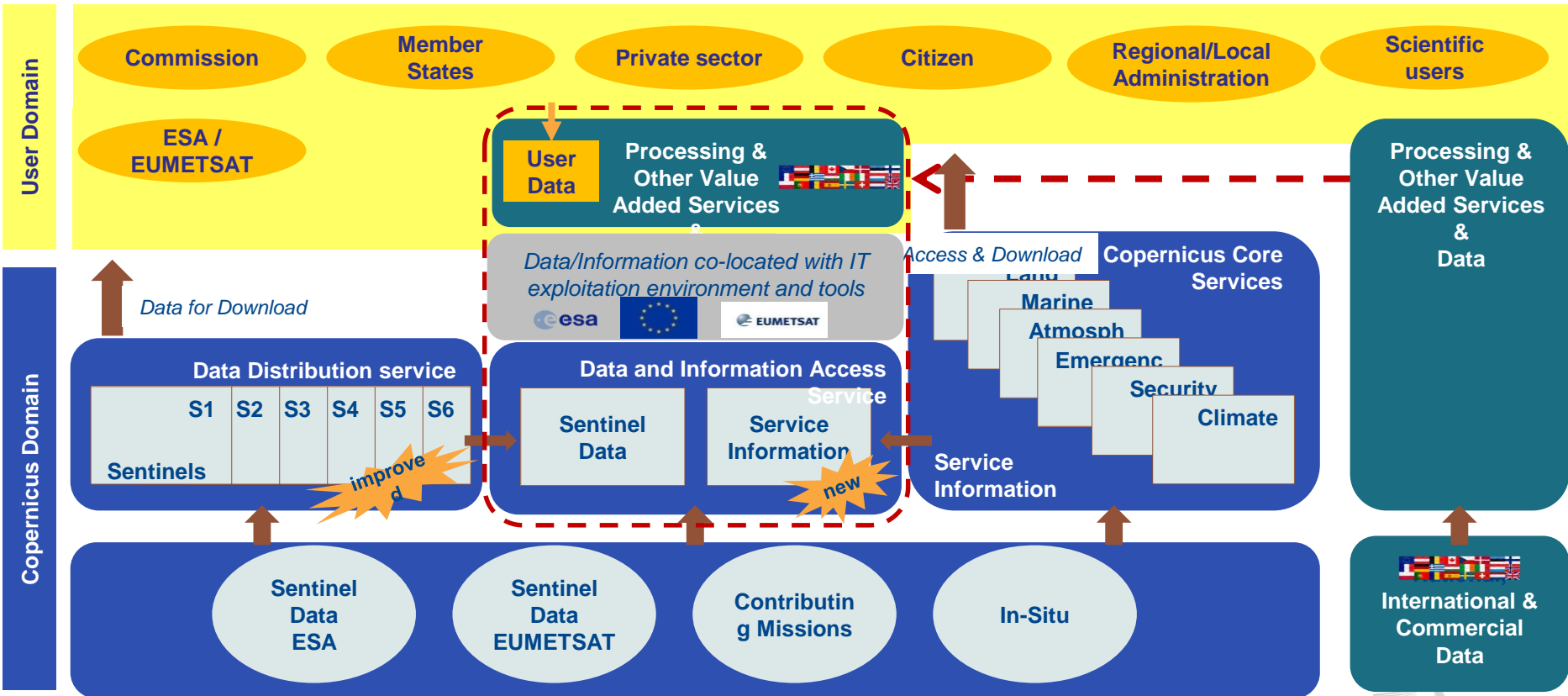


**Over 10 Petabyte/year
of new data**

with just Sentinels-1, -2
and -3 fully operational
(data are downloaded
many times over)

- Different types of **dissemination** infrastructures
- Member States Collaborative GS
- **New technology** developments
- ICT and EO **cross-fertilisation**
- **Interoperability** with non-EO datasets
- Public programmes as enablers
- Growth and jobs in **downstream** sector

Overview Distribution and DIAS





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DIAS Concept



Provision of Front-Office Infrastructure is under Third-Party responsibility

} Interface for storage access & processing and management

} Scalable on-line storage

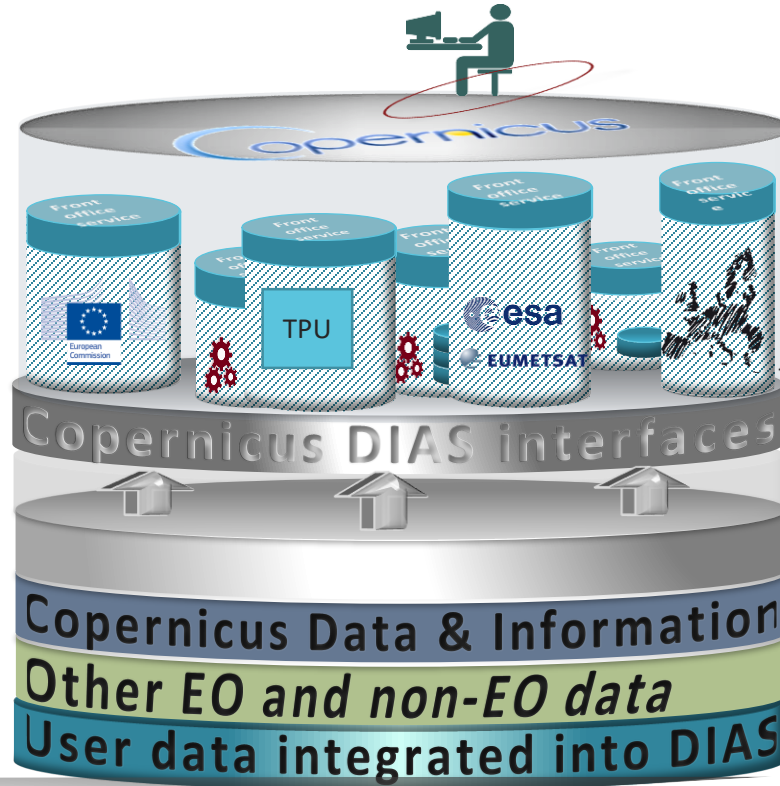


DIAS Provider

End user: customer to third-party services

Funded by
third-parties

DIAS
funded



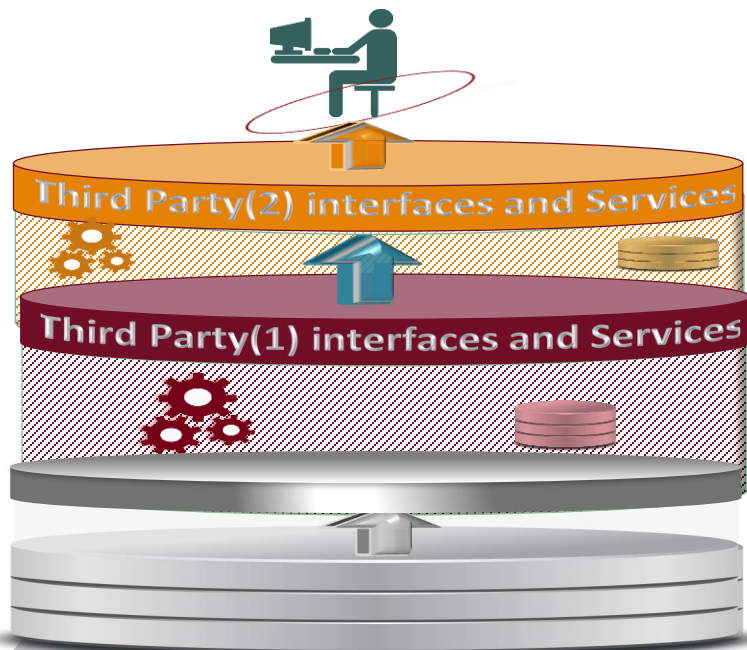


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Third-party service provision

Chaining of value adding services between Third Parties is a key feature for a dynamic market ecosystem

DIAS Provider





Multiple DIAS & Interoperability scenario

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1 – MULTIPLE DIAS

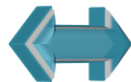


Third Party Service providers may choose between commercial IT offers and from possibly multiple DIAS service providers



DIAS Provider (1)

2 – INTEROPERABILITY



Interfaces enabling cross-operations (open API) between multiple DIAS and between DIAS and “other environments”.
Third Party Service providers may integrate data/information from “other environment” in their service provision.



DIAS Provider (2)

3 – EXTERNAL RESOURCES



Third Party may provide services based on Copernicus data on “other environments”





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Boundary conditions

- Open and non-discriminatory
- Competition rules
- Governance and reporting
- Copernicus visibility
- Institutional demand and transparency
- Intellectual property
- The DIAS are there to serve the users !



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Legal Issues

LEGAL THEMES		pre BIG DATA CONTEXT	BIG DATA CONTEXT
1	RIGHTS	Free, full and open, you need to benefit the right to provide the value added product under a free full and open licence	Ease of use, fully in line with large automated processing. Community building. Exchange of script. Huge potential. Start up playground
	YOU RECEIVE – YOU PROVIDE	Licences on commercial terms for input data. Where the licence ends ? How to provide value-added information on free full and open basis where the input data licence is restrictive.	Automated processing where many datasets needed – Automated licensing management – Model of licences for each business model – Common terms and definitions. – Metadata include licencing – Authorisation mechanisms – Where authorised, no hard coded prohibition to use but warnings
2	LIABILITY	Providing information on free basis	The user may have more control on the result of the processing and therefore assume more responsibility
		Providing information on Commercial basis	Idem. Complex to identify the party responsible in a complex processing environment



3	SECURITY Dual use data	Free data, no more open, Not black and white sensitivity and security levels need to know basis.	More Infrastructure to protect from intrusion Fiduciary mechanisms in new proposal for Space Regulation in the Copernicus chapter
4	Other issues Long Term Archive	Commercial data provided by third party, authorisation to provide according to national laws	Authorisation mechanisms need to be time and cost efficient
		Libraries, long time financing. Huge value for future generation	data curation, data corruption
		No Commercial value anymore	



Thanks for your attention!

European Commission