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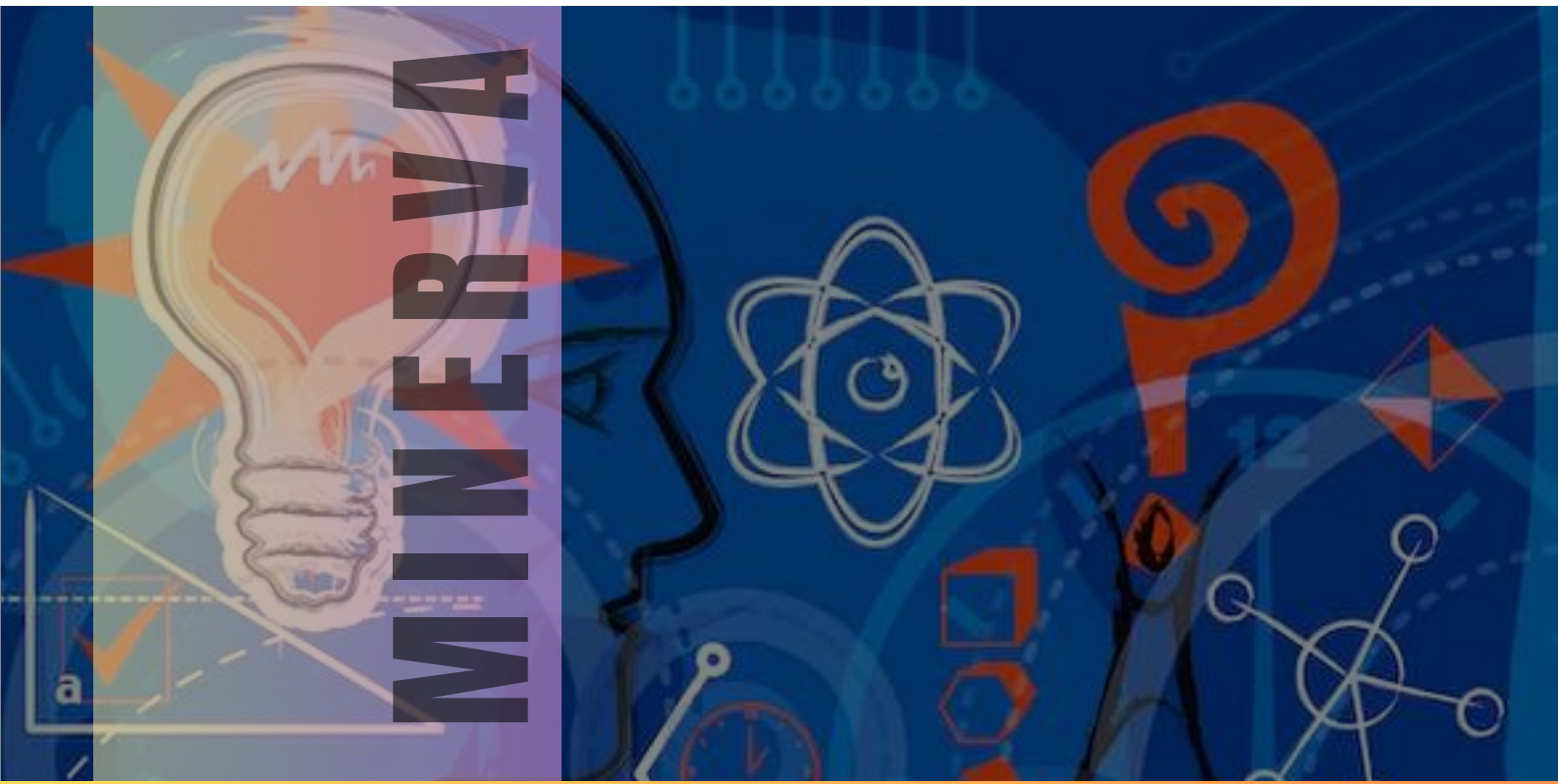
MINERVA 2019-2023
Strengthening Research Management and
Open Science Capacities of HEIs in Moldova and Armenia

open science

Deliverable 1.2

REPORT

on current Open Science infrastructure and policies



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MINERVA 2019-2023

Strengthening Research Management and Open Science Capacities of HEIs in Moldova and Armenia

This document is a deliverable within MINERVA project „ STRENGTHENING RESEARCH MANAGEMENT AND OPEN SCIENCE CAPACITIES OF HEIS IN MOLDOVA AND ARMENIA" (MINERVA), ref. nr. 597889-EPP-1-2018-1-MD-EPPKA2-CBHE-SP, funded by the European Union through the Erasmus + programme, key action 2 - Capacity Building in Higher Education.

Project	**MINERVA**
Ref. nr.	597889-EPP-1-2018-1-MD-EPPKA2-CBHE-SP
WP / Deliverable	WP1/ D1.2 - Report on current Open Science infrastructure and policies
WP Leader	P16- European Policy Development and Research Institute/Slovenia- EPDRI

Co-funded by the Erasmus+ Programme of the European Union

MINERVA 2019-2023
Strengthening Research Management and Open Science Capacities of HEIs in Moldova and Armenia

IN-DEPTH ANALYSIS ON OPEN SCIENCE INFRASTRUCTURE AND POLICIES

Report - analyses level: University

P1 - Academy of Economic Studies of Moldova

Evaluation period: 15 January 2019 – 15 January 2021

Project Acronym:	**MINERVA**
Project full title:	STRENGTHENING RESEARCH MANAGEMENT AND OPEN SCIENCE CAPACITIES OF HEIS IN MOLDOVA AND ARMENIA
Project No:	597889-EPP-1-2018-1-MD-EPPKA2-CBHE-SP
Funding Scheme:	ERASMUS+
WP / Deliverable/ Action:	WP1/D1.2/ A1.2 – In-depth analysis on Open Science infrastructure and policies
Project partner (s)	P1-ASEM
Place/ Date	ONLINE-1KA

Co-funded by the Erasmus+ Programme of the European Union

MINERVA 2019-2023
Strengthening Research Management and Open Science Capacities of HEIs in Moldova and Armenia

QUESTIONNAIRE
on current Open Science infrastructure and policies

Introduction

The designed questionnaire is a data collection tool aims to draw a complete picture of the different elements of the Open Science (OS) in Moldova and Armenia. The questionnaire will reflect the following issues:

1) Existing national legislatives and institutional incentives related to the implementation of open science principles in research and education;
2) Current open science practice and the registry of institutional open science repositories and related information infrastructures;
3) Mapping the situation regarding the awareness and knowledge of open science principles within academic community;
4) Prerequisites for building technical solutions for open science at universities.

1.A. Country where your organization is based:
Republic of Moldova

1.B. Existing national legislatives related to the implementation of open science principles:
NO

2.A. Name of organization:
Academy of Economic Studies of Moldova

2.B. Existing institutional bylaws/ incentives related to the implementation of open science principles:
YES

3	**How would you describe the main profile of your organization?**
	The ones that fund research (funders - national, international, private, policymakers, etc.)
X	The ones that perform research - CREATE (e.g. universities, research institutes, individual researchers, research communities, citizen scientists, data enthusiasts, etc.)
X	The ones that perform research - SUPPORT (e.g. research infrastructures, e-infrastructures, service providers, libraries, etc.)
	The ones that “consume” research (e.g. research-intensive SMEs, citizens, etc.)

	OS facilitators (European, regional or national initiatives and individuals supporting OS)

If an organisation has multiple roles, please fill out the survey for each of your roles.

4.	**Which scientific domain does your organization belong/support/fund?**
	Natural Sciences
	Engineering and Technology
X	Information and Communication Technology
	Medical and Health Sciences
	Agricultural Sciences
X	Social Sciences
X	Humanities
	None / not applicable

5.	**What is your position within the organization?**
	Manager
X	Senior researcher
X	Research support staff
X	Librarian
	Junior researcher
X	Other: Head of IT department

6. What is the total number of researchers (full-time equivalent, FTE), including doctoral candidates, working at your organisation?

			X		
1-50	51-100	101-200	201-300	301-500	>500

7. What are you supporting/funding?

X	X	X	X	X	X	
Human resources	Projects	Hardware	Software	Operations	Infrastructures	Other:

8.	**What conditions should an e-infrastructure or research infrastructure meet in order to be supported/funded by your organization? Check all that apply**
	No condition
X	Discipline of users
X	Excellence based
X	Affiliation of users

X	Technology readiness of the proposal
	Other:

9.	**Do you have a roadmap of the infrastructures you already support or you want to maintain?**
	Yes
X	No
	I don't know

A roadmap is a strategic plan that defines a goal or desired outcome and includes the major steps or milestones needed to reach it. The term infrastructure refers to research infrastructures and e-infrastructures.

10.	**How do you invest in user support? Check all that apply**
X	Funding staff who provides support
	Through an EC funding for infrastructure
	Through an EC funding
X	We do not invest in user support
	Other:

Explanation: *User support means guidance and assistance to relevant users. In case of funders, users are institutions, in case of service providers users are service users, in case of libraries users are researchers and other library users, etc.*

11.	**Is your organization performing research assessment for any of the following purposes:**
X	Careers in research
X	Performance evaluation of research units and/or allocation of funding
	Not applicable
	Don't know

12. Does your organization impose internal rules regarding the following aspects?					
	Mandatory for all	**Mandatory for some projects/groups**	**Encouraged but optional**	**No regulation**	**Not applicable**
Publication repositories			X		
Open data			X		
Data management plans			X		
Data protection in research data	X				
Publishing platforms				X	

PIDs (persistent identifiers, e.g. DOI, ORCID...)		X			
Long-term availability of research data		X			
Article/Book Processing Charges (APC/BPC)		X			
Open-source software		X			
Open education resources		X			
Open practices (methodologies, peer review, metrics, citations, etc.)			X		
FAIR (Findable, Accessible, Interoperable, Reusable)		X			
Intellectual property rights and copyright (IPR)	X				

13. Does your organization provide support and training in the following areas?

	Yes	No, but planned	No, not planned	Other	Don't know
Repositories	X				
Research data (publishing of open data, FAIR, RDM plans, data protection, data curation, long-term preservation)		X			
Publishing platforms	X				
PIDs (persistent identifiers, e.g. DOI, ORCID...)		X			
Licenses					X
Intellectual property rights and copyright (IPR)	X				
Article/Book Processing Charges (APC/BPC)		X			
Open-source software	X				
Open education resources	X				
Open practices (methodologies, peer review, metrics, citations, etc.)		X			

14.	How does your organization provide support and training? Check all that apply
X	Website with resources and relevant information and Frequently Asked Questions
	Employment of experts for this purpose
X	Communication activities
	Other:

15.	Who are the target groups for the training? Check all that apply
X	Researchers and academic staff
X	Students
X	Librarians
	Research infrastructures providers
X	SMEs
	Other:

16. What types of research outputs does your organization hold and create and who are intellectual property owners?

	Authors	Institution	Funder	Government	Joint ownership	None	Don't know
Publications							X
Data							X
Patents							X
Reports							X
Studies and trials							X
Technical guidelines							X
Grey literature							X

17. Open Science-related infrastructure used by your organization:

	Already have inhouse	Already have outsourced	Plans to have inhouse	Plans to have outsourced	No plans to setup	Don't know
Institutional repository	X					
Institutional data repository			X			
Shared repository (multiple organizations in the same country)			X			
Journal/monographs/conference publishing system			X			
CRIS (or CRIS-like) system	X					

Repository must support Dublic Core *and* OAI-PMH.

CRIS - Current Research Information System

18. If your organization has an institutional repository, provide its URL.
IREK – AESM (Institutional Repository of Economic Knowledge) https://irek.ase.md/xmlui/

19. If your organization has a data repository, provide its URL..
-

20.	**How familiar are you with the concept of FAIR (Findable, Accessible, Interoperable, Reusable) regarding data?**
X	Very familiar
	Familiar
X	Not very familiar
	Not familiar at all

In order to be put in service of OS, research data must be easy to find, identify and contextualize. In 2016, the FAIR guiding principles for research data were published and they have since become the staple of all policy recommendations. In brief, FAIR means that research data must be supplied with rich metadata and persistent identifiers, deposited on a searchable platform that has open protocols for access and sharing, and assigned a license that clearly defines usage rights.

21.	**What kind of digital objects do you use persistent identifiers for? Check all that apply**
X	Scientific publications
	Datasets
	Files without metadata
	Files containing metadata
	Software
X	Methods
	Protocols
X	Metadata records
X	Semantic artefacts (vocabularies, data models, concepts)
	Other:

22.	**Which identifiers are used in your community for these digital objects? Check all that apply**
X	DOI
	URN

X	Handle
	ARK
	PURL
	None
	Other:

23. Are versioning and changes in data objects in your organization clearly documented?			
X	X		
Yes	Partly	No	Don't know

24. In your opinion, what particular areas of training, support or advice, researchers and support staff need in relation to making data FAIR?			
	Much needed	**Somewhat needed**	**Not needed**
Stewardship of FAIR outputs (data, software)	X		
Training others (including doctoral candidates)	X		
Data analytics and statistical techniques	X		
Finding and reusing data	X		
Finding FAIR data repositories	X		
Raising awareness about FAIR principles	X		
Data wrangling	X		
Citing and acknowledging contributions	X		
Using or developing tools/services	X		
Sharing data (ethics, data protection)	X		
Costing and resourcing RDM in proposals	X		
Documenting data or code to make it FAIR	X		

RDM: Research Data Management (see: https://www.jisc.ac.uk/guides/how-and-why-you-should-manage-your-research-data)

25.	How familiar are you with EOSC (European Open Science Cloud)?
	Very familiar
X	Familiar
	Not very familiar
	Not familiar at all

The EOSC (https://www.eosc-portal.eu/) is a data infrastructure to support and develop open science and open innovation in Europe. It will federate existing resources across national data centres, European e-infrastructures and research infrastructures and provide common services to all users.

26. What kind of infrastructure would be the most useful for your research/work and how intensively would you use it?

	1-3 months	4-6 months	7-9 months	10-12 months	We wouldn't use	Don't know
High-performance computing clusters						X
High-throughput computing clusters						X
Big data clusters (Hadoop-like clusters)						X
Cloud virtual machines				X		
Single server						X

27. Apart from the services you already have, which additional services would benefit the users in your organization?

- VPN, repository software, Scientific collaboration portals and projects;
- Open Journal Systems publishing platform for institutional journals. It is an open source scientific publishing software, released under the GNU (General Public License);
- Data anonymization tools, DMP tools;

Examples: repository software, data anonymization tools, DMP tools, publishing platforms, VPN, etc.

28. What do you expect from EOSC?

- Increasing the efficiency and effectiveness of scientific activity. Creating the conditions for scientific activity. Infrastructure development.
- Increasing responsibility in the field of research, modernizing research, democratizing research, increasing the visibility, increasing the quality of research, developing partnerships in research, increasing the role of the library in archiving and distributing scientific information.
- Increasing responsibility in the field of research, modernizing research, democratizing research, increasing the visibility, increasing the quality of research, developing partnerships in research, increasing the role of the library in archiving and distributing scientific information.

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MINERVA 2019-2023
Strengthening Research Management and Open Science Capacities of HEIs in Moldova and Armenia

IN-DEPTH ANALYSIS ON OPEN SCIENCE INFRASTRUCTURE AND POLICIES

Report - analyses level: University

P2 - State University of Medicine and Pharmacy of Moldova / USMF

Evaluation period: 15 January 2019 – 15 January 2021

Project Acronym:	**MINERVA**
Project full title:	STRENGTHENING RESEARCH MANAGEMENT AND OPEN SCIENCE CAPACITIES OF HEIS IN MOLDOVA AND ARMENIA
Project No:	597889-EPP-1-2018-1-MD-EPPKA2-CBHE-SP
Funding Scheme:	ERASMUS+
WP / Deliverable/ Action:	WP1/D1.2/ A1.2 – In-depth analysis on Open Science infrastructure and policies
Project partner (s)	P2-USMF
Place/ Date	ONLINE-1KA

Co-funded by the Erasmus+ Programme of the European Union

MINERVA 2019-2023
Strengthening Research Management and Open Science Capacities of HEIs in Moldova and Armenia

QUESTIONNAIRE
on current Open Science infrastructure and policies

Introduction

The designed questionnaire is a data collection tool aims to draw a complete picture of the different elements of the Open Science (OS) in Moldova and Armenia. The questionnaire will reflect the following issues:

1) Existing national legislatives and institutional incentives related to the implementation of open science principles in research and education;
2) Current open science practice and the registry of institutional open science repositories and related information infrastructures;
3) Mapping the situation regarding the awareness and knowledge of open science principles within academic community;
4) Prerequisites for building technical solutions for open science at universities.

1.A. Country where your organization is based:
Republic of Moldova

1.B. Existing national legislatives related to the implementation of open science principles:
1. Declaration on Open Science in the Republic of Moldova **2. State policy in the sphere of science and innovation** **3. Code regarding science and innovation in the Republic of Moldova** **4. National program in the field of Research and innovation for the years 2020-2023** **5. National strategy for the development of the "Digital Moldova 2020" information society** **6. The national roadmap for the integration of the Republic of Moldova in the SEC for the years 2019-2021** **7. The research and development strategy of the Republic of Moldova until 2020**

2.A. Name of organization:
Nicolae Testemitanu State University of Medicine and Pharmacy

2.B. Existing institutional bylaws/ incentives related to the implementation of open science principles:
1. Open Access Policy of Nicolae Testemitanu State University of Medicine and Pharmacy of the Republic of Moldova **2. The Regulation on the organization and functioning of the Institutional Repository of the Nicolae Testemitanu State University of Medicine and Pharmacy of the Republic of Moldova**

3	How would you describe the main profile of your organization?
	The ones that fund research (funders - national, international, private, policymakers, etc.)
X	The ones that perform research - CREATE (e.g. universities, research institutes, individual researchers, research communities, citizen scientists, data enthusiasts, etc.)
	The ones that perform research - SUPPORT (e.g. research infrastructures, e-infrastructures, service providers, libraries, etc.)
	The ones that "consume" research (e.g. research-intensive SMEs, citizens, etc.)
	OS facilitators (European, regional or national initiatives and individuals supporting OS)

If an organisation has multiple roles, please fill out the survey for each of your roles.

4.	Which scientific domain does your organization belong/support/fund?
	Natural Sciences
	Engineering and Technology
	Information and Communication Technology
X	Medical and Health Sciences
	Agricultural Sciences
	Social Sciences
	Humanities
	None / not applicable

5.	What is your position within the organization?
	Manager
X	Senior researcher
	Research support staff
	Librarian
	Junior researcher
	Other: Head of IT department

6. What is the total number of researchers (full-time equivalent, FTE), including doctoral candidates, working at your organisation?

				X	
1-50	51-100	101-200	201-300	301-500	>500

7. What are you supporting/funding?

X	X					
Human resources	Projects	Hardware	Software	Operations	Infrastructures	Other:

	8. What conditions should an e-infrastructure or research infrastructure meet in order to be supported/funded by your organization? Check all that apply
	No condition
	Discipline of users
X	Excellence based
	Affiliation of users
	Technology readiness of the proposal
	Other:

	9. Do you have a roadmap of the infrastructures you already support or you want to maintain?
X	Yes
	No
	I don't know

A roadmap is a strategic plan that defines a goal or desired outcome and includes the major steps or milestones needed to reach it. The term infrastructure refers to research infrastructures and e-infrastructures.

	10. How do you invest in user support? Check all that apply
X	Funding staff who provides support
	Through an EC funding for infrastructure
	Through an EC funding
	We do not invest in user support
	Other:

Explanation: *User support means guidance and assistance to relevant users. In case of funders, users are institutions, in case of service providers users are service users, in case of libraries users are researchers and other library users, etc.*

	11. Is your organization performing research assessment for any of the following purposes:
	Careers in research
	Performance evaluation of research units and/or allocation of funding
X	Not applicable
	Don't know

12. Does your organization impose internal rules regarding the following aspects?					
	Mandatory for all	**Mandatory for some projects/groups**	**Encouraged but optional**	**No regulation**	**Not applicable**
Publication repositories			X		
Open data			X		
Data management plans				X	
Data protection in research data					X
Publishing platforms			X		
PIDs (persistent identifiers, e.g. DOI, ORCID...)			X		
Long-term availability of research data					X
Article/Book Processing Charges (APC/BPC)			X		
Open-source software			X		
Open education resources			X		
Open practices (methodologies, peer review, metrics, citations, etc.)			X		
FAIR (Findable, Accessible, Interoperable, Reusable)			X		
Intellectual property rights and copyright (IPR)		X			

13. Does your organization provide support and training in the following areas?					
	Yes	**No, but planned**	**No, not planned**	**Other**	**Don't know**
Repositories	X				
Research data (publishing of open data, FAIR, RDM plans, data protection, data curation, long-term preservation)	X				
Publishing platforms					X
PIDs (persistent identifiers, e.g. DOI, ORCID...)	X				
Licenses	X				
Intellectual property rights and copyright (IPR)	X				

Article/Book Processing Charges (APC/BPC)	X				
Open-source software	X				
Open education resources	X				
Open practices (methodologies, peer review, metrics, citations, etc.)	X				

14.	How does your organization provide support and training? Check all that apply
X	Website with resources and relevant information and Frequently Asked Questions
	Employment of experts for this purpose
X	Communication activities
	Other:

15.	Who are the target groups for the training? Check all that apply
X	Researchers and academic staff
X	Students
X	Librarians
	Research infrastructures providers
	SMEs
	Other:

16. What types of research outputs does your organization hold and create and who are intellectual property owners?

	Authors	Institution	Funder	Government	Joint ownership	None	Don't know
Publications							X
Data							X
Patents							X
Reports							X
Studies and trials							X
Technical guidelines							X
Grey literature							X

17. Open Science-related infrastructure used by your organization:						
	Already have inhouse	**Already have outsourced**	**Plans to have inhouse**	**Plans to have outsourced**	**No plans to setup**	**Don't know**
Institutional repository	X					
Institutional data repository					X	
Shared repository (multiple organizations in the same country)						X
Journal/monographs/conference publishing system	X					
CRIS (or CRIS-like) system	X					

Repository must support Dublic Core *and* OAI-PMH.

CRIS - Current Research Information System

18. If your organization has an institutional repository, provide its URL.
http://repository.usmf.md

19. If your organization has a data repository, provide its URL..
-

20.	How familiar are you with the concept of FAIR (Findable, Accessible, Interoperable, Reusable) regarding data?
	Very familiar
	Familiar
X	Not very familiar
	Not familiar at all

In order to be put in service of OS, research data must be easy to find, identify and contextualize. In 2016, the FAIR guiding principles for research data were published and they have since become the staple of all policy recommendations. In brief, FAIR means that research data must be supplied with rich metadata and persistent identifiers, deposited on a searchable platform that has open protocols for access and sharing, and assigned a license that clearly defines usage rights.

21.	What kind of digital objects do you use persistent identifiers for? Check all that apply
X	Scientific publications
	Datasets
	Files without metadata
	Files containing metadata
	Software

	Methods
	Protocols
	Metadata records
	Semantic artefacts (vocabularies, data models, concepts)
	Other:

22.	**Which identifiers are used in your community for these digital objects? Check all that apply**
X	DOI
	URN
X	Handle
	ARK
	PURL
	None
	Other:

23. Are versioning and changes in data objects in your organization clearly documented?

			X
Yes	Partly	No	Don't know

24. In your opinion, what particular areas of training, support or advice, researchers and support staff need in relation to making data FAIR?

	Much needed	Somewhat needed	Not needed
Stewardship of FAIR outputs (data, software)	X		
Training others (including doctoral candidates)	X		
Data analytics and statistical techniques	X		
Finding and reusing data		X	
Finding FAIR data repositories	X		
Raising awareness about FAIR principles	X		
Data wrangling	X		
Citing and acknowledging contributions	X		
Using or developing tools/services	X		
Sharing data (ethics, data protection)	X		
Costing and resourcing RDM in proposals	X		

Documenting data or code to make it FAIR	X		

RDM: Research Data Management (see: https://www.jisc.ac.uk/guides/how-and-why-you-should-manage-your-research-data)

25.	**How familiar are you with EOSC (European Open Science Cloud)?**
	Very familiar
	Familiar
X	Not very familiar
	Not familiar at all

The EOSC (https://www.eosc-portal.eu/) is a data infrastructure to support and develop open science and open innovation in Europe. It will federate existing resources across national data centres, European e-infrastructures and research infrastructures and provide common services to all users.

26. What kind of infrastructure would be the most useful for your research/work and how intensively would you use it?

	1-3 months	4-6 months	7-9 months	10-12 months	We wouldn't use	Don't know
High-performance computing clusters						X
High-throughput computing clusters				X		
Big data clusters (Hadoop-like clusters)				X		
Cloud virtual machines						X
Single server						X

27. Apart from the services you already have, which additional services would benefit the users in your organization?

- Modern repository software, VPN, publishing platforms

Examples: repository software, data anonymization tools, DMP tools, publishing platforms, VPN, etc.

28. What do you expect from EOSC?

- We expect the increasing quality of scientific research support, expanding open access to scientific information, and establishing relationships for scientific communication in the common interest

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MINERVA 2019-2023
Strengthening Research Management and Open Science Capacities of HEIs in Moldova and Armenia

IN-DEPTH ANALYSIS ON OPEN SCIENCE INFRASTRUCTURE AND POLICIES

Report - analyses level: University

P3 - Technical University of Moldova/TUM

Evaluation period: 15 January 2019 – 15 January 2021

Project Acronym:	**MINERVA**
Project full title:	STRENGTHENING RESEARCH MANAGEMENT AND OPEN SCIENCE CAPACITIES OF HEIS IN MOLDOVA AND ARMENIA
Project No:	597889-EPP-1-2018-1-MD-EPPKA2-CBHE-SP
Funding Scheme:	ERASMUS+
WP / Deliverable/ Action:	WP1/D1.2/ A1.2 – In-depth analysis on Open Science infrastructure and policies
Project partner (s)	P3-TUM
Place/ Date	ONLINE-1KA

Co-funded by the Erasmus+ Programme of the European Union

MINERVA 2019-2023
Strengthening Research Management and Open Science Capacities of HEIs in Moldova and Armenia

QUESTIONNAIRE
on current Open Science infrastructure and policies

Introduction

The designed questionnaire is a data collection tool aims to draw a complete picture of the different elements of the Open Science (OS) in Moldova and Armenia. The questionnaire will reflect the following issues:

1) Existing national legislatives and institutional incentives related to the implementation of open science principles in research and education;
2) Current open science practice and the registry of institutional open science repositories and related information infrastructures;
3) Mapping the situation regarding the awareness and knowledge of open science principles within academic community;
4) Prerequisites for building technical solutions for open science at universities.

1.A. Country where your organization is based:
Republic of Moldova

1.B. Existing national legislatives related to the implementation of open science principles:
1. National Roadmap for the integration of the Republic of Moldova in the European Research Area for the years 2019-2021 and the Action Plan on its implementation - were approved by Governmental Decision No 1081 on 08.11.2018, Priority 5. Optimal circulation, access to knowledge and its transfer; **2. Code on science and innovation No 259 of 15.07.2004, art. 54 (k), art. 57 (m), art. 79 (h),** **3. National Program in science and innovation for 2020-2023, priority Societal Challenges (2).**

2.A. Name of organization:
Academy of Economic Studies of Moldova

2.B. Existing institutional bylaws/ incentives related to the implementation of open science principles:
1. Institutional policy on open access to information, approved on January 2016 - http://library.utm.md/IRTUM/Politica_UTM_Accesul_Deschis.pdf **2. Regulation on organization and functioning of Institutional Repository, approved on January 2016 - http://library.utm.md/IRTUM/Regulament_IRTUM.pdf**

3	**How would you describe the main profile of your organization?**
	The ones that fund research (funders - national, international, private, policymakers, etc.)

X	The ones that perform research - CREATE (e.g. universities, research institutes, individual researchers, research communities, citizen scientists, data enthusiasts, etc.)
	The ones that perform research - SUPPORT (e.g. research infrastructures, e-infrastructures, service providers, libraries, etc.)
	The ones that "consume" research (e.g. research-intensive SMEs, citizens, etc.)
	OS facilitators (European, regional or national initiatives and individuals supporting OS)

If an organisation has multiple roles, please fill out the survey for each of your roles.

4.	**Which scientific domain does your organization belong/support/fund?**
X	Natural Sciences
X	Engineering and Technology
X	Information and Communication Technology
	Medical and Health Sciences
	Agricultural Sciences
X	Social Sciences
	Humanities
	None / not applicable

5.	**What is your position within the organization?**
X	Manager
	Senior researcher
	Research support staff
	Librarian
	Junior researcher
X	Other: Head of IT department

6. What is the total number of researchers (full-time equivalent, FTE), including doctoral candidates, working at your organisation?

			X		
1-50	51-100	101-200	201-300	301-500	>500

7. What are you supporting/funding?

Human resources	Projects	Hardware	Software	Operations	Infrastructures	Other:

8.	**What conditions should an e-infrastructure or research infrastructure meet in order to be supported/funded by your organization? Check all that apply**
	No condition
X	Discipline of users
X	Excellence based
X	Affiliation of users
X	Technology readiness of the proposal
	Other:

9.	**Do you have a roadmap of the infrastructures you already support or you want to maintain?**
X	Yes
	No
	I don't know

A roadmap is a strategic plan that defines a goal or desired outcome and includes the major steps or milestones needed to reach it. The term infrastructure refers to research infrastructures and e-infrastructures.

10.	**How do you invest in user support? Check all that apply**
X	Funding staff who provides support
X	Through an EC funding for infrastructure
X	Through an EC funding
	We do not invest in user support
	Other:

Explanation: *User support means guidance and assistance to relevant users. In case of funders, users are institutions, in case of service providers users are service users, in case of libraries users are researchers and other library users, etc.*

11.	**Is your organization performing research assessment for any of the following purposes:**
X	Careers in research
X	Performance evaluation of research units and/or allocation of funding
	Not applicable
	Don't know

12. Does your organization impose internal rules regarding the following aspects?					
	Mandatory for all	**Mandatory for some projects/groups**	**Encouraged but optional**	**No regulation**	**Not applicable**
Publication repositories		X			
Open data			X		
Data management plans				X	
Data protection in research data				X	
Publishing platforms			X		
PIDs (persistent identifiers, e.g. DOI, ORCID...)		X			
Long-term availability of research data				X	
Article/Book Processing Charges (APC/BPC)					X
Open-source software			X		
Open education resources			X		
Open practices (methodologies, peer review, metrics, citations, etc.)				X	
FAIR (Findable, Accessible, Interoperable, Reusable)			X		
Intellectual property rights and copyright (IPR)	X				

13. Does your organization provide support and training in the following areas?					
	Yes	**No, but planned**	**No, not planned**	**Other**	**Don't know**
Repositories	X				
Research data (publishing of open data, FAIR, RDM plans, data protection, data curation, long-term preservation)		X			
Publishing platforms		X			
PIDs (persistent identifiers, e.g. DOI, ORCID...)		X			
Licenses	X				
Intellectual property rights and copyright (IPR)	X				

Article/Book Processing Charges (APC/BPC)		X			
Open-source software		X			
Open education resources	X				
Open practices (methodologies, peer review, metrics, citations, etc.)		X			

14.	How does your organization provide support and training? Check all that apply
	Website with resources and relevant information and Frequently Asked Questions
X	Employment of experts for this purpose
X	Communication activities
	Other:

15.	Who are the target groups for the training? Check all that apply
X	Researchers and academic staff
	Students
X	Librarians
	Research infrastructures providers
X	SMEs
	Other:

16. What types of research outputs does your organization hold and create and who are intellectual property owners?

	Authors	Institution	Funder	Government	Joint ownership	None	Don't know
Publications							X
Data							X
Patents							X
Reports							X
Studies and trials							X
Technical guidelines							X
Grey literature							X

17. Open Science-related infrastructure used by your organization:						
	Already have inhouse	**Already have outsourced**	**Plans to have inhouse**	**Plans to have outsourced**	**No plans to setup**	**Don't know**
Institutional repository	X					
Institutional data repository					X	
Shared repository (multiple organizations in the same country)	X					
Journal/monographs/conference publishing system				X		
CRIS (or CRIS-like) system	X					

Repository must support Dublic Core *and* OAI-PMH.

CRIS - Current Research Information System

18. If your organization has an institutional repository, provide its URL.
http://repository.utm.md/

19. If your organization has a data repository, provide its URL..
-

20.	How familiar are you with the concept of FAIR (Findable, Accessible, Interoperable, Reusable) regarding data?
	Very familiar
X	Familiar
	Not very familiar
	Not familiar at all

In order to be put in service of OS, research data must be easy to find, identify and contextualize. In 2016, the FAIR guiding principles for research data were published and they have since become the staple of all policy recommendations. In brief, FAIR means that research data must be supplied with rich metadata and persistent identifiers, deposited on a searchable platform that has open protocols for access and sharing, and assigned a license that clearly defines usage rights.

21.	What kind of digital objects do you use persistent identifiers for? Check all that apply
X	Scientific publications
	Datasets
	Files without metadata
	Files containing metadata
	Software

	Methods
	Protocols
	Metadata records
	Semantic artefacts (vocabularies, data models, concepts)
	Other:

22.	**Which identifiers are used in your community for these digital objects? Check all that apply**
X	DOI
	URN
	Handle
	ARK
	PURL
	None
	Other:

23. Are versioning and changes in data objects in your organization clearly documented?			
		X	
Yes	Partly	No	Don't know

24. In your opinion, what particular areas of training, support or advice, researchers and support staff need in relation to making data FAIR?			
	Much needed	**Somewhat needed**	**Not needed**
Stewardship of FAIR outputs (data, software)	X		
Training others (including doctoral candidates)	X		
Data analytics and statistical techniques	X		
Finding and reusing data	X		
Finding FAIR data repositories	X		
Raising awareness about FAIR principles	X		
Data wrangling	X		
Citing and acknowledging contributions	X		
Using or developing tools/services	X		
Sharing data (ethics, data protection)	X		
Costing and resourcing RDM in proposals	X		

Documenting data or code to make it FAIR	X		

RDM: Research Data Management (see: https://www.jisc.ac.uk/guides/how-and-why-you-should-manage-your-research-data)

25.	**How familiar are you with EOSC (European Open Science Cloud)?**
	Very familiar
	Familiar
X	Not very familiar
	Not familiar at all

The EOSC (https://www.eosc-portal.eu/) is a data infrastructure to support and develop open science and open innovation in Europe. It will federate existing resources across national data centres, European e-infrastructures and research infrastructures and provide common services to all users.

26. What kind of infrastructure would be the most useful for your research/work and how intensively would you use it?

	1-3 months	4-6 months	7-9 months	10-12 months	We wouldn't use	Don't know
High-performance computing clusters				X		
High-throughput computing clusters				X		
Big data clusters (Hadoop-like clusters)				X		
Cloud virtual machines				X		
Single server						X

27. Apart from the services you already have, which additional services would benefit the users in your organization?

-

Examples: repository software, data anonymization tools, DMP tools, publishing platforms, VPN, etc.

28. What do you expect from EOSC?

- To be more visible at European level

Co-funded by the Erasmus+ Programme of the European Union

MINERVA 2019-2023
Strengthening Research Management and Open Science Capacities of HEIs in Moldova and Armenia

IN-DEPTH ANALYSIS ON OPEN SCIENCE INFRASTRUCTURE AND POLICIES

Report - analyses level: University

P4 - Rectors Council of the Republic of Moldova/ULIM

Evaluation period: 15 January 2019 – 15 January 2021

Project Acronym:	**MINERVA**
Project full title:	STRENGTHENING RESEARCH MANAGEMENT AND OPEN SCIENCE CAPACITIES OF HEIS IN MOLDOVA AND ARMENIA
Project No:	597889-EPP-1-2018-1-MD-EPPKA2-CBHE-SP
Funding Scheme:	ERASMUS+
WP / Deliverable/ Action:	WP1/D1.2/ A1.2 – In-depth analysis on Open Science infrastructure and policies
Project partner (s)	P4-RC
Place/ Date	ONLINE-1KA

Co-funded by the Erasmus+ Programme of the European Union

MINERVA 2019-2023
Strengthening Research Management and Open Science Capacities of HEIs in Moldova and Armenia

QUESTIONNAIRE
on current Open Science infrastructure and policies

Introduction

The designed questionnaire is a data collection tool aims to draw a complete picture of the different elements of the Open Science (OS) in Moldova and Armenia. The questionnaire will reflect the following issues:

1) Existing national legislatives and institutional incentives related to the implementation of open science principles in research and education;
2) Current open science practice and the registry of institutional open science repositories and related information infrastructures;
3) Mapping the situation regarding the awareness and knowledge of open science principles within academic community;
4) Prerequisites for building technical solutions for open science at universities.

1.A. Country where your organization is based:
Republic of Moldova

1.B. Existing national legislatives related to the implementation of open science principles:
National Roadmap for the integration of the RM in the European Research Area for the years 2019-2021 and the Action Plan on its implementation, approved by Government Decision No 0081 from 08.11.2018

2.A. Name of organization:
Free International University of Moldova

2.B. Existing institutional bylaws/ incentives related to the implementation of open science principles:
• **Institutional Policy on Open Access approved by the ULIM Senate on April 16, 2014.** • **ULIM Institutional Policy authorizing open access to the results of scientific research, was registered in the Registry of Open Access Repository Mandates and Policies (ROARMAP).** • **Regulation on the organization and operation of Institutional Repository of ULIM approved in 2016.** • **Implementing DSpace software;** • **Digital repository available on ULIM library page since 2017 - Signing in 2020 the declaration of commitment - the EURAXESS Service Network**

3	How would you describe the main profile of your organization?
	The ones that fund research (funders - national, international, private, policymakers, etc.)
X	The ones that perform research - CREATE (e.g. universities, research institutes, individual researchers, research communities, citizen scientists, data enthusiasts, etc.)
X	The ones that perform research - SUPPORT (e.g. research infrastructures, e-infrastructures, service providers, libraries, etc.)
	The ones that "consume" research (e.g. research-intensive SMEs, citizens, etc.)
X	OS facilitators (European, regional or national initiatives and individuals supporting OS)

If an organisation has multiple roles, please fill out the survey for each of your roles.

4.	Which scientific domain does your organization belong/support/fund?
	Natural Sciences
	Engineering and Technology
X	Information and Communication Technology
	Medical and Health Sciences
	Agricultural Sciences
X	Social Sciences
X	Humanities
	None / not applicable

5.	What is your position within the organization?
X	Manager
	Senior researcher
	Research support staff
	Librarian
	Junior researcher
	Other: Head of IT department

6. What is the total number of researchers (full-time equivalent, FTE), including doctoral candidates, working at your organisation?

		X			
1-50	51-100	101-200	201-300	301-500	>500

7. What are you supporting/funding?

X	X	X	X		X	
Human resources	Projects	Hardware	Software	Operations	Infrastructures	Other:

8.	**What conditions should an e-infrastructure or research infrastructure meet in order to be supported/funded by your organization? Check all that apply**
	No condition
	Discipline of users
X	Excellence based
X	Affiliation of users
	Technology readiness of the proposal
	Other:

9.	**Do you have a roadmap of the infrastructures you already support or you want to maintain?**
X	Yes
	No
	I don't know

A roadmap is a strategic plan that defines a goal or desired outcome and includes the major steps or milestones needed to reach it. The term infrastructure refers to research infrastructures and e-infrastructures.

10.	**How do you invest in user support? Check all that apply**
	Funding staff who provides support
X	Through an EC funding for infrastructure
X	Through an EC funding
	We do not invest in user support
	Other:

Explanation: *User support means guidance and assistance to relevant users. In case of funders, users are institutions, in case of service providers users are service users, in case of libraries users are researchers and other library users, etc.*

11.	**Is your organization performing research assessment for any of the following purposes:**
	Careers in research
X	Performance evaluation of research units and/or allocation of funding
	Not applicable
	Don't know

12. Does your organization impose internal rules regarding the following aspects?					
	Mandatory for all	**Mandatory for some projects/groups**	**Encouraged but optional**	**No regulation**	**Not applicable**
Publication repositories		X			
Open data			X		
Data management plans		X			
Data protection in research data	X				
Publishing platforms		X			
PIDs (persistent identifiers, e.g. DOI, ORCID...)	X				
Long-term availability of research data		X			
Article/Book Processing Charges (APC/BPC)		X			
Open-source software		X			
Open education resources		X			
Open practices (methodologies, peer review, metrics, citations, etc.)	X				
FAIR (Findable, Accessible, Interoperable, Reusable)		X			
Intellectual property rights and copyright (IPR)	X				

13. Does your organization provide support and training in the following areas?					
	Yes	**No, but planned**	**No, not planned**	**Other**	**Don't know**
Repositories					
Research data (publishing of open data, FAIR, RDM plans, data protection, data curation, long-term preservation)					
Publishing platforms					
PIDs (persistent identifiers, e.g. DOI, ORCID...)					
Licenses					
Intellectual property rights and copyright (IPR)					

Article/Book Processing Charges (APC/BPC)					
Open-source software					
Open education resources					
Open practices (methodologies, peer review, metrics, citations, etc.)					

14.	How does your organization provide support and training? Check all that apply
X	Website with resources and relevant information and Frequently Asked Questions
	Employment of experts for this purpose
X	Communication activities
	Other:

15.	Who are the target groups for the training? Check all that apply
X	Researchers and academic staff
X	Students
X	Librarians
	Research infrastructures providers
	SMEs
	Other:

16. What types of research outputs does your organization hold and create and who are intellectual property owners?

	Authors	Institution	Funder	Government	Joint ownership	None	Don't know
Publications							X
Data							X
Patents							X
Reports							X
Studies and trials							X
Technical guidelines							X
Grey literature							X

17. Open Science-related infrastructure used by your organization:						
	Already have inhouse	**Already have outsourced**	**Plans to have inhouse**	**Plans to have outsourced**	**No plans to setup**	**Don't know**
Institutional repository	X					
Institutional data repository					X	
Shared repository (multiple organizations in the same country)						X
Journal/monographs/conference publishing system	X					
CRIS (or CRIS-like) system	X					

Repository must support Dublic Core *and* OAI-PMH.

CRIS - Current Research Information System

18. If your organization has an institutional repository, provide its URL.
http://repository.usmf.md

19. If your organization has a data repository, provide its URL..
-

20.	How familiar are you with the concept of FAIR (Findable, Accessible, Interoperable, Reusable) regarding data?
	Very familiar
	Familiar
X	Not very familiar
	Not familiar at all

In order to be put in service of OS, research data must be easy to find, identify and contextualize. In 2016, the FAIR guiding principles for research data were published and they have since become the staple of all policy recommendations. In brief, FAIR means that research data must be supplied with rich metadata and persistent identifiers, deposited on a searchable platform that has open protocols for access and sharing, and assigned a license that clearly defines usage rights.

21.	What kind of digital objects do you use persistent identifiers for? Check all that apply
X	Scientific publications
	Datasets
	Files without metadata
	Files containing metadata
	Software
	Methods

	Protocols
	Metadata records
	Semantic artefacts (vocabularies, data models, concepts)
	Other:

22.	**Which identifiers are used in your community for these digital objects? Check all that apply**
X	DOI
	URN
X	Handle
	ARK
	PURL
	None
	Other:

23. Are versioning and changes in data objects in your organization clearly documented?

			X
Yes	Partly	No	Don't know

24. In your opinion, what particular areas of training, support or advice, researchers and support staff need in relation to making data FAIR?

	Much needed	Somewhat needed	Not needed
Stewardship of FAIR outputs (data, software)	X		
Training others (including doctoral candidates)	X		
Data analytics and statistical techniques	X		
Finding and reusing data		X	
Finding FAIR data repositories	X		
Raising awareness about FAIR principles	X		
Data wrangling	X		
Citing and acknowledging contributions	X		
Using or developing tools/services	X		
Sharing data (ethics, data protection)	X		
Costing and resourcing RDM in proposals	X		
Documenting data or code to make it FAIR	X		

RDM: Research Data Management (see: https://www.jisc.ac.uk/guides/how-and-why-you-should-manage-your-research-data)

	25. How familiar are you with EOSC (European Open Science Cloud)?
	Very familiar
	Familiar
X	Not very familiar
	Not familiar at all

The EOSC (https://www.eosc-portal.eu/) is a data infrastructure to support and develop open science and open innovation in Europe. It will federate existing resources across national data centres, European e-infrastructures and research infrastructures and provide common services to all users.

26. What kind of infrastructure would be the most useful for your research/work and how intensively would you use it?

	1-3 months	4-6 months	7-9 months	10-12 months	We wouldn't use	Don't know
High-performance computing clusters						X
High-throughput computing clusters				X		
Big data clusters (Hadoop-like clusters)				X		
Cloud virtual machines						X
Single server						X

27. Apart from the services you already have, which additional services would benefit the users in your organization?

- Modern repository software, VPN, publishing platforms

Examples: repository software, data anonymization tools, DMP tools, publishing platforms, VPN, etc.

28. What do you expect from EOSC?

- We expect the increasing quality of scientific research support, expanding open access to scientific information, and establishing relationships for scientific communication in the common interest

Co-funded by the Erasmus+ Programme of the European Union

MINERVA 2019-2023
Strengthening Research Management and Open Science Capacities of HEIs in Moldova and Armenia

IN-DEPTH ANALYSIS ON OPEN SCIENCE INFRASTRUCTURE AND POLICIES

Report - analyses level: University

P6 - Yerevan State Medical University named after M. Heratsi / YSMU

Evaluation period: 15 January 2019 – 15 January 2021

Project Acronym:	**MINERVA**
Project full title:	STRENGTHENING RESEARCH MANAGEMENT AND OPEN SCIENCE CAPACITIES OF HEIS IN MOLDOVA AND ARMENIA
Project No:	597889-EPP-1-2018-1-MD-EPPKA2-CBHE-SP
Funding Scheme:	ERASMUS+
WP / Deliverable/ Action:	WP1/D1.2/ A1.2 – In-depth analysis on Open Science infrastructure and policies
Project partner (s)	P6-YSMU
Place/ Date	ONLINE-1KA

Co-funded by the Erasmus+ Programme of the European Union

MINERVA 2019-2023
Strengthening Research Management and Open Science Capacities of HEIs in Moldova and Armenia

QUESTIONNAIRE
on current Open Science infrastructure and policies

Introduction

The designed questionnaire is a data collection tool aims to draw a complete picture of the different elements of the Open Science (OS) in Moldova and Armenia. The questionnaire will reflect the following issues:

1) Existing national legislatives and institutional incentives related to the implementation of open science principles in research and education;
2) Current open science practice and the registry of institutional open science repositories and related information infrastructures;
3) Mapping the situation regarding the awareness and knowledge of open science principles within academic community;
4) Prerequisites for building technical solutions for open science at universities.

1.A. Country where your organization is based:
Armenia

1.B. Existing national legislatives related to the implementation of open science principles:
Law of the Republic of Armenia About scientific and scientific and technical activities

2.A. Name of organization:
Yerevan State Medical University

2.B. Existing institutional bylaws/ incentives related to the implementation of open science principles:
• **"RESEARCH DEVELOPMENT STRATEGY AND POLICY 2015-2020", confirmed by the Research Council, decision N2, 11.11.2015** • **"YSMU RESEARCH DEVELOPMENT VISION 2018-2028/38" confirmed by the University Scientific Council session N3, 28.03.2018.**

3	**How would you describe the main profile of your organization?**
	The ones that fund research (funders - national, international, private, policymakers, etc.)
X	The ones that perform research - CREATE (e.g. universities, research institutes, individual researchers, research communities, citizen scientists, data enthusiasts, etc.)

	The ones that perform research - SUPPORT (e.g. research infrastructures, e-infrastructures, service providers, libraries, etc.)
	The ones that "consume" research (e.g. research-intensive SMEs, citizens, etc.)
	OS facilitators (European, regional or national initiatives and individuals supporting OS)

If an organisation has multiple roles, please fill out the survey for each of your roles.

4.	**Which scientific domain does your organization belong/support/fund?**
	Natural Sciences
	Engineering and Technology
	Information and Communication Technology
X	Medical and Health Sciences
	Agricultural Sciences
	Social Sciences
	Humanities
	None / not applicable

5.	**What is your position within the organization?**
X	Manager
	Senior researcher
	Research support staff
	Librarian
	Junior researcher
	Other: Head of IT department

6. What is the total number of researchers (full-time equivalent, FTE), including doctoral candidates, working at your organisation?

		X			
1-50	51-100	101-200	201-300	301-500	>500

7. What are you supporting/funding?

	X				X	
Human resources	Projects	Hardware	Software	Operations	Infrastructures	Other:

	8. What conditions should an e-infrastructure or research infrastructure meet in order to be supported/funded by your organization? Check all that apply
	No condition
	Discipline of users
X	Excellence based
	Affiliation of users
X	Technology readiness of the proposal
	Other:

	9. Do you have a roadmap of the infrastructures you already support or you want to maintain?
X	Yes
	No
	I don't know

A roadmap is a strategic plan that defines a goal or desired outcome and includes the major steps or milestones needed to reach it. The term infrastructure refers to research infrastructures and e-infrastructures.

	10. How do you invest in user support? Check all that apply
	Funding staff who provides support
X	Through an EC funding for infrastructure
	Through an EC funding
	We do not invest in user support
X	Other: Government funding

Explanation: *User support means guidance and assistance to relevant users. In case of funders, users are institutions, in case of service providers users are service users, in case of libraries users are researchers and other library users, etc.*

	11. Is your organization performing research assessment for any of the following purposes:
X	Careers in research
X	Performance evaluation of research units and/or allocation of funding
	Not applicable
	Don't know

12. Does your organization impose internal rules regarding the following aspects?					
	Mandatory for all	**Mandatory for some projects/groups**	**Encouraged but optional**	**No regulation**	**Not applicable**
Publication repositories		X			
Open data				X	
Data management plans		X			
Data protection in research data		X			
Publishing platforms			X		
PIDs (persistent identifiers, e.g. DOI, ORCID...)			X		
Long-term availability of research data			X		
Article/Book Processing Charges (APC/BPC)		X			
Open-source software		X			
Open education resources			X		
Open practices (methodologies, peer review, metrics, citations, etc.)		X			
FAIR (Findable, Accessible, Interoperable, Reusable)	X				
Intellectual property rights and copyright (IPR)	X				

13. Does your organization provide support and training in the following areas?					
	Yes	**No, but planned**	**No, not planned**	**Other**	**Don't know**
Repositories		X			
Research data (publishing of open data, FAIR, RDM plans, data protection, data curation, long-term preservation)		X			
Publishing platforms	X				
PIDs (persistent identifiers, e.g. DOI, ORCID...)		X			
Licenses			X		
Intellectual property rights and copyright (IPR)	X				

Article/Book Processing Charges (APC/BPC)			X		
Open-source software			X		
Open education resources	X				
Open practices (methodologies, peer review, metrics, citations, etc.)		X			

14.	How does your organization provide support and training? Check all that apply
X	Website with resources and relevant information and Frequently Asked Questions
X	Employment of experts for this purpose
X	Communication activities
	Other:

15.	Who are the target groups for the training? Check all that apply
X	Researchers and academic staff
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	Librarians
	Research infrastructures providers
	SMEs
	Other:

16. What types of research outputs does your organization hold and create and who are intellectual property owners?

	Authors	Institution	Funder	Government	Joint ownership	None	Don't know
Publications	X	X	X				
Data		X			X		
Patents	-	-	-	-	-	-	-
Reports		X		X			
Studies and trials			X				
Technical guidelines	-	-	-	-	-	-	-
Grey literature	-	-	-	-	-	-	-

17. Open Science-related infrastructure used by your organization:						
	Already have inhouse	**Already have outsourced**	**Plans to have inhouse**	**Plans to have outsourced**	**No plans to setup**	**Don't know**
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Repository must support Dublic Core *and* OAI-PMH.

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-

19. If your organization has a data repository, provide its URL..
-

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	Very familiar
X	Familiar
	Not very familiar
	Not familiar at all

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	Semantic artefacts (vocabularies, data models, concepts)
	Other:

22.	**Which identifiers are used in your community for these digital objects? Check all that apply**
X	DOI
	URN
	Handle
	ARK
	PURL
	None
	Other:

23. Are versioning and changes in data objects in your organization clearly documented?

	X		X
Yes	Partly	No	Don't know

24. In your opinion, what particular areas of training, support or advice, researchers and support staff need in relation to making data FAIR?

	Much needed	**Somewhat needed**	**Not needed**
Stewardship of FAIR outputs (data, software)	X		
Training others (including doctoral candidates)		X	
Data analytics and statistical techniques		X	
Finding and reusing data		X	
Finding FAIR data repositories		X	
Raising awareness about FAIR principles	X		
Data wrangling			X
Citing and acknowledging contributions			
Using or developing tools/services	X		
Sharing data (ethics, data protection)		X	
Costing and resourcing RDM in proposals	X		
Documenting data or code to make it FAIR	X		

RDM: Research Data Management (see: https://www.jisc.ac.uk/guides/how-and-why-you-should-manage-your-research-data)

25.	**How familiar are you with EOSC (European Open Science Cloud)?**
	Very familiar
X	Familiar
	Not very familiar
	Not familiar at all

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26. What kind of infrastructure would be the most useful for your research/work and how intensively would you use it?

	1-3 months	4-6 months	7-9 months	10-12 months	We wouldn't use	Don't know
High-performance computing clusters						
High-throughput computing clusters						
Big data clusters (Hadoop-like clusters)						
Cloud virtual machines			X			
Single server		X				

27. Apart from the services you already have, which additional services would benefit the users in your organization?

- Repository software, DMP tools

Examples: repository software, data anonymization tools, DMP tools, publishing platforms, VPN, etc.

28. What do you expect from EOSC?

- Openness of research results, integration into the European Research Area, active communication/cooperation with researchers, exchange of experience, sustainable growth through continuous trainings.

Co-funded by the Erasmus+ Programme of the European Union

MINERVA 2019-2023
Strengthening Research Management and Open Science Capacities of HEIs in Moldova and Armenia

IN-DEPTH ANALYSIS ON OPEN SCIENCE INFRASTRUCTURE AND POLICIES

Report - analyses level: University

P7 - Armenian State University of Economics/ASUE

Evaluation period: 15 January 2019 – 15 January 2021

Project Acronym:	**MINERVA**
Project full title:	STRENGTHENING RESEARCH MANAGEMENT AND OPEN SCIENCE CAPACITIES OF HEIS IN MOLDOVA AND ARMENIA
Project No:	597889-EPP-1-2018-1-MD-EPPKA2-CBHE-SP
Funding Scheme:	ERASMUS+
WP / Deliverable/ Action:	WP1/D1.2/ A1.2 – In-depth analysis on Open Science infrastructure and policies
Project partner (s)	P7-ASUE
Place/ Date	ONLINE-1KA

Co-funded by the Erasmus+ Programme of the European Union

MINERVA 2019-2023
Strengthening Research Management and Open Science Capacities of HEIs in Moldova and Armenia

QUESTIONNAIRE
on current Open Science infrastructure and policies

Introduction

The designed questionnaire is a data collection tool aims to draw a complete picture of the different elements of the Open Science (OS) in Moldova and Armenia. The questionnaire will reflect the following issues:

1) Existing national legislatives and institutional incentives related to the implementation of open science principles in research and education;
2) Current open science practice and the registry of institutional open science repositories and related information infrastructures;
3) Mapping the situation regarding the awareness and knowledge of open science principles within academic community;
4) Prerequisites for building technical solutions for open science at universities.

1.A. Country where your organization is based:
Armenia

1.B. Existing national legislatives related to the implementation of open science principles:
Law on Education, **The Law of Armenia on Higher and Postgraduate Vocational Education**

2.A. Name of organization:
Armenian State University of Economics

2.B. Existing institutional bylaws/ incentives related to the implementation of open science principles:
• **2020-2024 - Strategic program for the development of research activities of the University**

3	**How would you describe the main profile of your organization?**
	The ones that fund research (funders - national, international, private, policymakers, etc.)
	The ones that perform research - CREATE (e.g. universities, research institutes, individual researchers, research communities, citizen scientists, data enthusiasts, etc.)
X	The ones that perform research - SUPPORT (e.g. research infrastructures, e-infrastructures, service providers, libraries, etc.)
	The ones that "consume" research (e.g. research-intensive SMEs, citizens, etc.)

	OS facilitators (European, regional or national initiatives and individuals supporting OS)

If an organisation has multiple roles, please fill out the survey for each of your roles.

4.	**Which scientific domain does your organization belong/support/fund?**
X	Natural Sciences
	Engineering and Technology
	Information and Communication Technology
	Medical and Health Sciences
	Agricultural Sciences
	Social Sciences
	Humanities
	None / not applicable

5.	**What is your position within the organization?**
	Manager
	Senior researcher
	Research support staff
X	Librarian
	Junior researcher
	Other: Head of IT department

6. **What is the total number of researchers (full-time equivalent, FTE), including doctoral candidates, working at your organisation?**					
-	-	-	-	-	-
1-50	51-100	101-200	201-300	301-500	>500

7. **What are you supporting/funding?**						
-	-	-	-	-	-	-
Human resources	Projects	Hardware	Software	Operations	Infrastructures	Other:

8.	**What conditions should an e-infrastructure or research infrastructure meet in order to be supported/funded by your organization? Check all that apply**
	No condition
X	Discipline of users
	Excellence based
	Affiliation of users

	Technology readiness of the proposal
	Other:

9.	**Do you have a roadmap of the infrastructures you already support or you want to maintain?**
	Yes
X	No
	I don't know

A roadmap is a strategic plan that defines a goal or desired outcome and includes the major steps or milestones needed to reach it. The term infrastructure refers to research infrastructures and e-infrastructures.

10.	**How do you invest in user support? Check all that apply**
	Funding staff who provides support
	Through an EC funding for infrastructure
	Through an EC funding
X	We do not invest in user support
	Other:

Explanation: *User support means guidance and assistance to relevant users. In case of funders, users are institutions, in case of service providers users are service users, in case of libraries users are researchers and other library users, etc.*

11.	**Is your organization performing research assessment for any of the following purposes:**
	Careers in research
	Performance evaluation of research units and/or allocation of funding
	Not applicable
X	Don't know

12. Does your organization impose internal rules regarding the following aspects?

	Mandatory for all	**Mandatory for some projects/groups**	**Encouraged but optional**	**No regulation**	**Not applicable**
Publication repositories	X				
Open data		X			
Data management plans			X		
Data protection in research data	X				
Publishing platforms	X				
PIDs (persistent identifiers, e.g. DOI, ORCID...)	X				

Long-term availability of research data		X			
Article/Book Processing Charges (APC/BPC)	X				
Open-source software	X				
Open education resources	X				
Open practices (methodologies, peer review, metrics, citations, etc.)		X			
FAIR (Findable, Accessible, Interoperable, Reusable)	X				
Intellectual property rights and copyright (IPR)	X				

13. Does your organization provide support and training in the following areas?					
	Yes	**No, but planned**	**No, not planned**	**Other**	**Don't know**
Repositories		X			
Research data (publishing of open data, FAIR, RDM plans, data protection, data curation, long-term preservation)		X			
Publishing platforms	X				
PIDs (persistent identifiers, e.g. DOI, ORCID...)		X			
Licenses		X			
Intellectual property rights and copyright (IPR)		X			
Article/Book Processing Charges (APC/BPC)		X			
Open-source software		X			
Open education resources	X				
Open practices (methodologies, peer review, metrics, citations, etc.)		X			

14.	**How does your organization provide support and training? Check all that apply**
X	Website with resources and relevant information and Frequently Asked Questions
	Employment of experts for this purpose
	Communication activities

	Other:

15.	Who are the target groups for the training? Check all that apply
X	Researchers and academic staff
X	Students
X	Librarians
	Research infrastructures providers
	SMEs
	Other:

16. What types of research outputs does your organization hold and create and who are intellectual property owners?

	Authors	Institution	Funder	Government	Joint ownership	None	Don't know
Publications	-	-	-	-	-	-	-
Data	-	-	-	-	-	-	-
Patents	-	-	-	-	-	-	-
Reports	-	-	-	-	-	-	-
Studies and trials	-	-	-	-	-	-	-
Technical guidelines	-	-	-	-	-	-	-
Grey literature	-	-	-	-	-	-	-

17. Open Science-related infrastructure used by your organization:

	Already have inhouse	Already have outsourced	Plans to have inhouse	Plans to have outsourced	No plans to setup	Don't know
Institutional repository	-	-	-	-	-	-
Institutional data repository		X				
Shared repository (multiple organizations in the same country)	-	-	-	-	-	-
Journal/monographs/conference publishing system	-	-	-	-	-	-
CRIS (or CRIS-like) system	-	-	-	-	-	-

Repository must support Dublic Core *and* OAI-PMH.

CRIS - Current Research Information System

18. If your organization has an institutional repository, provide its URL.
Not yet

19. If your organization has a data repository, provide its URL..
http://library.asue.am/

20.	How familiar are you with the concept of FAIR (Findable, Accessible, Interoperable, Reusable) regarding data?
	Very familiar
X	Familiar
	Not very familiar
	Not familiar at all

In order to be put in service of OS, research data must be easy to find, identify and contextualize. In 2016, the FAIR guiding principles for research data were published and they have since become the staple of all policy recommendations. In brief, FAIR means that research data must be supplied with rich metadata and persistent identifiers, deposited on a searchable platform that has open protocols for access and sharing, and assigned a license that clearly defines usage rights.

21.	What kind of digital objects do you use persistent identifiers for? Check all that apply
X	Scientific publications
	Datasets
	Files without metadata
	Files containing metadata
	Software
	Methods
	Protocols
	Metadata records
	Semantic artefacts (vocabularies, data models, concepts)
	Other:

22.	Which identifiers are used in your community for these digital objects? Check all that apply
	DOI
X	URN
	Handle
	ARK
	PURL
	None
	Other:

23. Are versioning and changes in data objects in your organization clearly documented?			
X			
Yes	Partly	No	Don't know

24. In your opinion, what particular areas of training, support or advice, researchers and support staff need in relation to making data FAIR?			
	Much needed	**Somewhat needed**	**Not needed**
Stewardship of FAIR outputs (data, software)	-	-	-
Training others (including doctoral candidates)	X	-	-
Data analytics and statistical techniques	X		
Finding and reusing data	-	-	-
Finding FAIR data repositories	-	-	-
Raising awareness about FAIR principles	-	-	-
Data wrangling	-	-	-
Citing and acknowledging contributions	-	-	-
Using or developing tools/services	-	-	-
Sharing data (ethics, data protection)	-	-	-
Costing and resourcing RDM in proposals	-	-	-
Documenting data or code to make it FAIR	-	-	-

RDM: Research Data Management (see: https://www.jisc.ac.uk/guides/how-and-why-you-should-manage-your-research-data)

25.	How familiar are you with EOSC (European Open Science Cloud)?
	Very familiar
X	Familiar
	Not very familiar
	Not familiar at all

The EOSC (https://www.eosc-portal.eu/) is a data infrastructure to support and develop open science and open innovation in Europe. It will federate existing resources across national data centres, European e-infrastructures and research infrastructures and provide common services to all users.

26. What kind of infrastructure would be the most useful for your research/work and how intensively would you use it?

	1-3 months	4-6 months	7-9 months	10-12 months	We wouldn't use	Don't know
High-performance computing clusters	-	-	-	-	-	-
High-throughput computing clusters	-	-	-	-	-	-
Big data clusters (Hadoop-like clusters)	-	-	-	-	-	-
Cloud virtual machines	-	-	-	-	-	-
Single server				X		

27. Apart from the services you already have, which additional services would benefit the users in your organization?

- Joint scientific repository

Examples: repository software, data anonymization tools, DMP tools, publishing platforms, VPN, etc.

28. What do you expect from EOSC?

- Scientific and technical assistance.

Co-funded by the Erasmus+ Programme of the European Union

MINERVA 2019-2023
Strengthening Research Management and Open Science Capacities of HEIs in Moldova and Armenia

IN-DEPTH ANALYSIS ON OPEN SCIENCE INFRASTRUCTURE AND POLICIES

Report - analyses level: University

P8 - Yerevan State University/YSU

Evaluation period: 15 January 2019 – 15 January 2021

Project Acronym:	**MINERVA**
Project full title:	STRENGTHENING RESEARCH MANAGEMENT AND OPEN SCIENCE CAPACITIES OF HEIS IN MOLDOVA AND ARMENIA
Project No:	597889-EPP-1-2018-1-MD-EPPKA2-CBHE-SP
Funding Scheme:	ERASMUS+
WP / Deliverable/ Action:	WP1/D1.2/ A1.2 – In-depth analysis on Open Science infrastructure and policies
Project partner (s)	P8-YSU
Place/ Date	ONLINE-1KA

Co-funded by the Erasmus+ Programme of the European Union

MINERVA 2019-2023
Strengthening Research Management and Open Science Capacities of HEIs in Moldova and Armenia

QUESTIONNAIRE
on current Open Science infrastructure and policies

Introduction

The designed questionnaire is a data collection tool aims to draw a complete picture of the different elements of the Open Science (OS) in Moldova and Armenia. The questionnaire will reflect the following issues:

1) Existing national legislatives and institutional incentives related to the implementation of open science principles in research and education;
2) Current open science practice and the registry of institutional open science repositories and related information infrastructures;
3) Mapping the situation regarding the awareness and knowledge of open science principles within academic community;
4) Prerequisites for building technical solutions for open science at universities.

1.A. Country where your organization is based:
Armenia

1.B. Existing national legislatives related to the implementation of open science principles:
The Law on The Higher Education and Science of the Republic of Armenia

2.A. Name of organization:
Yerevan State University

2.B. Existing institutional bylaws/ incentives related to the implementation of open science principles:
• **OJS system** • **CROSSREF systen**

3	**How would you describe the main profile of your organization?**
	The ones that fund research (funders - national, international, private, policymakers, etc.)
X	The ones that perform research - CREATE (e.g. universities, research institutes, individual researchers, research communities, citizen scientists, data enthusiasts, etc.)
	The ones that perform research - SUPPORT (e.g. research infrastructures, e-infrastructures, service providers, libraries, etc.)

	The ones that "consume" research (e.g. research-intensive SMEs, citizens, etc.)
	OS facilitators (European, regional or national initiatives and individuals supporting OS)

If an organisation has multiple roles, please fill out the survey for each of your roles.

4.	**Which scientific domain does your organization belong/support/fund?**
X	Natural Sciences
X	Engineering and Technology
X	Information and Communication Technology
	Medical and Health Sciences
	Agricultural Sciences
X	Social Sciences
X	Humanities
	None / not applicable

5.	**What is your position within the organization?**
	Manager
	Senior researcher
	Research support staff
	Librarian
	Junior researcher
X	Other: Head of Scientific Policy Department

6. What is the total number of researchers (full-time equivalent, FTE), including doctoral candidates, working at your organisation?

					X
1-50	51-100	101-200	201-300	301-500	>500

7. What are you supporting/funding?

-	-	-	-	-	-	-
Human resources	Projects	Hardware	Software	Operations	Infrastructures	Other:

8.	**What conditions should an e-infrastructure or research infrastructure meet in order to be supported/funded by your organization? Check all that apply**
	No condition
X	Discipline of users
	Excellence based

	Affiliation of users
X	Technology readiness of the proposal
	Other:

9.	**Do you have a roadmap of the infrastructures you already support or you want to maintain?**
X	Yes
	No
	I don't know

A roadmap is a strategic plan that defines a goal or desired outcome and includes the major steps or milestones needed to reach it. The term infrastructure refers to research infrastructures and e-infrastructures.

10.	**How do you invest in user support? Check all that apply**
X	Funding staff who provides support
	Through an EC funding for infrastructure
	Through an EC funding
	We do not invest in user support
	Other:

Explanation: *User support means guidance and assistance to relevant users. In case of funders, users are institutions, in case of service providers users are service users, in case of libraries users are researchers and other library users, etc.*

11.	**Is your organization performing research assessment for any of the following purposes:**
X	Careers in research
	Performance evaluation of research units and/or allocation of funding
	Not applicable
	Don't know

12. Does your organization impose internal rules regarding the following aspects?

	Mandatory for all	**Mandatory for some projects/groups**	**Encouraged but optional**	**No regulation**	**Not applicable**
Publication repositories		X			
Open data		X			
Data management plans		X			
Data protection in research data		X			
Publishing platforms	X				

PIDs (persistent identifiers, e.g. DOI, ORCID...)		X			
Long-term availability of research data		X			
Article/Book Processing Charges (APC/BPC)		X			
Open-source software	X				
Open education resources	X				
Open practices (methodologies, peer review, metrics, citations, etc.)	X				
FAIR (Findable, Accessible, Interoperable, Reusable)	X				
Intellectual property rights and copyright (IPR)	X				

13. Does your organization provide support and training in the following areas?					
	Yes	**No, but planned**	**No, not planned**	**Other**	**Don't know**
Repositories	X				
Research data (publishing of open data, FAIR, RDM plans, data protection, data curation, long-term preservation)	X				
Publishing platforms	X				
PIDs (persistent identifiers, e.g. DOI, ORCID...)	X				
Licenses	X				
Intellectual property rights and copyright (IPR)	X				
Article/Book Processing Charges (APC/BPC)	X				
Open-source software	X				
Open education resources	X				
Open practices (methodologies, peer review, metrics, citations, etc.)	X				

14.	How does your organization provide support and training? Check all that apply
X	Website with resources and relevant information and Frequently Asked Questions

X	Employment of experts for this purpose
X	Communication activities
	Other:

15.	**Who are the target groups for the training? Check all that apply**
X	Researchers and academic staff
	Students
	Librarians
X	Research infrastructures providers
	SMEs
	Other:

16. What types of research outputs does your organization hold and create and who are intellectual property owners?

	Authors	**Institution**	**Funder**	**Government**	**Joint ownership**	**None**	**Don't know**
Publications	X						
Data		X					
Patents	X						
Reports		X					
Studies and trials		X					
Technical guidelines		X					
Grey literature		X					

17. Open Science-related infrastructure used by your organization:

	Already have inhouse	**Already have outsourced**	**Plans to have inhouse**	**Plans to have outsourced**	**No plans to setup**	**Don't know**
Institutional repository	X					
Institutional data repository	X					
Shared repository (multiple organizations in the same country)	X					
Journal/monographs/conference publishing system	X					
CRIS (or CRIS-like) system	X					

Repository must support Dublic Core *and* OAI-PMH.

CRIS - Current Research Information System

18. If your organization has an institutional repository, provide its URL.
http://lib.ysu.am/index.html?lg=1

19. If your organization has a data repository, provide its URL..
http://ysu.am/science/en/journals

20.	How familiar are you with the concept of FAIR (Findable, Accessible, Interoperable, Reusable) regarding data?
	Very familiar
X	Familiar
	Not very familiar
	Not familiar at all

In order to be put in service of OS, research data must be easy to find, identify and contextualize. In 2016, the FAIR guiding principles for research data were published and they have since become the staple of all policy recommendations. In brief, FAIR means that research data must be supplied with rich metadata and persistent identifiers, deposited on a searchable platform that has open protocols for access and sharing, and assigned a license that clearly defines usage rights.

21.	What kind of digital objects do you use persistent identifiers for? Check all that apply
X	Scientific publications
X	Datasets
	Files without metadata
X	Files containing metadata
	Software
X	Methods
	Protocols
	Metadata records
X	Semantic artefacts (vocabularies, data models, concepts)
	Other:

22.	Which identifiers are used in your community for these digital objects? Check all that apply
X	DOI
	URN
	Handle
	ARK
	PURL
	None

	Other:

23. Are versioning and changes in data objects in your organization clearly documented?			
	X		
Yes	Partly	No	Don't know

24. In your opinion, what particular areas of training, support or advice, researchers and support staff need in relation to making data FAIR?			
	Much needed	**Somewhat needed**	**Not needed**
Stewardship of FAIR outputs (data, software)		X	
Training others (including doctoral candidates)	X		
Data analytics and statistical techniques		X	
Finding and reusing data		X	
Finding FAIR data repositories		X	
Raising awareness about FAIR principles	X		
Data wrangling		X	
Citing and acknowledging contributions	X		
Using or developing tools/services		X	
Sharing data (ethics, data protection)	X		
Costing and resourcing RDM in proposals		X	
Documenting data or code to make it FAIR		X	

RDM: Research Data Management (see: https://www.jisc.ac.uk/guides/how-and-why-you-should-manage-your-research-data)

25.	How familiar are you with EOSC (European Open Science Cloud)?
	Very familiar
X	Familiar
	Not very familiar
	Not familiar at all

The EOSC (https://www.eosc-portal.eu/) is a data infrastructure to support and develop open science and open innovation in Europe. It will federate existing resources across national data centres, European e-infrastructures and research infrastructures and provide common services to all users.

26. What kind of infrastructure would be the most useful for your research/work and how intensively would you use it?

	1-3 months	4-6 months	7-9 months	10-12 months	We wouldn't use	Don't know
High-performance computing clusters						X
High-throughput computing clusters						X
Big data clusters (Hadoop-like clusters)						X
Cloud virtual machines						X
Single server					X	

27. Apart from the services you already have, which additional services would benefit the users in your organization?

- DMP tools

Examples: repository software, data anonymization tools, DMP tools, publishing platforms, VPN, etc.

28. What do you expect from EOSC?

- We are expecting development of Open Science Policy and also to get acquainted with the latest international publications.

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MINERVA 2019-2023
Strengthening Research Management and Open Science Capacities of HEIs in Moldova and Armenia

IN-DEPTH ANALYSIS ON OPEN SCIENCE INFRASTRUCTURE AND POLICIES

Report - analyses level: University

P9 - Brusov State University /BSU

Evaluation period: 15 January 2019 – 15 January 2021

Project Acronym:	**MINERVA**
Project full title:	STRENGTHENING RESEARCH MANAGEMENT AND OPEN SCIENCE CAPACITIES OF HEIS IN MOLDOVA AND ARMENIA
Project No:	597889-EPP-1-2018-1-MD-EPPKA2-CBHE-SP
Funding Scheme:	ERASMUS+
WP / Deliverable/ Action:	WP1/D1.2/ A1.2 – In-depth analysis on Open Science infrastructure and policies
Project partner (s)	P9-BSU
Place/ Date	ONLINE-1KA

Co-funded by the Erasmus+ Programme of the European Union

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1) Existing national legislatives and institutional incentives related to the implementation of open science principles in research and education;
2) Current open science practice and the registry of institutional open science repositories and related information infrastructures;
3) Mapping the situation regarding the awareness and knowledge of open science principles within academic community;
4) Prerequisites for building technical solutions for open science at universities.

1.A. Country where your organization is based:
Armenia

1.B. Existing national legislatives related to the implementation of open science principles:
The comprehensive legislation is under discussion and approval by the RA authorities. However, there are no effective legislative patterns.

2.A. Name of organization:
Brusov State University

2.B. Existing institutional bylaws/ incentives related to the implementation of open science principles:
• **The institutional bylaws should be flowing from the RA comprehensive national legislation, as it is not effective currently. Consequently, there are no bylaws. However, there are some processes that constitute best practices currently at Brusov State University,**

3	**How would you describe the main profile of your organization?**
	The ones that fund research (funders - national, international, private, policymakers, etc.)
X	The ones that perform research - CREATE (e.g. universities, research institutes, individual researchers, research communities, citizen scientists, data enthusiasts, etc.)
X	The ones that perform research - SUPPORT (e.g. research infrastructures, e-infrastructures, service providers, libraries, etc.)

	The ones that "consume" research (e.g. research-intensive SMEs, citizens, etc.)
	OS facilitators (European, regional or national initiatives and individuals supporting OS)

If an organisation has multiple roles, please fill out the survey for each of your roles.

4.	**Which scientific domain does your organization belong/support/fund?**
	Natural Sciences
	Engineering and Technology
	Information and Communication Technology
	Medical and Health Sciences
	Agricultural Sciences
X	Social Sciences
X	Humanities
	None / not applicable

5.	**What is your position within the organization?**
X	Manager
X	Senior researcher
	Research support staff
	Librarian
	Junior researcher
	Other:

6. **What is the total number of researchers (full-time equivalent, FTE), including doctoral candidates, working at your organisation?**					
X					X
1-50	51-100	101-200	201-300	301-500	>500

7. **What are you supporting/funding?**						
	X	X	X	X	X	-
Human resources	Projects	Hardware	Software	Operations	Infrastructures	Other:

8.	**What conditions should an e-infrastructure or research infrastructure meet in order to be supported/funded by your organization? Check all that apply**
	No condition
	Discipline of users
X	Excellence based

	Affiliation of users
X	Technology readiness of the proposal
	Other:

9.	**Do you have a roadmap of the infrastructures you already support or you want to maintain?**
X	Yes
	No
	I don't know

A roadmap is a strategic plan that defines a goal or desired outcome and includes the major steps or milestones needed to reach it. The term infrastructure refers to research infrastructures and e-infrastructures.

10.	**How do you invest in user support? Check all that apply**
	Funding staff who provides support
X	Through an EC funding for infrastructure
	Through an EC funding
	We do not invest in user support
	Other:

Explanation: *User support means guidance and assistance to relevant users. In case of funders, users are institutions, in case of service providers users are service users, in case of libraries users are researchers and other library users, etc.*

11.	**Is your organization performing research assessment for any of the following purposes:**
	Careers in research
X	Performance evaluation of research units and/or allocation of funding
	Not applicable
	Don't know

12. Does your organization impose internal rules regarding the following aspects?

	Mandatory for all	**Mandatory for some projects/groups**	**Encouraged but optional**	**No regulation**	**Not applicable**
Publication repositories				X	
Open data	X				
Data management plans	X		X		
Data protection in research data					
Publishing platforms	X				

PIDs (persistent identifiers, e.g. DOI, ORCID...)			X		
Long-term availability of research data		X			
Article/Book Processing Charges (APC/BPC)			X		
Open-source software	X				
Open education resources	X				
Open practices (methodologies, peer review, metrics, citations, etc.)		X			
FAIR (Findable, Accessible, Interoperable, Reusable)			X		
Intellectual property rights and copyright (IPR)				X	

13. Does your organization provide support and training in the following areas?

	Yes	No, but planned	No, not planned	Other	Don't know
Repositories		X			
Research data (publishing of open data, FAIR, RDM plans, data protection, data curation, long-term preservation)		X			
Publishing platforms	X				
PIDs (persistent identifiers, e.g. DOI, ORCID...)	X				
Licenses	X				
Intellectual property rights and copyright (IPR)	X				
Article/Book Processing Charges (APC/BPC)		X			
Open-source software	X				
Open education resources	X				
Open practices (methodologies, peer review, metrics, citations, etc.)		X			

14.	How does your organization provide support and training? Check all that apply
X	Website with resources and relevant information and Frequently Asked Questions
	Employment of experts for this purpose
X	Communication activities
	Other:

15.	Who are the target groups for the training? Check all that apply
X	Researchers and academic staff
X	Students
X	Librarians
X	Research infrastructures providers
	SMEs
	Other:

16. What types of research outputs does your organization hold and create and who are intellectual property owners?

	Authors	Institution	Funder	Government	Joint ownership	None	Don't know
Publications	X	X					
Data	X				X		
Patents						X	
Reports		X		X			
Studies and trials	X	X					
Technical guidelines		X		X			
Grey literature		X		X			

17. Open Science-related infrastructure used by your organization:

	Already have inhouse	Already have outsourced	Plans to have inhouse	Plans to have outsourced	No plans to setup	Don't know
Institutional repository			X			
Institutional data repository			X			
Shared repository (multiple organizations in the same country)			X			
Journal/monographs/conference publishing system			X			
CRIS (or CRIS-like) system						X

Repository must support Dublic Core *and* OAI-PMH.

CRIS - Current Research Information System

18. If your organization has an institutional repository, provide its URL.
Our institution does not have currently, however, we do plan to have installed it in house.

19. If your organization has a data repository, provide its URL..
Our institution does not have currently, however, we do plan to have installed it in house.

20.	How familiar are you with the concept of FAIR (Findable, Accessible, Interoperable, Reusable) regarding data?
	Very familiar
X	Familiar
	Not very familiar
	Not familiar at all

In order to be put in service of OS, research data must be easy to find, identify and contextualize. In 2016, the FAIR guiding principles for research data were published and they have since become the staple of all policy recommendations. In brief, FAIR means that research data must be supplied with rich metadata and persistent identifiers, deposited on a searchable platform that has open protocols for access and sharing, and assigned a license that clearly defines usage rights.

21.	What kind of digital objects do you use persistent identifiers for? Check all that apply
X	Scientific publications
X	Datasets
	Files without metadata
X	Files containing metadata
X	Software
X	Methods
	Protocols
X	Metadata records
X	Semantic artefacts (vocabularies, data models, concepts)
	Other:

22.	Which identifiers are used in your community for these digital objects? Check all that apply
	DOI
	URN
	Handle
	ARK

	PURL
X	None
	Other:

23. Are versioning and changes in data objects in your organization clearly documented?			
		X	
Yes	Partly	No	Don't know

24. In your opinion, what particular areas of training, support or advice, researchers and support staff need in relation to making data FAIR?			
	Much needed	**Somewhat needed**	**Not needed**
Stewardship of FAIR outputs (data, software)	X		
Training others (including doctoral candidates)	X		
Data analytics and statistical techniques	X		
Finding and reusing data	X		
Finding FAIR data repositories	X		
Raising awareness about FAIR principles		X	
Data wrangling	X		
Citing and acknowledging contributions	X		
Using or developing tools/services		X	
Sharing data (ethics, data protection)	X		
Costing and resourcing RDM in proposals	X		
Documenting data or code to make it FAIR		X	

RDM: Research Data Management (see: https://www.jisc.ac.uk/guides/how-and-why-you-should-manage-your-research-data)

25.	How familiar are you with EOSC (European Open Science Cloud)?
	Very familiar
	Familiar
X	Not very familiar
	Not familiar at all

The EOSC (https://www.eosc-portal.eu/) is a data infrastructure to support and develop open science and open innovation in Europe. It will federate existing resources across national data centres, European e-infrastructures and research infrastructures and provide common services to all users.

26. What kind of infrastructure would be the most useful for your research/work and how intensively would you use it?

	1-3 months	4-6 months	7-9 months	10-12 months	We wouldn't use	Don't know
High-performance computing clusters				X		
High-throughput computing clusters					X	
Big data clusters (Hadoop-like clusters)					X	
Cloud virtual machines					X	
Single server				X		

27. Apart from the services you already have, which additional services would benefit the users in your organization?

- Repository software, data anonymization tools, DMP tools, publishing platforms, VPN

Examples: repository software, data anonymization tools, DMP tools, publishing platforms, VPN, etc.

28. What do you expect from EOSC?

- Be engaged and install a virtual environment with open services for possessing storage, management, analysis and re-use of research data.