Science. Set free.

RDM, DMPs in ARGOS &

The Greek case study

Elli Papadopoulou

OpenAIRE / Athena Research Center

ALWAYS REMEMBER TO PLAN AHEA
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DMPs and RDM

RDM (Research Data Management) is the process of *organising, storing, preserving, and sharing* data in a research project. Data might be collected, generated or re-used (secondary) throughout research.

DMPs in RDM - First stage of RDM
DMPs are drafted at the beginning of the project and implemented throughout its lifetime.

DMPs for RDM - Describe RDM activities
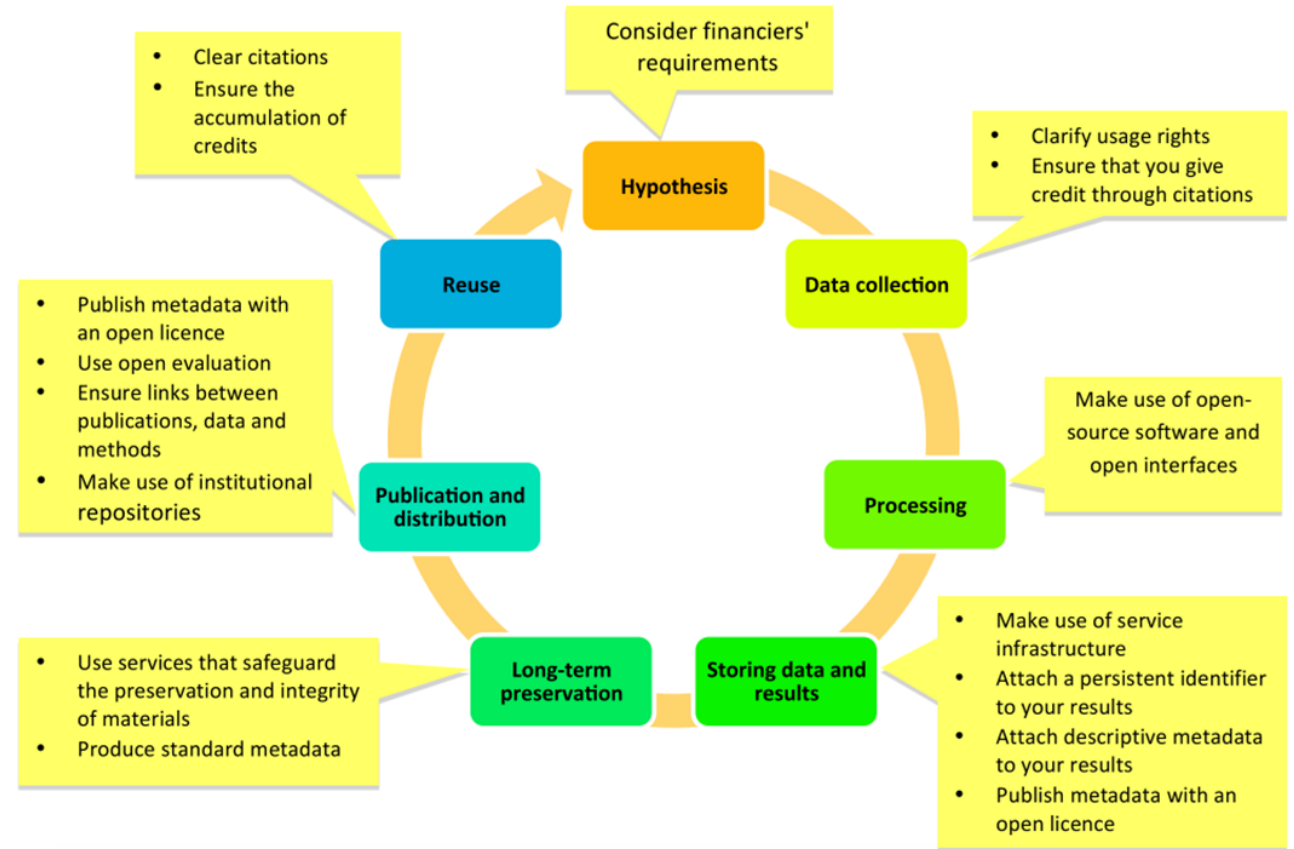DMPs outline and contain information about all RDM activities to be followed in the project.

https://www.openaire.eu/rdm-in-horizon-europe-proposals
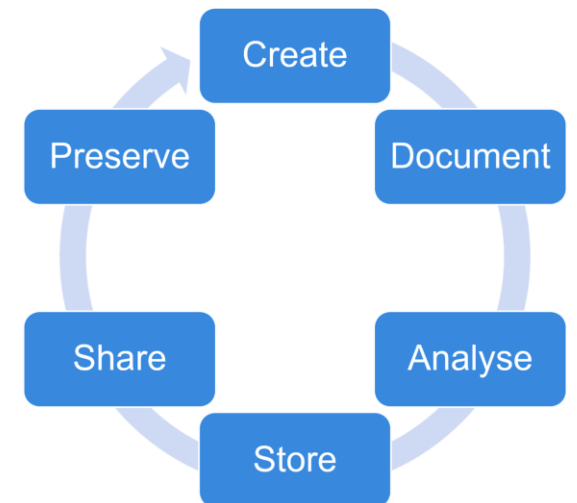
DMPs content

USE – MAKE – SHARE Framework

[Use] What tools and resources will I use?

[Make] What outputs will I produce?

[Share] How am I going to share them?

[Ref: NASA TOPS Open Science Curriculum, 2023]

- Clear citations
- Ensure the accumulation of credits

Consider financiers' requirements

- Clarify usage rights
- Ensure that you give credit through citations

Hypothesis

Reuse

Data collection

- Publish metadata with an open licence
- Use open evaluation
- Ensure links between publications, data and methods
- Make use of institutional repositories

Publication and distribution

Processing

Make use of open-source software and open interfaces

Long-term preservation

Storing data and results

- Use services that safeguard the preservation and integrity of materials
- Produce standard metadata

- Make use of service infrastructure
- Attach a persistent identifier to your results
- Attach descriptive metadata to your results
- Publish metadata with an open licence

[Ref: Open Science and Research Initiative, 2014]

FAIR Principles vs Open Access

[Ref: Wilkinson, M. et.al., 2016]

[Ref:https://eoscpilot.eu/content/d32-eosc-open-science-monitor-specifications]
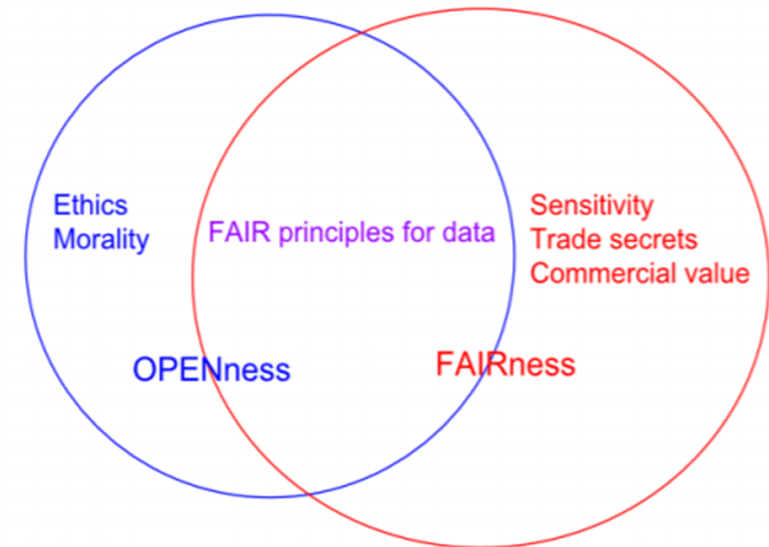
Getting started with a DMP Template

A DMP Template is a prototype file with questions and guidance to support researchers with filling in the DMP with content.

-> Templates offer researchers a more structured way to provide input in their DMPs.

DMP Templates may be provided by funders and institutions that have RDM policies in place; Librarians, data stewards and support staff might also create DMP Templates to help researchers.

What are the key topics and questions?

1. **Data description and collection or re-use of existing**
   a. How will new data be collected or produced and/c will existing data be re-used?
   b. What data (for example the kinds, formats, and vo will be collected or produced?

2. **Documentation and data quality**
   a. What metadata and documentation (for examp methodology of data collection and way of orga data) will accompany data?
   b. What data quality control measures will be used?

3. **Storage and backup during the research process**
   a. How will data and metadata be stored and bac during the research process?
   b. How will data security and protection of sensitive taken care of during the research?

4. **Legal and ethical requirements, codes of conduct**
   a. If personal data are processed, how will complian legislation on personal data and on data security be er
   b. How will other legal issues, such as intellectual p rights and ownership, be managed? What legisla applicable?
   c. How will possible ethical issues be taken into accou codes of conduct followed?

5. **Data sharing and long-term preservation**
   a. How and when will data be shared? Are there possible restrictions to data sharing or embargo reasons?
   b. How will data for preservation be selected, and where will data be preserved long-term (for example a data repository or archive)?
   c. What methods or software tools will be needed to access and use the data?
   d. How will the application of a unique and persistent identifier (such as a Digital Object Identifier (DOI)) to each data set be ensured?

6. **Data management responsibilities and resources**
   a. Who (for example role, position, and institution) will be responsible for data management (i.e. the data steward)?
   b. What resources (for example financial and time) will be dedicated to data management and ensuring that data will be FAIR (Findable, Accessible, Interoperable, Re-usable)?

https://zenodo.org/records/4915862

What is a good DMP?

DMP PLATFORMS - TODAY

TOPIC	DMPonline
Brief Description	DMPonline helps users to create, review,
Coverage	UK; Europe
Domain	Generic
Login options	Sign in required to use the service. Login
Machine-	Limited
Persistent, Unique	No
Licensing Options	No
Version support	N/A (edits can be made, but no visible
Formats Supported	Human readable; Machine readable (csv,
Publishing options	Internal publication of DMPs, on the
Linking of derived	No
Co-editing of DMPs	Yes
Costs to the	Free
Networking	Monthly Drop-In Sessions with the

TOPIC	ARGOS
Brief Description	ARGOS is an open extensible service that simplifies the
Coverage	Europe; Worldwide
Domain	Generic
Login options	No sign up, but login required to use the service. Login via
Machine-	Yes
Persistent, Unique	DOIs are assigned when publishing DMPs to Zenodo,
Licensing Options	Yes, licenses are assigned to all DMPs
Version support	Yes. Two types of versioning are supported, both for non
Formats Supported	Human readable (docx, pdf); Machine readable (.xml);
Publishing options	Two publishing options: a. internal, under the Public DMP
Linking of derived	Yes via the OpenAIRE Graph
Co-editing of DMPs	Yes
Costs to the	Free
Networking	Community Calls run every last Wednesday of the month

Simple forms ->
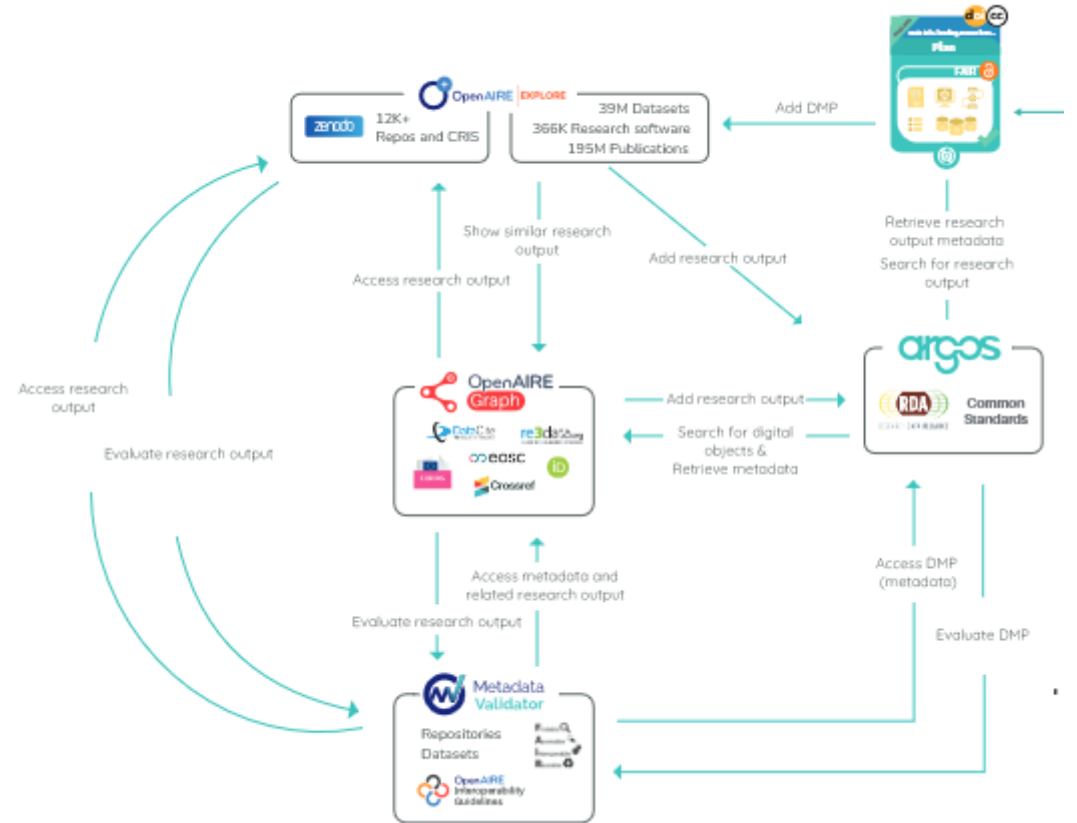
DMP repositories ->

Integrated systems

Creating your DMP in ARGOS

An OpenAIRE service

Free and open source

- ARGOS is an **open source, configurable** and **extensible tool** for **Research Management** activities connected to outputs (data, software, etc) and administrative workflows.

https://argos.openaire.eu/

Key concepts to know

- A **Template** is effectively a guide that contains specific questions about different entities or activities within a Research Management Plan, e.g. for data, software, policies, or evaluation results. It also provides instructions on who should answer these questions and how to respond. The questions and rules in a template are shaped by its purpose. For example, some templates are designed to help meet FAIR data principles or to ensure compliance with the rules set by a supervising or funding organization.

- A **Blueprint** outlines the structure of a (**Research Management) Plan**. It organizes the plan into sections and specifies which **Templates** should be used to describe different areas. For example, a software section would use a software-oriented template, and the evaluation section would use an evaluation template. Each Plan is always linked to one specific **Blueprint**.

- A **Plan** is created following a **Blueprint**, which organizes the Plan into sections. Each section is described using **Templates**, and every **description** in the Plan is based on one specific Template. The Blueprint decides which Templates are used for different parts of the Plan.
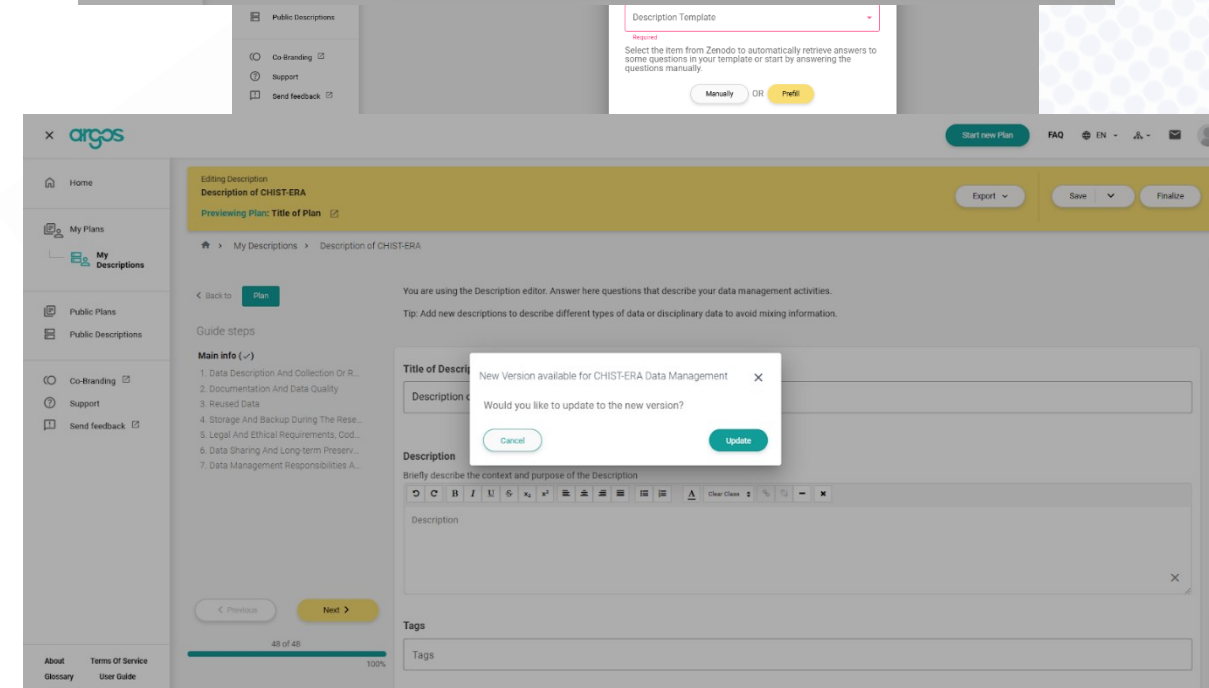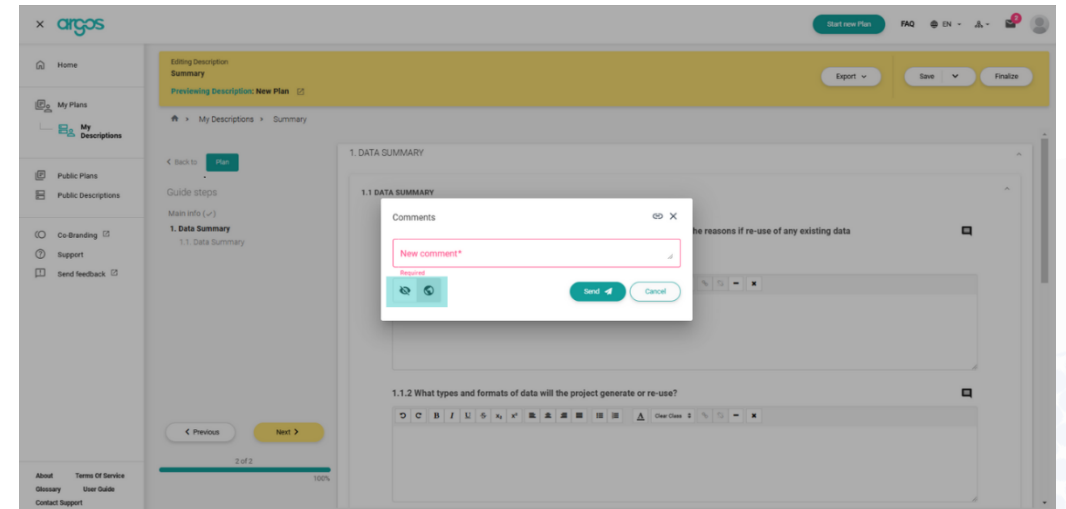
Key features 1/3

- Dashboard & Profile Management
  - View all created DMPs in one place.
  - Customise profile according to needs.

- Blueprint & Template Selection
  - Choose from available blueprints (Horizon Europe, institutional, funder-specific).
  - Customize sections if needed with more templates.

- Form-Based DMP Editing
  - Fill in structured sections with guided questions.
  - Auto-suggestions for metadata and best practices.

Key features 2/3

- Collaboration Tools
  - Add team members as co-authors or reviewers.
  - Set different permission levels (edit, view, comment).

- Automated Metadata & Linking
  - Auto-generates metadata for datasets, software, and repositories.
  - Links research outputs with DOIs, ORCID, and institutional repositories.

- Version Control & Tracking
  - Save multiple versions of a DMP.
  - Track changes over time.

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Key features 3/3

- Sharing & Publishing
  - Set visibility options (private, shared, public).
  - Generate a DOI for published DMPs.

- Exporting
  - Download DMPs in PDF, JSON, or other formats.
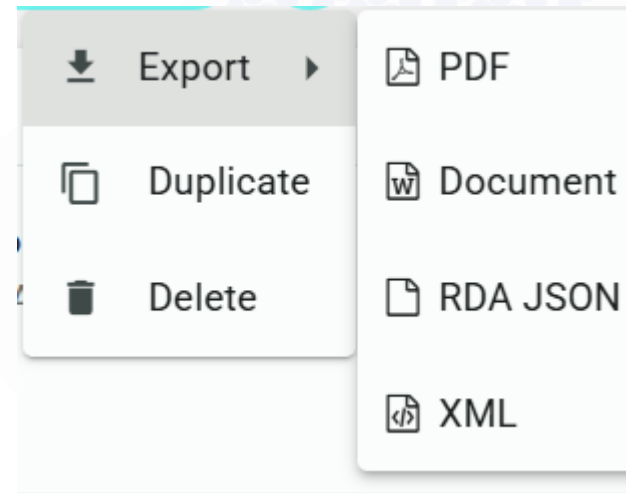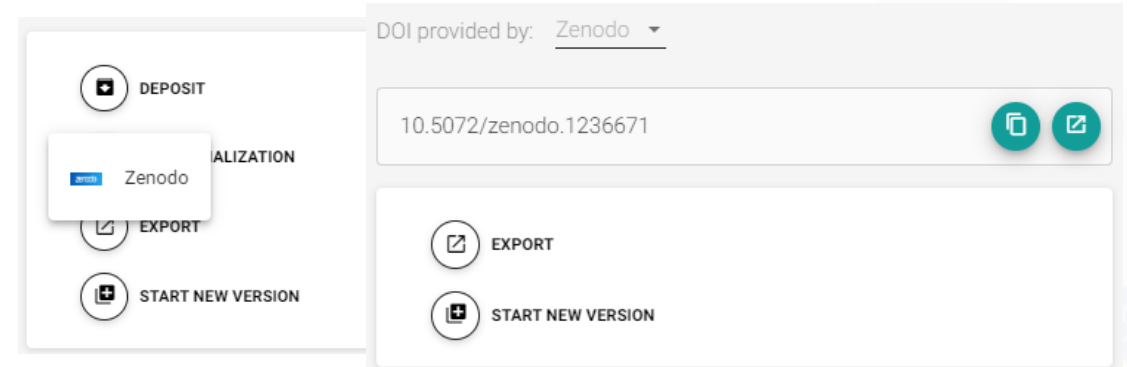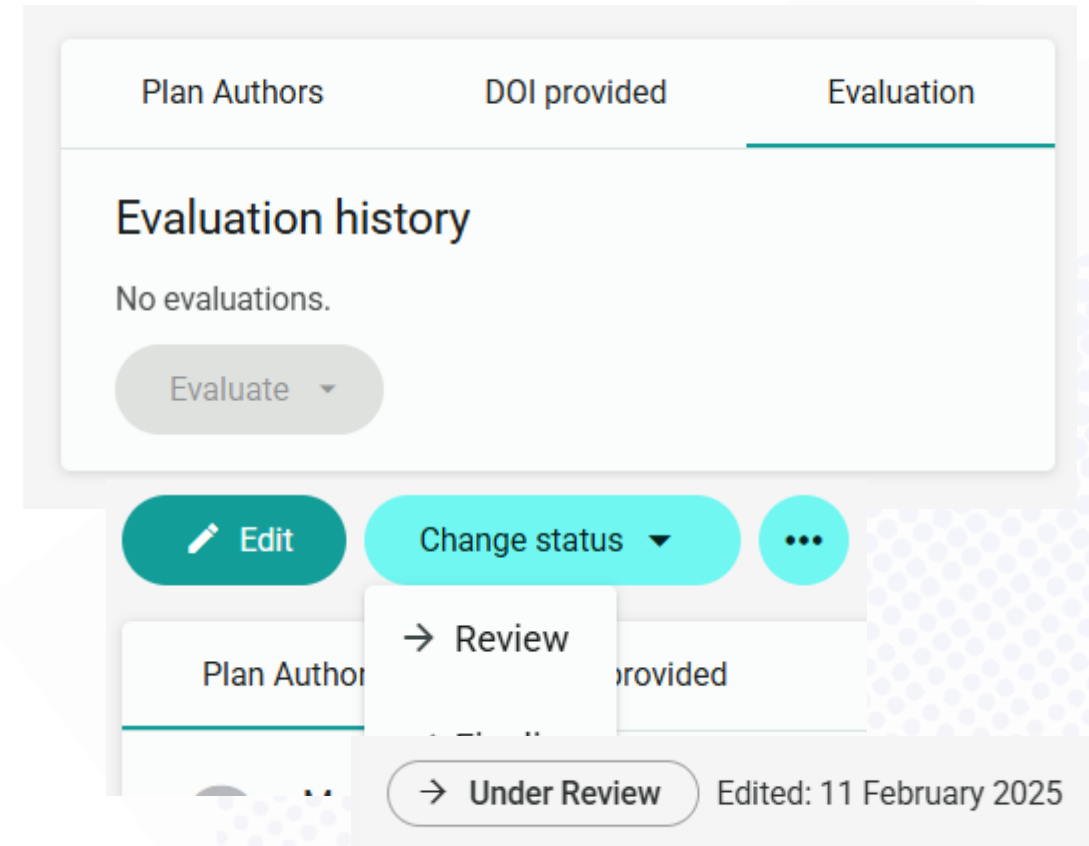
Coming soon!

- Evaluation mechanism
    - FAIR compliance
    - DMP requirements met
    - ...and more!

- Status changes
    - Change status according to needs
      eg under review, sent to funder etc

In Summary

- **Describe** your dataset(s), software, workflows
- **Use** automated templates to start your DMP
- **Collaborate** with colleagues to write the DMP
- **Get guided** to Research Data Management
- **Follow** FAIR principles for data and software (depending on the template)
- **Assign** license and DOI (Digital Object Identifier) to your DMP
- **Publish** your DMP
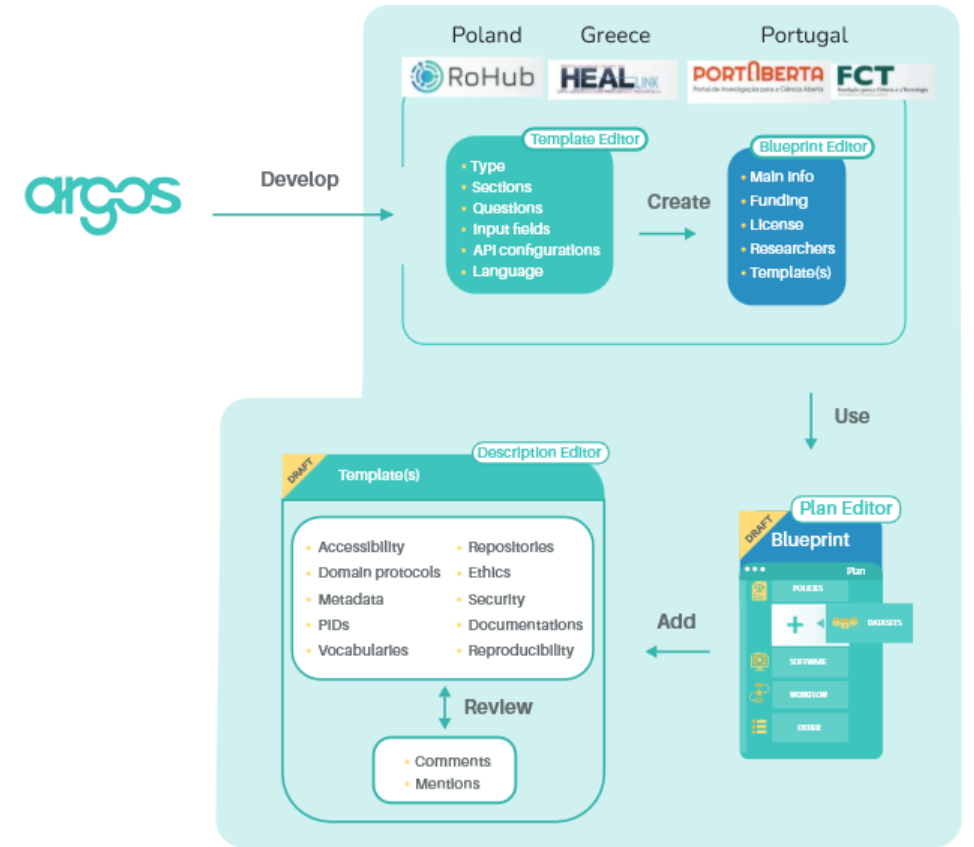
Get involved!

Argos

Community Calls

Are you a researcher or administrator of Argos? Got questions on how to write your Data Management Plan (DMP) or how to create your Template and connect DMPs with other data services and outputs? Join us and learn more!

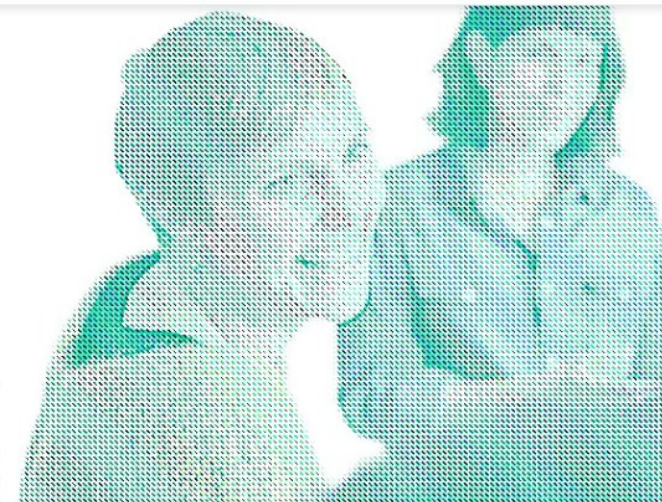OpenAIRE is running a series of **community calls for Argos** to **support all researchers** in meeting their **Horizon Europe requirements** by creating **FAIR** (Findable, Accessible, Interoperable, Reusable) **DMPs**. Similarly, it supports **all research performing and funding organisations** to orchestrate their data services around Argos and **connect data workflows** contributing to **interconnected Research Data Management ecosystems**.

These calls offer the opportunity to discover Argos novelties and learn how to benefit from them in your practice, share feedback and discuss the future of DMPs as FAIR and machine actionable outputs, i.e. as complete outputs that bring validated information, qualified references and automations to the table to assist the processes of collecting, documenting and publishing your data.

The **Argos Community Calls** will run **every last Wednesday of the month at 14.00 CEST**, starting from June 29th!

https://www.openaire.eu/argos-community-calls

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WHAT THE FUTURE HOLDS

- Aims to advance processes and instruments for **Planning, Tracking, and Assessing scientific knowledge production** beyond state-of-the-art, working with various national and thematic contexts and stakeholders, improving existing infrastructure, and connecting key components to enable an operational, open and FAIR EOSC ecosystem.

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Open Science in Greece

OpenAIRE Greek NOAD

The journey so far

Elli Papadopoulou
NOAD for Greece

National Open Access Desk

Athena Research and
Innovation Center (Athena RC)

Contacts

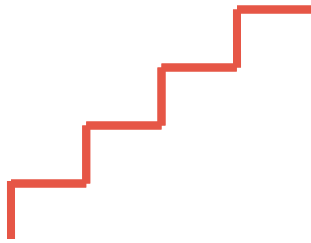Elli Papadopoulou | elli.p@imis.athena-innovaton.gr
|
HEAL-Link is also involved in the Greek
NOADship as third partner to the OpenAIRE
Advance project |

The plan

-> What are the "gaps" in the national academic and research ecosystem?

The steps of implementation

-> How we fill them and create the greater picture?

Achievements ☺

-> What did we succeed after all?

The Plan: Background and Needs

Policies

National level:
- good policy and legal framework (open data, e-Government, etc)

Institutional level:
- only few academic libraries have a formal policy for OA (5 according to ROARMAP)

- **National Policy for OA/ OS**
- **Institutional Policies for OA**

Data & Infras

National level:
- HELIX - Hellenic Data Services

Institutional level:
- literature repositories
- data repositories
- other services?

- **Compliance to OpenAIRE**
- **Representation in the EOSC**

Training

National level:
- n/a

Institutional level:
- Researchers (including ECRs)
- Research Communities
- Libraries

- **Training at all levels**

The Steps of Implementation: our tools & methods

Policies

National level:
- landscape review of national laws and regulations
- meetings with GSRT Task Force on Open Science

Institutional level:
- collaboration with the Hellenic Academic Libraries Link (HEAL-Link) & landscape review
- Letter to the Rectors Council

- **National Policy for OA/ OS**
- **Institutional Policies for OA**

Data & Infras

National level:
- awareness on HELIX - Hellenic Data Services
- collaborate with RDA node

Institutional level:
- landscape review on literature repositories technical capabilities
- mini landscape review on FAIR compliance of data repositories & RIs sustainability problems
- services integration to eInfraCentral catalogue

- **Compliance to OpenAIRE**
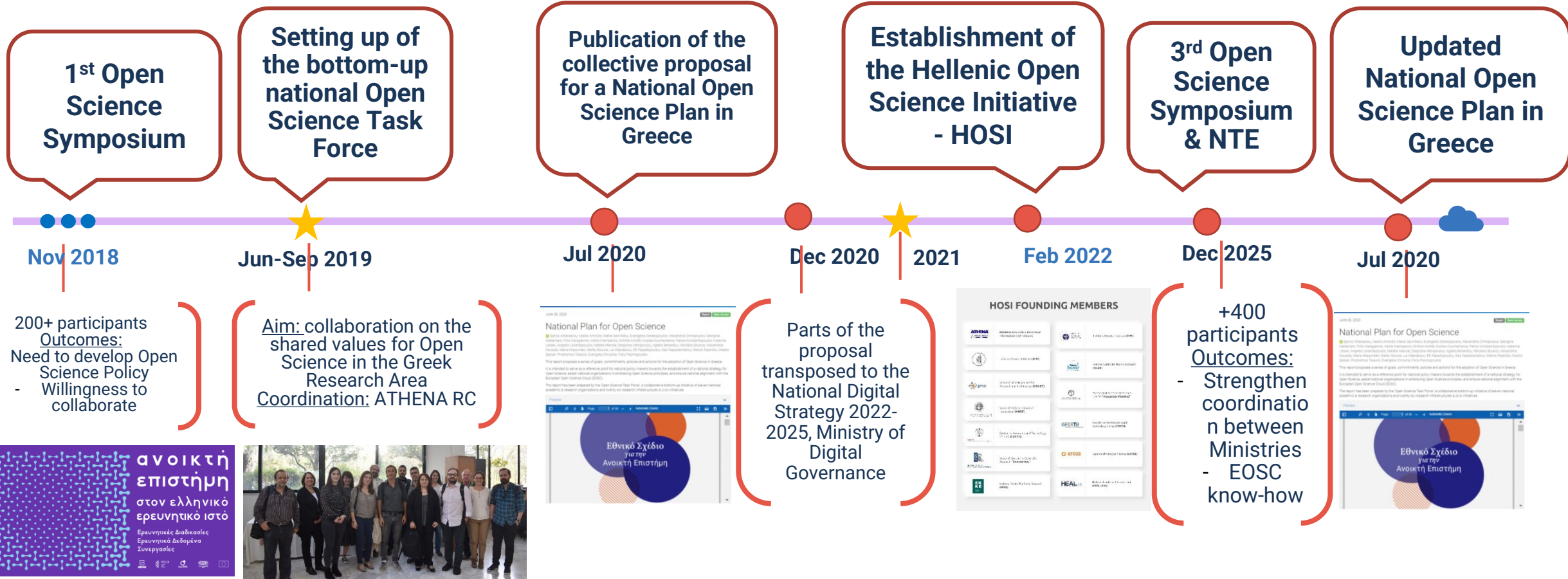- **Representation in the EOSC**

Training

National level:
- communicate with the Ministry (incorporate in the national OS Strategy)

Institutional level:
- Webinars for Researchers (including ECRs)
- Training on OpenAIRE Services for Projects
- Transfer knowledge in Libraries
- Collaborate with Research Communities (ELIXIR-GR, APOLLONIS)

Achievements: The Greek Open Science Symposium effect

1st Open Science Symposium

Setting up of the bottom-up national Open Science Task Force

Publication of the collective proposal for a National Open Science Plan in Greece

Establishment of the Hellenic Open Science Initiative - HOSI

3rd Open Science Symposium & NTE

Updated National Open Science Plan in Greece

Nov 2018 — Jun-Sep 2019 — Jul 2020 — Dec 2020 — 2021 — Feb 2022 — Dec 2025 — Jul 2020

200+ participants
Outcomes:
- Need to develop Open Science Policy
- Willingness to collaborate

Aim: collaboration on the shared values for Open Science in the Greek Research Area
Coordination: ATHENA RC

Parts of the proposal transposed to the National Digital Strategy 2022-2025, Ministry of Digital Governance

+400 participants
Outcomes:
- Strengthen coordination between Ministries
- EOSC know-how

THANKS

Elli Papadopoulou

Website
www.openaire.eu

ORCID
0000-0002-0893-8509

Email
elli.p@athenarc.gr

Twitter
@openaire_eu

@elli_lib

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