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# **D6.4:** A beta version of the ROSiE Knowledge Hub

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ABSTRACT:	The <b>ROSiE Knowledge Hub (KH)</b> will be a platform that is, currently, being designed and optimized to openly funnel the project's results and outputs in a user-friendly way. The ROSiE KH contains different thematic sections focusing on various issues related to open science. Each thematic section will be structured in three levels: 1) <b>Level 1</b> contains basic information on the aims, objectives and highlights on the methodology used to produce the content of the ROSiE KH; 2) <b>Level 2</b> contains the "building blocks" of information that will be displayed in a way that the end-user can easily grasp their content; and 3) <b>Level 3</b> includes the content of these building blocks. This report describes the development and the structure of the <b>beta version</b> of the ROSiE KH. The beta version is going to be tested by a multitude of stakeholders, through the application of a structured beta testing plan also described in this report.
Keyword List:	Open Science, Platform, Beta version, Beta testing, Stakeholders, Optimisation, Structure, User friendliness, Usability, End users.





## RESIE onsible Open Science in Europe

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No.	Role	Name	Short Name	Country
1.	Coordinator	UNIVERSITETET I OSLO	UiO	Norway
2.	Partner	ÖSTERREICHISCHE AGENTUR FURWISSENSCHAFTLICHE INTEGRITAT	OeAWI	Austria
3.	Partner	VEREIN DER EUROPAEISCHENBURGERWISSENSCHAFTEN	ECSA	Germany
4.	Partner	EUREC OFFICE GUG	EUREC	Germany
5.	Partner	THE FEDERATION OF FINNISHLEARNED SOCIETIES	TSV	Finland
6.	Partner	HAUT CONSEIL DE L'EVALUATIONDE LA RECHERCHE ET DEL'ENSEIGNEMENT SUPERIEUR	HCERES	France
7.	Partner	INSTITUT NATIONAL DERECHERCHE POUR L'AGRICULTURE,L'ALIMENTATION ETL'ENVIRONNEMENT	INRAE	France
8.	Partner	NATIONAL TECHNICAL UNIVERSITYOF ATHENS	NTUA	Greece
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11.	Partner	TARTU ULIKOOL	UT	Estonia
12.	Partner	UNIVERSITETET I SOROST-NORGE	USN	Norway

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0.3	20 February 2023	Vana Stavridi, Panagiotis Kavouras	Preparation of the 2 <sup>nd</sup> draft
0.4	21 February 2023	Costas Charitidis	Editing of the 2 <sup>nd</sup> draft
1.0	28 February 2023	Rose Bernabe	Preparation of the final draft





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### Acronyms

Open Science: OS Knowledge Hub: KH Citizen Science: CS





# **RESIE** onsible Open Science in Europe

## **1** Executive summary

The ROSiE Knowledge Hub (ROSiE KH) will be a platform that is currently being designed and optimized to openly funnel the project's results and outputs in a user-friendly way. The content of the ROSiE KH will be organized in different thematic, OS-related, sections that will focus on the following: research ethics, research integrity, social issues of OS, legal issues of OS, training in OS, OS infrastructures, and policy issues of OS. These thematic sections also reflect the work package structure of ROSiE. However, it should be mentioned that wherever a specific guideline (output) is related to more than one theme, it will be placed in more than one thematic section of the ROSiE KH.

Each thematic section will be structured in three distinct levels which will provide to the end user not only different information but also different levels of descriptive granularity of the ROSiE KH's content. More specifically:

- Level 1 contains basic information on the aims and objectives of each thematic section. It will also highlight the methodology used to collect the necessary information, for the case of the "Mapping"-type of content (results) and draft the "Guideline"-type of content (outputs). This information will be minimal, i.e. brought to the attention of the end user only via icons, in order to keep this level as simple as possible. Detailed information on the methodology can be found in the deliverables; all necessary references will be made in other places of the ROSiE KH, as described below.
- Level 2 contains the "building blocks" of information that will be displayed in a way that the end-user will be able to easily grasp their content. The building blocks will be categorized in "Mapping"-type and "Guidelines"-type building blocks. The former will contain the results of the mapping exercises conducted in the initial stages of ROSiE (i.e. the "results" mentioned above) and the latter will contain the various documents that provide guidance to practitioners of OS (i.e. the "outputs" mentioned above). The building blocks will contain information from the project's deliverables and they will be the searchable elements from the search function of the ROSiE KH; for this reason, the building blocks will be described with specific types of metadata (tags).
- Level 3 hosts the content of these building blocks, as retrieved from the relevant ROSiE deliverables. In most cases, the content of Level 3 is very similar but not exactly the same as the deliverables. In several cases, the text of the deliverables has to be restructured to fit the needs of an online document, i.e., to strike the right balance between being concise and being comprehensive. Level 3 will be the most detailed level of information of the ROSiE KH and the second most detailed level of information of the ROSiE website, with the actual deliverables representing the most detailed level of information produced by the consortium.





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This report describes the development and the structure of the beta version of the ROSiE KH, i.e., the version that is going to be tested by a multitude of stakeholders, through the application of a structured beta testing plan that is described in the next section.

## 2 An overview of the development of the beta version

This section contains a concise report of the preparation of the ROSIE KH within the consortium to reach a consensus on the conceptual, functional, and aesthetic issues of the ROSIE KH.

On November 2021, a series of bilateral discussions, led by NTUA, took place with the following partners: UoL, UiO, ECSA, and EUREC, in order to gain input for the following auestions:

- 1. What will the ROSiE KH be?
- 2. What functions should the ROSiE KH have (taking into account the parameters that the ROSiE KH should have according to the proposal text)?
- 3. What will be its content?
- 4. What will be its structure?

The outcomes of this interaction, with regard to the functions the ROSiE KH is going to have, are summarized below:

- $\rightarrow$  Provide in a structured and automated manner recommendations to end users. For this to be achieved, a clear structure must be designed that will guide the end user to the recommendation they need (if such a recommendation has been included at the ROSiE KH). The blueprint of such a function can be a decision tree, i.e., a map or a standard operating procedure with all existing pathways that lead to different recommendations.
- $\rightarrow$  Provide an open forum linked to the ROSiE community of OS/CS practitioners. For gueries that cannot be answered through the search function or when a more nuanced input is needed the ROSiE KH user can be diverted to the forum. It will be up to the community to respond.
- $\rightarrow$  Provide a space where all ROSiE outputs will be linked in a way that will facilitate targeted knowledge sharing. During the course of the search for recommendations or/and when the recommendations are displayed a list of supplementary material can be also displayed, i.e. ROSiE deliverables, as well as other "external" resources from other SwafS and/or WIDERA projects (for example, the part of the SOPs4RI toolbox with guidelines for "Data practices and Management").

On 16 February 2022 a number of early simulations of the ROSiE KH were presented in the context of the 3<sup>rd</sup> Cross-SwafS Stakeholder Forum meeting, the first instance where

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the KH was presented outside of the ROSiE consortium, in order to gain feedback mainly on the design/aesthetic features of the KH, with the aim to increase its user friendliness.

On **14 December 2022** the pre-final mockups were presented at the 1<sup>st</sup> meeting of the Stakeholder Forum that took place.

On 19 January 2023 EUREC interacted with NTUA, in order to provide input on what is needed to be taken into account during the design phase, in order to render the ROSiE KH user-friendly to visually impaired people. The relevant interventions will be implemented during the course of the pilot testing and are going to be pilot tested by a visually impaired person.

## **3** The structure of the ROSiE Knowledge Hub (beta version)

As described in the executive summary, each thematic section will be structured in three distinct levels that will provide to the end user different levels of descriptive granularity of ROSiE's results and outputs that will compose ROSiE KH's content. With "results" we refer to the results from the different mapping exercises that were applied during the initial stages of ROSiE and with "outputs" to the different documents that provide guidance to practitioners of OS. The distinction between these two types of content at the ROSiE KH is described more explicitly below. More specifically:

- Level 1 will contain the aims and objectives of each thematic section, while it will highlight the methodology used to draft the content of the ROSiE KH. This information will be minimal, i.e. brought to the attention of the end user only via icons, in order not to overburden with information that can be found in the deliverables (all the necessary references will be made in other places of the ROSiE KH, as it will be described below). This level has been designed to be identical in all thematic sections, except Training on OS, since the types of the building blocks that have included at Level 2 are completely different, as described in section 4.
- Level 2 will contain the "building blocks" of information that will be displayed in a way that the end-user will be able to easily grasp their content. These building blocks will be categorized in "Mapping"-type and "Guidelines"-type building blocks. The former will contain the results of the mapping exercises conducted in the initial stages of ROSiE (i.e., the "results" mentioned above) and the latter will contain the various documents that provide guidance to practitioners of OS (i.e., the "outputs" mentioned above). These building blocks will contain information from the project's deliverables. They will also be the searchable elements from the search function of the ROSiE KH; for this reason, they will be described with specific types of metadata (tags) visible only at the back-end of the ROSiE KH. This level has been designed to be identical in all thematic 8





sections, except Training on OS, as in the case of Level 1, since the types of the building blocks that have found a place here are completely different, as described in section 4.

Level 3 will host the content of these building blocks, as retrieved from the relevant • ROSiE deliverables. In most cases, the content of Level 3 will be very similar, though not completely the same as the deliverables. This is due to the fact that in several cases the text of the deliverables had to be re-structured to fit the needs of an online document, i.e., in order to be more concise and be structured in smaller units/sections. This will be the most detailed level of information of the ROSiE KH and the second most detailed level of information of the ROSiE website, with the actual deliverables representing the most detailed documents that will be produced from the consortium. As in the previously-described levels, this level has been designed to have a similar design in all thematic sections, except the following: Training on OS and Policy issues in OS, as described in section 4.

### 4 A view at the ROSiE KH (beta version)

This section contains a series of indicative screen shots from the mockups of the beta version of the ROSiEKH that closely replicate the actual structure and aesthetics of the ROSiE KH, as it will be featured at the staging environment, where the beta testing will take place.

#### 4.1 Level 1 of the ROSiE KH

This subsection (Figures 1–7) presents the Level 1 of all thematic sections of the ROSIE KH.









Research Integrity Research Ethics Social	Legal Training Open science Policy			
Aims	Objectives			
To map, examine, evaluate, and provide a conceptual and normative framework on the research ethics dimensions of open	<ol> <li>Map and examine the research ethics, disciplinary, epistemic and citizen science</li> </ol>			
science.	<ol><li>Investigate the potential tensions between applications of research ethics standards and open science in scientific practice</li></ol>			
Methodology	<ol> <li>Provide a global perspective (low and middle income countries) on the European open science initiatives and policies, taking into account the context of existing global inequalities and benefit-sharing obligations</li> </ol>			

Figure 2: Level 1, Research Ethics thematic section.

Research Ethics Social	Legal Training Open science Policy		
Aims	Objectives		
To map, analyze and address social implications and challenges related to open science in the context of research ethics/	<ol> <li>To map social implications and challenges related to open science</li> </ol>		
research integrity.	<ol> <li>To analyze the identified social challenges in the context of different scientific disciplines</li> </ol>		
Methodology	<ol> <li>To identify the necessary elements for addressing social challenges in order to maximize the benefits of open science and to support the integration of responsible research and innovation as structural component of open science</li> </ol>		
Literature survey Interviews Focus group			

Figure 3: Level 1, Social thematic section.





esearch Integrity Research Ethics Social	egal Training Open science Policy
Aims	Objectives
To map, analyze and address legal implications and challenges related to open science in thecontext of research ethics/research integrity.	<ol> <li>To map legal implications and challenges related to open science by analyzing the publicly available results from relevant EU funded research projects and the scientific literature</li> </ol>
Methodology	<ol><li>To analyze the identified legal challenges in the context of different scientific disciplines</li></ol>
Methodology	<ol> <li>To identify the necessary elements for addressing legal challenges in order to maximize the benefits of open science and to support the integration of responsible research and innovation as structural component of open science</li> </ol>
Legal comparative research Legal dogmatics methods	

Figure 4: Level 1, Legal thematic section.

Rasie About Ourteam St	akeholders <u>Knowledge Hub</u> News Contact us 🥑 in
ROSiE Knowledge	Hub   Search
Research Integrity Research Ethics Social Lega	Training Open science Policy
Aims Training materials aim at students, researchers, and citizen scientists for acquiring skills required for practicing responsible open science. They have been developed for a 2-day training and include modules focused on the research ethics and integrity access of open science. The developed training materials are tested in various types of institutional and educational settings, e.g. universities, research centres, and citi society organizations with a focus on open science. To achieve optimal results, the ROSE training materials rely on sciencial ensuring and test-flags testatgies that the achieves consider most effective and useful for the purpose.	<ul> <li>Ethical and societal foundations of open science, its purpose</li> <li>Ethical and societal foundations of open science, its purpose</li> <li>The quality of the research outputs and data sets</li> <li>Protection of research participants' rights in open science</li> <li>Prevention of research matpractices in the context of open science</li> <li>Responsible sharing and use of open data</li> <li>Responsible dissemination/publication practices</li> <li>Protection of intellectual property in the context of open science</li> <li>Ethical aspects of citizen science in the context of open science</li> </ul>
	dology gevercise Stakeholder consultation
Training	Categories
Health and life sciences Humanities Natura	al sciences Social sciences Citizen sciences

Figure 5: Level 1, Training thematic section. In contrast to the other thematic sections, this one has multiple entrances to Level 2, since training material is structured along disciplines.

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ROSiE Knowledge		
Research Integrity Research Ethics Social Legal	Training Open science Policy	
Aims	Objectives	
To map, examine, evaluate, and provide a conceptual and normative framework on the esearch ethics/ research integrity dimension of open science.	<ol> <li>To map and examine the research ethics/research integrity, disciplinary, epistemic and citizen science dimensions of open science</li> </ol>	
And the Andrews	<ol><li>To investigate the potential tensions between applications of research ethics/research integrity standards and open science in scientific practice</li></ol>	
Methodology	<ol> <li>To provide a global (low and middle income countries) perspective on the European open science initiatives and policies, taking into account the context of existing global inequalities and benefit-sharing obligations</li> </ol>	
Content analysis Workshop Interviews Literature survey	<ol> <li>To develop a typology and conceptual framework for the ethical and epistemological aspects of open science in various disciplines.</li> </ol>	
Explore the	category	

Figure 6: Level 1, OSthematic section.

<b>ROSiE Knowledge</b>	Hub   Search				
esearch Integrity Research Ethics Social Leg	al Training Open science Policy				
Aims	Objectives				
To create a detailed strategic policy assessment for promoting responsible open science and provide an operational guideline	<ol> <li>To provide an overview of existing responsible open science public policies and strategies within Europe</li> </ol>				
for relevant stakeholders.	<ol><li>To map and address the main challenges for responsible open science within a discipline-sensitive perspective</li></ol>				
Methodology	<ol> <li>To construct specific, discipline-related guidelines by consulting with the open science and research ethics/research integrity experts</li> </ol>				
Interviews Mapping exercise Literature survey					
- Finderson	the category				
Explore	ne category				

Figure 7: Level 1, Policy thematic section.

From the figures at this section, it is evident that only Level 1 differs with regard to its structure is training on open science (Figure 5). This is due to the fact that the types of documents that have been included differ from all other thematic sections. More specifically, there are no "Mapping"-related and "Guideline"-related documents/building blocks but those related to the structure of the ROSiE training programme, as will be displayed at the next subsection.

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#### 4.2 Level 2 of the ROSiE KH

This subsection presents Level 2 of selected thematic sections of the ROSiE KH. Figure 8 depicts Level 2 of the thematic section of Research Integrity. This is indicative of all but one (Training) thematic section. Each Level 2 contains two types of building blocks: the ones that contain information of the results of the mapping that fall under the title "Mapping", and the ones that contain information of the guidelines related to the thematic section that fall under the title "Recommendations".

🕻 back						
Research Integrity	Research Ethics	Social	Legal	Training	Open science	Policy
Mapping			Recon	nmendat	ions	
*			-	Timeout (50)3 m	-	
				/*(7:\{\w\M]+\} data	and the second se	
				and a ≕dSA gin.ca	e Case	
RI						
RI Responsible Research Co	odes		RI and C	S relationships		
	)		An analys	<b>OS relationships</b> is on how the differe des of conduct on	nt	

Figure 8: Level 2, Research Integrity thematic section.

Research Integrity Research Ethics	Social	Legal	Training	Open science	Policy
	Healt	h and life	sciences		
For trainees					
+ Handouts					
+ Readings					
For trainers					
+ Instructions					

Figure 9: Level 2, Training thematic section.

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For the sake of user-friendliness, the building blocks are depicted as square areas with an indicative photograph, a short title and a very short description of the content. The number of building blocks depends on the current situation on the finalization of different deliverables; i.e., the final ROSiE KH will contain more building blocks.

Figure 9 shows a screen capture from Level 2 of Training. As shown, the structure clearly indicated the three different types of building blocks, as well as for whom these are relevant for, i.e., either for trainees or for trainers. The end user can click of the bullets with the plus sign in order to see the content of each type of building blocks, i.e., Handouts, Readings or Instructions. Then, a display of all building blocks appears in the screen (see Figure 10). NTUA has chosen this way of displaying the building blocks for Training since there is a large number of them and if everything was visible, by default, at Level 2, that would cause a lot of "optical noise".



Figure 10: Level 2, Training thematic section.

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Figure 11 provides another example from Level 2 of the Policy thematic section.



Figure 11: Level 2, Training thematic section.

#### 4.3 Level 3 of the ROSiE KH

This subsection presents Level 3 of selected thematic sections of the ROSiE KH. Figure 12 presents the content of Level 3, of OS thematic section, mapping category, on blockchain technologies.



Figure 12: Level 3, of OSthematic section, mapping category, on blockchain technologies.

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Figure 13 presents the content of Level 3, of Policy thematic section, mapping category, which is about the country cards. As seen, instead of presenting all Country Cards (EU countries plus UK and Norway), we have placed a drop-down menu in order for the end user to display one country at a time and avoid confusion or an overcrowded screen.





#### 4.4 Search function of the ROSiE KH

Despite the fact that the ROSiE KH has been designed to provide a clear structure that provides accessibility to the building blocks with only two clicks, a search function has been included. This function is visibly located right next to the title of the ROSiE KH and, for the end user to make use of it, she/he has just to click on the "Search" title. Figure 14 depicts the way that the results of a search would look like. For reasons of simplicity and user-friendliness, the results of search are the building blocks that comprise Level 2 of all thematic sections. In cases that the end user cannot gain input through the search function or when a more nuanced input is needed, she/he can be diverted to the forum of experts, as shown in Figure 14. This specific feature is subject to reconsideration, since at the time this report was drafted, a discussion was pending related to the integration of the Search function.

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Figure 14: The search function of the ROSiE KH

### 5 Planning of the beta testing

The beta version of the ROSiE KH is going to be tested during the duration of the third year of the project. For this important task to be successfully implemented, NTUA has drafted the following plan that is composed of 5 different phases (all dates refer to 2023):

- **Phase 1**: Beta testing from TSV partners (4<sup>th</sup> week of February 1<sup>st</sup> week of March)
- Phase 2: Beta testing from the ROSiE consortium (3rd week of March 1st week of April)



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- Phase 3: Beta testing from the members of the ROSiE Advisory Board and the EC (provisionally ROSiE Project Officer and Policy Officer) (4th week of April- 2nd week of May)
- Phase 4: Beta testing from the members of the Stakeholder Forum and Cross-SwafS Stakeholder Forum (1<sup>st</sup> week of June – 4<sup>th</sup> week of June)
- Phase 5: Beta testing from interested stakeholders to be recruited via ROSiE's social media channels (3<sup>rd</sup> week of July – 4<sup>th</sup> week of September)

Please note that the dates are indicative, in the sense that the duration of each phase is apt to (fine) tuning according to unexpected delays or non-planned stages that might prove to be in need.

### 6 Dissemination of the beta testing

The beta testing of the Phase 3 is going to be disseminated through the leaders of WP3 (EUREC) and WP4 (ECSA) that run the Stakeholder Forum and the Cross-SwafS stakeholder Forum, respectively. The 5<sup>th</sup> phase of the beta testing is going to be disseminated via ROSiE's social media channels, the Embassy of Good Science, and the professional networks of all ROSiE partners. EUREC and ECSA will initiate the recruitment from the beginning of March 2023, while the recruitment for the 5th phase of beta testing is going to start at the middle of May 2023. Due to the summer holiday period that extends into July and August, ROSiE is going to tweet and post the ongoing 5th phase on a weekly basis throughout the period of July - September 2023.

#### **Deviations from DoA** 7

No deviations from DoA.

