Portfolio **PUBLISH**

Brief presentation of the four OpenAIRE services that assist researches to practice open science.

Service: **Zenodo ,** Jose Benito Gonzalez Lopez / Alex Ioannidis (CERN)

Service: **Episciences,** Raphael Tournoy (CNRS)

Service: **ARGOS,** Elli Papadopoulou (Athena RC)

Service: **Amnesia,** Manolis Terrovitis (Athena RC)

Alex Ioannidis
CERN/Zenodo

Catch-all repository for the long tail of research

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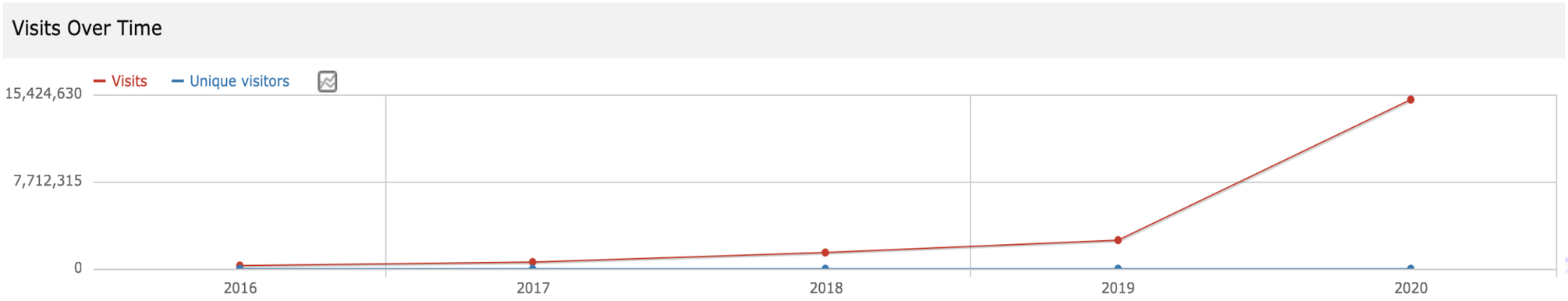
Overview of Zenodo

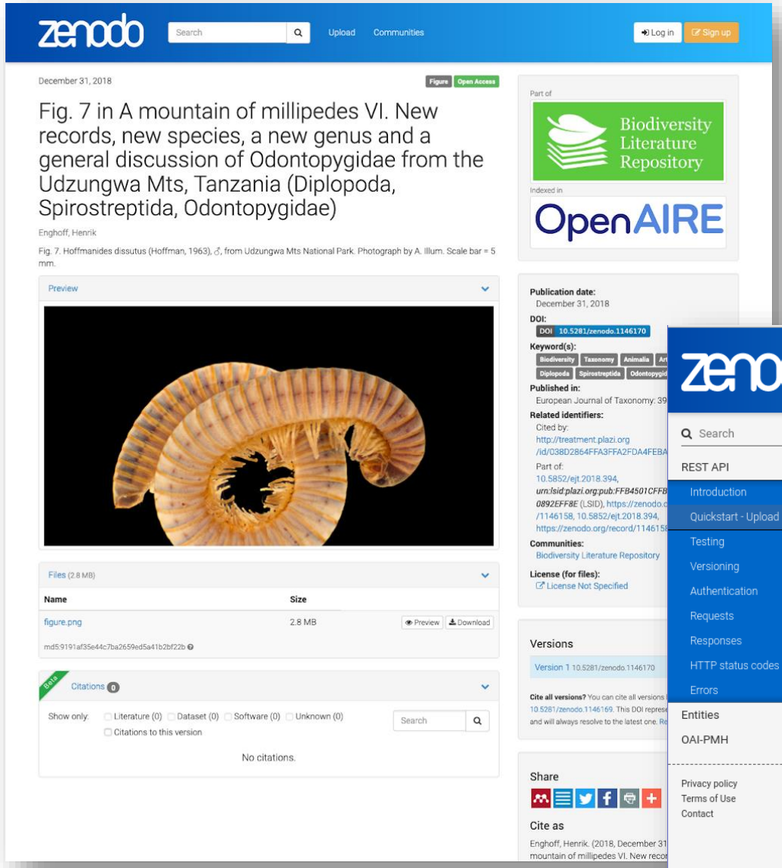
- Digital **multi-disciplinary** repository
- Hosted at CERN's datacenter
- For **all types** of research objects; by default, 50GB per record
- Rich metadata; integrated with funding agencies (EC)
- **REST API** for programmatic usage; **OAI-PMH** for harvesting
- 2021: **15M** visitors/year; **~2M** records; **~0.5PB** files



Why to use Zenodo by Whom

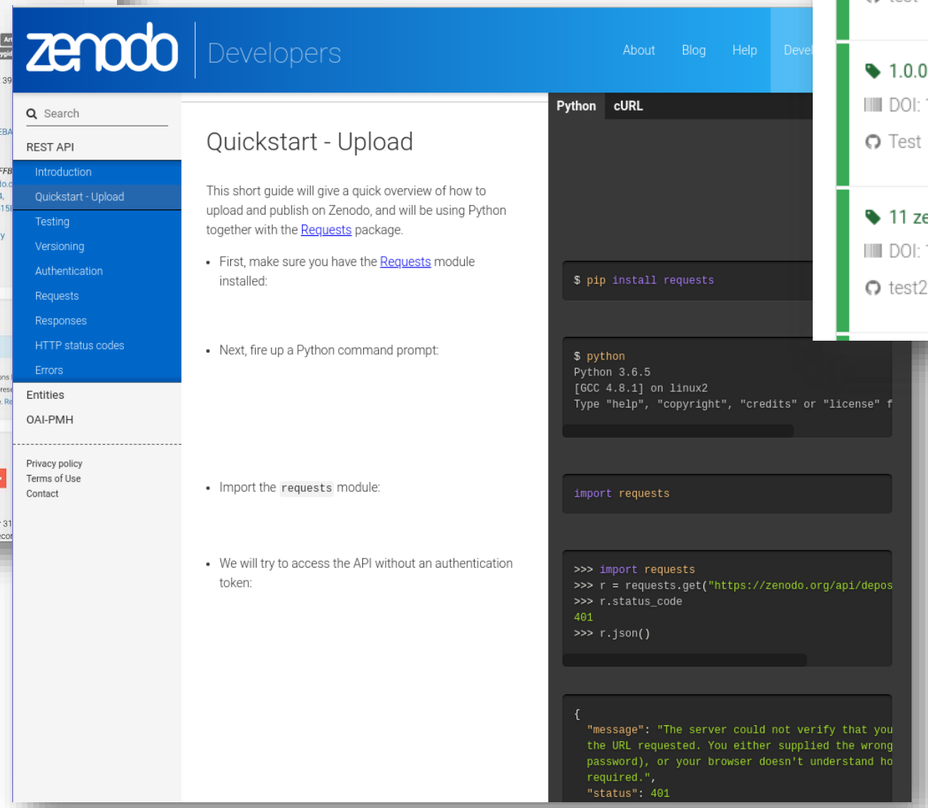
- It **provides** reliable infrastructure for all researchers, especially those w/o a dedicated domain/institutional repository
- It **lowers barriers** to share data, software, or any research output in a FAIR and hassle-free way
- It **exposes** usage statistics and citations
- It is part of EOSC, adds value to EOSC users by allowing them to easily share their research
- Is used by: Researchers, research communities, project coordinators/principal investigators

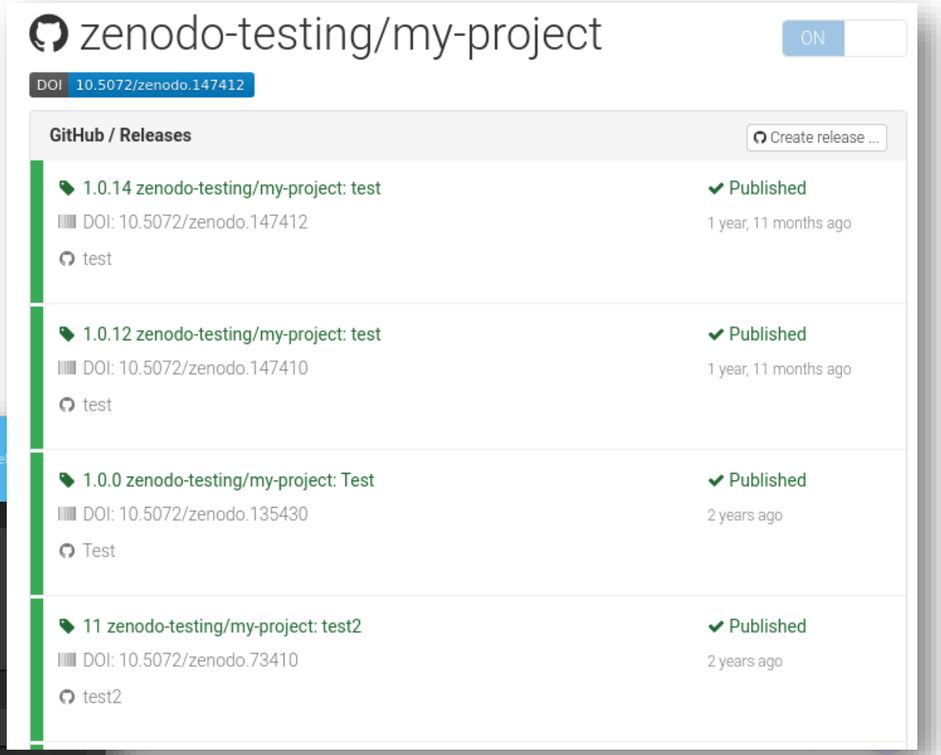
How to use Zenodo



Web UI

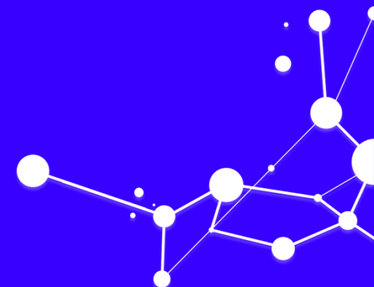
REST API

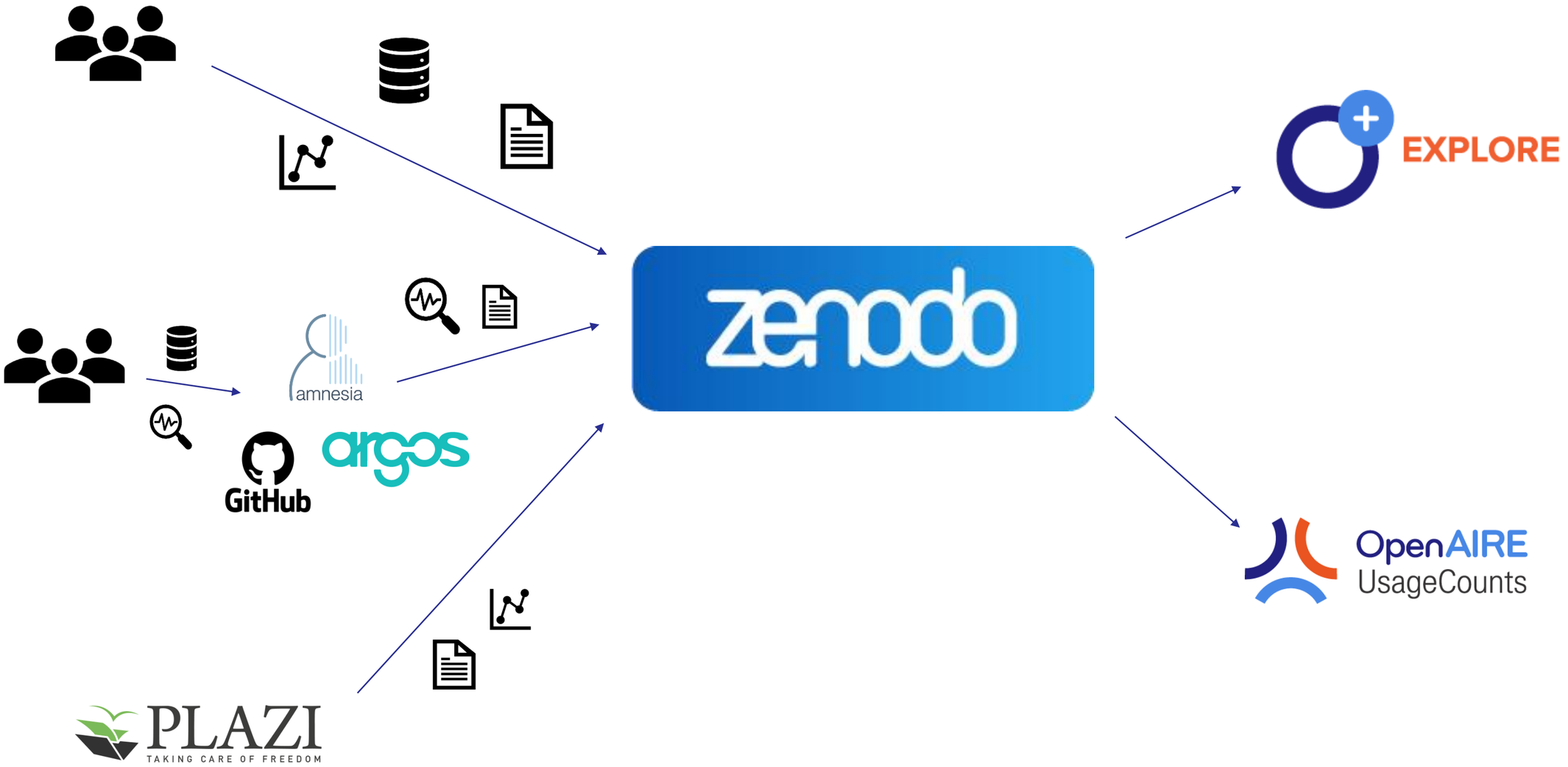




GitHub integration

Positioning in EOSC & OpenAIRE Ecosystem




zenodo
EXPLORE
amnesia
argos
GitHub
OpenAIRE
UsageCounts
PLAZI
TAKING CARE OF FREEDOM

Takeaway

- Free data sharing repository for everyone, made easy
- Following best practices in scholarly communication
- More than papers, promoting reproducibility

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#OpenAIRE-Nexus

THANK YOU

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OpenAIRE

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Raphaël Tournoy
CNRS

épisciences

An overlay journal platform

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Overview of Episciences

- **Website**: www.episciences.org
- **An overlay journal platform**
- **Operating on top of OA repositories e.g. HAL, arXiv, CWI, Zenodo** (very soon), ...
- **Scientific communities can create and operate high-quality OA journals**
- **Diamond Open Access publishing**

Why to use Episciences by whom

- **Saves time** for readers, researchers and editorial teams
- End-to-end **compatible** with **FAIR** principles
- Operated by researchers and their scientific communities
- **Cost efficient**, independent from the publishers
- Hosted in Europe on public infrastructure
- Is for scientific communities

How to use Episciences

- **Each journals has its own domain name**
  Example with:

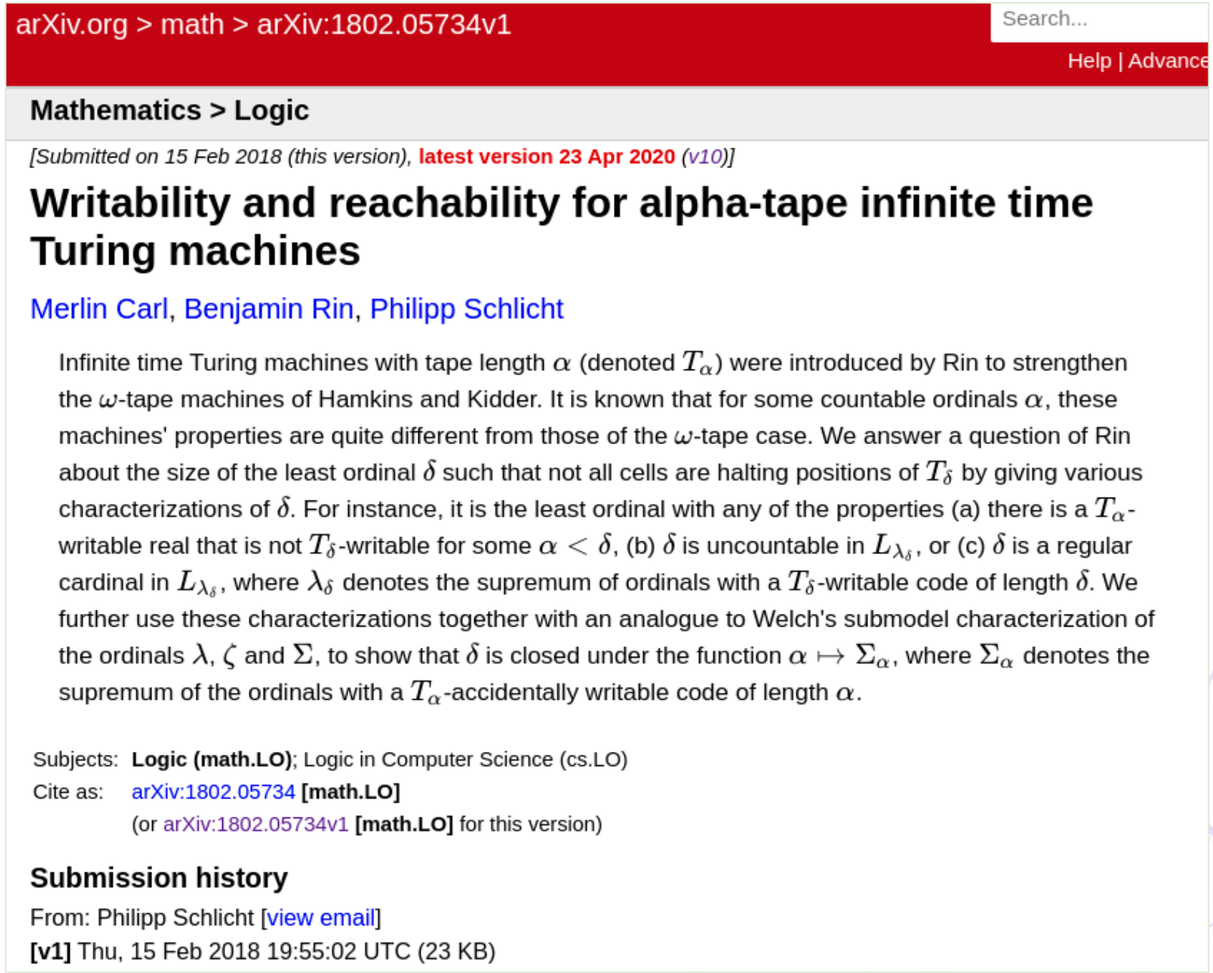
LOGICAL METHODS IN COMPUTER SCIENCE

Hosted on:

https://lmcs.episciences.org/

How to use Episciences

Step 1/4 : Submit your preprint on a repository, eg arXiv: https://arxiv.org/abs/1802.05734v1



arXiv.org > math > arXiv:1802.05734v1

Search...

Help | Advance

Mathematics > Logic

[Submitted on 15 Feb 2018 (this version), latest version 23 Apr 2020 (v10)]

Writability and reachability for alpha-tape infinite time Turing machines

Merlin Carl, Benjamin Rin, Philipp Schlicht

Infinite time Turing machines with tape length α (denoted T_α) were introduced by Rin to strengthen the ω-tape machines of Hamkins and Kidder. It is known that for some countable ordinals α, these machines' properties are quite different from those of the ω-tape case. We answer a question of Rin about the size of the least ordinal δ such that not all cells are halting positions of T_δ by giving various characterizations of δ. For instance, it is the least ordinal with any of the properties (a) there is a T_α-writable real that is not T_δ-writable for some $\alpha < \delta$, (b) δ is uncountable in L_{λ_δ}, or (c) δ is a regular cardinal in L_{λ_δ}, where λ_δ denotes the supremum of ordinals with a T_δ-writable code of length δ. We further use these characterizations together with an analogue to Welch's submodel characterization of the ordinals λ, ζ and Σ, to show that δ is closed under the function $\alpha \mapsto \Sigma_\alpha$, where Σ_α denotes the supremum of the ordinals with a T_α-accidentally writable code of length α.

Subjects: **Logic (math.LO)**; Logic in Computer Science (cs.LO)
Cite as: arXiv:1802.05734 **[math.LO]**
(or arXiv:1802.05734v1 **[math.LO]** for this version)

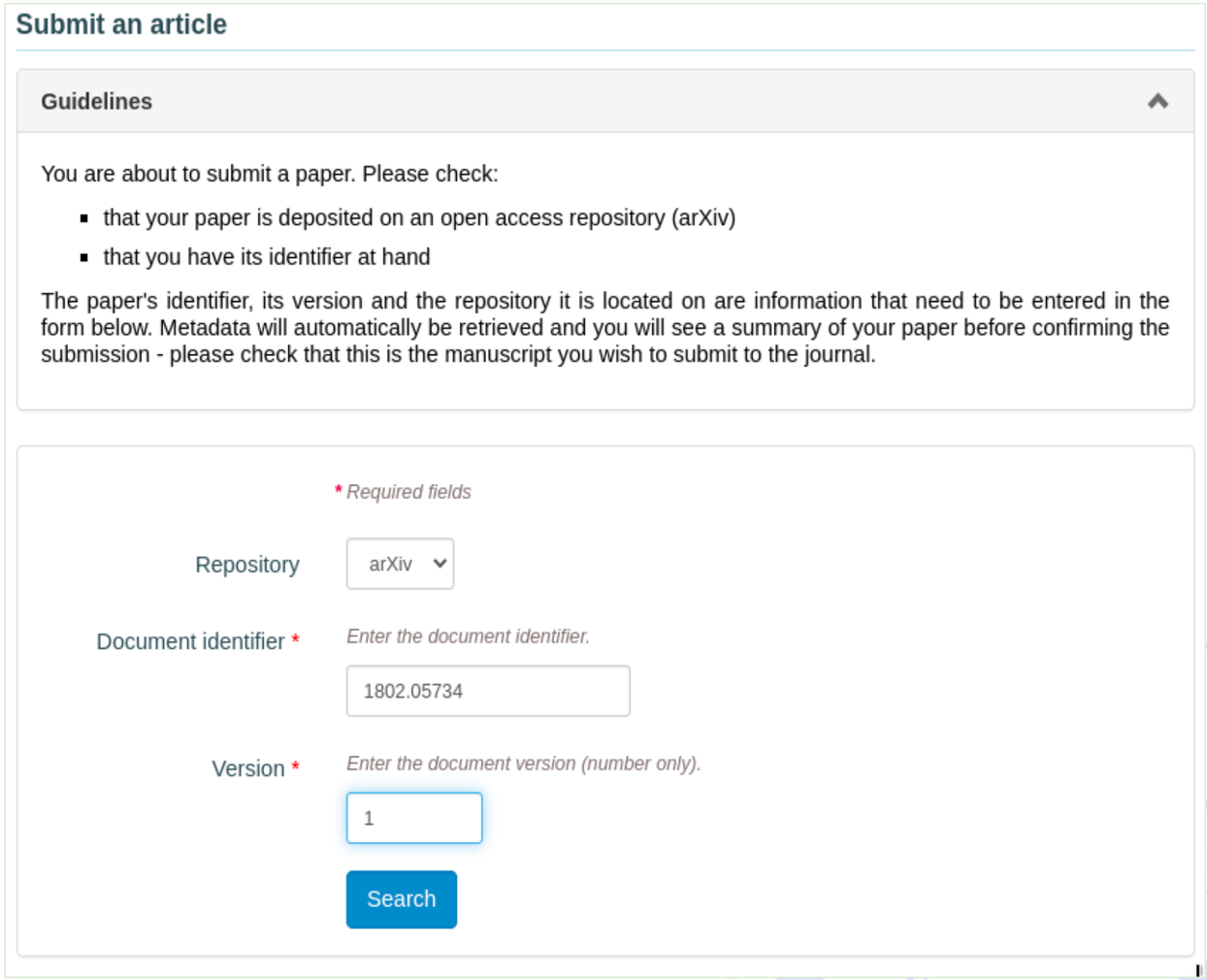
Submission history

From: Philipp Schlicht [view email]
[v1] Thu, 15 Feb 2018 19:55:02 UTC (23 KB)

How to use Episciences

Step 2/4 : Import your preprint on a journal with your preprint ID: 1802.05734v1

On a journal, eg LMCS for this example



How to use Episciences

Step 3/4 :

- Multiple rounds of peer-review
- New improved versions
- Copy-editing

Reachability for Turing machines with long tapes

Merlin Carl, Benjamin Rin, Philipp Schlicht

Infinite time Turing machine models with tape length α, denoted T_α, strengthen the machines of Hamkins and Kidder [HL00] with tape length ω. A new phenomenon is that for some countable ordinals α, some cells cannot be halting positions of T_α given trivial input. The main open question in [Rin14] asks about the size of the least such ordinal δ.
We answer this by providing various characterizations. For instance, δ is the least ordinal with any of the following properties: (a) For some $\xi < \alpha$, there is a T_ξ-writable but not T_α-writable subset of ω. (b) There is a gap in the T_α-writable ordinals. (c) α is uncountable in L_{λ_α}. Here λ_α denotes the supremum of T_α-writable ordinals, i.e. those with a T_α-writable code of length α.
We further use the above characterizations, and an analogue to Welch's submodel characterization of the ordinals λ, ζ and Σ, to show that δ is large in the sense that it is a closure point of the function $\alpha \mapsto \Sigma_\alpha$, where Σ_α denotes the supremum of the T_α-accidentally writable ordinals.

Subjects: **Logic (math.LO)**; Logic in Computer Science (cs.LO)
Cite as: arXiv:1802.05734 **[math.LO]**
(or arXiv:1802.05734v5 **[math.LO]** for this version)

Submission history

From: Philipp Schlicht [view email]
[v1] Thu, 15 Feb 2018 19:55:02 UTC (23 KB)
[v2] Wed, 21 Feb 2018 07:58:12 UTC (23 KB)
[v3] Mon, 21 Jan 2019 17:35:28 UTC (28 KB)
[v4] Thu, 23 May 2019 11:53:38 UTC (29 KB)
[v5] Thu, 5 Dec 2019 20:00:10 UTC (31 KB)
[v6] Tue, 10 Dec 2019 07:28:22 UTC (31 KB)
[v7] Mon, 9 Mar 2020 08:05:29 UTC (31 KB)
[v8] Wed, 8 Apr 2020 14:35:32 UTC (39 KB)
[v9] Mon, 20 Apr 2020 20:35:58 UTC (41 KB)
[v10] Thu, 23 Apr 2020 09:08:19 UTC (41 KB)

How to use Episciences

Step 4 : Publish

Reachability for infinite time Turing machines with long tapes

arXiv.org

Merlin Carl, Benjamin Rin, Philipp Schlicht

Infinite time Turing machine models with tape length α, denoted T_α, strengthen the machines of Hamkins and Kidder [HL00] with tape length ω. A new phenomenon is that for some countable ordinals α, some cells cannot be halting positions of T_α given trivial input. The main open question in [Rin14] asks about the size of the least such ordinal δ.

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Subjects: **Logic (math.LO)**; Logic in Computer Science (cs.LO)
Journal reference: Logical Methods in Computer Science, Volume 16, Issue 2 (April 24, 2020) lmcs:6429
DOI: 10.23638/LMCS-16(2:2)2020
Cite as: arXiv:1802.05734 **[math.LO]**
(or arXiv:1802.05734v10 **[math.LO]** for this version)

LOGICAL METHODS IN COMPUTER SCIENCE

Back to the article management page

Carl, Merlin and Rin, Benjamin and Schlicht, Philipp - **Reachability for infinite time Turing machines with long tapes**

lmcs:4444 - Logical Methods in Computer Science, April 24, 2020, Volume 16, Issue 2 - https://doi.org/10.23638/LMCS-16(2:2)2020

Reachability for infinite time Turing machines with long tapes

Authors: Carl, Merlin and Rin, Benjamin and Schlicht, Philipp

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https://doi.org/10.23638/LMCS-16(2:2)2020
Source : oai:arXiv.org:1802.05734
Volume: Volume 16, Issue 2
Published on: April 24, 2020
Submitted on: April 16, 2018
Keywords: Mathematics - Logic,Computer Science - Logic in Computer Science

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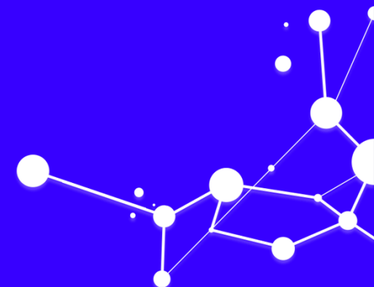
Article status

Current status: Published

Take away



Takeaway

- **Easy** and **cost efficient** to operate high-quality OA journals
- **Free** to **read**, free to **submit**, free to **publish**
- Open to new journals or already existing journals
- For **all** scientific **fields**

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THANK YOU

Raphaël Tournoy

contact@episciences.org

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Elli Papadopoulou
ATHENA Research Center

Plan and follow your data

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Overview of ARGOS

- **ARGOS is an open source, configurable and extensible tool for planning Research Data Management (RDM) activities according to Open Access & FAIR data policies.**

- **Website:** https://argos.openaire.eu/

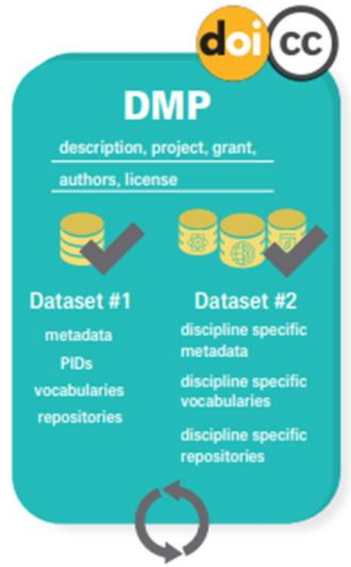
~1000 users (growing)

- ✓ **Online or ad-hoc installation**
- ✓ **Free to use for researchers**
- ✓ **Available in EOSC**

Why to use ARGOS by whom

- **Full DMP generation & publication process according to Open and FAIR principles.**
- **Machine actionable DMP (ma-DMP) outputs that normalize descriptions data:**
  - Interdisciplinary & multi-disciplinary DMPs support
    - Wizard-based DMP authoring: multiple datasets may be contained in a single Plan

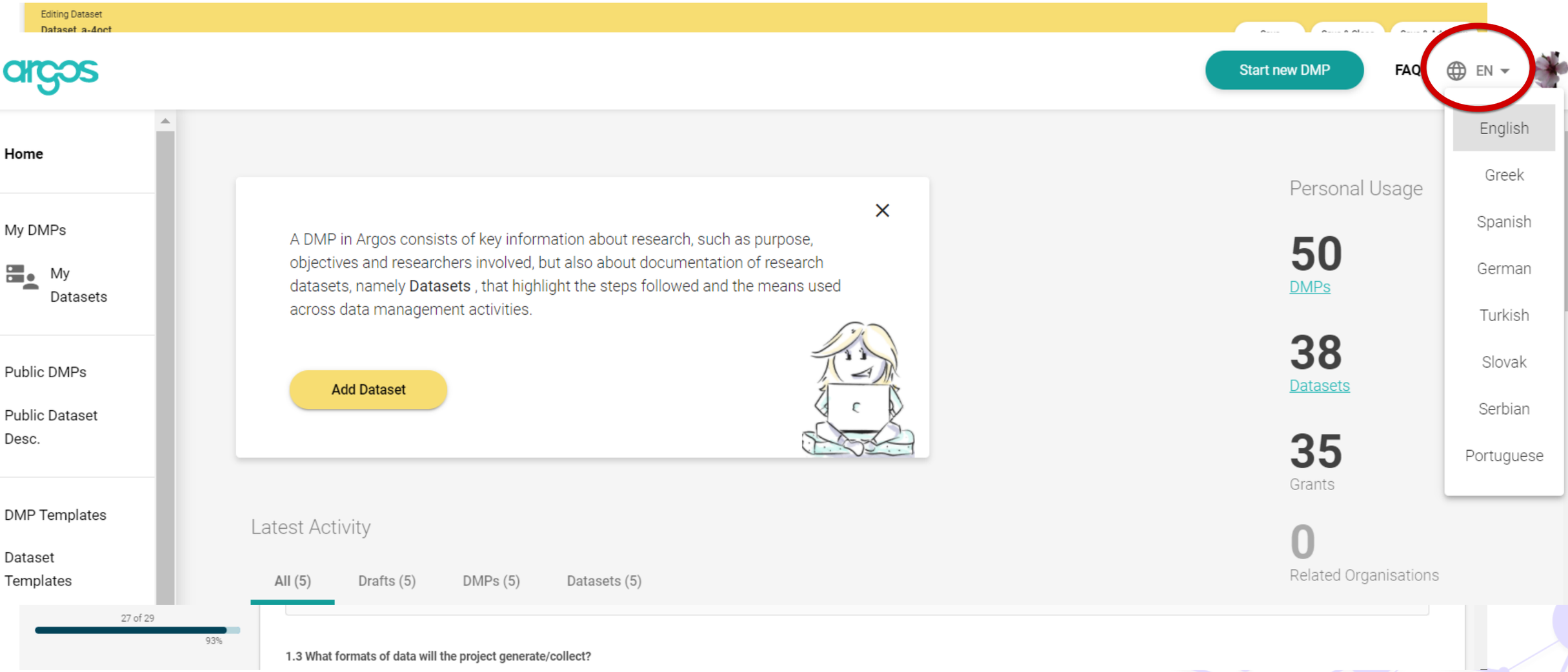
    -> produced vs re-used vs sensitive vs discipline specific.



- **Interlinked and connected with reference services and data sources (OpenAIRE, EOSC, etc).**
- **Standardization of practices and collaborations -> e.g. DMPs exposed in repositories with appropriate resource_type**

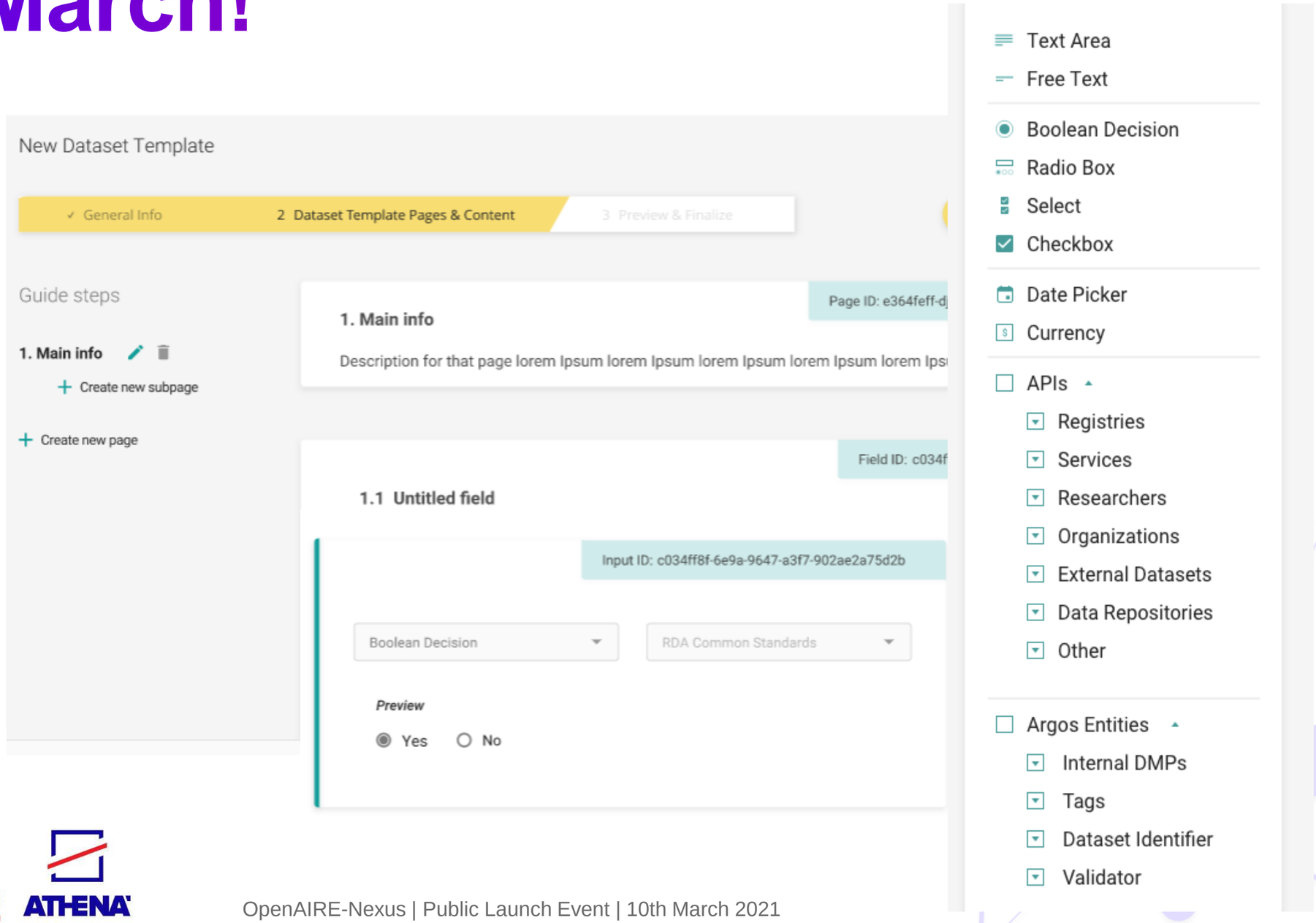
Main users: researchers / research projects, funders, research communities and institutions

How to use Argos

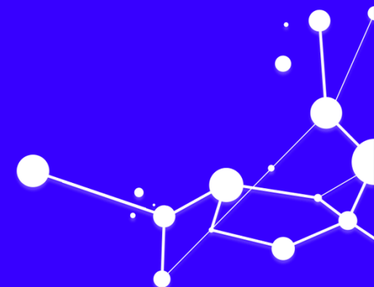


Coming in March!

- **Admin interface**
  - Manage users.
  - Create model templates.
  - Configure APIs.
  - Control RDA compliance.

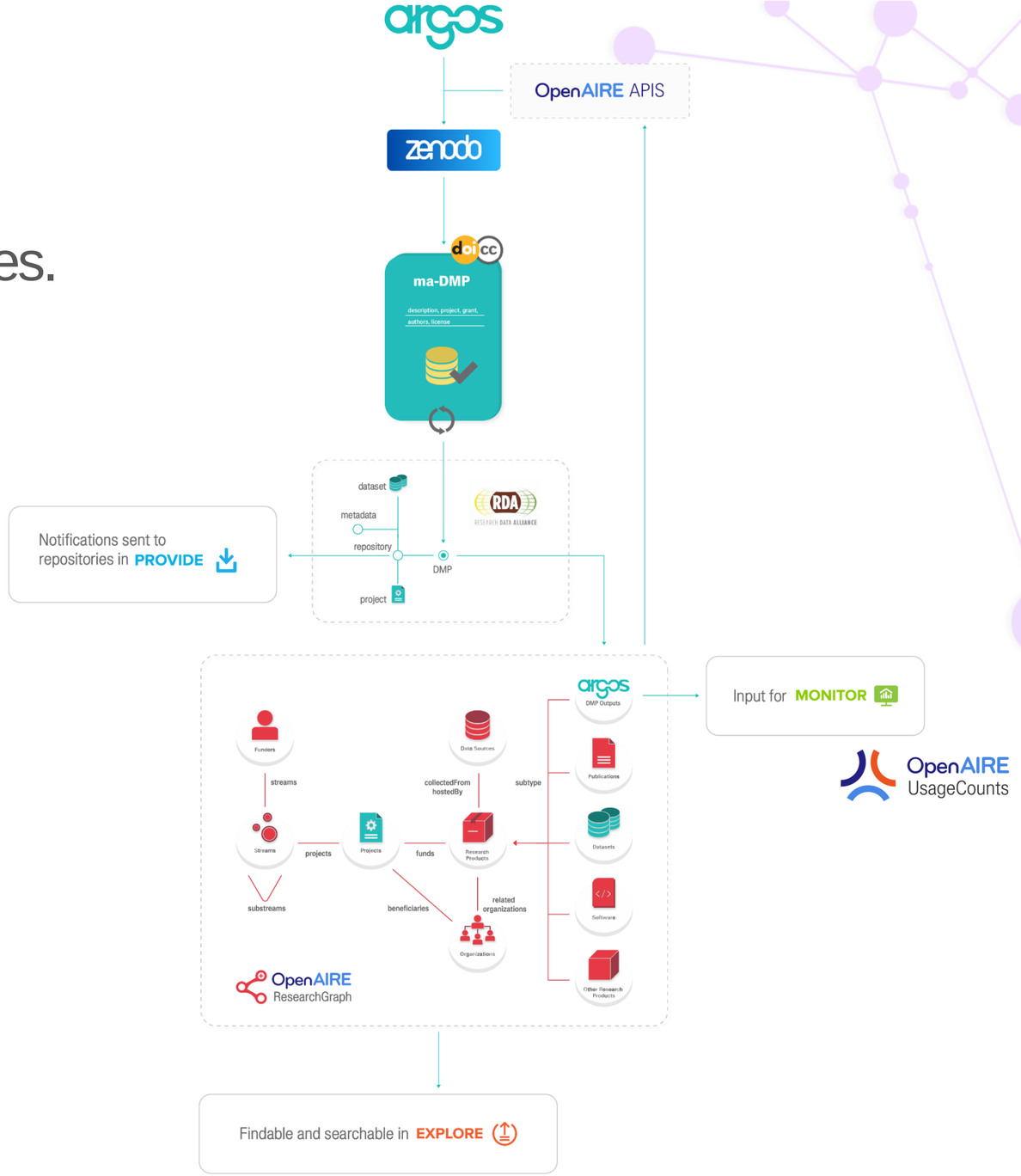


Positioning in EOSC & OpenAIRE Ecosystem

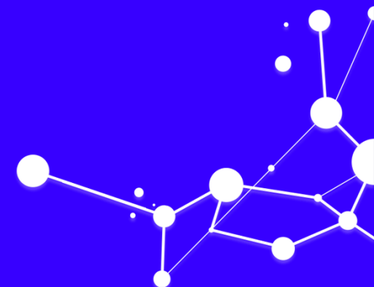


ARGOS interlinked

- Exploit OpenAIRE and EOSC APIs in templates.
- Publish in Zenodo.
- Notify repository managers for new datasets.
- Provide statistics.
  - Define indicators.
  - Add to dashboards.
- Create links between outputs and entities.
  - Data and projects.
- Add DMPs under the project's page.
- Exploit DMP entities as datasets.



Take away



Take away

- ARGOS **prepares** all stakeholders for the next Horizon Europe DMPs requirements.
- ARGOS **simplifies** administrative processes and **connects** with University / Institutional workflows.
- ARGOS **enables** research communities to create templates tailored to domain standards and practices.

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#OpenAIRE-Nexus

THANK YOU

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Manolis Terrovitis
ATHENA Research Center

Data Anonymization Made Easy

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Overview of Amnesia

- **Data anonymization**
  - Not pseudo-anonymization (According to **GDPR**)
  - Personal data become statistical data
- **Stand alone application**
  - Available as web service for training/demo purposes
  - Anonymization engine available through ReST API
- **~34K unique visitors in 20020**
- **4750 uses of the online service**

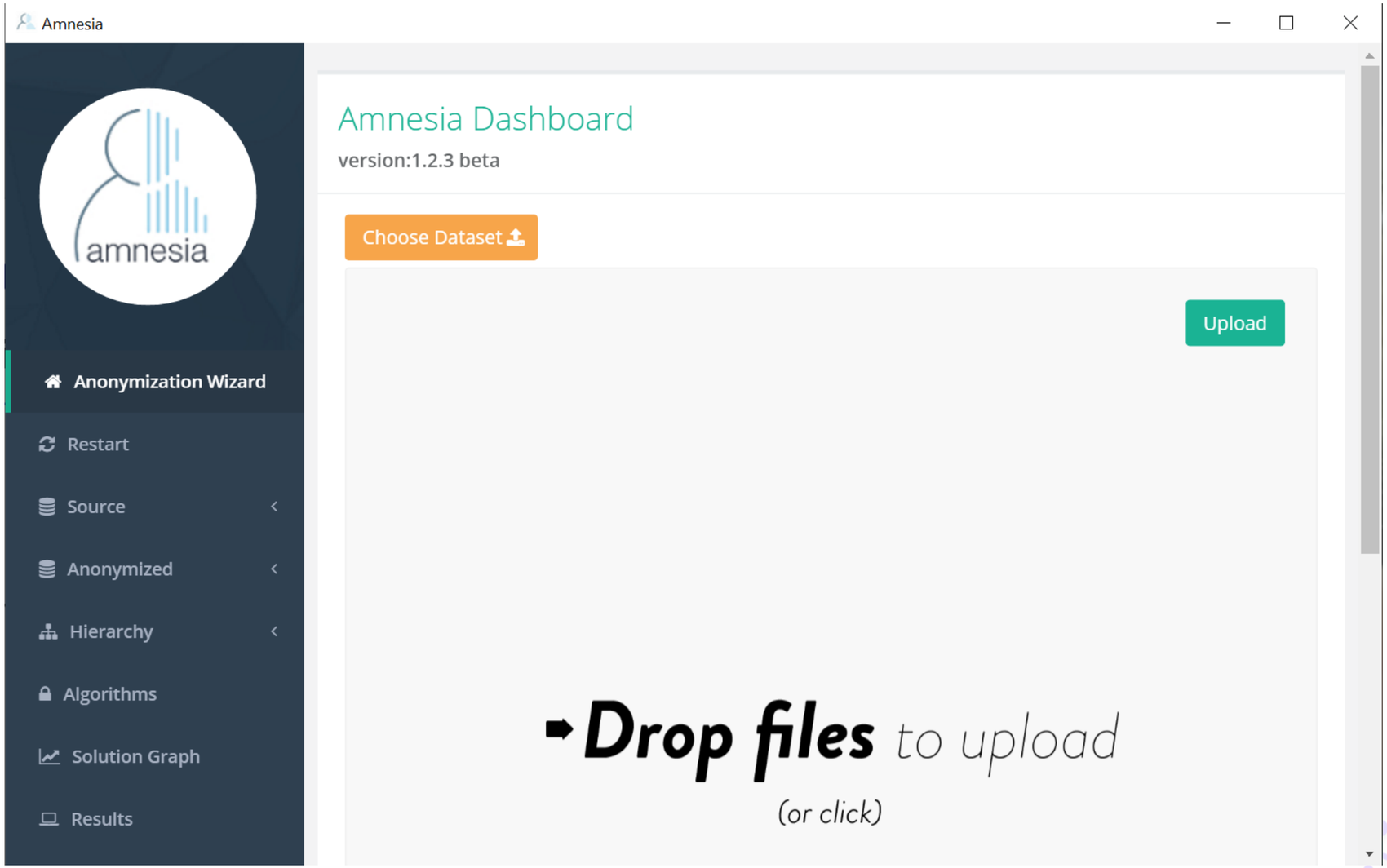
Why to use Amnesia by Who

- **Amnesia supports the anonymization of personal data**
  - Anonymization frees the data from GDPR restrictions
  - It is an irreversible transformation of the data
  - It preserves useful information but removes identifying data
- **Is an added value service for EOSC users, researchers and data owners**
- **There are no established tools in this area. Amnesia is one of the few available tools with unique features**
- **It is targeted to data owners who want to share their data**
  - Researchers will benefit from an environment where information contained in personal data will be shared

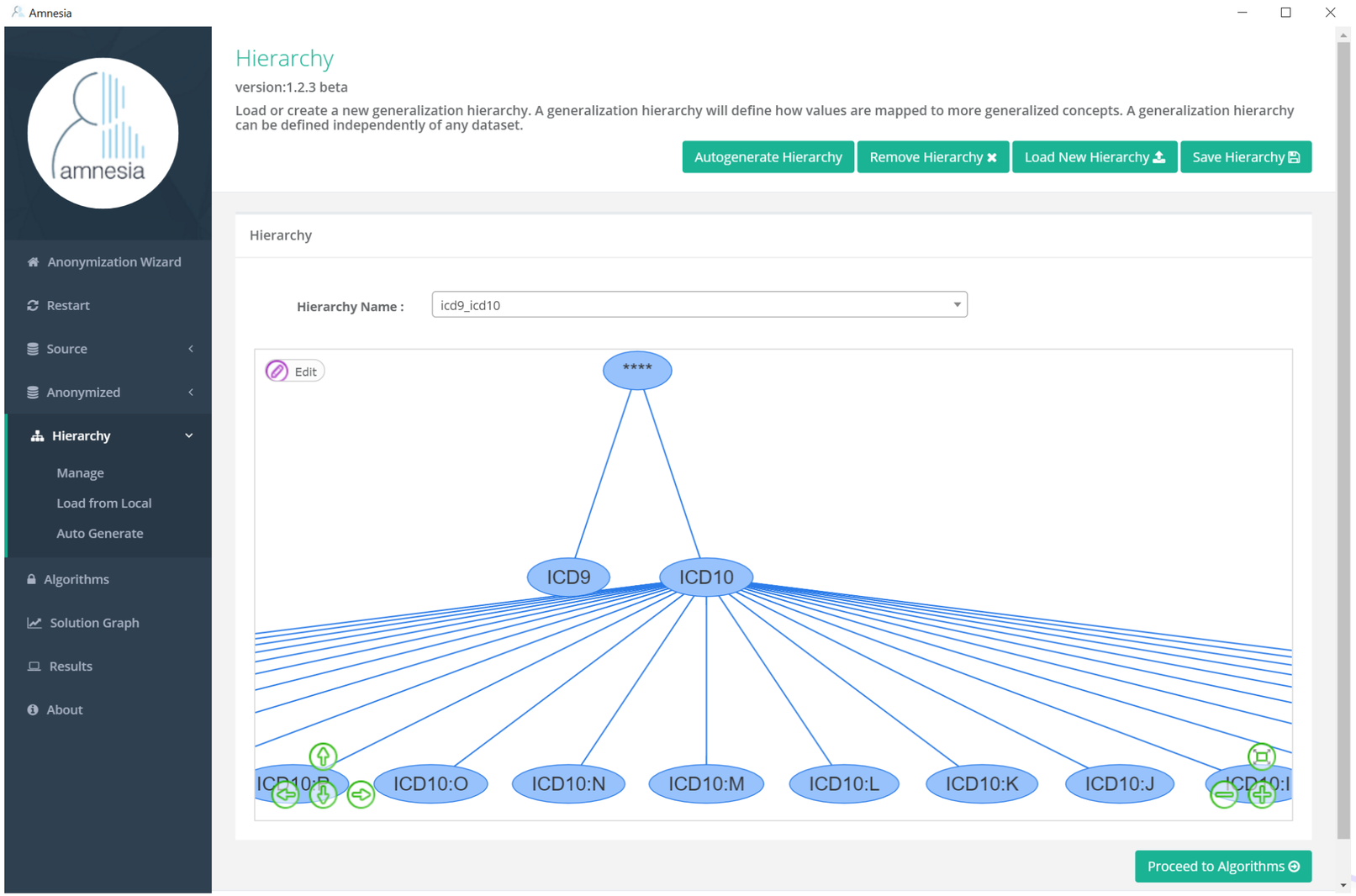
How to use Amnesia

- **Visit: https://amnesia.openaire.eu**
  - **On-line** version for training and demo
  - **Standalone** version
    - GUI
    - ResST API
    - Command line

How to use Amnesia



How to use Amnesia



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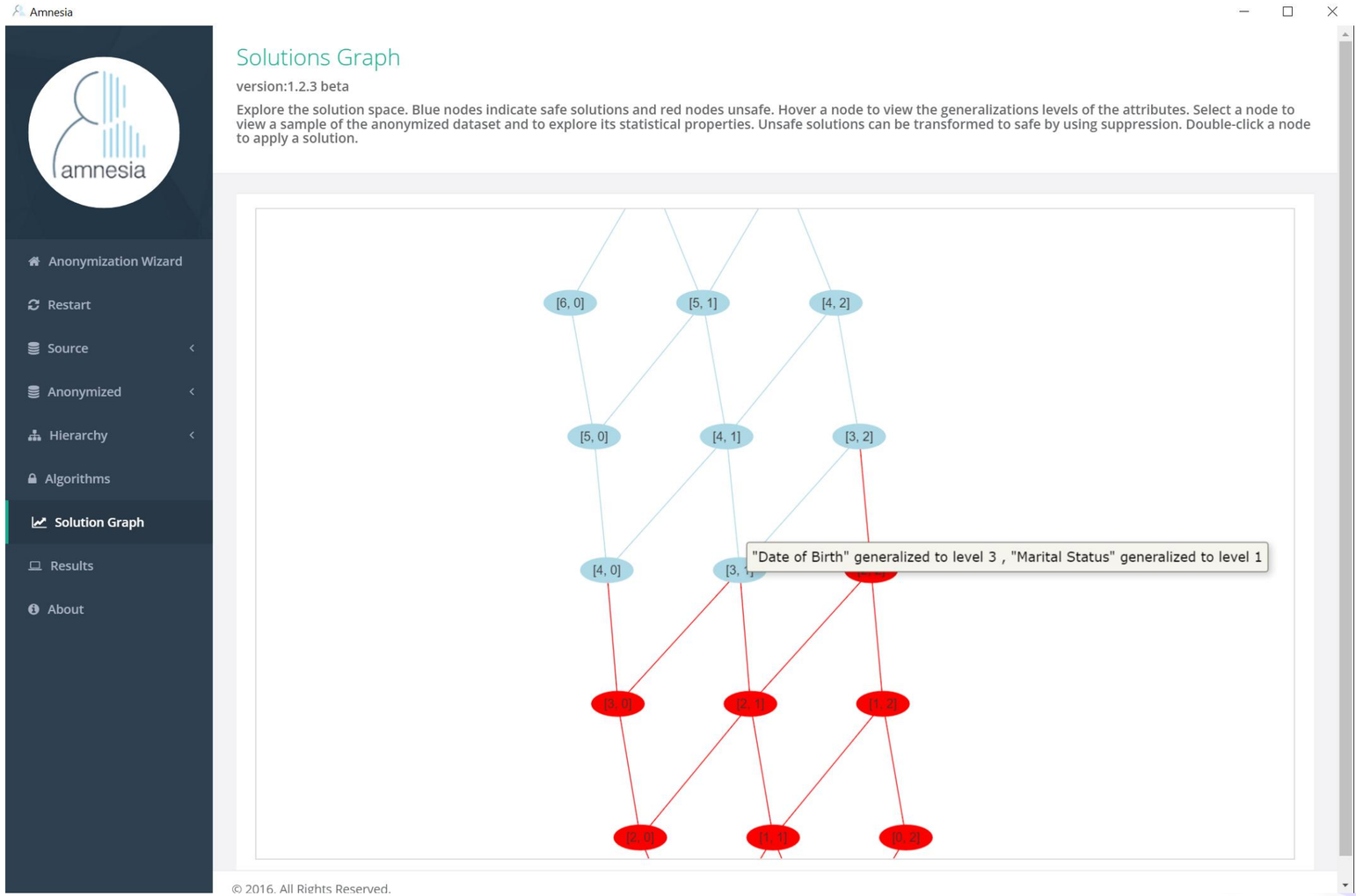
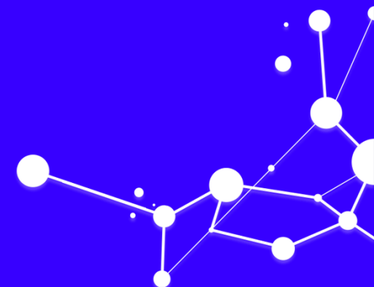
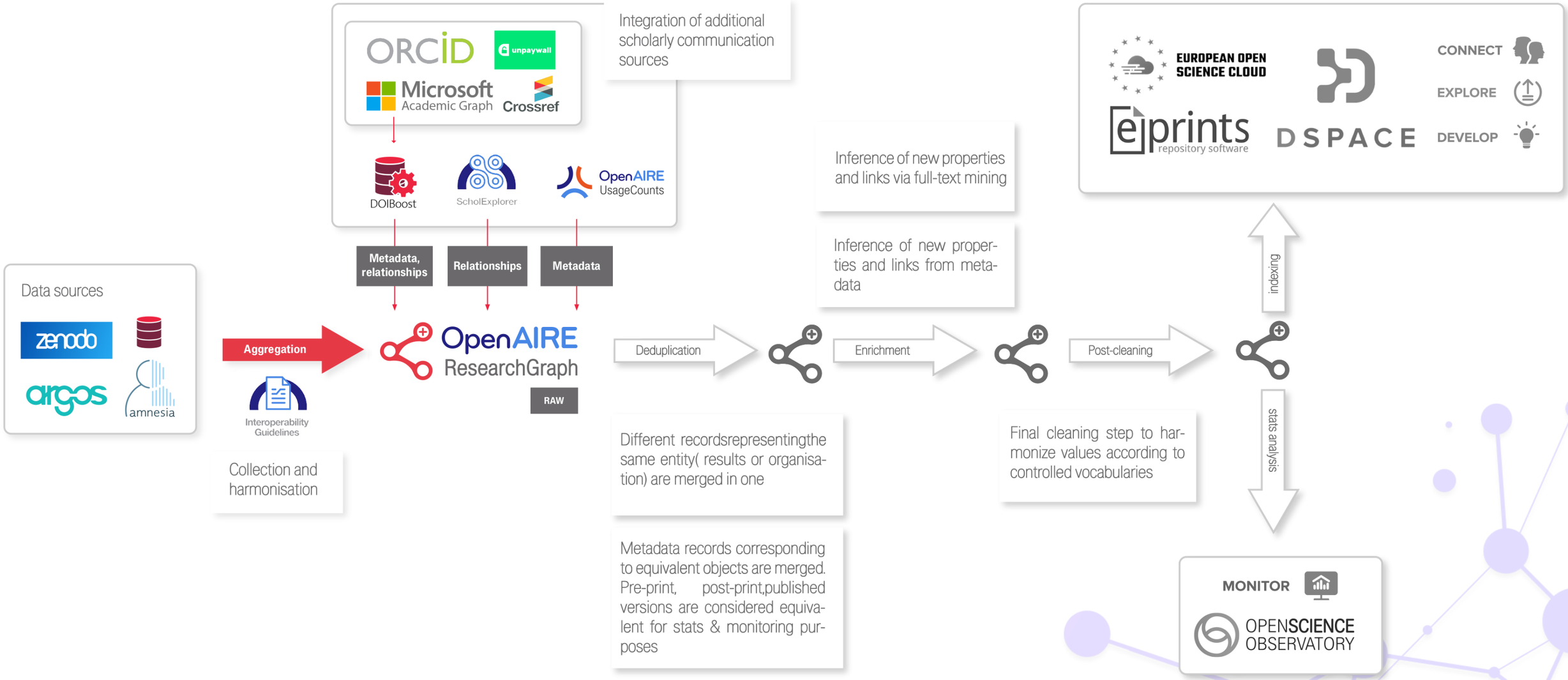


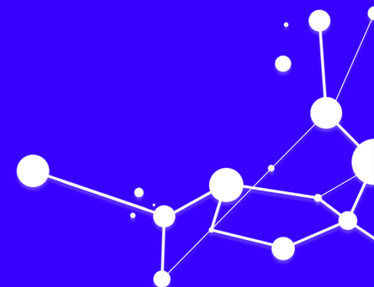
Positioning in EOSC & OpenAIRE Ecosystem



Amnesia's role



Take away



Takeaway

- **Amnesia performs data anonymization**
  - Not just pseudo-anonymization
  - Anonymized data are no longer personal data
- **Amnesia is a free standalone tool**
- **Amnesia is one of the very few tools that offer data anonymization**
  - Unique techniques for high dimensional data

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THANK YOU

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