# OCRE

Open Clouds for Research Environments

#OCREwebinar

https://www.ocre-project.eu

OCRE receives funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 824079.

OCRE Open Clouds for Research Environments

# Aim of this webinar

For the research community and suppliers
to be informed about the OCRE project,

its aims, approach and timeline;
prepare and get involved.

We are at the starting point.

*The information in this document is subject to change.*

OCRE | Open Clouds for Research Environments

Will stimulate the adoption of commercial cloud and Earth Observation (EO) services by the European research community.

As part of the European Open Science Cloud.

Through a tender resulting in framework agreements with suppliers, which research institutions can use to buy resources.

By making available 9.5 million EURO in cloud adoption funds from the EC, for the research community to use.

# Why OCRE?

- Cloud and Earth Observation (EO) based services offer the European Research community a wealth of powerful tools.
- But for many researchers, these are currently out of reach.
  - It is difficult to find and select suitable services.
  - Establishing agreements with providers and ensuring legal and technical compliance requires specialist skills and takes an inordinate amount of time.
- Equally, service providers have difficulty reaching and meeting the needs of the research community in
  - technical,
  - financial and legal areas.

## RESEARCHERS

*Easy adoption*

Incorporate commercial digital services into their activities

Service discovery and acquisition

## SERVICE PROVIDERS

*Easy delivery*

Reach and meet the needs of the research community

Meet legal, financial and technical requirements

OCRE will drive adoption of digital services
and close the gap between the supply and demand sides

# Purpose

- The Open Cloud for Research Environments project (OCRE), will run from January 2019 until December 2021, to accelerate usage of commercial cloud services by the European research community.
- OCRE brings together cloud providers, Earth Observation companies and the European research community, through
- a pan-European tender resulting in ready-to-use service agreements available to 10,000 institutions.
- a cloud delivery program, including €9.5 million in adoption funding for research.
- a management platform to track uptake and manage vouchers

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# European Open Science Cloud

- Europe is the largest producer of research data in the world.
- The EC wants to increase the use of this data and interconnect research IT infrastructures through the European Open Science Cloud.
- OCRE is part of the European Open Science Cloud and receives funding from the EC under grant agreement no. 824079.

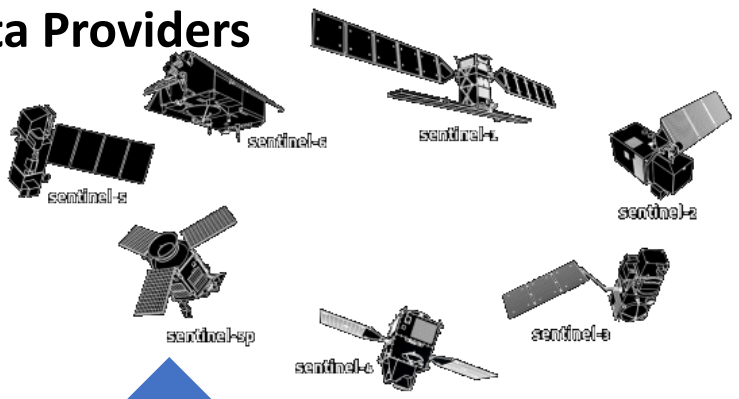
# Scope

IaaS, PaaS and SaaS
commercial cloud offerings.

Earth Observation commercial services, which leverage EU DIAS platforms (Data and Information Access Services), where the Copernicus sentinel data is stored.

# EO service value chain: From satellite to users

**Data Providers**

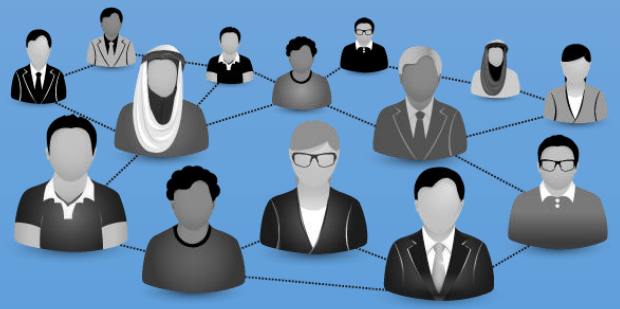



**Service / Platform Providers**

- Value added products
- Data visualisation
- Data analytics
- Data processing services
- Processing platforms

DIAS

**User community**



European Open Sciene Cloud

- Oil & Gas sector
- Agricultural sector
- Insurance sector
- Environmental sector

# Why participate in the OCRE call for Earth Observation services

Copernicus Sentinel data freely available and ready to use on Data Information Access Services (DIAS)

Follow the market evolution towards services based on EO derived products

Potential market increase for researchers and institutions belonging to non EO related sectors, by getting analysis ready data or final products without investing effort in data download and processing. Climate Change, Geography, Oceanography,…

# Requirements and input

- Requirements from researchers and institutes
- Input from suppliers
- Webinars, meetings

# EO Requirements gathering from the research community and input from suppliers

- Dedicated Webinars
- Participating in conferences and user consultations, including
  - EGU, International Symposium on Digital Earth
  - Dedicated Earth Observation Symposiums: Living Planet Symposium, EarSeL Symposium.
- EARSC community: European Association of Remote Sensing Companies

# Benefits for researchers

## Participate in the tender

Give input to tender requirements. Procurement focused on needs of research community.
Use tender outcomes: ready-to-use agreements. No need to run your own tender.
Ensure your institution is eligible to consume; is included in the tender publication.
Through your NREN, representing education and research institutes in a country.
Or via a domain specific buyer group, where research institutes gather and consume as a collective, through a lead buyer.

Benefit from cloud and Earth Observation services.
For EO: Data download reduced to zero, Fast, robust and reliable services
Allowing to use researchers' time for research and not for processing data

## Opportunity to benefit from adoption funding.

# Adoption funds: 9.5 million euro

## 50% for IaaS, PaaS and SaaS & 50% for Earth Observation

First batch of **500 KEURO**
Expected **f**rom July 2019 onwards
for researchers (users)
who want to use the IaaS offerings
available in the GÉANT IaaS framework.
Through vouchers

Vouchers distributed via organisations
who represent or have access to researchers.
First participating organisation is Eurodoc:
*The European Council for Doctoral Candidates and Junior Researchers*

Start usage, raise awareness, use-cases.
Experience with vouchers.

**9 MEUR** in 2020 – 2021
to be used at suppliers
who have been awarded
a framework agreement
in the OCRE tender.

Multi-tier approach: vouchers for researchers and adoption funds for institutions & buyer groups.

# Vouchers model

Separates:

- **payments** for cloud resources
OCRE, as custodian of the adoption fund,
buys the cloud resources from providers.

- **usage** of these cloud resources
Researchers use the services at the providers,
with the providers reporting to OCRE about usage.

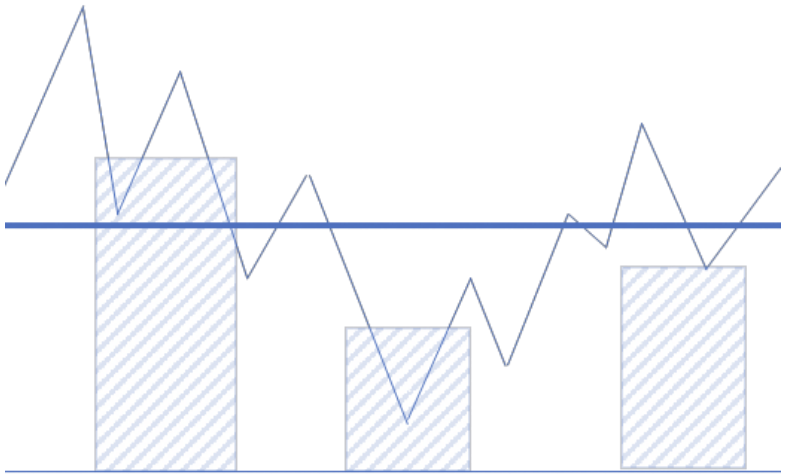
Creates a situation where:

a. cloud and Earth Observation services are free-at-the-point-of-the-user;

b. 'the long-tail-of-science', individual researchers, are enabled to use cloud services.

Hence, the use of commercial cloud services by the European research community is increased.

# Explore different usage models



- On-demand
- Basic discount levels available to all institutions
- Test Suite, packaging several scientific applications
- Reserved instances
- Volume discounts for buyer groups committing to certain spending levels
- Spot instances / Pre-emptible instances
- Vouchers/Credits



Building on two delivery vehicles

*OCRE is the successor to the HNSciCloud and GÉANT IaaS tenders*

# Efficient delivery

GÉANT cloud delivery ecosystem:
reach 10,000 institutions across Europe.

**GÉANT**

**40 NRENs**

**10,000 institutions**

# Tender: aggregated demand

CERN and other
research institutions
will establish buyer groups

NRENs will coordinate national
deployments and can buy in bulk

Individual institutions
will buy resources

EIRO forum
serving european science

CERN
EMBL
EUROfusion
ESA
ESO
ESRF
European XFEL
ILL

# Expected tender requirements

- Compliance with EU data protection law, including GDPR.
- Ready-to-use agreements, which include purchasing and payment models that match the financial structures and funding in research institutions, such as: acquiring services with a purchase order, postpaid billing and accommodating capital expenditure through upfront commitments.
- Reduction of network traffic charges, through suppliers' connections to the GÉANT network.
- Identity management, single sign-on capabilities
- (ISO) certifications: cloud specific features, security, interoperability, exit support, environmental, financial and service level agreements, IT service management.
- Customer adoption support.
- License management and migration. Transfer of existing licenses to the cloud.
- Data portability, interoperability and open standards.
- Report resource usage to OCRE.

# Input to tender

- Research community
- European Open Science Cloud (EOSC-Hub WP12)
- Research Data Alliance
- FAIR data principles,
  to make data findable, accessible, interoperable and reusable
- Identity management and single sign-on: AARC2 project
- OpenEO and the ESA EO Exploitation Platform Common Architecture projects
- GÉANT IaaS and HNSciCloud tenders

# Tender results

Tender results in **framework agreements** with suppliers who meet the tender requirements. Not 1 winner takes all. Portfolio of services. GÉANT will sign the framework agreements with the suppliers, valid for 4 years.

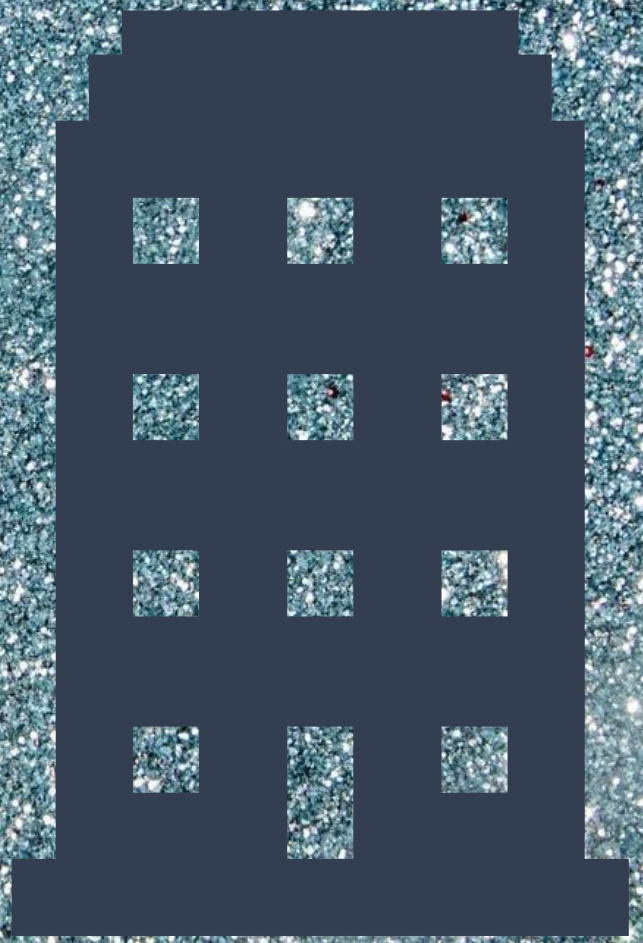
Entities identified in the tender are eligible to use these framework agreements: to buy resources, via **call-off agreements**. This can involve a mini-competition procedure.

# Benefits for suppliers

Efficient route to market

Respond to 1 tender

Reach 10,000 institutions



# Connections & outreach

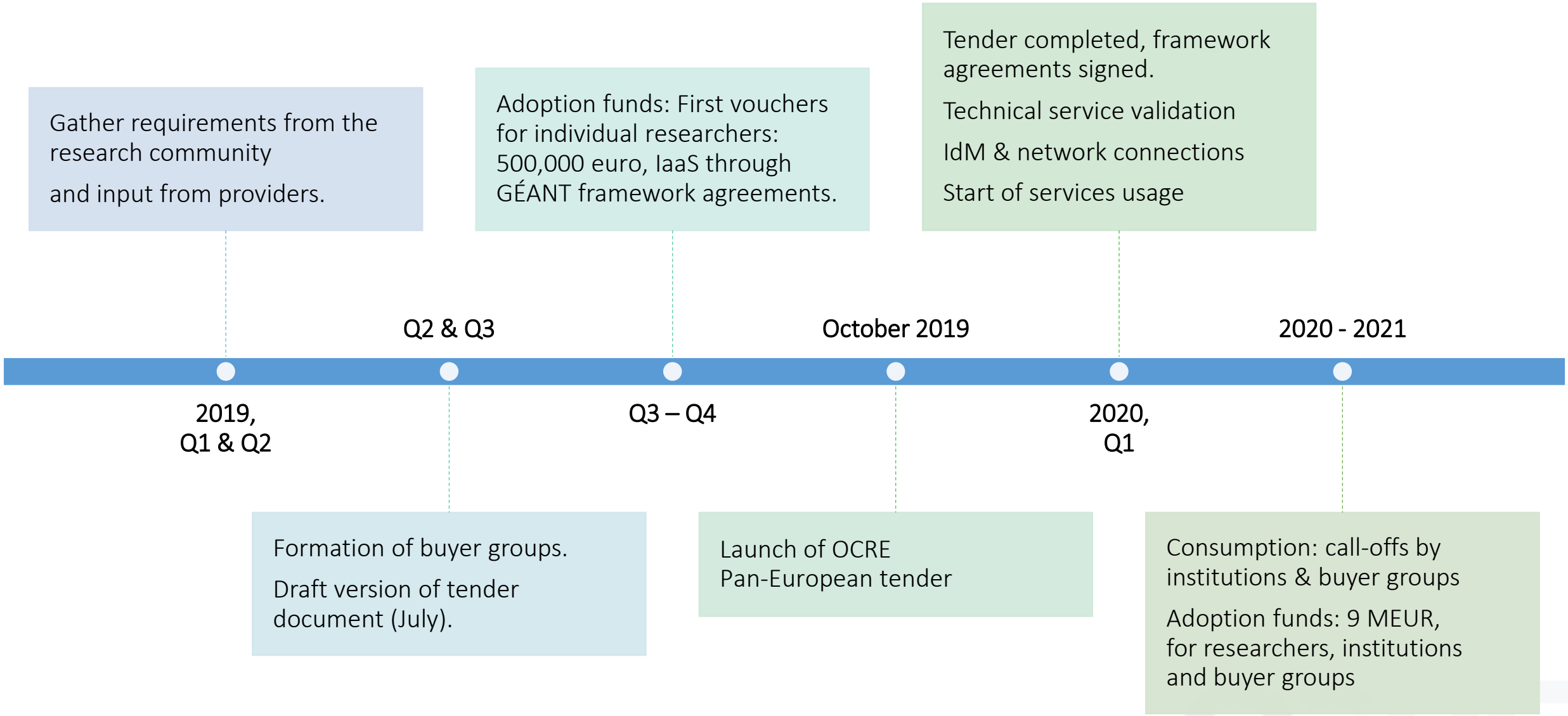
- Selected providers will become an integral part of the European Open Science Cloud service catalogue
- and are connected to
  - the GÉANT data network
  - and the community's single sign-on systems,
- OCRE will stimulate awareness and adoption
- Thus, bringing the selected providers into the heart of the European research community

# Delivery structure

- OCRE aggregates needs, demand and establishes an efficient delivery on a European level.
- OCRE will be seeking suppliers, through the tender, who can meet the community's needs and operate in a similar fashion.


# Usage management

- Technical platform to track uptake, usage of vouchers
- Through RHEA Group company SixSq.


Gather requirements from the research community
and input from providers.
2019, Q1 & Q2
Formation of buyer groups.
Draft version of tender document (July).
Q2 & Q3
Adoption funds: First vouchers for individual researchers: 500,000 euro, IaaS through GÉANT framework agreements.
Q3 – Q4
Launch of OCRE Pan-European tender
October 2019
Tender completed, framework agreements signed.
Technical service validation
IdM & network connections
Start of services usage
2020, Q1
Consumption: call-offs by institutions & buyer groups
Adoption funds: 9 MEUR, for researchers, institutions and buyer groups
2020 - 2021

# OCRE

Open Clouds for Research Environments

## OCRE aims to be a CORE component in the European Open Science cloud

Next steps
Slides, Questionnaire, input

Face to Face seminar for suppliers
March 12, Utrecht, the Netherlands

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