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Τεχνολογίες Πληροφορίας

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Έρευνα & Καινοτομία  
Τεχνολογίες Πληροφορίας

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Research & Innovation  
Information Technologies

# Open Science in Greece

the

dots

connecting

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# OVERVIEW

- The European Open Science Ecosystem
- Athena Research Center's input
- Methods utilized
- The current Open Science scenery in Greece
- Next Steps





# The European Open Science Ecosystem



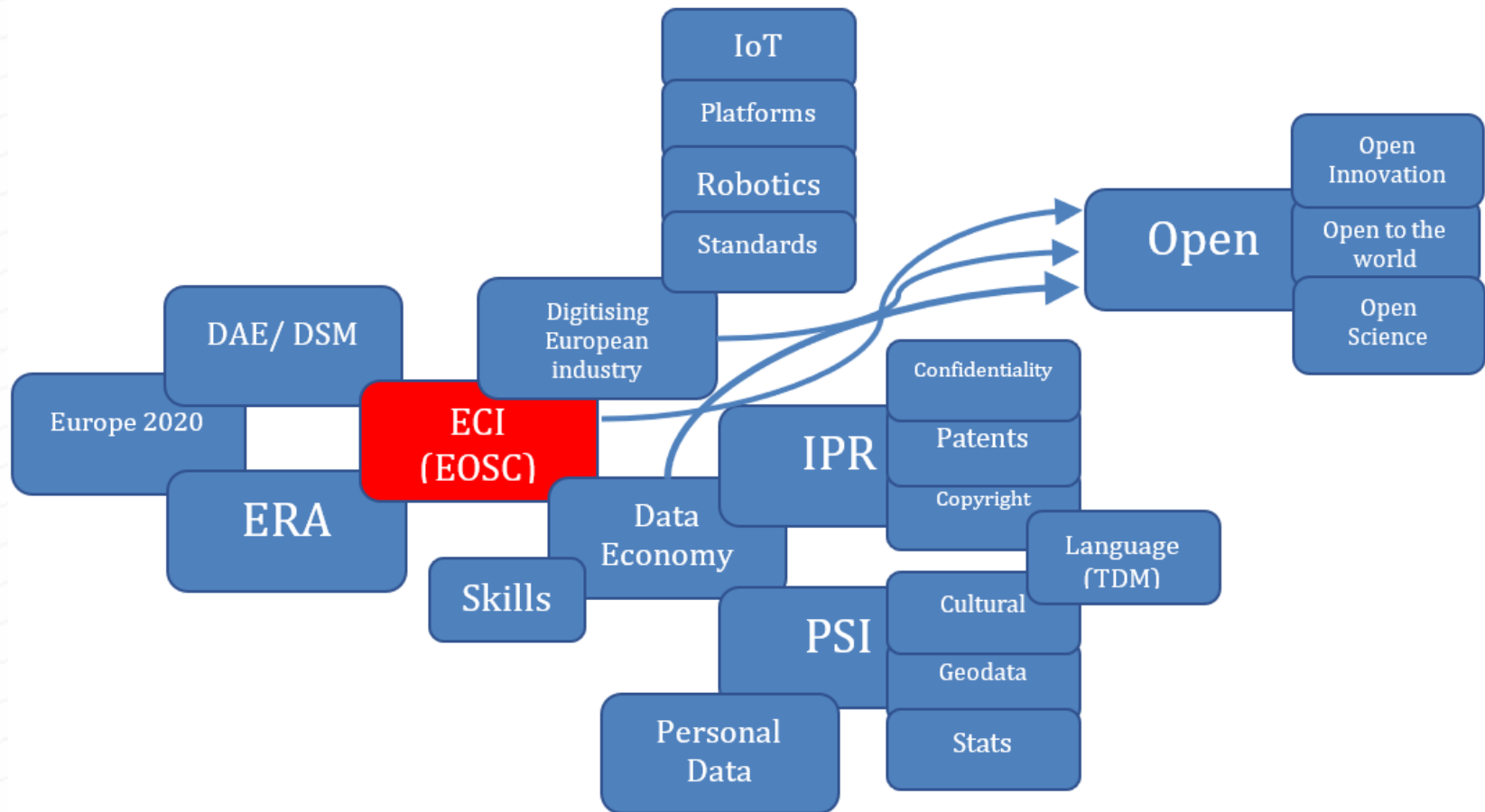
# The European Open Science Ecosystem 1/2



**“As open as possible,  
as closed as  
necessary”**



# The European Open Science Ecosystem 2/2





# Athena Research Center's input



# Core contributors



OpenAIRE



RDA Europe



Hellenic Data Service

|   |
|---|
| Polymaking: templates for RFOs and RPOs   |
| Services and tools for OS (monitoring dashboards, zenodo, amnesia, etc)                   |
| Interoperability of repositories  |
| Training on OS and OpenAIRE services and tools  |
| Orientation: Mostly Open; FAIR  |
| Stakeholders supported: Mostly policymakers, funders, repository managers and researchers |

|  |
|--|
| Polymaking: practical policy output  |
|  |
| Solutions for research data  |
| Stakeholders supported: Mostly researchers with special orientation in early career researchers, service providers |

|  |
|--|
|  |
| National repository for data and data analysis tools |
|  |
| Stakeholders supported: Researchers                  |

Work concentrates on:  
**policy-infrastructures/services-training nexus**  
**national and institutional levels**





# Methods utilized



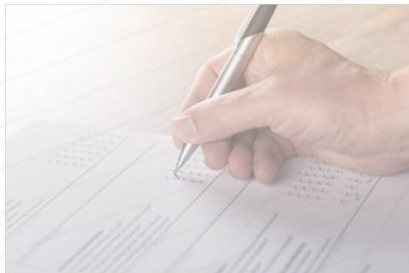
# Methods utilized

## Landscape Reviews

desk research



surveys



## Awareness & Engagement

webinars & workshops



meetings

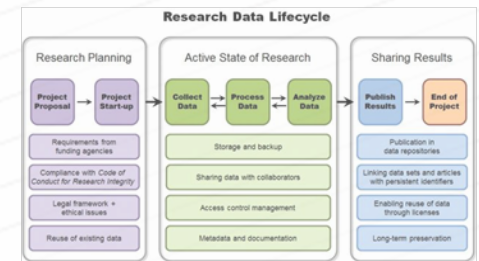


## Training

train-the-trainer



researchers



# Methods utilized

## Services

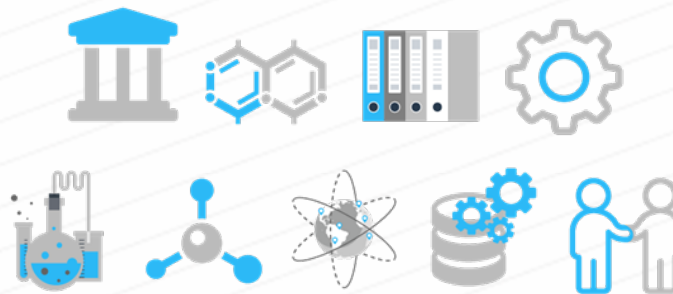
## Helpdesks

## Collaboration & coordination

### FAIR data



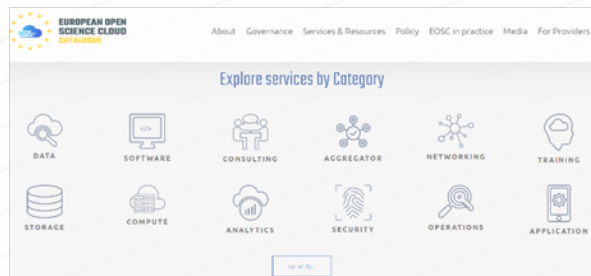
### all stakeholders



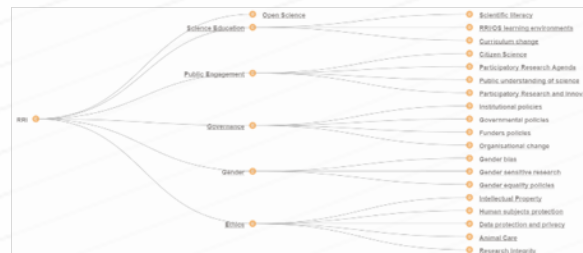
### internally



### EOSC catalogue




### RRI orientation




### externally





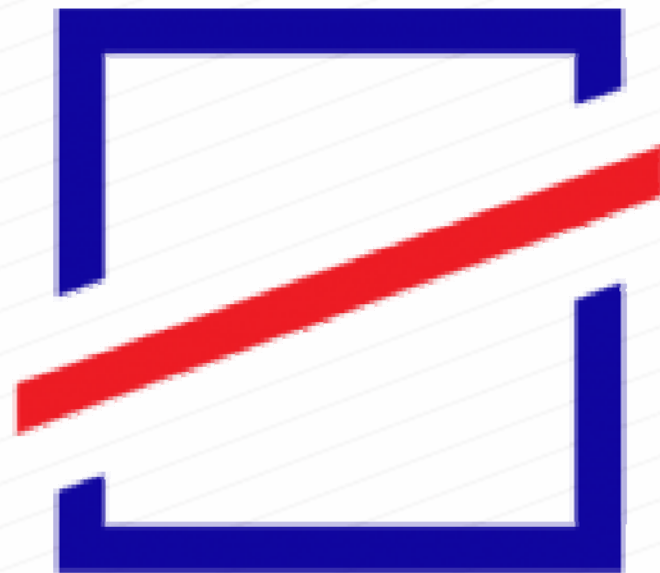
# The current Open Science scenery in Greece



# Steps taken

## *Recommendations and actions*

1. Know your people
2. Prepare for the Open Science era
  - a. Understand the **current state of Open Science** in the country
    - i. Policies and national legislation
    - ii. Infrastructures and Services
    - iii. Training
  - b. Show the way - **Communicate best practices and achievements**
  - c. **Provide support**



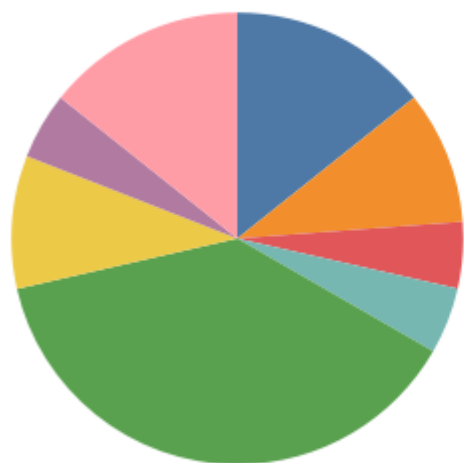
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**νολογίες Πληροφο**

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# 1. Know your people

## a. Identify the national stakeholders and understand their role in the national research ecosystem

Greek stakeholders



#

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Stakeholder category

e-infrastructures

Industry/SMEs

Libraries

National policymakers

Nodes and other Structures (Open Science facilitators)

Research Funding Organisations

Research Infrastructures

Research Performing Organisations



# 1. Know your people

## b. Establish strong collaborations

### National

---

- **Political Leadership:**

General Secretary for Research and Technology (GSRT) Open Science Working Group  
-> National Strategy for OS

- **National academic and research stakeholders, including the Industry:**

[Bottom-up Open Science Task Force](#) -> sustainability, institutional policies & communication with EOSC

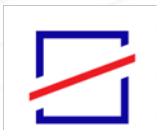
### Institutional

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- **Academic Libraries:** HEAL-Link partner in Greek NOADship  
-> University policies and repositories interoperability

- **Research Infrastructures:**  
-> presentations and collaborative events  
-> encouraging participation in OS initiatives, e.g. [greek translation of the FOSTER Open Science Training Handbook](#) OR a FAIR guide for Nanotechnology and Material Science

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## 2. Prepare for the Open Science Era

### a. Understand the current state of Open Science in the country

#### i. Policies and national legislation

##### National

---

Greek Law 4310/2014 supports open access to publicly funded research

Law N. 3979/2011 on E-government

Law N. 4305/2014 on Open Access to and Further Use of Public Sector Documents, Information and Data

##### Institutional

---

All academic libraries are still developing Open Access policies in support of their literature repositories ([5 have a formal Policy according to ROARMAP](#))





## 2. Prepare for the Open Science Era

### a. Understand the current state of Open Science in the country

#### ii. Infrastructures and Services



##### Hardware and networks

routers, switches, access points, bandwidth

##### Computing

HPC, cloud computing

Literature and data **repositories**

##### E-publishing platforms

##### Data Management services

Application programming interfaces (APIs),  HELIX

Authentication and Authorisation Infrastructure (AAI),  
Virtual Machines, openDMP tool

##### Monitoring services



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## 2. Prepare for the Open Science Era

### a. Understand the current state of Open Science in the country

*Some efforts, though in a **iii. Training** fragmented way*

Good examples:

- [ELIXIR-GR](#) dedicated training programme for researchers in the Life Sciences
- [Apollonis Summer School for the Digital Humanities](#)
- OpenAIRE invested in a training programme for Greek academic librarians to acquire essential data skills
- HELIX Lab services used in classes, for educational purposes & hands-on session at the [1<sup>st</sup> OS Symposium](#)



## 2. Prepare for the Open Science Era

### b. Show the way - Communicate best practices and achievements

- [OpenAIRE Greek NOADs dedicated webinar series](#) in collaboration with the Cypriot NOAD and OpenAIRE services for repository services and funders  
audience: all stakeholders
- RDA Greek Node for RDA outputs adoption and links with the [RDA Early Career Engagement Interest Group \(ECEIG\)](#)  
audience: research communities, researchers at all stages, including early career researchers
- [ELLAK](#), the Greek Open Technologies Alliance  
audience: software developers and computer engineers, including researchers producing software, e.g. for data analysis purposes



## 2. Prepare for the Open Science Era

### c. Provide support

OpenAIRE Greek NOADs:

#### Helpdesks

- Open Access, Open Science and FAIR data literacy
- Legal issues
- Compliance with EU conditions

#### University Policies

Model policy template – approved by the Rectors Council ->  
next: [PALC 25](#) session for implementation per library occasion  
basis

RDA Greek Node:

- RDA outputs adoption
- Early career researchers endeavors





# Next Steps



## Next Steps

- Inaugural meeting of the bottom-up Open Science Task Force

> **institutional policies**

- National Initiatives for Open Science in Europe (NI4OS-Europe)

-> **questionnaire**

- **Second series of Open Science webinars**

- **Helpdesks enrichment**

- Data stewards?

- National service catalogue?

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# References

BOSMAN, J. and KRAMER, B. (2017). 'Defining Open Science Definitions', WordPress. [online] Available at: <https://im2punt0.wordpress.com/2017/03/27/defining-open-science-definitions/> [Accessed: 20 Aug. 2019].

Cor.europa.eu. (2017). *Law N. 4483/2017 Regulations on modernization of the institutional framework for the organisation and operation of Municipal Sewerage Companies*. [online] Available at: [https://portal.cor.europa.eu/egtc/about/National%20Provisions%20Docs/EL\\_n-4483-2017%20-%20Greece.pdf](https://portal.cor.europa.eu/egtc/about/National%20Provisions%20Docs/EL_n-4483-2017%20-%20Greece.pdf) [Accessed: 20 Aug. 2019].

EC.europa.eu. (2019). *Background Document Public Consultation - 'Science 2.0': Science In Transition*, European Commission, Directorate-General for Research and Innovation. [online] Available at: <http://ec.europa.eu/research/consultations/science-2.0/background.pdf> [Accessed: 20 Aug. 2019].

EC.europa.eu. (2019). *EOSC strategic implementation plan published*, European Commission, European Open Science Cloud. [online] Available at: <https://ec.europa.eu/research/openscience/index.cfm/pdf/index.cfm?pg=open-science-cloud> [Accessed: 20 Aug. 2019].

EC.europa.eu. (2011). *Europe 2020 Flagship Initiative Innovation Union*, European Commission. [online] Available at: [https://ec.europa.eu/research/innovation-union/pdf/innovation-union-communication-brochure\\_en.pdf](https://ec.europa.eu/research/innovation-union/pdf/innovation-union-communication-brochure_en.pdf) [Accessed: 20 Aug. 2019].

EC.europa.eu. (2017). *H2020 Programme Guidelines to the Rules on Open Access to Scientific Publications and Open Access to Research Data in Horizon 2020*, European Commission Directorate-General for Research & Innovation. [online] Available at: [https://ec.europa.eu/research/innovation-union/pdf/innovation-union-communication-brochure\\_en.pdf](https://ec.europa.eu/research/innovation-union/pdf/innovation-union-communication-brochure_en.pdf) [Accessed: 20 Aug. 2019].

EC.europa.eu. (2018). *Open Science Policy Platform Recommendations*, European Commission, Directorate-General for Research & Innovation. [online] Available at: [https://ec.europa.eu/research/openscience/pdf/integrated\\_advice\\_opspp\\_recommendations.pdf](https://ec.europa.eu/research/openscience/pdf/integrated_advice_opspp_recommendations.pdf) [Accessed: 20 Aug. 2019].

FosterOpenScience.eu. (2019). *Open Science - RRI* | Foster. [online] Available at: <https://www.fosteropenscience.eu/taxonomy/term/255> [Accessed: 20 Aug. 2019].



# References

FosterOpenScience.eu. (2019). *Open Science – RRI* | Foster. [online] Available at: <https://www.fosteropenscience.eu/foster-taxonomy/open-science> [Accessed: 20 Aug. 2019].

General Secretariat for Research and Technology (2014). *Law N. 4310/2014 Research, Technological Development and Innovation and relevant regulations*, Greek Republic, Ministry of Development and Investments. [online] Available at: <http://www.gsrt.gr/Legislation/Files/LawFiles136/FEK%20258.pdf> [Accessed: 20 Aug. 2019].

GRnet.gr. Computing and Storage Services. [online] Available at: <https://grnet.gr/en/services/internet-services/interconnection/> [Accessed: 20 Aug. 2019].

LiberEurope.eu. (2018), *National Plan for Open Science*, French Republic, Ministry of Higher Education, of Research and Innovation. [online] Available at: [https://libereurope.eu/wp-content/uploads/2018/07/SO\\_A4\\_2018\\_05-EN\\_print.pdf](https://libereurope.eu/wp-content/uploads/2018/07/SO_A4_2018_05-EN_print.pdf) [Accessed: 20 Aug. 2019].

Minadmin.gov. (2014). *Law N. 4205/2014 for Open Access and Further Use of Public Sector Documents, Information and Data*, Greek Republic, Ministry of Interior. [online] Available at: <http://www.minadmin.gov.gr/?p=11238> [Accessed: 20 Aug. 2019].

Minadmin.gov. (2011). *Law N. 3979/2011 for E-governance and relevant regulations*, Greek Republic, Ministry of Interior. [online] Available at: <http://www.minadmin.gov.gr/?p=1806> [Accessed: 20 Aug. 2019].

SALMI, J. (2015). *Study on Open Science Impact, Implications and Policy Options*, European Commission. [online] Available at: [https://ec.europa.eu/research/innovation-union/pdf/expert-groups/rise/study\\_on\\_open\\_science-impact\\_implications\\_and\\_policy\\_options-salmi\\_072015.pdf](https://ec.europa.eu/research/innovation-union/pdf/expert-groups/rise/study_on_open_science-impact_implications_and_policy_options-salmi_072015.pdf) [Accessed: 20 Aug. 2019].

SparcEurope.org. (2018), *Latest update to European Open Data and Open Science policies released*. [online] Available at: <https://sparceurope.org/latest-update-to-european-open-data-and-open-science-policies-released/> [Accessed: 20 Aug. 2019].

TERROVITIS, M., TSIAVOS, P., OSTER, P., SANDBERG, M., GHELLER, C., PINEDA, O. and SEGERS, P. (2018). *Final Stakeholder Map*, European Open Science Cloud for Research Pilot Project, V1.1 [online] Available at: [https://eoscipilot.eu/sites/default/files/eoscipilot\\_d2.7\\_submitted.pdf](https://eoscipilot.eu/sites/default/files/eoscipilot_d2.7_submitted.pdf) [Accessed: 20 Aug. 2019].





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