



ESCAPE

European Science Cluster of Astronomy &
Particle physics ESFRI research Infrastructures

WP3 – E-OSSR

Kay GRAF for the E-OSSR Work Package

ECAP, Friedrich-Alexander University Erlangen-Nürnberg

ESCAPE Progress Meeting, 29th Sep. 2021

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.





Catalogue &
Repository of
resources

Datasets
Software & services
Tutorials
Training
Publications



Virtual Observatory

Astronomy Data
centres

VO Registry

VO Registry
Analysis Tools
VO Services



Science Platforms

Workflows, notebooks, deployment platforms,
packaging

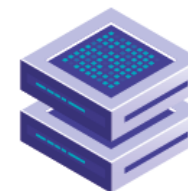


Citizen Science



Data Lake

FAIR data management
Content discovery and delivery



HPC

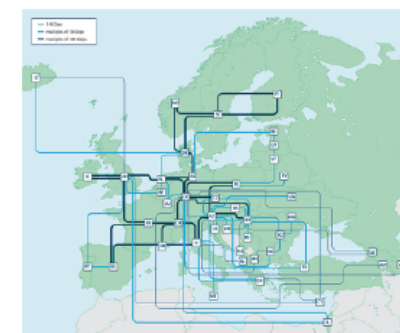


HTC

Grid clusters,
etc

Private/public
clouds

Commercial
clouds



E-OSSR Aims and Objectives

- **Aim:**
shared open science software and services based on FAIR principles
- **Objectives:**
 - Facilitate and support continuous **development, deployment, exposure and preservation** of partners' software/tools/services
 - Foster **interoperability, software re-use and cross-fertilisation** between ESFRIs (e.g. simulation)
 - Offer an **open innovation environment for open standards** (e.g. workflows, data-formats), **common regulations** and **shared (novel) software** for multi-messenger & multi-probe data
- **All objectives follow:**
 - Paradigm of **enabling open science** – with **software as “first class citizen”**
 - a **community-based, inclusive** approach
 - the **FAIR principles** for open science resources – software and derivatives
 - **Federation** of available resources



Co-Development and Community Engagement



🕒 23 July 2020 to 28 July 2020

ESCAPE Workshop on Open-Source Software Life Cycles

Virtual

Software development is an integral part of modern science, gaining knowledge from data. All ESCAPE partners develop and

[...]



🕒 17 February 2021

Webinar: ESCAPE OSSR | Enhancing science through sharing software - benefits & use cases

Virtual

When: 17th February 3pm CET. In the webinar "ESCAPE OSSR Enhancing science through sharing software - benefits & use cases" we will show the ESCAPE OSSR developments and achievements towards a FAIR multi-messenger data-driven cooperative approach.



🕒 08 March 2021 to 12 March 2021

IWAPP Workshop - Innovative Workflows in Astro and Particle Physics

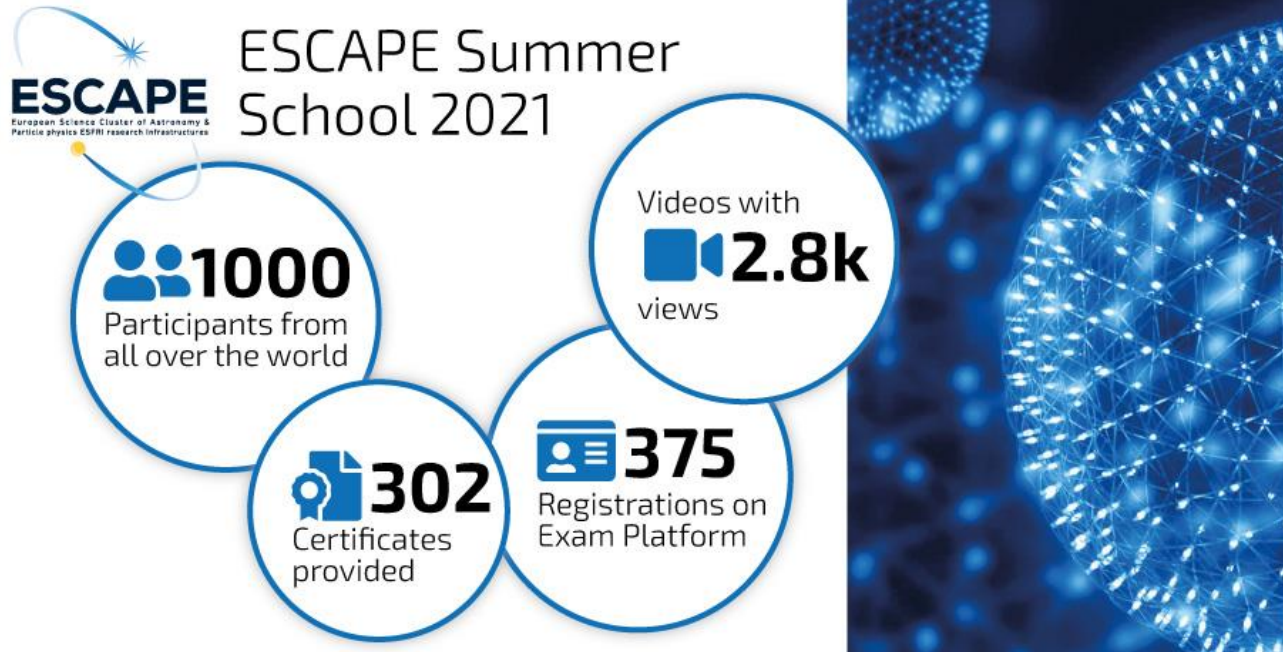
Online

The objective of this workshop is to bring together the scientists' communities of Astrophysics, Astroparticle Physics and Particle Physics who are leading the development of Innovative Workflows within their domain.



Training of Software Custodians

- Software as first class EOSC citizen
- Enable software custodians
- All lectures/materials online:
<https://escape2020.github.io/school2021/>



🕒 07 June 2021 to 18 June 2021

ESCAPE Summer School 2021

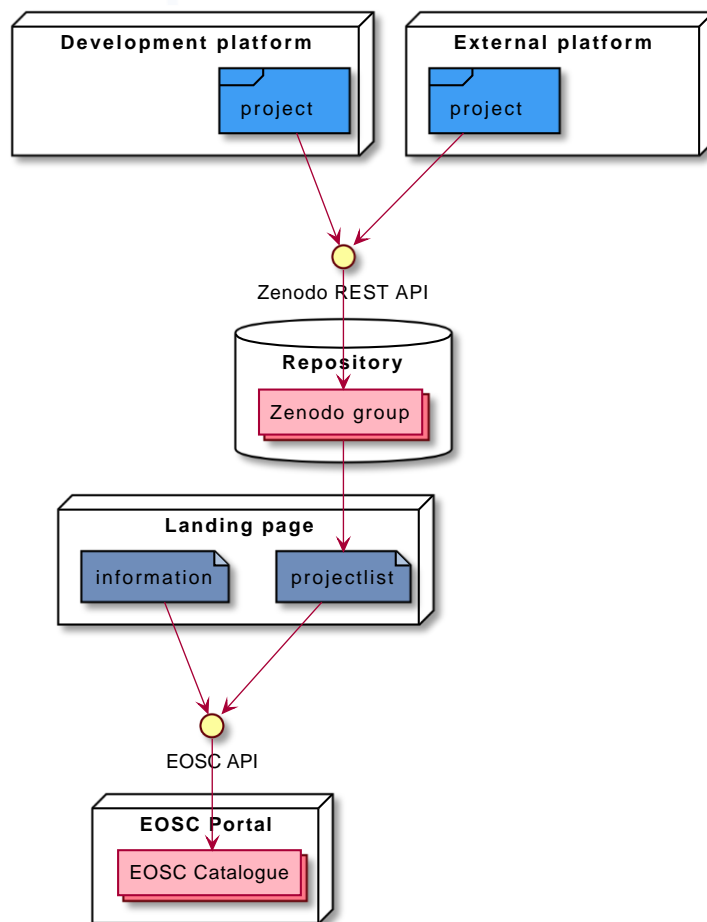
Virtual

In the framework of ESCAPE, the ESCAPE Summer School 2021 edition is taking place from 7 til 18 June 2021, as a virtual event. due to the world's[...]

[READ MORE](#)



OSSR Prototype - Schematic



Development Platform

- Software Development
- Integration & Automisation

Repository

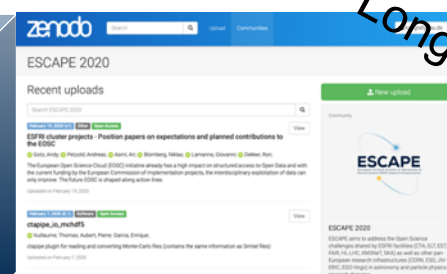
- Service Aggregation
- Preservation

Landing Page

- Entry point, Link Aggregation
- Search



Open-source



Long-term



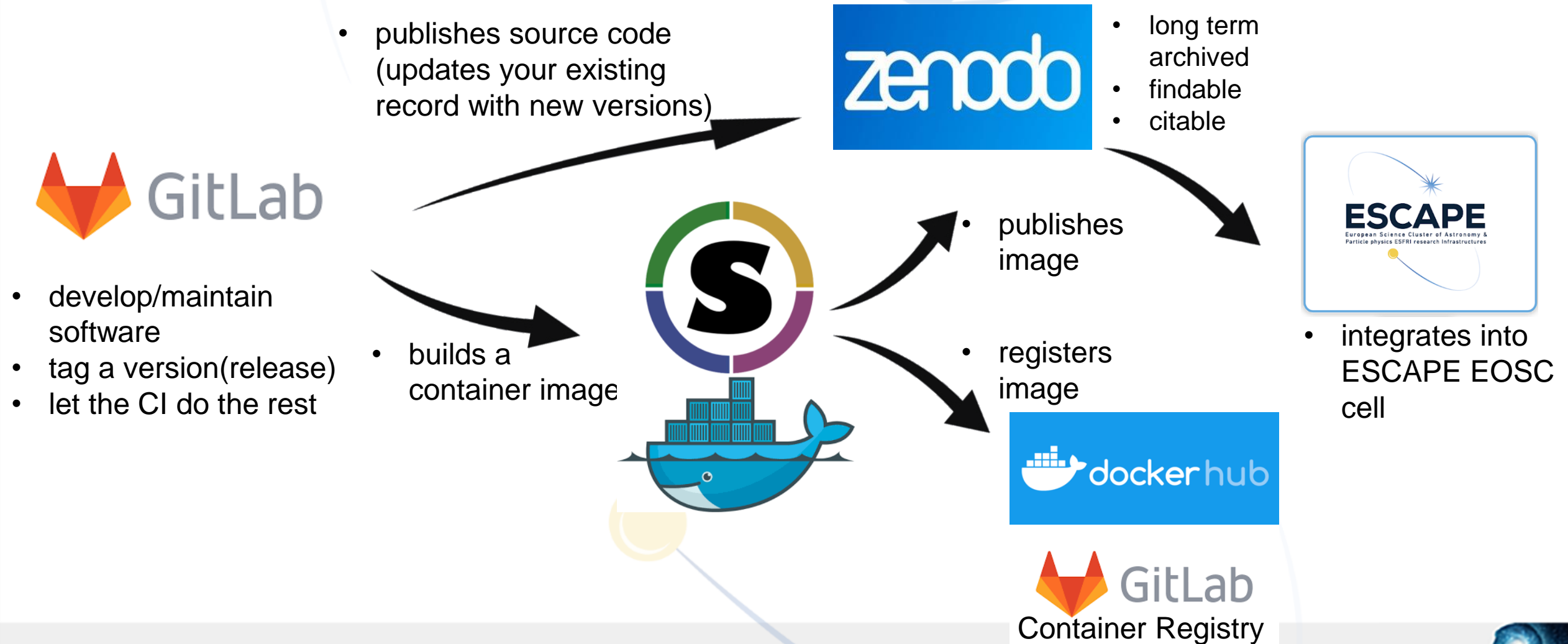
Federation

See also technical presentation on [E-EB extended discussion day](#)



ESCAPE OSSR and Development Platform

– how to ease the publication and integration process?



OSSR - Current Landing Page

<http://purl.org/escape/ossr>

ESCAPE OSSR ▼ OSSR POLICY ▼ TUTORIALS ▼ TOOLS ▼ ABOUT ▼



Search software and services in the ESCAPE repository

Welcome to the ESCAPE OSSR!

[Browse the OSSR content.](#)

What is it?

The ESCAPE Open-source Scientific Software and Service Repository (OSSR) is a sustainable open-access repository to share scientific software and services to the science community and enable open science. It will house astro-particle-physics-related scientific software and services for data processing and analysis, as well as test data sets, user-support documentation, tutorials, presentations and training activities.

How to contribute to the ESCAPE OSSR?

You can onboard your project right now - [see here](#) how.

Learn more about our projects in this website or [Contact us!](#)

Research infrastructures and Science Projects in the OSSR



Please note that this page will be constantly updated with the latest WP3 development.



ESCAPE 2020

Found 15 results. Sort by: Most recent

Access Right

- ☐ Open (15)

File Type

- ☐ Zip (7)
- ☐ Pdf (4)
- ☐ Gz (3)
- ☐ Json (2)
- ☐ (1)
- ☐ Md (1)
- ☐ Simg (1)
- ☐ Tar (1)

Keywords

- ☐ ESCAPE (3)
- ☐ CTA (2)
- ☐ Python (2)
- ☐ AGN (1)
- ☐ EOSC (1)
- ☐ European Open Science Cloud, ESFRI, E-Infrastructures (1)

August 10, 2021 (v1) [Report](#) [Open Access](#) [View](#)

EOSC Symposium 2021 Report

Bertacchini, Veronica; Drago, Federico; Flicker, Katharina; Gebreyesus, Netsanet; Grant, Annabel; Jones, Bob; Llinamaa, Iiris; Märkälä, Anu; Marinos-Kouris, Christos; Meerman, Bert; Saurugger, Bernd; Smith, Zachary;

The EOSC Symposium 2021 provided a key engagement opportunity for the EOSC community after the European Open Science Cloud finally entered its highly-anticipated implementation phase in 2021. Delivered online to just under 1,000 EOSC stakeholders from over 63 different countries, this was not only t

Uploaded on August 16, 2021

August 2, 2021 (0.1.1) [Software](#) [Open Access](#) [View](#)

agnpy: Modelling Active Galactic Nuclei radiative processes with python.

Cosimo Nigro; Julian Sitarek; Pawel Gliwny; David Sanchez; Matthew Craig;

agnpy is a python package focusing on the computation of the radiative processes of relativistic particles accelerated in the jets of Active Galactic Nuclei (AGN). It includes classes describing the galaxy components responsible for line and thermal emission and calculates the absorption due to gam

Uploaded on August 2, 2021

6 more version(s) exist for this record

July 12, 2021 (v1.0) [Lesson](#) [Open Access](#) [View](#)

ESCAPE Data Science Summer School 2021

Thomas Vuillaume; Maximilian Nöthe; Julien Peloton; Axel Donath; Arturo Sanchez Pineda; Eduardo Rodrigues; Enrique Garcia; Karl Kosack; Tamas Gal; Benson Muir; Alberto Iess; Martino Sorbaro; Claudia Beileites; Jutta Schnabel; Rachael Ainsworth;

Release of the ESCAPE Data Science Summer School 2021. The school is held as a continuation of the Asterics/Obelics summer schools that were organised in-person in Annecy, France in 2017, 2018 and 2019. The aim of the school is to provide theoretical and hands-on training on Data Science and Python

To be added: related projects / collections



Time for a Short Demo

Also as Video at [the ESCAPE Cloud](#)



- Checklist for ESCAPE partners at <https://escape2020.pages.in2p3.fr/wp3/ossr-pages/>
- Process tracked via issues on [project platform](#)
- Necessary: Onboarding presentation & technical report
→ entry on the landing page
- Add metadata and register to ESCAPE community at Zenodo
- To be extended to external partners and streamlined
 - Add EOSC terms of use

Start onboarding to OSSR

Please fill this short form, we will contact you asap.

Your software name

Your answer

Your contact email

Integration #8

[TEMPLATE] Onboarding: software or container

Added by jutta schnebel 5 months ago. Updated 3 months ago.

Status:	New	Start date:	04/14/2021
Priority:	Normal	Due date:	
Assignee:	-	% Done:	0%
Target version:	OSSR primer	Estimated time:	
Documentation:		Meeting contribution:	
Tags:	OSSR Onboarding, Template		

Description

How to use the template

Adjust the issue

- Subject should have your software or project name in it, keeping "Onboarding"
- Assignee will be the OSSR maintainer assigned to your onboarding
- Tags should include your ESFRI
- Documentation will link to your tech report in Indico
- Meeting contribution will point to the Indico contribution containing slides and video recording of your onboarding talk
- The issue should link to an issue describing the software itself.

Completing the checklist

- Schedule your presentation to the FG1 meeting following [this wiki](#)
- Give the onboarding presentation and link the Indico entry of the onboarding under "Meeting contribution"
- Add the relevant metadata to your repository
- Register to zenodo

Checklist

- ☐ Onboarding talk scheduled
- ☐ Onboarding presentation given
- ☐ Tech report provided

Onboarding Procedure Checklist

- ☒ Sign User Agreement
(We don't have a formal User Agreement yet. We currently assume "conduct implying an intent" / "implied contract")
- ☒ Request [an issue](#) in the [project platform](#) to start the onboarding process by filling this [registration form](#), or contacting a repository maintainer.
- ☒ A short onboarding presentation should be held during an FG1 call using [this template](#), an example can be found in [this talk](#). Please book your date in [this poll](#).
- ☒ A technical report should be filed using [this template](#), an example can be found at [this tech report](#).



Active processes

Onboarding: LOFAR software

Onboarding: R3B

Onboarding: gLike

Onboarding: km3py

Onboarding: gammapy

Onboarding: HCG-16 study

Onboarding: agnpy

Onboarding: ConCordia

Onboarding: FAIR software

Onboarding: SKA data challenge

Onboarding: JIVE software

Onboarding: Gammalearn



+ ?

Onboarding Status

Initial software survey

- CTA
 - GammaLearn, ...
- EGO-Virgo
- EST
 - Improving solar wind predictions ...
- ESO
- FAIR
 - DDS, FairMQ, FairROOT
- HL-LHC
- JIVE
 - CASA 6
- KM3NeT
 - KM3Pipe, ...
- LSST
- SKA
 - SKA data challenge 1 solution
- Other
 - Hangar
 - Pipeline for HCG-16 Project
 - LOFAR Software
 - agnpy



Joint cross-WP Activities

WP3 – WP4 Topics

- Software **metadata** in the IVOA & OSSR
- **Onboarding strategy** of IVOA software
- Including IVOA in key list of OSSR
- Use cases with IVOA software
- **VHE data level format** (CTA, KM3NeT, ...) development: upcoming CEVO workshop

WP3 – WP5 Topics

- Integrating **Jupyter notebooks** from OSSR
- **Adding workflows** to OSSR
- **Finding software** through ESAP
- Use of **containerized software**
- How to treat **complex workflows**?



- First version of OSSR implemented
 - ready to host defined use cases
- Guidelines and best practices collected, co-developments implemented, cross-fertilisations materialised
- Onboarding of partner software & services on track, onboarding already other communities
- Open points identified for finalisation of the work programme



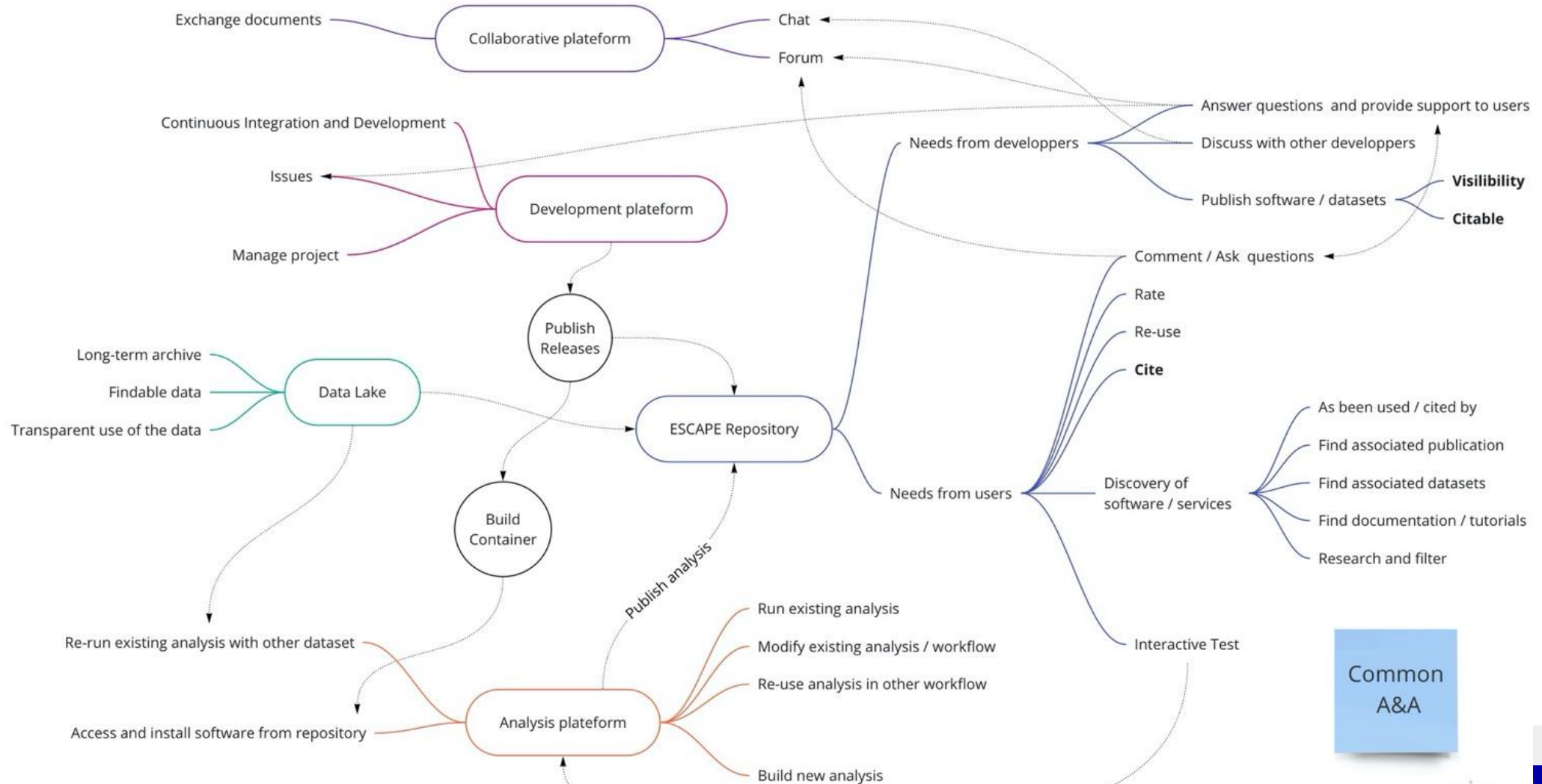
Thanks for your attention!



Backup Slides



Aim: ESCAPE Virtual Research Environment



Common
A&A

