FRIEDRICH-ALEXANDER UNIVERSITÄT ERLANGEN-NÜRNBERG

ERLANGEN CENTRE FOR ASTROPARTICLE PHYSICS

ESCAPE

European Science Cluster of Astronomy & Particle physics ESFRI research Infrastructures

The ESCAPE project and the EOSC

Kay GRAF

ECAP, Erlangen Centre for Astroparticle Physics

Friedrich-Alexander Universität Erlangen-Nürnberg

Computingstrategie in der HL-LHC-Ära – Online Workshop – 05/2020

ESCAPE - The European Science Cluster of Astronomy & Particle Physics ESFRI Research Infrastructures has received funding from the European Union's Horizon 2020 research and innovation programme under the Grant Agreement n° 824064.

About EOSC …

Why EOSC?

C. Pascu – https://indico.in2p3.fr/event/20203/contributions/79182/attachments/57544/76944/EOSC_for_ESCAPE_.pdf

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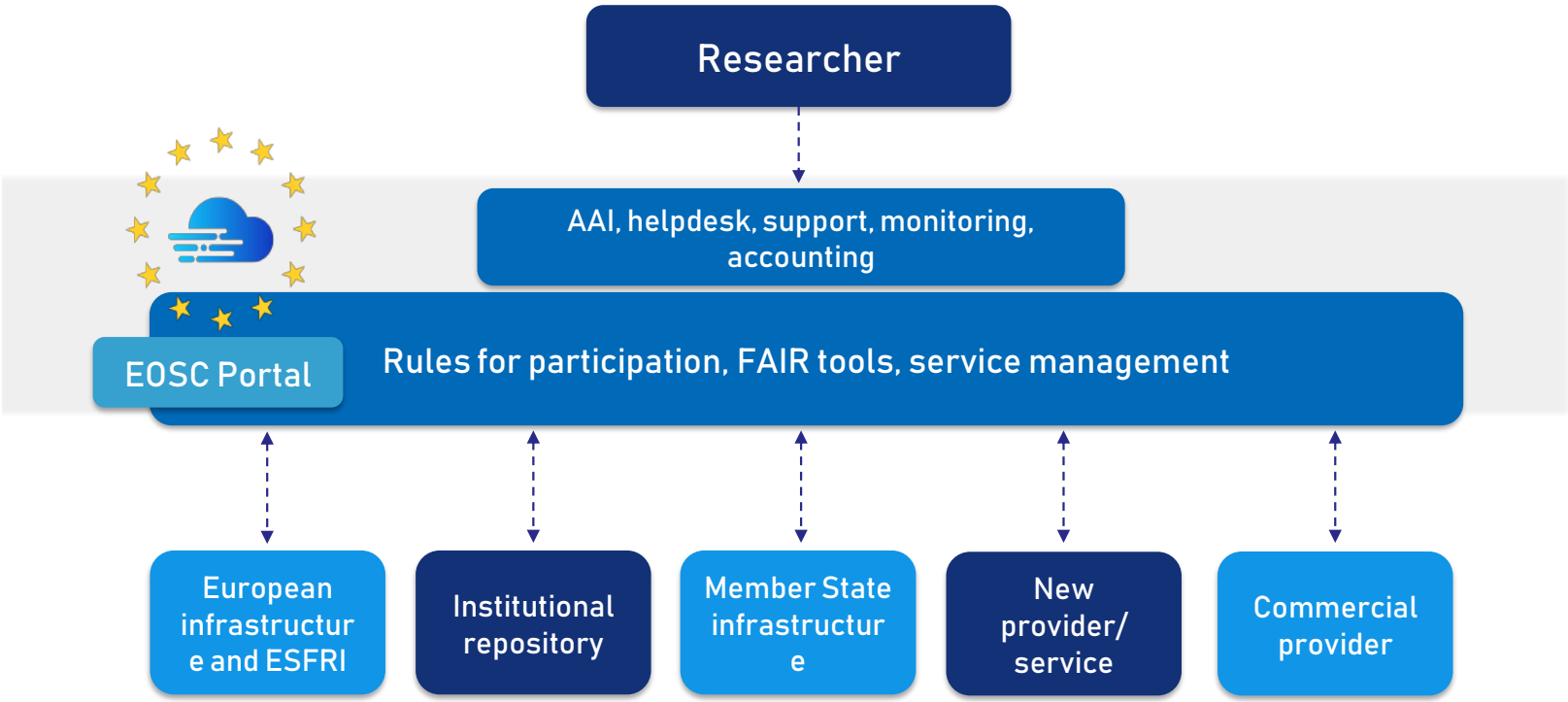
About EOSC …

EOSC portal: a universal gateway to EOSC services



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About EOSC …

EOSC portal: a universal gateway to EOSC services

RESEARCHERS	SERVICE PROVIDERS
Discover & access resources and services from different countries and disciplines	Share services and resources to a wider user base platform
Access and reuse resources through a secure authentication process	Get statistics, feedback and online interactions with the users
Obtain the latest information about EOSC-related policies	Improve services through the EOSC quality standards
Provide feedback and co-create EOSC	Check business pilots for SMEs interested in open research data and innovation

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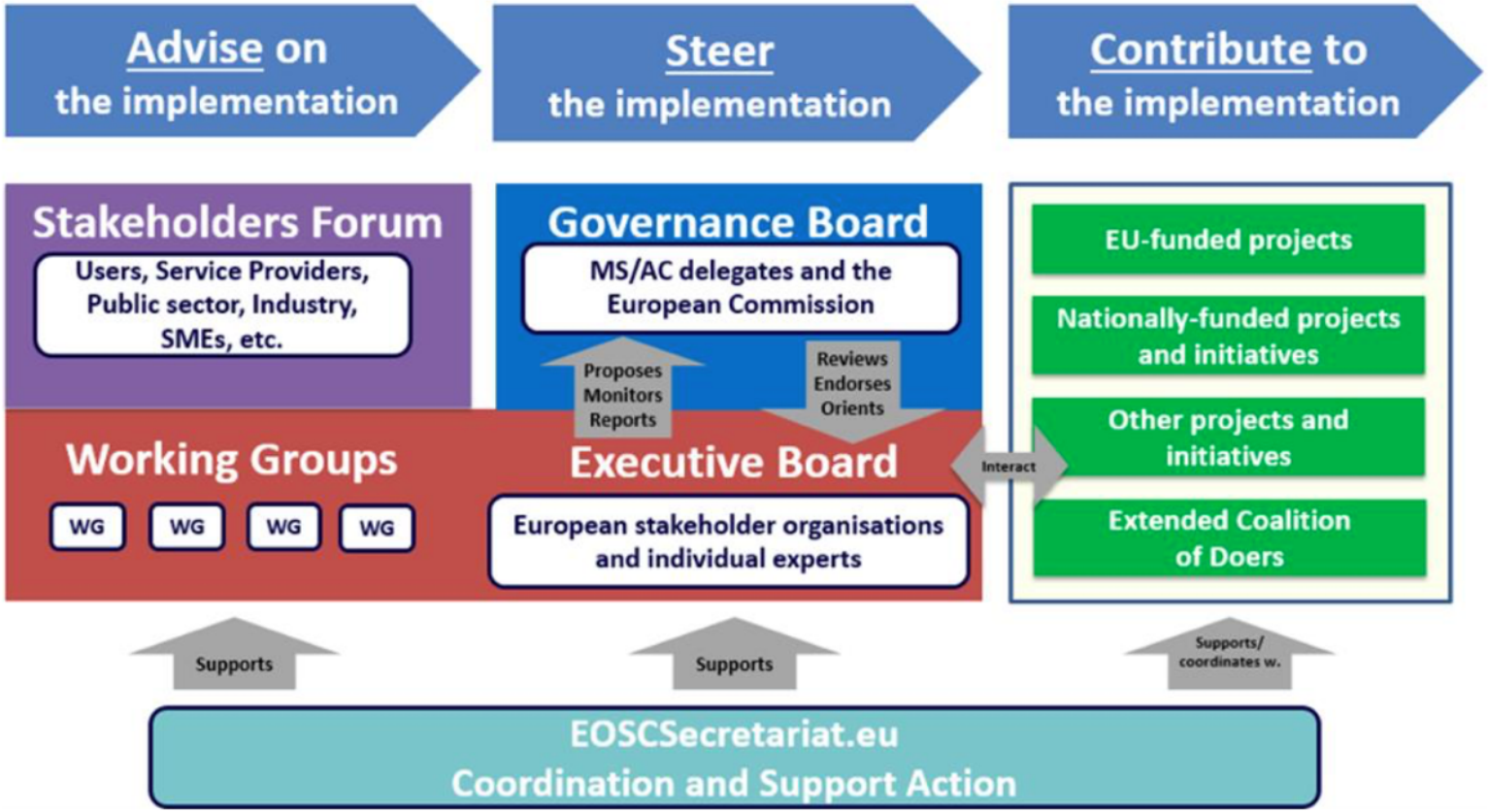
EOSC Organisational Structure



https://op.europa.eu/s/n4HJ

Source: DGRTD

First EOSC Iteration by end of 2020:
minimum viable (valuable) implementation, legal framework

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Funding

- **Horizon 2020, two calls still open, focus on the portal:**
  - **INFRAEOSC-03-2020:** Integration and consolidation of the existing pan-European access mechanism to public research infrastructures and commercial services through the EOSC Portal
    Deadline: 18 June 2020
  - **INFRAEOSC-07-2020:** Increasing the service offer of the EOSC Portal
    Deadline: 18 June 2020
- "In the post-2020 period, EOSC will be supported by the Horizon Europe programme as the principle of open science will become the modus operandi of Horizon Europe." s

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Five EOSC Clusters

- *The EC funds clustered participation to EOSC; funding based* ***on the number*** *of pan-European research infrastructures (****EUR 1.5 - 2 million for each ESFRI project/landmark)*** *in the clusters*
- **Clusters funded in H2020-INFRAEOSC-04-2018**
  - **EOSC-LIFE:** Life science RIs
  - **ENVRI-FAIR:** Environmental Research Infrastructures
  - **ESCAPE: Astronomy and Particle Physics**
  - **PANOSC:** Photon and Neutron sources RIs
  - **SSHOC:** Social Sciences and Humanities

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ESCAPE in a Nutshell

ESCAPE - *https://escape2020.eu* - convenes a large scientific community

- **31** partners (including 2 SMEs), representing:
  - **7** ESFRI projects & landmarks: CTA, ELT, EST, FAIR, HL-LHC, KM3NeT, SKA
  - **2** pan-European International Organizations: CERN, ESO (with their world-class established infrastructures, experiments and observatories).
  - **4** supporting ERA-NET initiatives: HEP (CERN), NuPECC, ASTRONET, APPEC
  - **1** involved initiative/infrastructure: EURO-VO
  - **2** European research infrastructures: EGO and JIV-ERIC
- Budget: **15.98 M€**
- Started: **1/2/2019**
- Duration: **42** months (end date 31/7/2022)
- Coordinator: **CNRS**
- *Each RI commits to ESCAPE,* ***teaming up with a sub-set of associated national stakeholders.***

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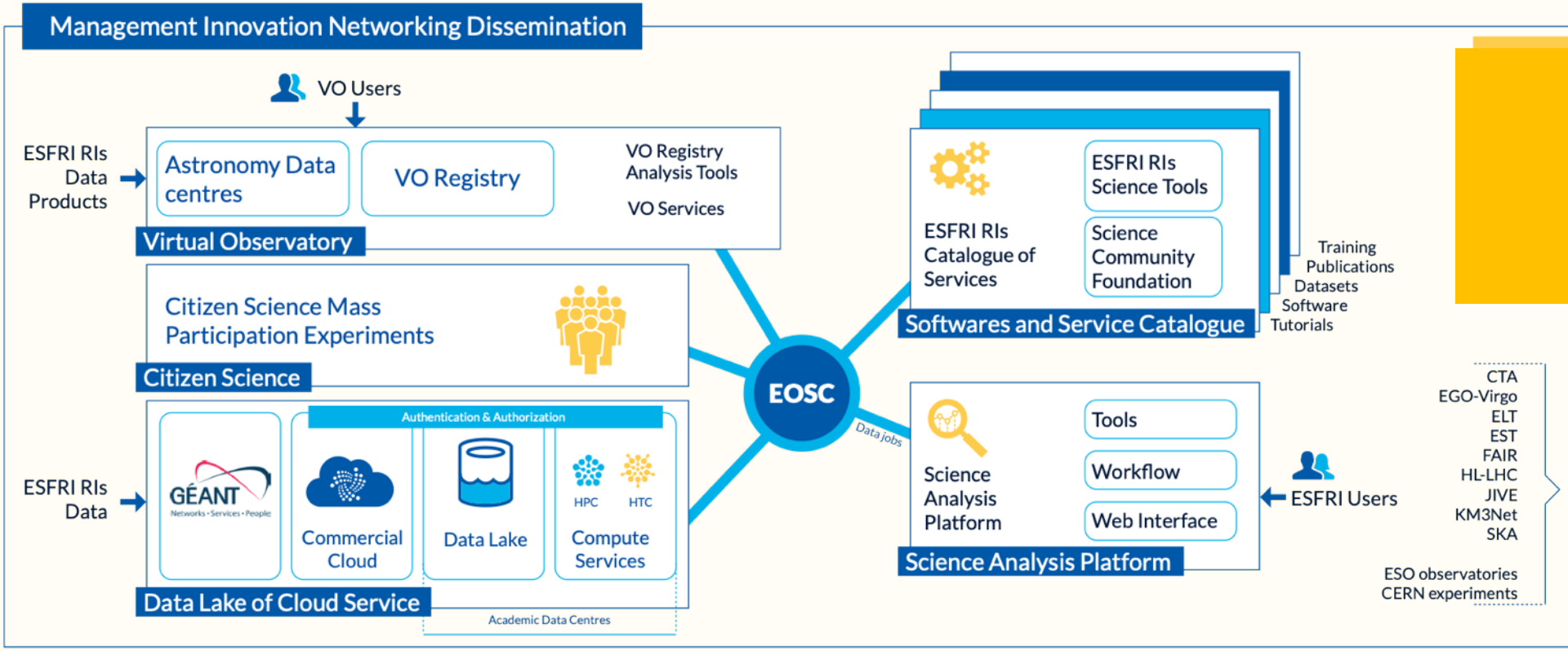
ESCAPE Project Overview - https://projectescape.eu



- Cross-fertilisation, finding and exploiting common practises
- Creating open-science community services
  (partly: to be self-hosted)
- Cross-community open science cases

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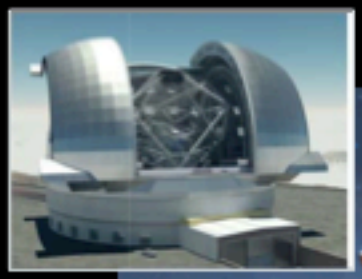
ESCAPE Partner RIs

Radio

SKA

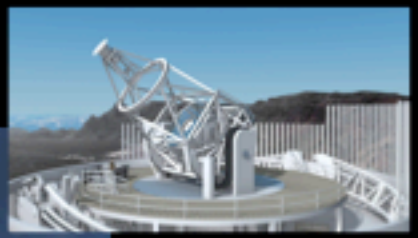
JIVE-VLBI

Visible light



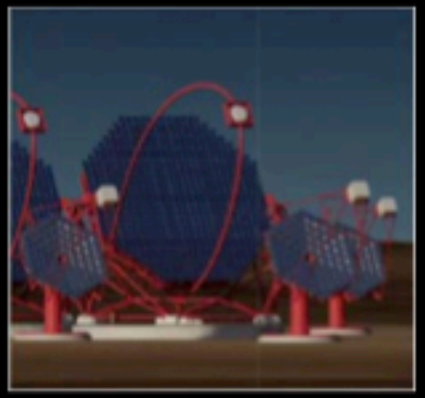
ELT

ESO



EST

Gamma rays



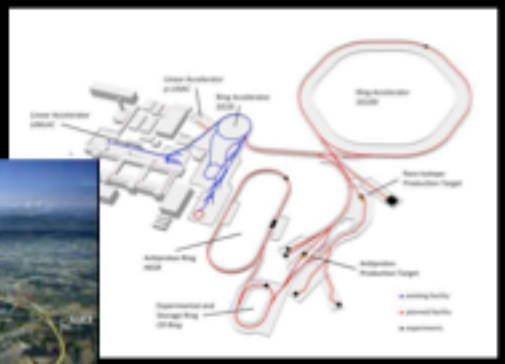
CTA

Accelerator-based Particle Physics

HL-LHC

CERN

Accelerator-based Nuclear Physics

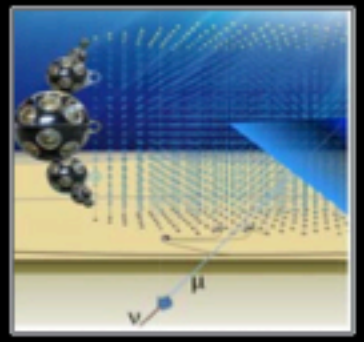


FAIR

Gravitational Waves

EGO-VIRGO

Cosmic-rays Neutrinos



KM3NeT

ESCAPE Partners

THE UNIVERSITY *of* EDINBURGH

UNIVERSITÄT HEIDELBERG
ZUKUNFT SEIT 1386

Heidelberg Institute for
Theoretical Studies

CSIC
Spanish Council of Research

The Open University

Royal Observatory
of Belgium

Community Foundation

- ESCAPE main focus on partner (ESF)RIs – however, it can serve the full astro/particle physics community:
  - wide range of experiments included (though no full coverage)
  - community integration foreseen via test science cases, open workshops and trainings (appropriate communication channels will be installed)
  - Inclusiveness for all services of the science community
  - it will help defining (and developing) the access points to the central EOSC services

⇒ ESCAPE as leverage point from A/PP community to EOSC

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Conclusions

In short:

- What can EOSC provide now:
  - A diverse catalogue of federated services (provided by many providers)
  - A platform for discussion and cooperation, implementation of common services with a set of central services
  - Guidelines and rules for open data and services
- What can EOSC not or will not provide (yet):
  - A harmonised scientific cloud as computing resource
- What should it provide in the future:
  - A platform to do cross-disciplinary open science, bringing together researchers and scientists
    ⇒ as this, it should be part of all computing strategies

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Thank you!

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