OCRE
Open Clouds for Research Environments

GÉANT · CERN · RHEA GROUP · Trust-IT
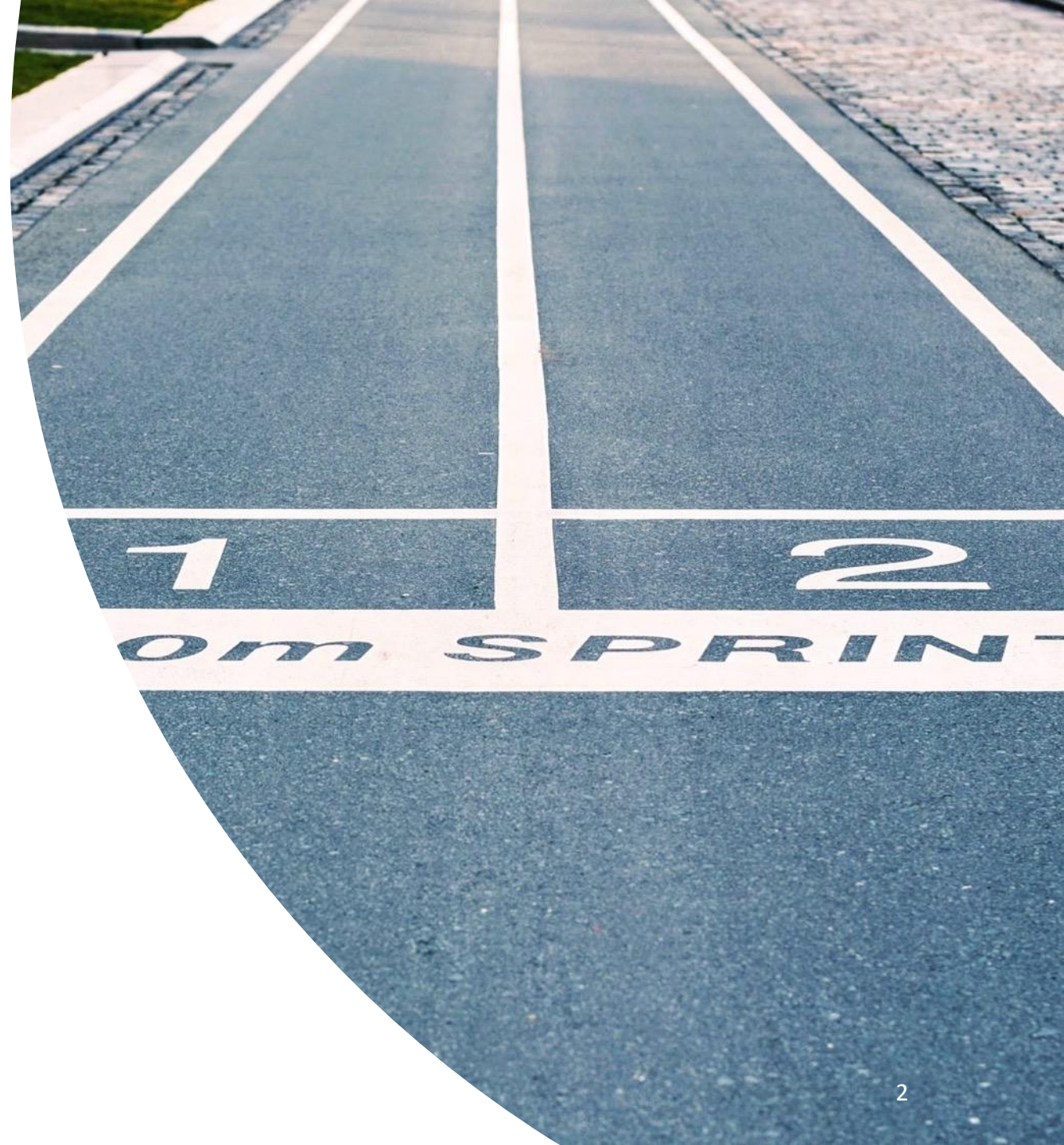
#OCREwebinar　　　https://www.ocre-project.eu

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

OCRE

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

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

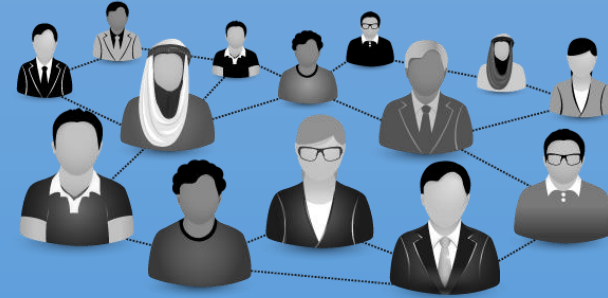- Value added products
- Data visualisation
- Data analytics
- Data processing services
- Processing platforms

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,...

OCRE | Open Clouds for Research Environments

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

OCRE Open Clouds for Research Environments

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

First batch of **500 KEURO**
Expected from 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
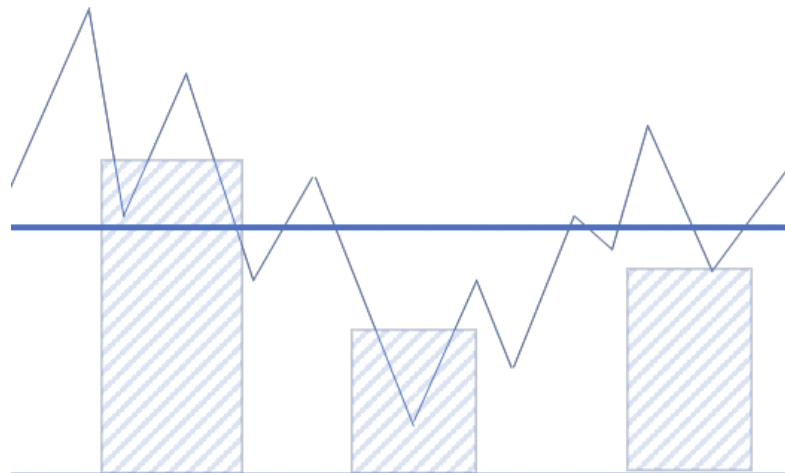
Volume discounts for buyer groups committing to certain spending levels

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

GÉANT membership

NATIONAL MEMBERS

1 per country

REPRESENTATIVE MEMBER

NORDUnet

RHnet (Iceland)

SUNET (Sweden)

UNINETT (Norway)

CSC (Finland)

DeIC (Denmark)

ASSOCIATES

ADVA Optical Networking

Alcatel-Lucent

Ciena Corporation

CERN

Cisco Systems

Coriant GmbH

ECI Telecom GmbH

EMBL

European Space Agency

Google UK Ltd

Level 3 Communications

ownCloud

Tata Communications

Tender: aggregated demand

OCRE | Open Clouds for Research Environments

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**.
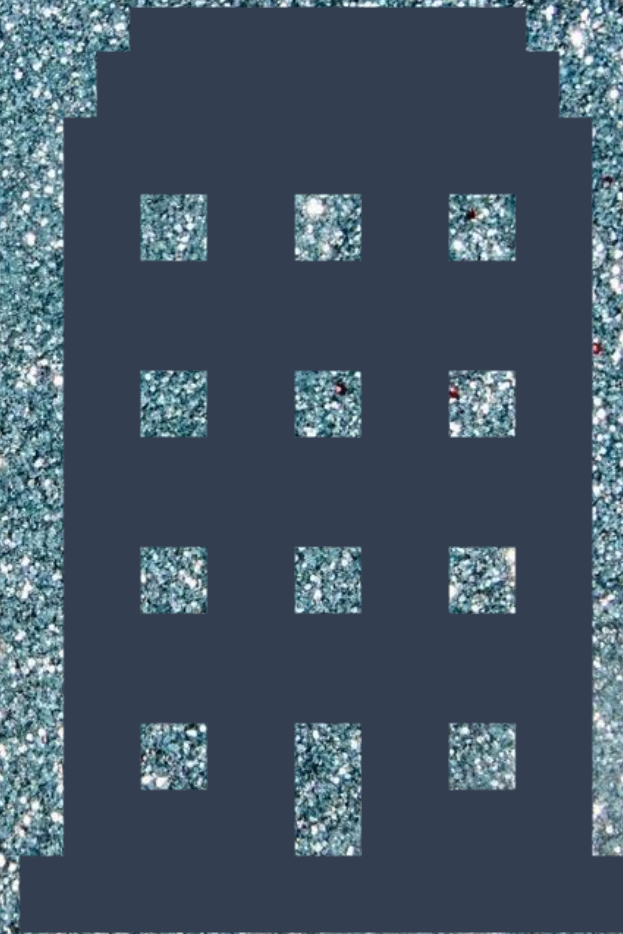This can involve a mini-competition procedure.

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
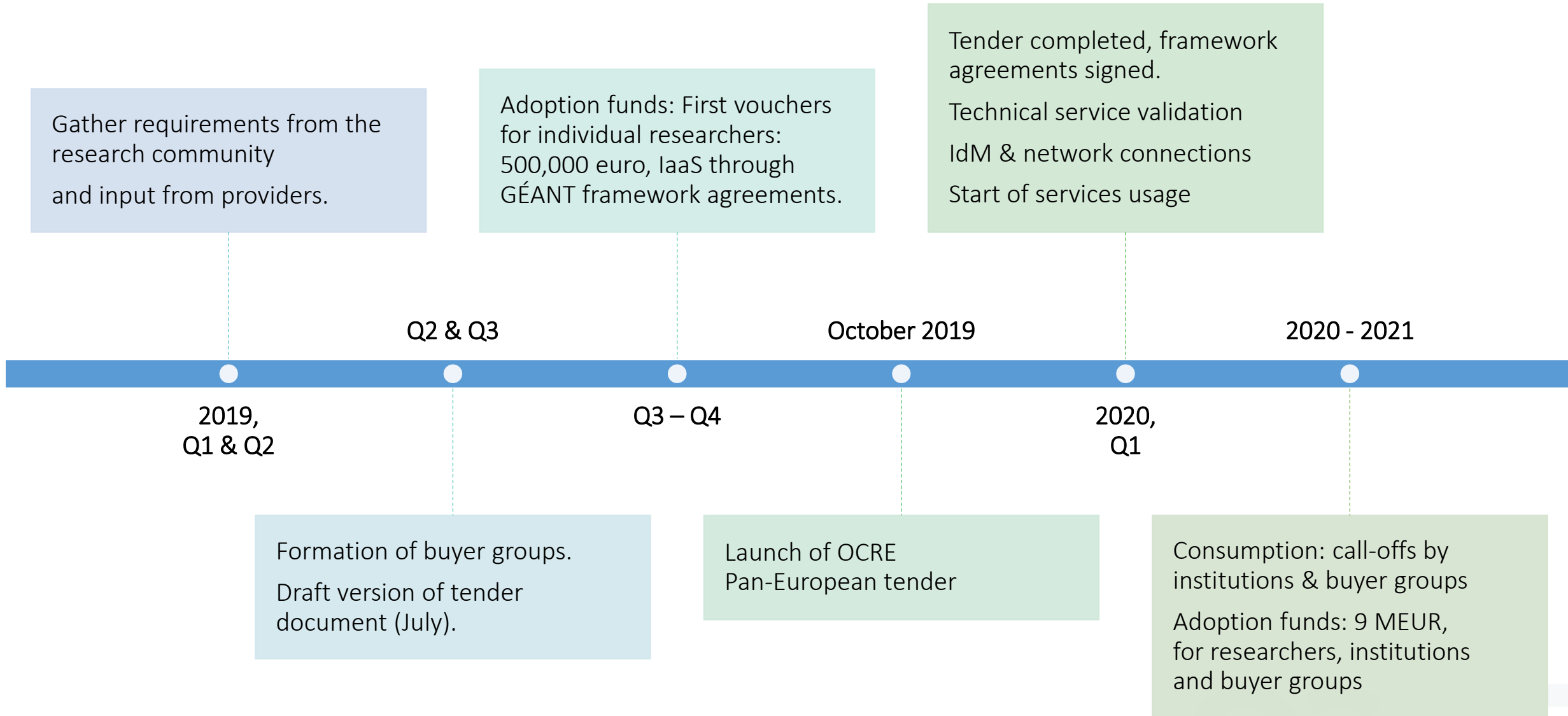
Delivery structure

- 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.

Adoption funds: First vouchers for individual researchers: 500,000 euro, IaaS through GÉANT framework agreements.

Tender completed, framework agreements signed.

Technical service validation

IdM & network connections

Start of services usage

Q2 & Q3

October 2019

2020 - 2021

2019, Q1 & Q2

Q3 – Q4

2020, Q1

Formation of buyer groups.

Draft version of tender document (July).

Launch of OCRE Pan-European tender

Consumption: call-offs by institutions & buyer groups

Adoption funds: 9 MEUR, for researchers, institutions and buyer groups

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

#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.