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SOPs4RI

D2.5: Online toolbox and its inclusion at the Embassy of Good Science

Authors: P. Kavouras, Mads P. Sørensen, Joeri Tijdink, Rea Roje, Teodora Konach

Reviewer: Executive board members

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Project acronym: SOPs4RI
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Author(s):	P. Kavouras, Mads P. Sørensen, Joeri Tijdink, Rea Roje, Teodora Konach
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1. Introduction

This deliverable contains a comprehensive description of the final version of SOPs4RI Toolbox that can be found in the following link: http://sops4ri.eu/toolbox. The SOPs4RI Toolbox is the main output of the project, since it provides a rich collection of guidelines and Standard Operating Procedures (SOPs) to all interested organizations and individuals, in an open, user-friendly, structured, and searchable way. The Toolbox contains 131 tools, 14 of which were created, developed and tested by the SOPs4RI consortium (see D4.7: Fifth version of SOPs and guidelines). 117 high-quality existing guidelines and SOPs were selected on the basis of two scoping reviews (cf. D3.2: Scoping reviews including multi-level model of research cultures and research conduct) and a quality assurance procedure (cf. D4.6: Fourth version of SOPs and guidelines).

Notification: In collaboration with the EC it was decided that the Toolbox is not going to feature in the SINAPSE system, but at the platform of The Embassy of Good Science (The Embassy). This joint decision was taken for the following reasons: (a) The Embassy was specially designed to host the outputs of EU-funded projects, (b) The Embassy is more user-friendly than the SINAPSE system, (c) The Embassy is more interactive than the SINAPSE system, (d) The Embassy is expected to provide more visibility to the Toolbox, and (e) The Embassy better reflects the needs and the dynamism of the community of Research Integrity and Ethics. More details on the rationale can be found in section 4.

2. The structure of the Toolbox

The Toolbox has been designed to have a layered structure. Its main gateway, i.e. the most visible point from which the end user can enter the Toolbox, is found at the upper part of the SOPs4RI website (https://sops4ri.eu/). **The first level** is "the entrance" of the Toolbox that represents the first element that is visible to the end user. **The second level** hosts the two "receptions" to the two sections of the Toolbox; they act as the entrances to the sections for RPOs and RFOs. **The third level**, "the Topics", is the level where the end user will find the categorisation of the tools in different RI-related thematic categories, the so-called Topics. **The fourth level**, "the Subtopics", is the level where the end user will find a more refined/granular categorization of the tools, which fall within the same Topic. Finally, **the fifth level**, "the Tools", is the level where the end user finds the tools of the Toolbox.

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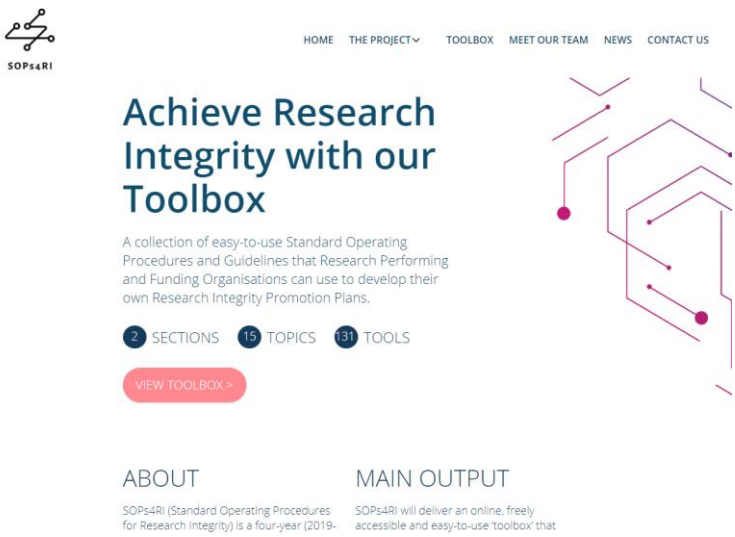
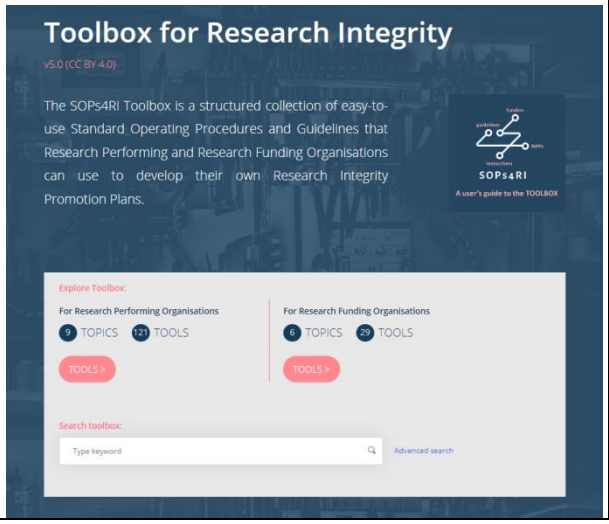
The gateway: The Toolbox can be reached from the top of the project's front page. This choice was made in order to increase the visibility of the Toolbox for everyone that visits the SOPs4RI website. The gateway also provides the main metrics of the Toolbox: the number of sections, the total number of topics and the total number of tools it contains. With a click on a button, the user is diverted to the entrance of the Toolbox. https://sops4ri.eu/	

LEVEL 1: THE ENTRANCE

	**The entrance:** The entrance provides a short introduction of what the Toolbox contains and information on its main structure. Specifically, it demonstrates that the Toolbox is composed of two sections: one filled with tools for Research Performing Organisations (RPOs) and another with tools for Research Funding Organisations (RFOs). It also provides the schematic overview of these two sections: how many topics and how many tools in total per section. https://sops4ri.eu/toolbox/

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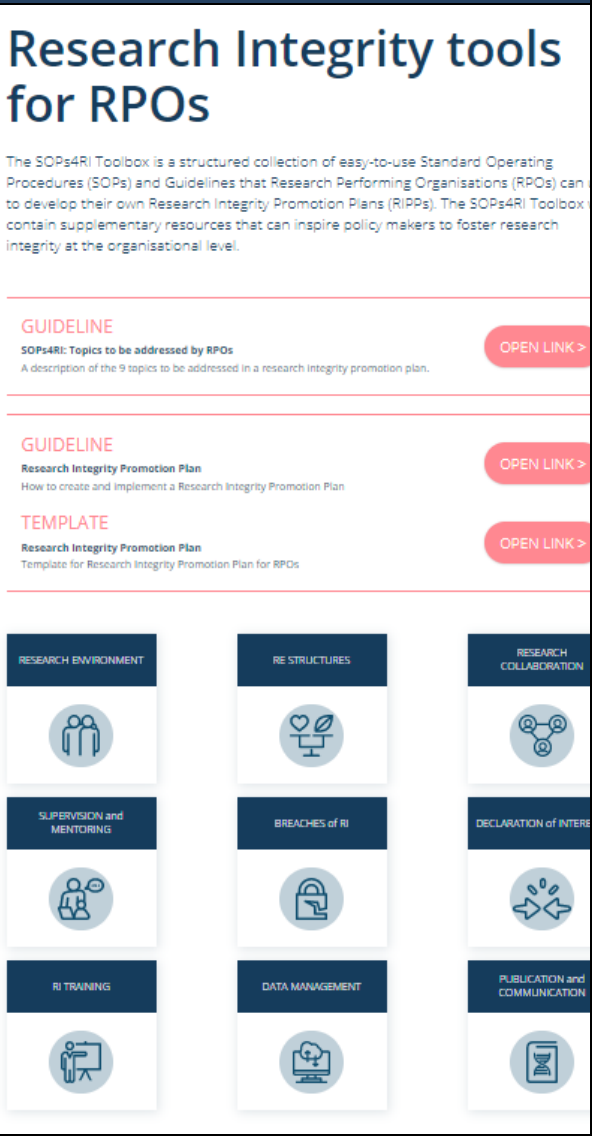
LEVEL 2: THE RECEPTIONS	
The RPO reception: The RPO reception presents, in a modular fashion, the structure of this section. The 9 topics that Research Performing Organisations (RPOs) should focus on are represented as an array of 9 squares with characteristic icons and representative short titles. These topics are selected based on a delphi survey (see D3.4, here) and are different RI-related broad thematic areas within which all tools are placed. The RPO reception can be seen as a "chest of drawers" for the tools for RPOs. https://sops4ri.eu/tools/	

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The RFO reception: The RFO reception presents, in a modular fashion, the structure of this section. Also here, the 6 topics that RFOs should focus on to foster responsible conduct of research are represented as an array of 6 squares with characteristic icons and representative short titles. The tools are placed within each of the thematic areas that were the result of the Delphi study at the beginning of our project (see D3.4). The RFO reception can be seen as a "chest of drawers" for the tools for RPOs.

https://sops4ri.eu/tools-for-rfos/

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LEVEL 3: THE TOPICS

The topics: Each topic contains three types of elements; (a) a short introduction to the theme of the topic, (b) a number of subtopics, in the same way as they are visualised at the reception level. These subtopics represent different RI-related thematic areas that fall into the broader area of the topic. I.e. these different subtopics are subgroups of the topic. Here we see an example of the infographic of the "Research Environment" guidelines, (c) [*in case the topic contains subtopics with SOPs4RI-made tools*] an infographic that provides the context of the SOPs4RI-made tools.

https://sops4ri.eu/tool_category/environment/

LEVEL 4: THE SUBTOPICS

The subtopics: Each subtopic contains the selected tools and the SOPs4RI created guidelines that provide guidance relevant to the subtopic's thematic category. Each tool is represented by the gray rectangle that provides information on the type of the tool (i.e. guideline or SOP), the content of the tool (found in the title and the one-sentence description). All SOPs4RI-made tools have a special marking (the SOPs4RI logo) for the sake of visibility. In this example, the first tool is marked as a SOPs4RI-made tool.

https://sops4ri.eu/tool_category/culture-building/

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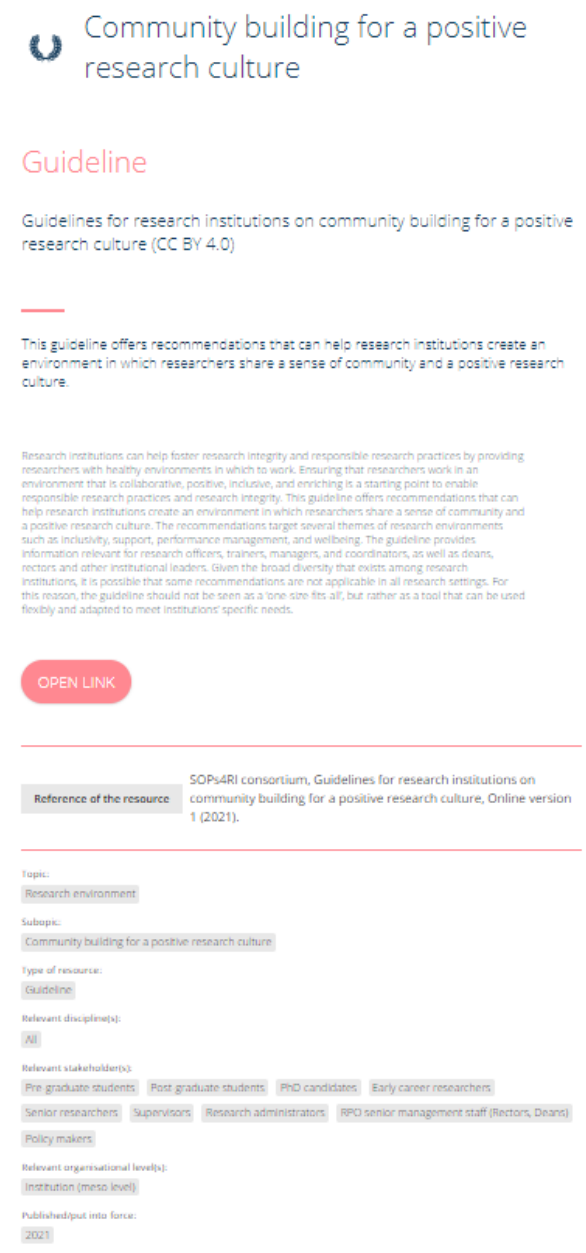
LEVEL 5: THE TOOLS	
The tool: This is the "lowest" level (level 5) of the Toolbox, meaning that at this level the user can obtain the most detailed information about the tool. Specifically, in addition to the information found at the previous level, the user has access to an abstract that describes the content of the tool, bibliographic-style information or metadata (authors, organisation or journal that has published it, publication date, etc), as well as standardised descriptors of the tool. These descriptors are presented as a list of terms that are Tool- metadata used by the search function of the Toolbox. More specifically there are 7 types of descriptors that contain information about the following: (1) the Topic the Tools belongs (i.e. its position at the 3rd level), (2) the Subtopic the Tool belongs (i.e. its potition to the 4th level), (3) Type of resource, i.e. whether it is s guideline or a SOP, (4) The discipline that is relevant to the Tool, (5) The type of stakeholder that the Tool is relevant for, (6) The organisational level that the Tool applies to, e.g. whether it is relevant for promoting RI at a national level, at an organisational level or at an individual level, and (7) the year the Tool was published or put into force.	

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3. Other features

The Toolbox, in addition to the tools, contains a number of additional features that aim at the optimal use of its content.

3.1 Infographics

The Toolbox contains (at the Level 3: The topics) a number of infographics that introduce the user to the SOPs4RI-made tools that are contained at the specific Topic. This is the reason that have been placed at a higher that the Tool level (specifically, Level 3), since they provide an overarching description of these Tools pertaining to the Subtopics of Research Environment, Supervision and Leadership, and Research Integrity Education. In the case of the infographic for research funders, it has been placed at an even higher level (specifically, Level 2), since it provides an overarching description of the way the Tools find a place at the section for RFOs.

These specific SOPs4RI-made Tools are the result of an extensive process that is described in detail in **D4.5: Third version of SOPs and guidelines** and **D4.6: Fourth version of SOPs and guidelines**, to be found here. Figures 1-4 depict these four infographics.

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Figure 1: The infographic that is placed at the Topic of Research Environment (https://sops4ri.eu/wp-content/uploads/SOPs4RI_Infographic_Healthy_research_EnvironmentsRGB.pdf).

Figure 2: The infographic that is placed at the Topic of Supervision and Mentoring (https://sops4ri.eu/wp-content/uploads/SOPs4RI_Infographic_SupervisionRGB4.pdf)

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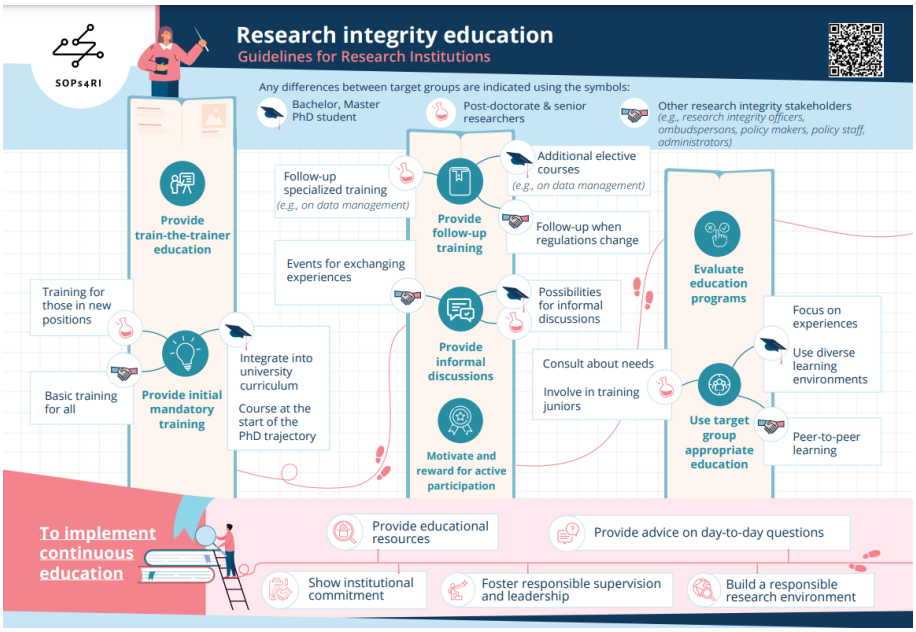

Figure 3: The infographic that is placed at the Topic of Research Integrity training (https://sops4ri.eu/wp-content/uploads/SOPs4RI_Infographic_RI_Education_RGB_.pdf)

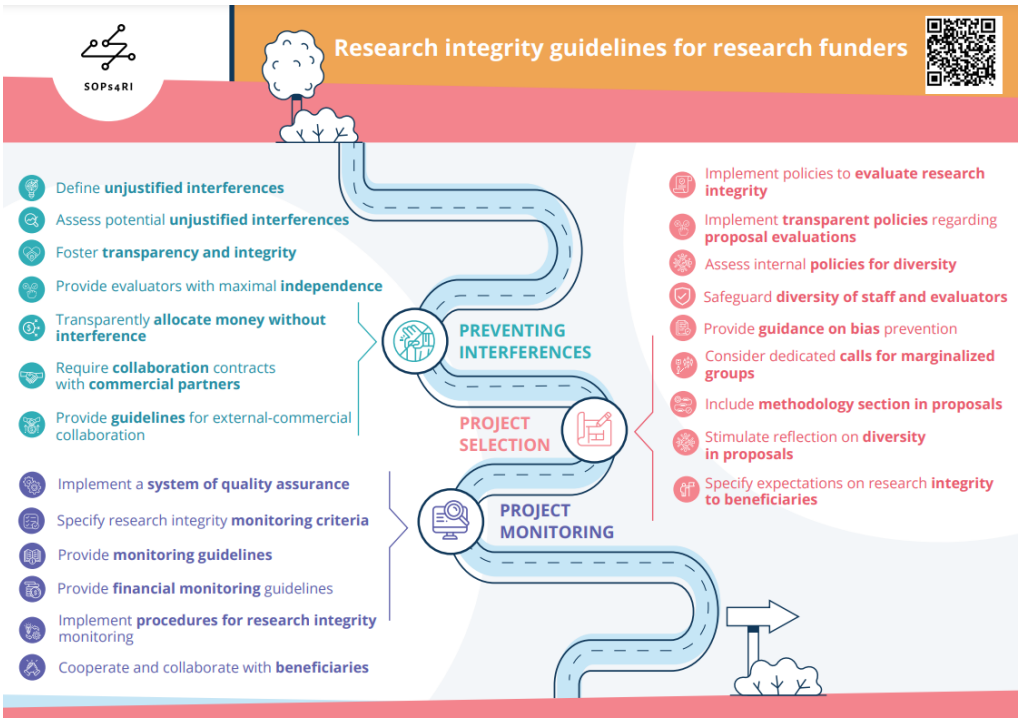

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Figure 4: The infographic that is placed at the RFO reception level (https://sops4ri.eu/wp-content/uploads/SOPs4RI_Infographic_RFOs_RGB_.pdf)

Table 1: The infographics and the SOPs4RI-made guidelines they refer to.

Relevant SOPs4RI-made guidelines (Subtopic/Title)
• Culture building/Guidelines for research institutions on community building for a positive research culture • Diversity issues/Guidelines for research institutions on diversity and inclusion • Education and training/Guidelines for research institutions on adequate education and skills training • Managing competition and publication pressure/Guidelines for research institutions on managing competition and publication pressure
• Building and leading an effective team/Guidelines for research institutions on building and leading an effective team • PhD guidelines/Guidelines for research institutions on supporting the PhD trajectory • Supervision requirements & guidelines/Guidelines for research institutions on supervision and mentoring

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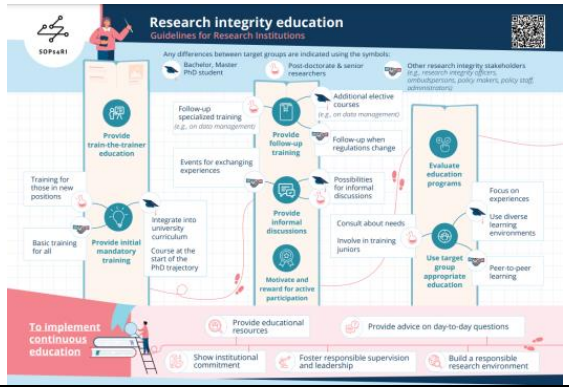

- Post-doctorate/Guidelines for research institutions on continuous research integrity education
- Post-doctorate/ Guidelines for research institutions on research integrity education of bachelor, master and PhD students
- Post-doctorate/ Guidelines for research institutions on the research integrity education of post-doctorate and senior researchers
- Pre-doctorate/ Guidelines for research institutions on continuous research integrity education
- Pre-doctorate/ Guidelines for research institutions on research integrity education of bachelor, master and PhD students
- RI counseling & advice/Guidelines for research institutions on continuous research integrity education
- Training of RI personnel & teachers/Guidelines for research institutions on continuous research integrity education
- Training of RI personnel & teachers/Guidelines for research institutions on the research integrity education of post-doctorate and senior researchers
- Training of RI personnel & teachers/Guidelines for research institutions on the research integrity education of support staff and research integrity personnel

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- Criteria and processes for assessing grant applications/Guidelines for research funders on the selection and evaluation of proposals
- Declaration of conflicts/Guidelines for research funders on defining and preventing unjustified interferences from funders, political and commercial actors
- Monitoring funded grants/Guidelines for research funders on monitoring funded projects

3.2 Two-page Guidelines

Each of the two Toolbox sections contains, at the level of the RPO and RFO receptions or Level 2 (Figure 5), a two-page guideline that describes the thematic content of the Topics. These Topics, as the short description at our website explains, are the building blocks of a Research Integrity Promotion Plan. The two figures below show the place where the two two-page guidelines can be found.By clicking the pink button the user can see the pdf version at her/his browser, in a different tab (Figure 6).

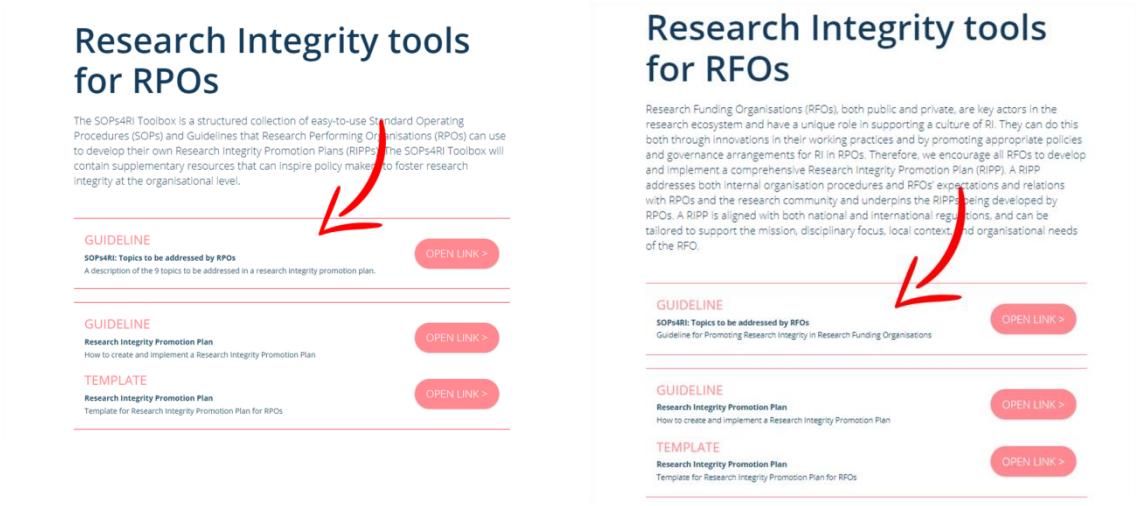

Figure 5: The receptions of the RPO (left, https://sops4ri.eu/tools/)and the RFO (right, https://sops4ri.eu/tools-for-rfos/) sections. The red arrow aims at the two-page guideline that describes each section's Topics.

Figure 6: The front pages of the two two-page guidelines. The one for the RPOs (left, https://sops4ri.eu/wp-content/uploads/Guideline-for-Promoting-RI-in-RPOs-FINAL-2.pdf) and the one for the RFOs (right,https://sops4ri.eu/wp-content/uploads/Guideline-for-Promoting-RI-in-RFOs_final.pdf)

3.3 Research Integrity Promotion Plans

Each section contains, at the level of the RPO and RFO receptions (Level 2), a guideline that describes what a Research Integrity Promotion Plan (RIPP) is and the procedure for how to develop, test, and update a RIPP. In addition, it contains a template for developing a RIPP for RPOs (https://sops4ri.eu/wp-content/uploads/Template-Research-Integrity-Promotion-Plan-RFOs_FINAL.pdf) and RFOs (https://sops4ri.eu/wp-content/uploads/Template-Research-Integrity-Promotion-Plan-RPOs_FINAL.pdf). The two figures below show the place where the RIPPs can be found. By clicking the upper pink button the user can see the pdf version of the RIPP in her/his browser, in a different tab. By clicking the lower pink button the user can see the pdf version of the templates for a RIPP at her/his browser, in a different tab. All elements are depicted in Figure 7. A RIPP template has been included, right below the RIPP guideline, in order to facilitate in very practical terms the development of a RIPP from our end users.

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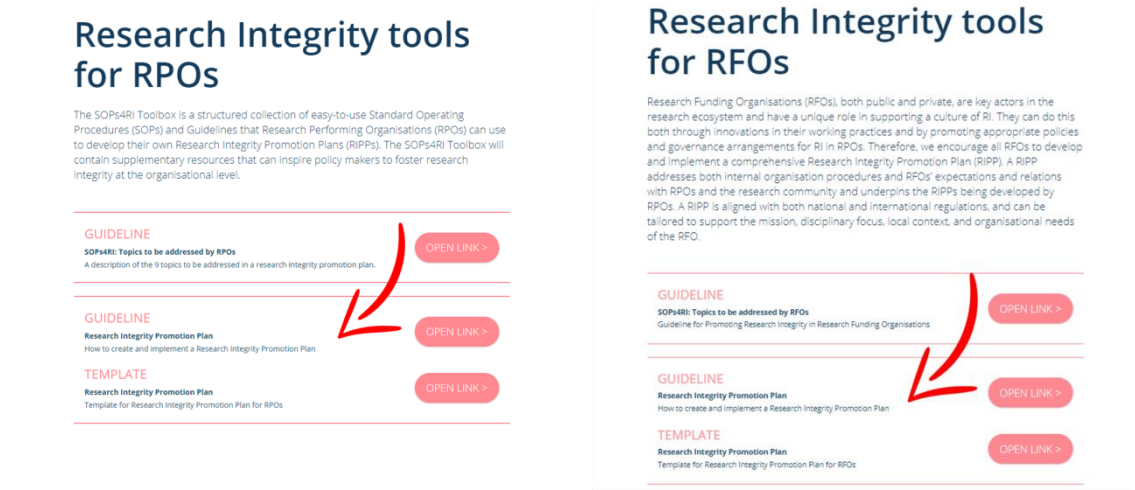

Figure 7: The receptions (Level 2 of the Toolbox) of the RPO (left,https://sops4ri.eu/tools/)and the RFO (right, https://sops4ri.eu/tools-for-rfos/) sections. The red arrow aims at the RIPP guideline (upper button) and the RIPP template (lower button).

3.4 Search function

A search function can be found at the entrance of the Toolbox (Figure 8). The user can search among the tools of the Toolbox by either using the "Search" function or by using the "Advanced Search" function (that is activated by clicking on the "Advanced search" term, found at the right hand side of the white rectangle, where the end user types the term to be found). The search engine works on the descriptors that have been added to all Tools, as described in page 9 of this report.

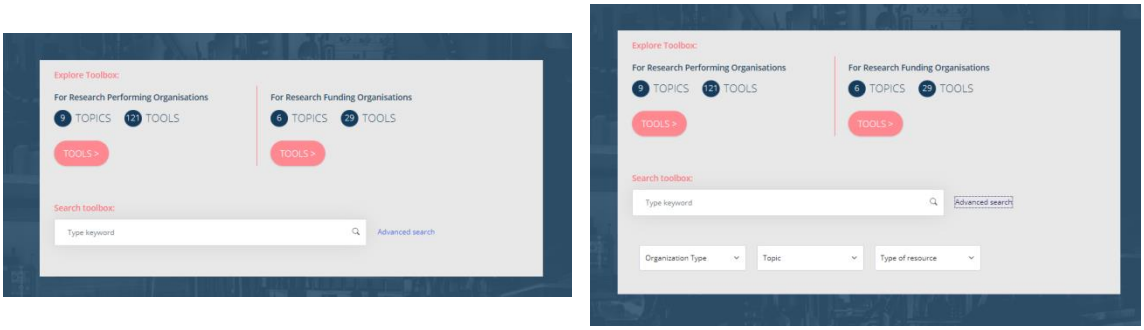

Figure 8: The Search (left) and the Advanced Search (right) functionalities that can be found at the Entrance level of the toolbox (https://sops4ri.eu/toolbox/).

3.5 A glimpse at the Topics

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In order for the user to have a glimpse at the content of each Topic, a short description has been added that is visible by hovering over (i.e. by putting the cursor above each Topic, without clicking, see Figure 9) the Topic element. The short description appears in a white rectangle, while the Topic square changes its colour from dark blue to pink.

Figure 9: By hovering over the Topics (i.e. by putting the cursor above each Topic, without clicking), a brief description of each Topic appears, as shown here for the "RE Structures" Topic.

3.6 The areas at the RFO section

The RFO section contains six Topics that bear a fundamental distinction: two of them contain tools relevant to an RFO's requirements to a funded researcher or organisation (so called 'external expectations') and four of them contain tools relevant to an RFO's demands on its own procedures, staff, and external experts that take part at the grant assessment and monitoring ('internal procedures'). This demarcation is clearly highlighted by the icons and titles depicted in Figure 10.

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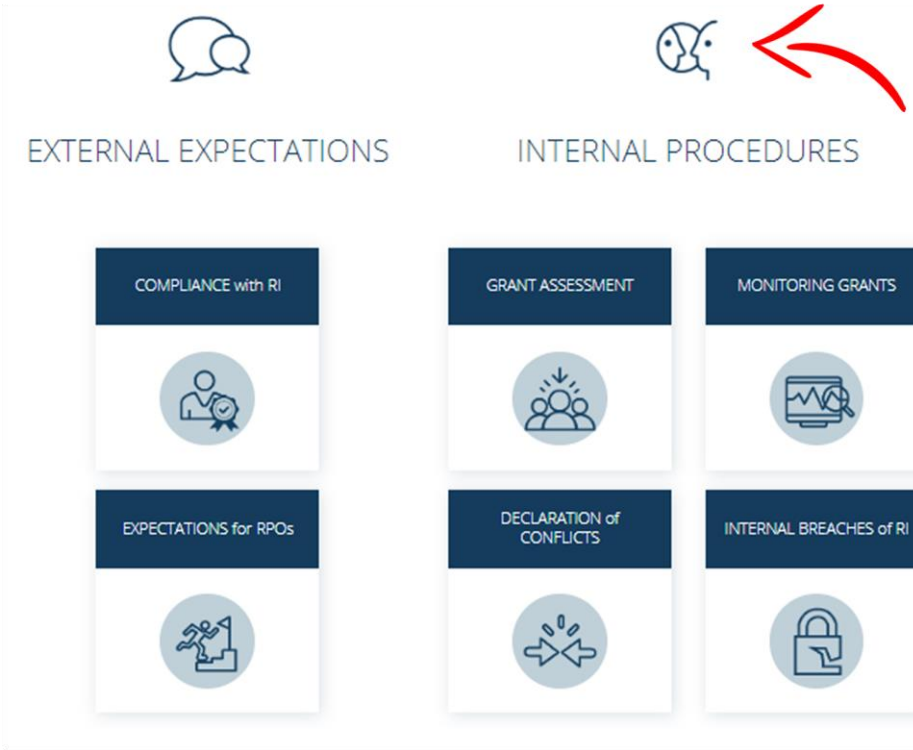

Figure 10: The RFO reception separates the RFO Topics into two areas: the "external expectations" and the "internal procedures".

3.7 A user's guide to the Toolbox

According to the feedback received from the pilot institutions, in the context of WP7 (see **D7.2: Report on Pilot Studies**, to be found here) and during the third General Assembly of the project, it became apparent that there is a need for a short document that will act as a guide to the Toolbox. This guide, according to the stakeholders' feedback, should describe the structure and use of the Toolbox. So, within December 2022, NTUA designed a "User's guide to the Toolbox" and include it at the entrance page of the Toolbox for RPOs and RFOs.

The User's Guide has been placed visibly at the entrance of the Toolbox (Figure 11, left); the red arrow indicates the button that can be clicked in order for the User's Guide to open in a separate tab in pdf format. In Figure 11 (right) there is a snapshot of the User's Guide. It is designed in the form of a flow chart/decision tree with links. It describes the use of the Toolbox and its different layers and functions.

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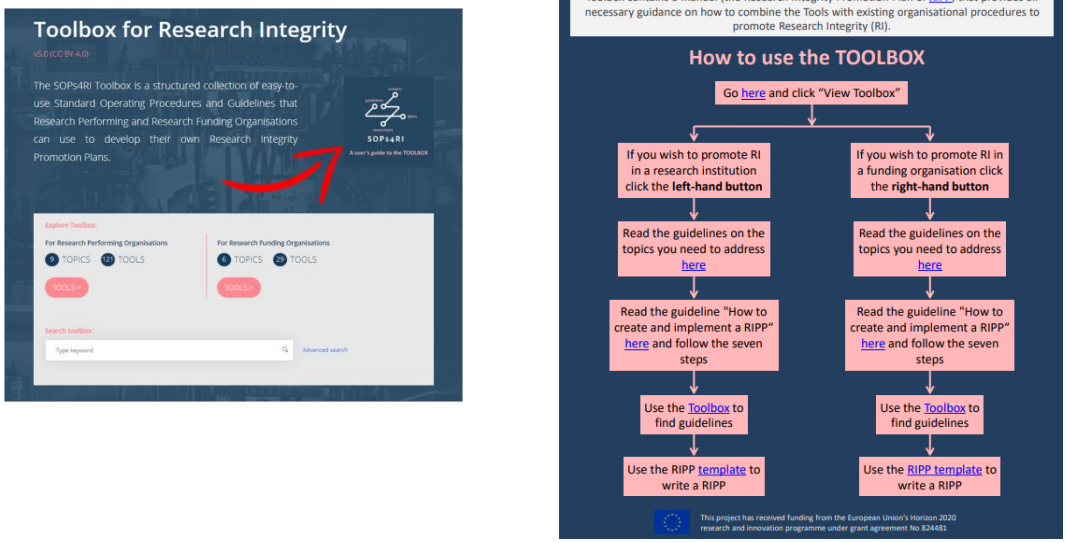

Figure 11: The User's Guide button, indicated by the red arrow, as it is included at the entrance of the Toolbox (left) and the User's Guide (right).

4. The Toolbox at the Embassy of Good Science

Quite early in the project, it was decided that the Toolbox is not going to feature in the SINAPSE system, but at the platform of The Embassy of Good Science (The Embassy). This decision was taken collectively with the European Commission and was based on the following arguments: (a) The Embassy is a more appropriate platform, since it was specially designed to host the outputs of SwafS and WIDERA projects and act as a hub of knowledge related to Research Integrity and Ethics, (b) The Embassy is perceived as more user-friendly than the SINAPSE system, (c) The Embassy is more interactive than the SINAPSE system, (d) The Embassy is already an established display of the outputs from other SwafS and WIDERA projects, so it is expected that the Toolbox will gain more visibility if featured at The Embassy than at the SINAPSE system, and (e) The Embassy, in contrast to the SINAPSE system, is a grass-root initiative, so it better reflects the needs and the dynamism of the community of Research Integrity and Ethics. Including the Toolbox at The Embassy will also help this platform gain additional momentum and, possibly, gain an even wider audience of users.

At the time of drafting this deliverable (end of November 2022) SOPs4RI is in collaboration with The Embassy to design a "digital entrance" (the SOPs4RI project page) of the Toolbox, to be placed

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on the **theme page section** for SOPs4RI (see Figure 12). For reasons of completeness, it is noted that the guidelines that were developed by SOPs4RI are already featured, as stand-alone elements, at the the **Resources/Guidelines** section on the Embassy (Figure 13). Finally, although not directly connected to the Toolbox, the SOPs4RI deliverables and peer-reviewed publications are also featured at the **Community/Initiatives** section of the Embassy (Figures 14 and 15).

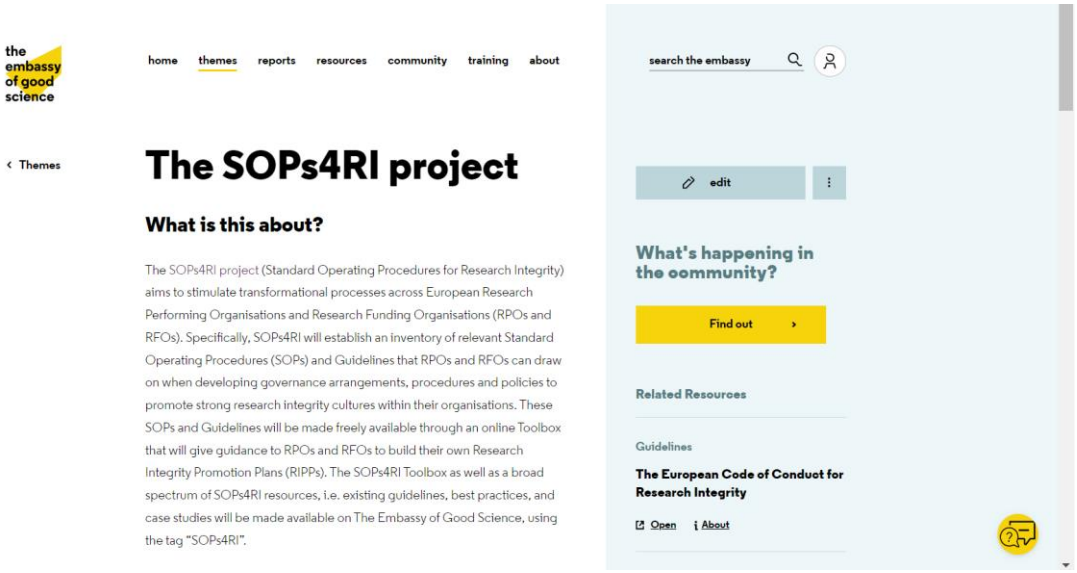

Figure 12: The SOPs4RI theme page section that is going to feature a "digital entrance" for the Toolbox (https://embassy.science/wiki/Theme:847b9778-3589-42fc-9a7e-5d2d7c92402e).

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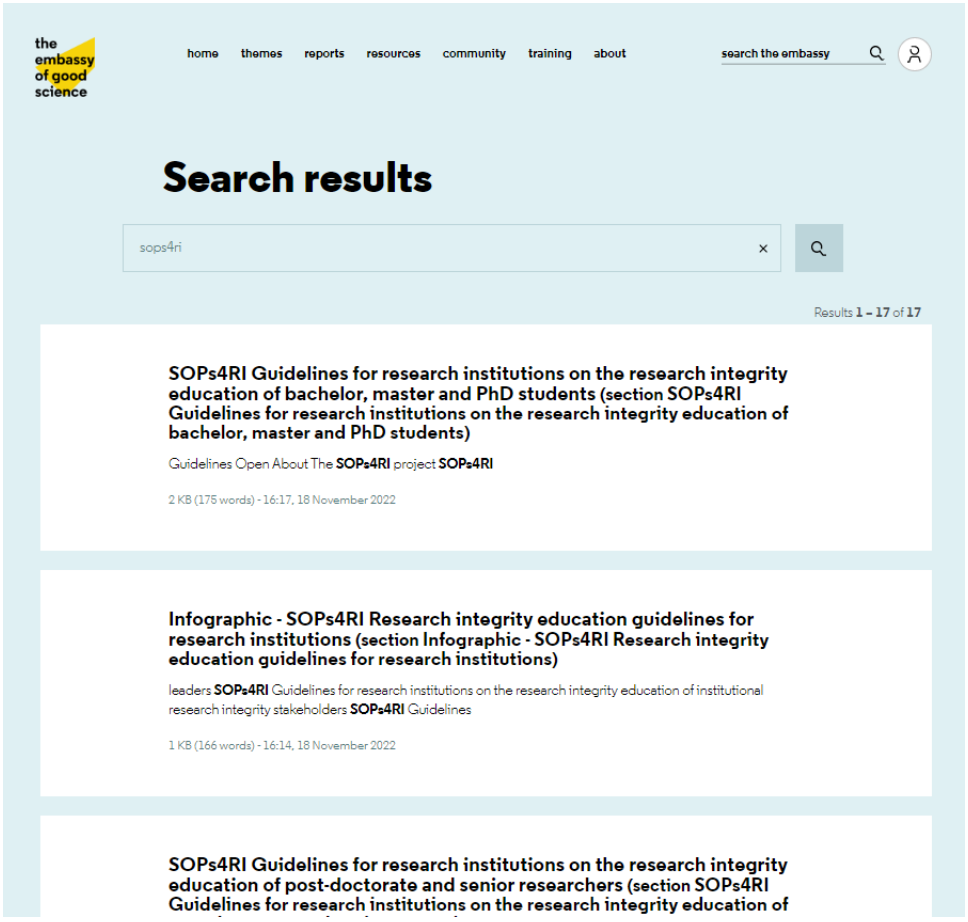

Figure 13: The guidelines that were developed by SOPs4RI are featured, as stand-alone elements, at the the **Resources/Guidelines** section. Here there are the results of the search function, when using "SOPs4RI" as search term (https://embassy.science/wiki-wiki/index.php?title=_Special:Search&search=sops4ri&go=Go&searchToken=34y7op738qh8p9v0sey4839rz).

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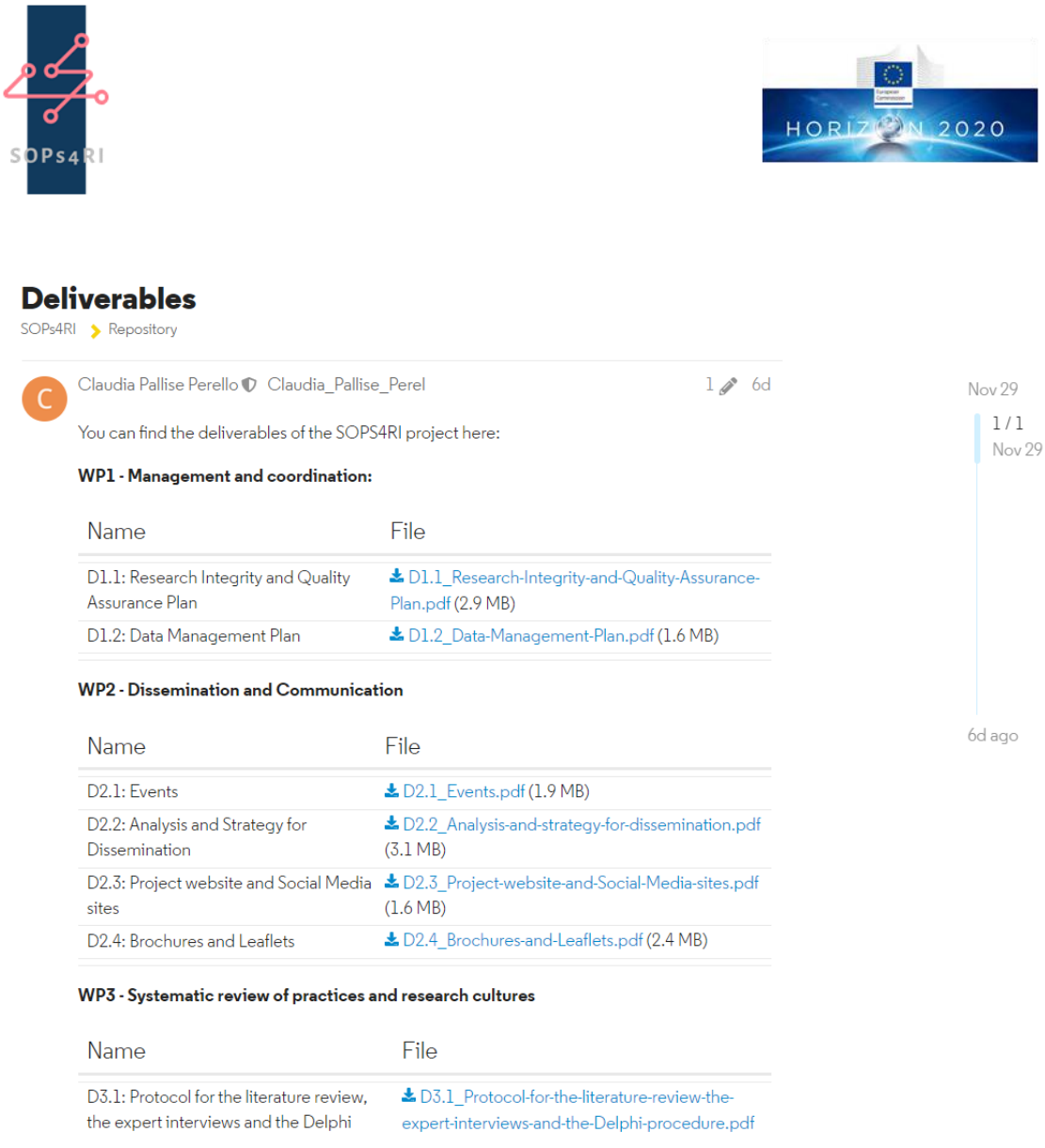

Deliverables

SOPs4RI › Repository

Claudia Pallise Perello · Claudia_Pallise_Perel · 1 · 6d

Nov 29

1 / 1

Nov 29

You can find the deliverables of the SOPS4RI project here:

WP1 - Management and coordination:

Name	File
D1.1: Research Integrity and Quality Assurance Plan	D1.1_Research-Integrity-and-Quality-Assurance-Plan.pdf (2.9 MB)
D1.2: Data Management Plan	D1.2_Data-Management-Plan.pdf (1.6 MB)

WP2 - Dissemination and Communication

Name	File
D2.1: Events	D2.1_Events.pdf (1.9 MB)
D2.2: Analysis and Strategy for Dissemination	D2.2_Analysis-and-strategy-for-dissemination.pdf (3.1 MB)
D2.3: Project website and Social Media sites	D2.3_Project-website-and-Social-Media-sites.pdf (1.6 MB)
D2.4: Brochures and Leaflets	D2.4_Brochures-and-Leaflets.pdf (2.4 MB)

6d ago

WP3 - Systematic review of practices and research cultures

Name	File
D3.1: Protocol for the literature review, the expert interviews and the Delphi	D3.1_Protocol-for-the-literature-review-the-expert-interviews-and-the-Delphi-procedure.pdf

Figure 14: The SOPs4RI deliverables are featured at the **Community/Initiatives** section (https://community.embassy.science/t/deliverables/362).

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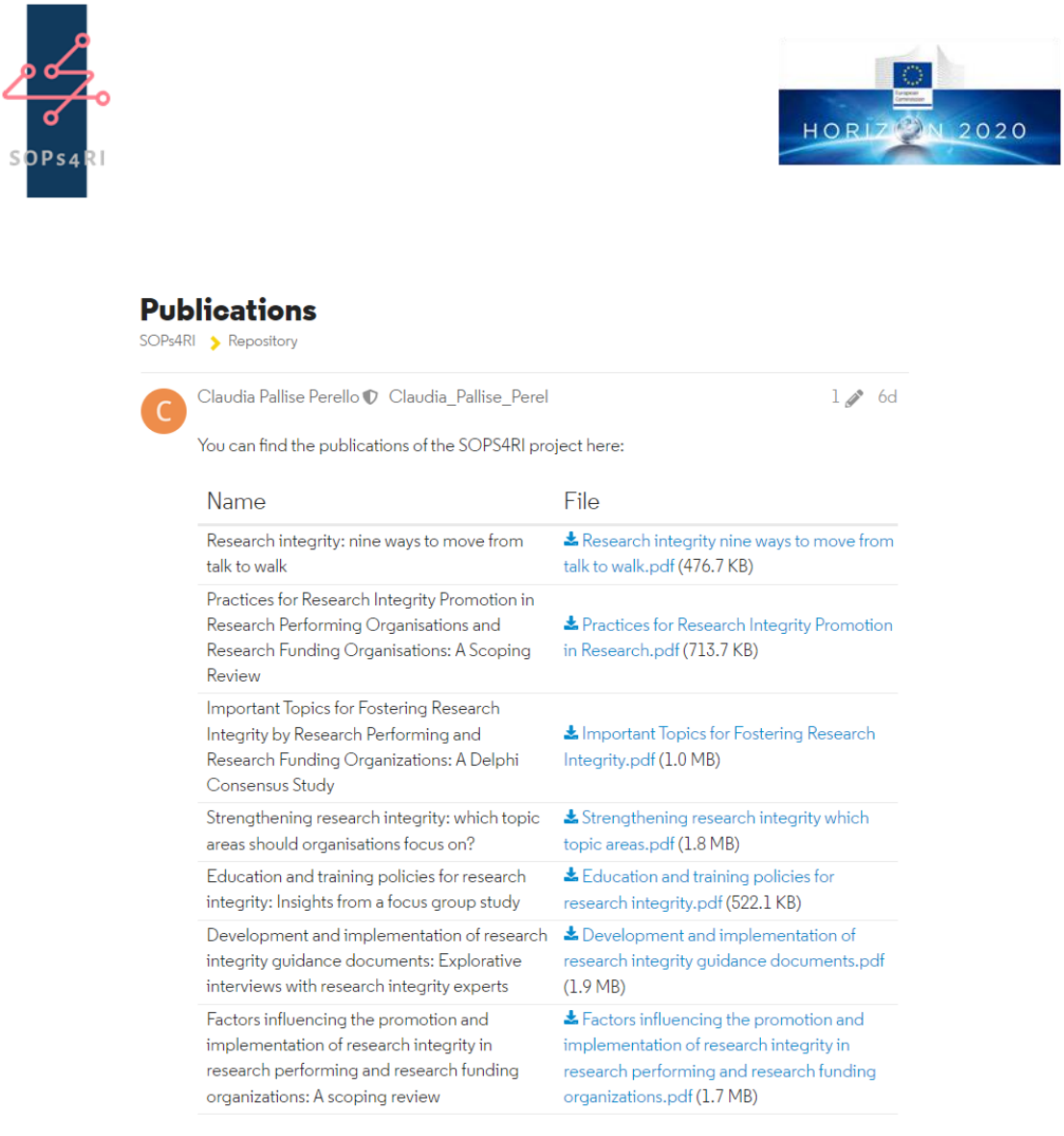

Publications

SOPs4RI › Repository

Claudia Pallise Perello Claudia_Pallise_Perel 1 6d

You can find the publications of the SOPS4RI project here:

Name	File
Research integrity: nine ways to move from talk to walk	Research integrity nine ways to move from talk to walk.pdf (476.7 KB)
Practices for Research Integrity Promotion in Research Performing Organisations and Research Funding Organisations: A Scoping Review	Practices for Research Integrity Promotion in Research.pdf (713.7 KB)
Important Topics for Fostering Research Integrity by Research Performing and Research Funding Organizations: A Delphi Consensus Study	Important Topics for Fostering Research Integrity.pdf (1.0 MB)
Strengthening research integrity: which topic areas should organisations focus on?	Strengthening research integrity which topic areas.pdf (1.8 MB)
Education and training policies for research integrity: Insights from a focus group study	Education and training policies for research integrity.pdf (522.1 KB)
Development and implementation of research integrity guidance documents: Explorative interviews with research integrity experts	Development and implementation of research integrity guidance documents.pdf (1.9 MB)
Factors influencing the promotion and implementation of research integrity in research performing and research funding organizations: A scoping review	Factors influencing the promotion and implementation of research integrity in research performing and research funding organizations.pdf (1.7 MB)

Figure 15: The SOPs4RI peer-reviewed publications are featured at the **Community/Initiatives** section (https://community.embassy.science/t/publications/361)

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LSE The London School of Economics and Political Science

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SOPs4RI

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