



EO requirements gathering preliminary findings

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Requirements and input

-  Requirements from researchers and institutes
-  Input from suppliers
-  Dedicated webinars, meetings, workshops
-  Conference participation
-  Champion users interviews
-  Online surveys

Conference participation and workshops

- **OCRE F2F meeting**, Utrecht, Nederland, 12 March
- **EGU**, Wien, Austria, 1-5 April – Oral presentation and User Workshop
- **Living Planet Symposium 19**, Milan, Italy, 13-17 May – Agora and poster session, F2F meetings
- **EXPANDEO**, Bruxelles, Belgium, 20 June
- **EARSeL**, Salzburg, Austria, 1-4 July
- **Phi Week**, Frascati, Italy, 9-13 September
- **ISDE 11**, Florence, Italy 24-27 September



Online Surveys - Questionnaires

Researcher



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EARTH OBSERVATION USER SURVEY

Help source the EOSC's future digital
EO services for researchers from
commercial providers



PROVIDE INPUT

Raffle
among
participants



Service
Provider



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EARTH OBSERVATION SUPPLIER SURVEY

Give your services more visibility and
have the chance to be included in the
European Open Science Cloud



PROVIDE INPUT

<https://www.ocre-project.eu/researchers>

11 questions

<https://www.ocre-project.eu/suppliers>

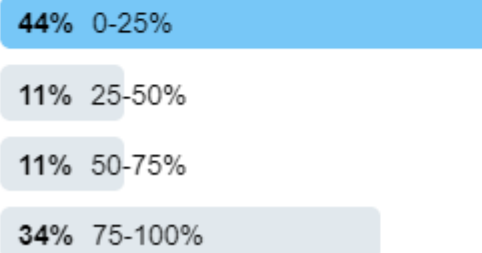
15 questions

Online Surveys – 1 question Polls

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Segui

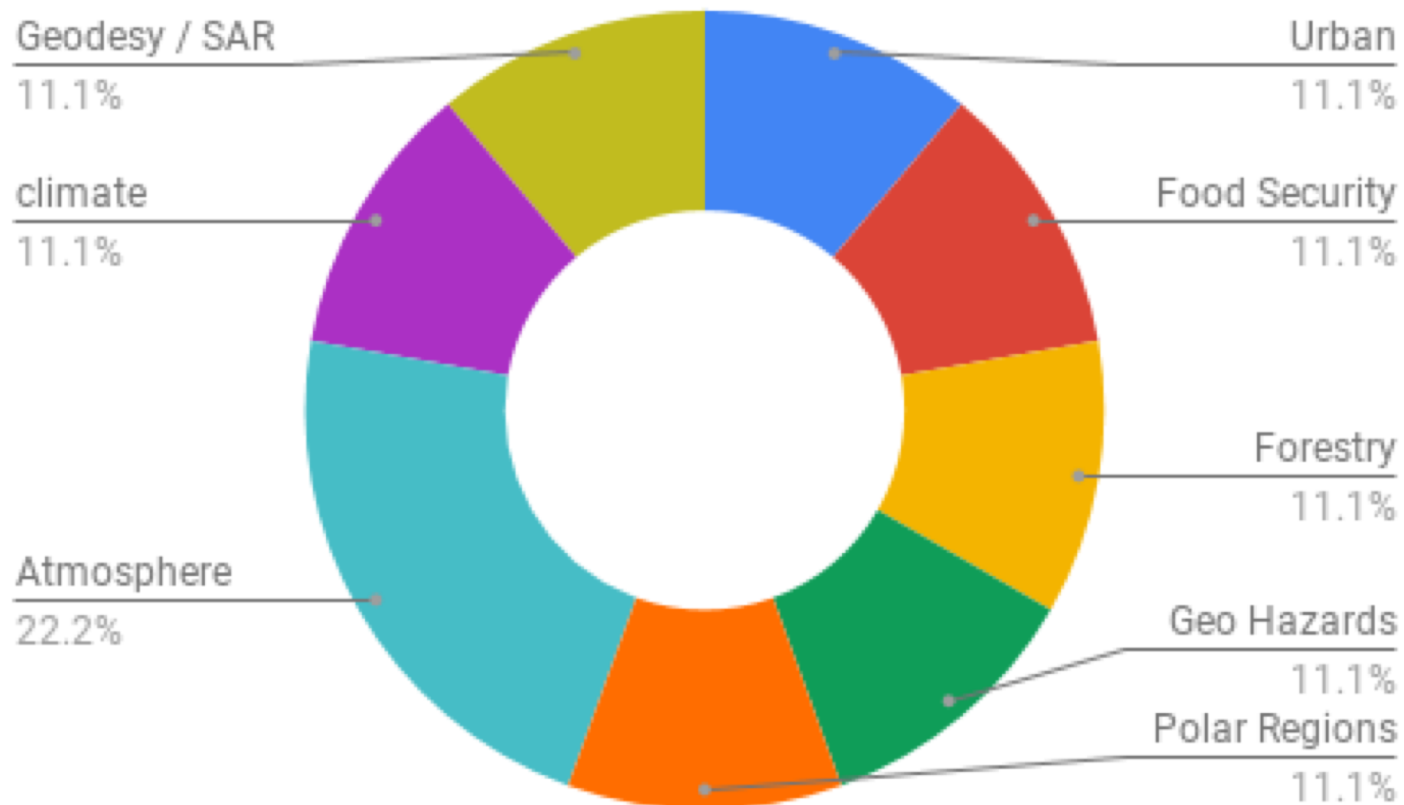
#OCRE poll for #researchers and users of #EarthObservation #Cloud Services:
How much of your #research is based on #EO #satellite #data processing or derived information?
Give us your inputs on the services you would like to see in the #EOSC: bit.ly/2QddSa1 #GIS #mapping



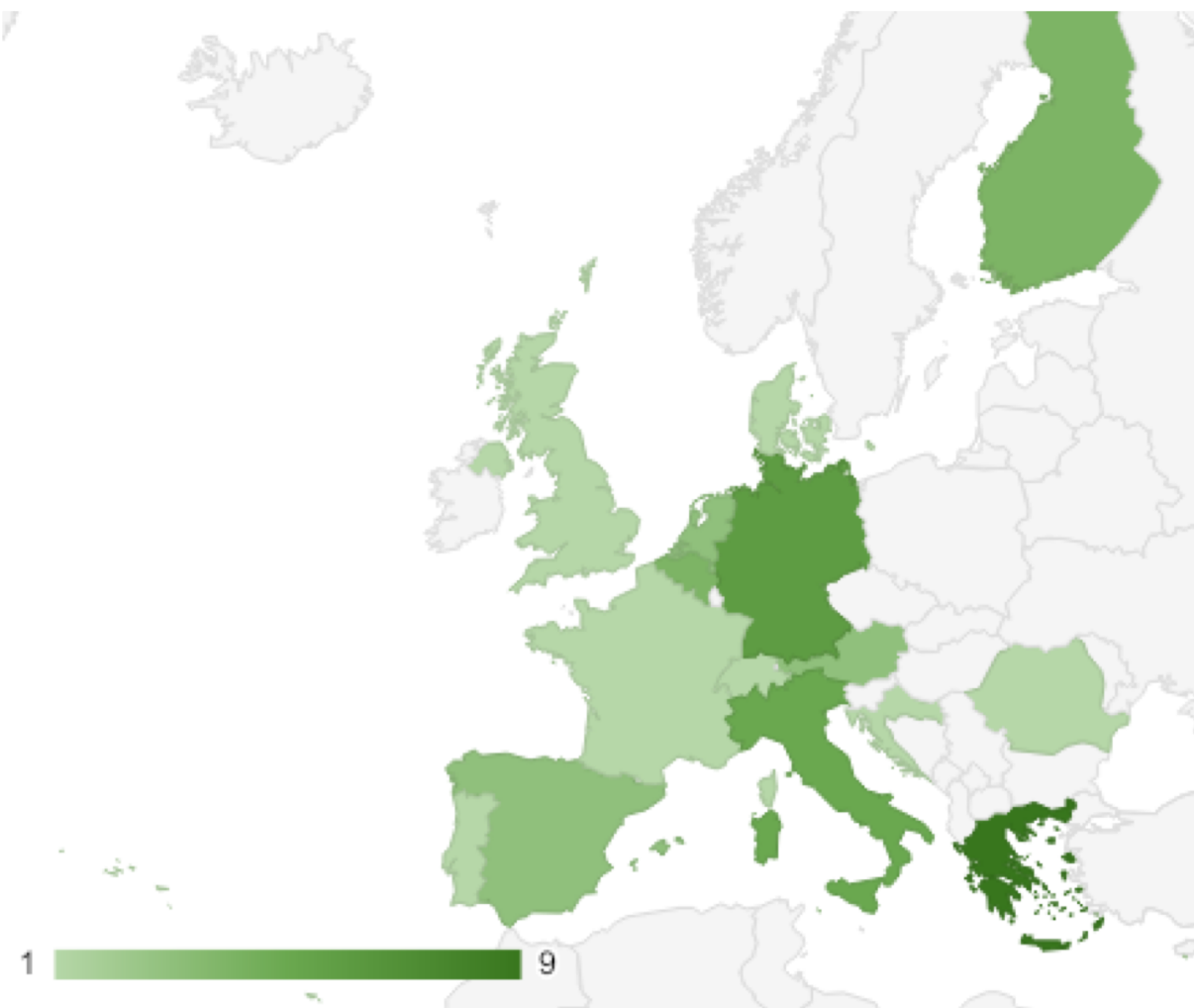
Champion users interviews

- 18 people contacted
- 13 interviewed from 8 different domains

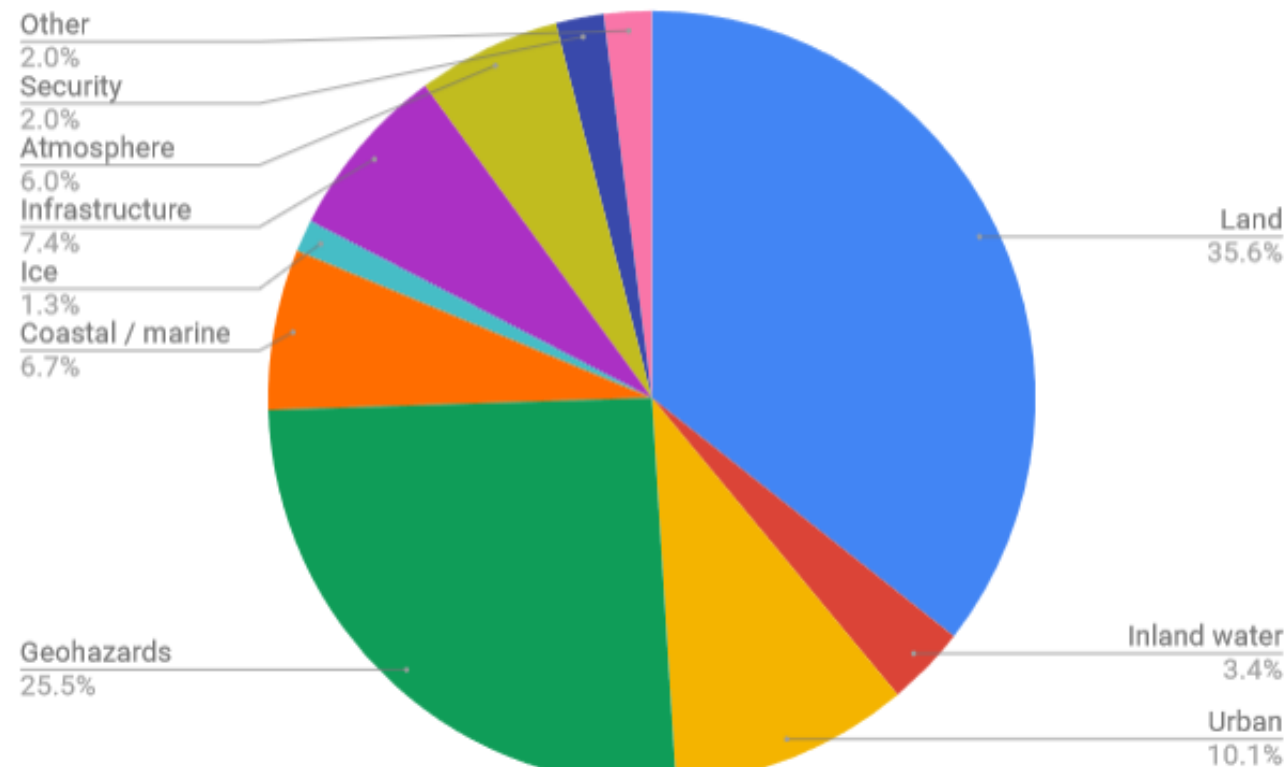
Research domain represented



EO requirements gathering participation



EO domain



A close-up photograph of a person's hand holding a blue pen over a document. The document features a bar chart with several vertical bars of varying heights and a pie chart with segments. The scene is brightly lit, and the overall color palette is dominated by light blues and whites. A semi-transparent blue banner is overlaid across the middle of the image, containing the text 'PRELIMINARY RESULTS' in a bold, white, sans-serif font.

PRELIMINARY RESULTS

Other key findings 1/2

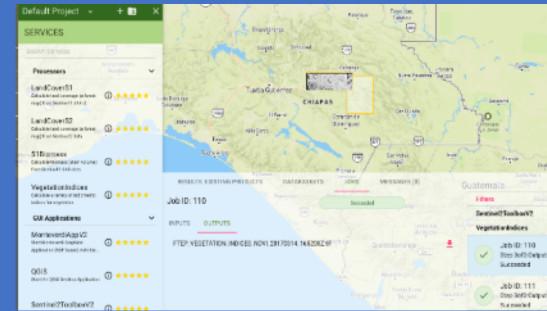
- 40% Do not trust in “black box” services
 - Algorithms employed should be recognized by the scientific community
- Processing datasets can employ up to 50% of the research time
 - Cloud massive parallelization and locally available datasets may boost researcher performance
- Copernicus Sentinel data is a must but is not the only data needed for research:
 - Services integrating different data sources (ESA, NASA, in-situ) are needed
- Not all researchers are IT experts
 - Services which provide easy algorithm execution at scale are welcome
- Researchers publish their results and collaborate
 - Data sharing is important service to ensure reproducibility of experiments

Other key findings 2/2

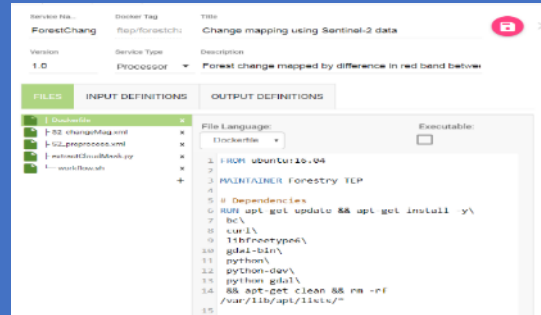
- Vendor lock threat
 - Use of standard API for common services (e.g. lunch a processing service, search a catalogue,...)
- IPR protection concern
 - T&C and technical measure to avoid unauthorised access to user data and algorithms
- Data provenance/certification
 - Offering of pre-generated EO derived information should be well documented
- EO based research is extremely variegated
 - Wide array of different technical capability needed
 - Specific services depends on the research domain

Identified technical capabilities

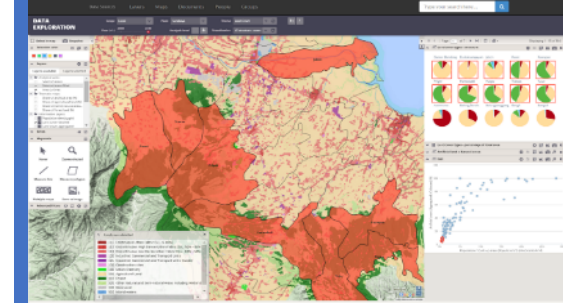
Data Processing Services



User Algorithms Hosting



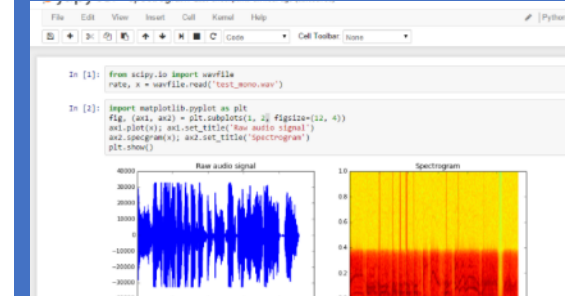
Data Analytics



Data Sharing/Publication



Interactive development



Powered by a scalable collocated processing environment - DIAS

Processing platforms

- Hosting of pre-developed algorithms
- The platform might instantiate or deploy computing resources to process new tasks and eliminate them once complete (ideally to reduce costs)
- The platform provides an API to invoke the services
- The platform should be able to interconnect services with data and computing resources
 - The EO service provider can provide services that could run independently on the platform below
- Dataset search/selector based on:
 - Mission
 - Area of interest (visualized, or delimited by polygon)
 - Sensing time
 - Data type
- **Enable efficient migration to DIAS**





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Thank you

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