OCRE

Open Clouds for Research Environments

GÉANT · CERN · RHEA GROUP · Trust-IT

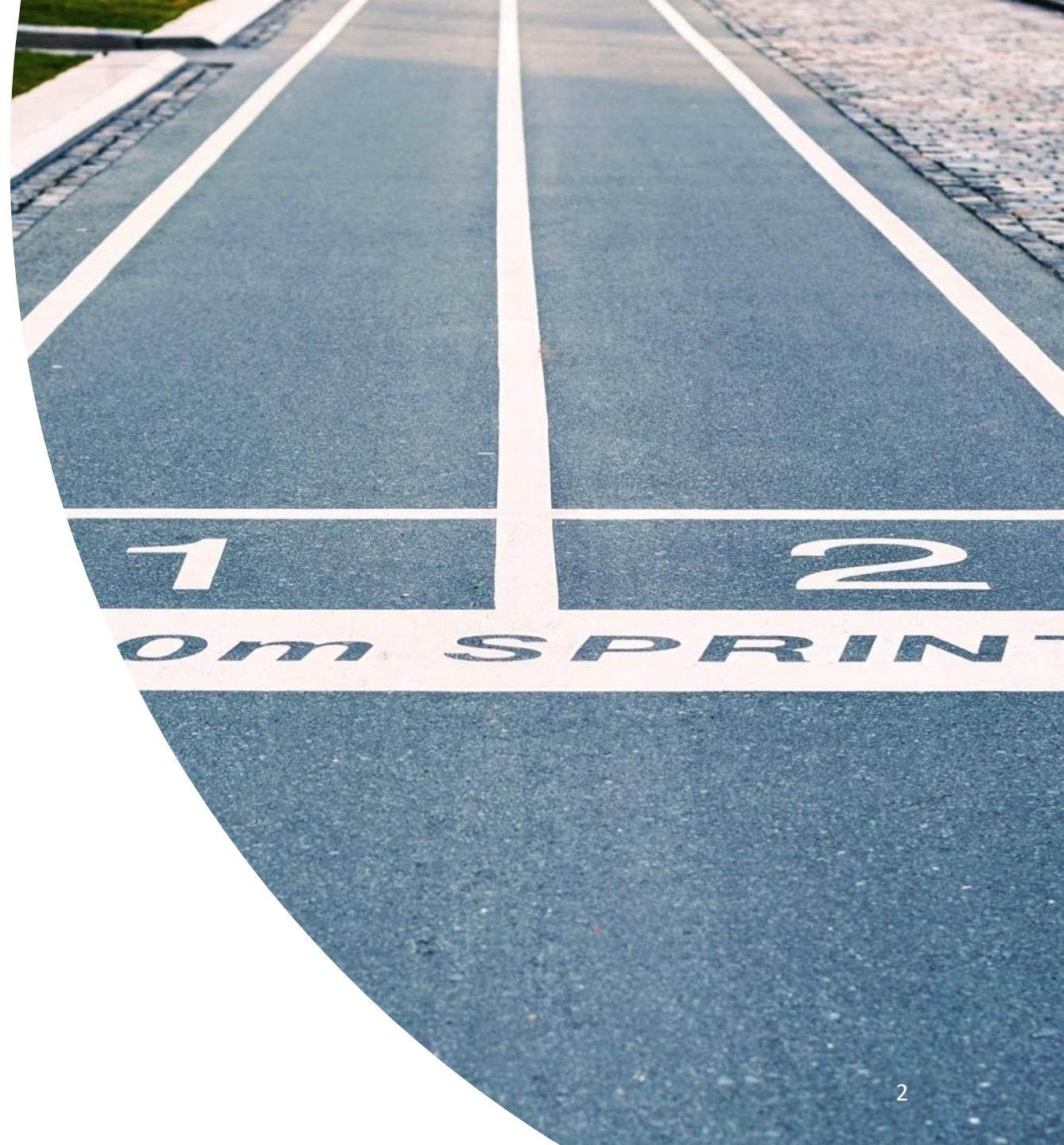https://www.ocre-project.eu

Supplier briefing

For cloud and Earth Observation service providers to be informed about the OCRE project;

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

Give input to OCRE.

We are at the starting point.

The information in this document is subject to change.

Agenda

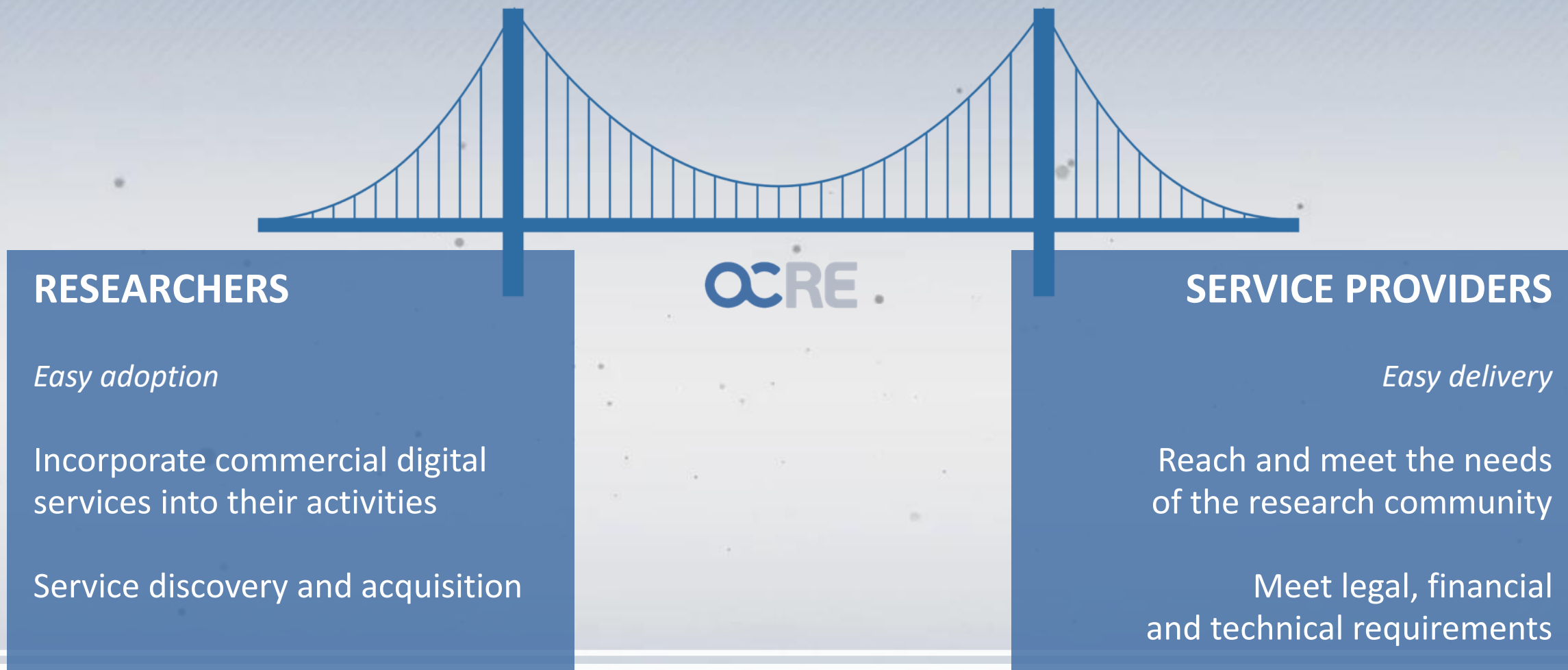12:30 OCRE presentations

14:00 Coffee break

14:10 Discussion in two groups (supplier input to OCRE)

     - Cloud providers

     - Earth Observation providers

15:00 Drinks and further conversations

16:00 End of meeting

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

Stimulate the adoption of commercial digital services by the European Research community

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.

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.

A **tender** (public procurement)
Using 2014/24/EU directive.
Procure with a group of entities
Cross-border
Centralised Purchasing Body

Launch tender in October

IaaS, PaaS, SaaS and Earth Observation services
Different lots.

Requirements input from research community
Input from suppliers

Demand aggregation in buyer groups:
Research groups (domain specific)
National Research and Education Networks (country specific)

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

CERN and other
research institutions
will establish buyer groups

NRENs will coordinate national
deployments and can buy in bulk

Individual institutions
will buy resources

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

Dates and duration

End of July:
Draft tender document

October
publish tender,

Q1 2020:
Evaluation completed and
agreements signed

Framework agreements signed
between suppliers and GÉANT.

Not 1 winner takes all.
Portfolio of services.
GÉANT will sign the framework
agreements with the suppliers.
Valid for 4 years.

Consumption through a range of usage models

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.

Call-off agreements and payments are between
institution / lead-buyer
and supplier

Explore different usage models
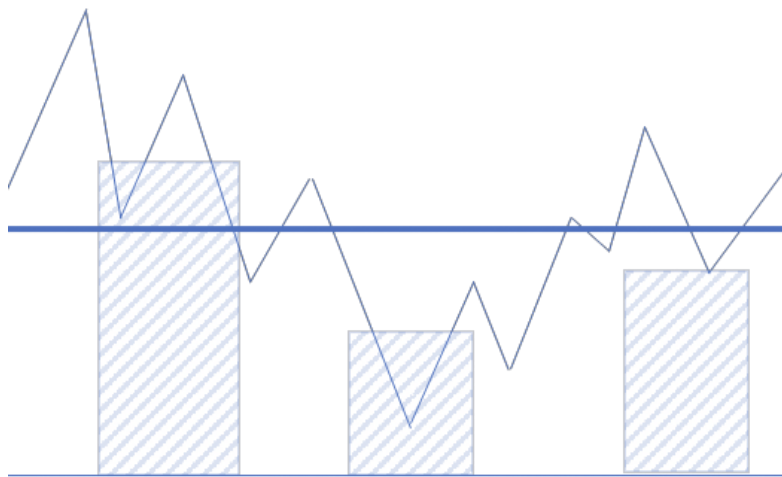
On-demand

Reserved instances

Spot instances / Pre-emptible instances

Basic discount levels available to all institutions

Volume discounts for buyer groups committing to certain spending levels

Vouchers/Credits

Test Suite, packaging several scientific applications

The GÉANT IaaS tender includes a cost recovery fee of 0.5% to compensate the coordinator (GÉANT) for its efforts.
Paid by the suppliers, to GÉANT, from the money they receive from customers.
NRENs (buyer groups) can also add a service charge for their national adoption and support efforts.
This is decided inside each group (by this community). Such a fee is added on top of the supplier's price.

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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.

Consumption through a range of usage models

EC **adoption funds** 9.5 MEUR.
Available through OCRE
Services are free-at-the-point-of-the-user,

Stage 1: From July 2019
500 KEURO. For individual researchers.
Usage of services in GÉANT IaaS framework.
Voucher system. 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.

Stage 2: 2020, until end of 2021
individual researchers, institutions
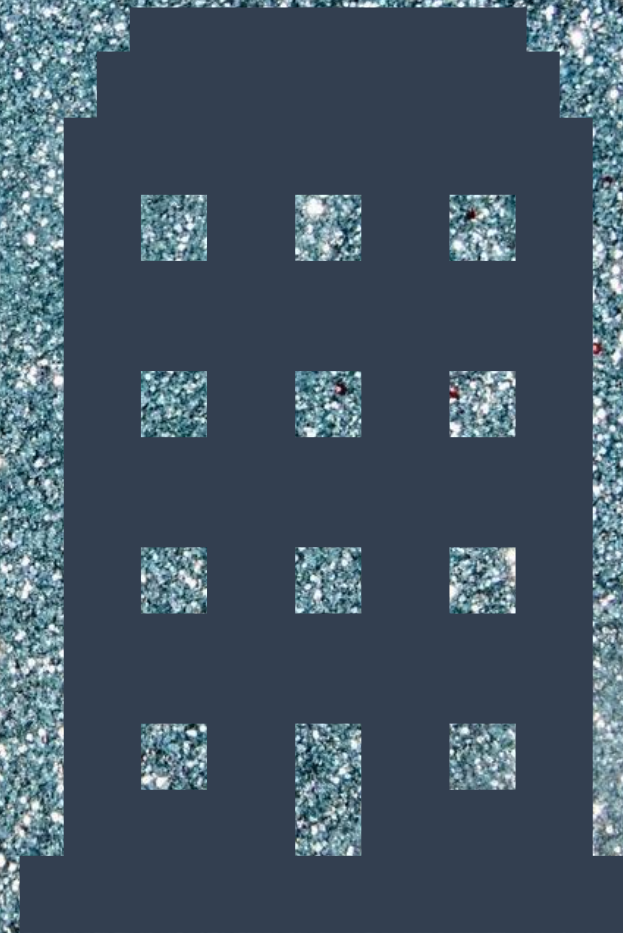4.25 MEUR million for IaaS, PaaS and SaaS
4.75 MEUR for Earth Observation
Services selected in OCRE tender

Benefits for suppliers

Efficient route to market

Respond to 1 tender
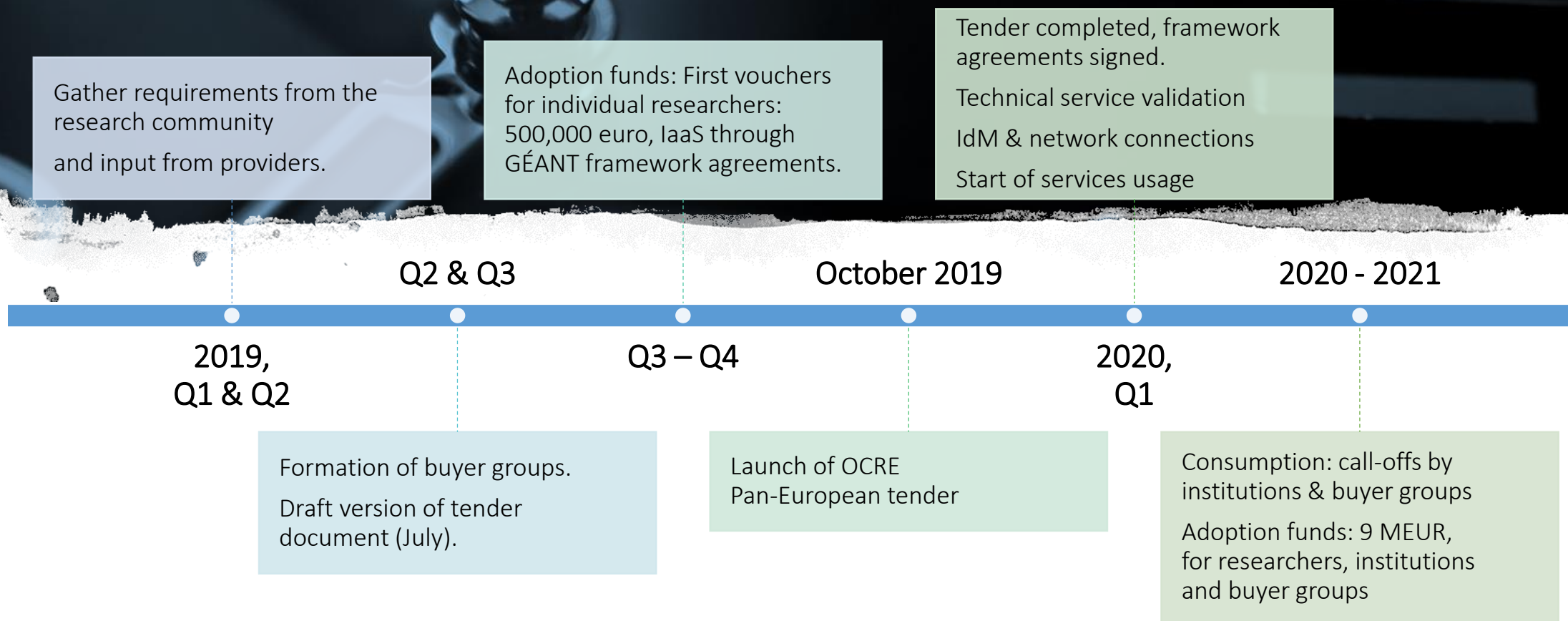
Reach 10,000 institutions

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

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Usage management

- Technical platform to track uptake, usage of vouchers

- Through RHEA Group company SixSq.

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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

Three steps into the cloud

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Level 1: no cloud

- Digital services run locally at the institutions: installed and managed on-premises.
- No collaboration between institutes on collective vendor management and procurement.
- No NREN involvement

Level 2: small clouds

- First digital services are moved off campus, to the cloud.
- Involves e-mail, lift-and-shift of virtual machines and cloud experimentation.
- Single or a few suppliers.
- Institutions buy individually.
- Institutions look to their NREN for delivery of core components: network, identity management and contracts.
- NRENs as referrer.

Level 3: big clouds

- Institutions have a digital transformation strategy, which includes cloud deployments, through structured sourcing decisions.
- Services are bought from more suppliers. Services encompass more specialist tools. Use of Machine Learning and AI.
- Multi cloud usage and management in production environments.
- Institutions aggregate volume purchases and look to their NREN for implementation and usage support.
- NRENs as underwriter and cloud competence center

GÉANT IaaS framework Available since January 2017

Usage thus far in 18 countries

Majority of usage in Western Europe

300 institutions consuming through the framework in 2018

Eightfold increase in spending from 2017 to 2018

OCRE

Open Clouds for Research Environments

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

Next steps
- Tender input
- Webinars
- End of July: tender draft

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