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National Initiatives for Open Science in Europe

Deliverable D4.7

Second set of legal, technical and procedural tools

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Abstract: This document is accompanying the deliverable D4.7, which delivers the NI4OS-Europe RoLECT and RePol tools.

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References

- [1] Project NI4OS-Europe-857645 – Annex I – Description of the Action
- [2] D4.1 Incentives for Supporting ORDM and FAIR
(<https://zenodo.org/record/3736148#.Xqq7ZagzY2w>)
- [3] D4.2 Data repository integration and ORDM/FAIR compliance guidelines
(<https://zenodo.org/record/3736150#.Xqq8GqgzY2w>)
- [4] D4.5 Delivery of legal, technical and procedural tools
https://wiki.ni4os.eu/index.php/EOSC_RoP_Legal_%26_Ethics_Compliance_-_Description_and_Documentation
- [5] D4.3 Mapping of legal, technical and procedural tools
<https://zenodo.org/record/3820880#.Xvsf-Sgzbc8>
- [6] Collected tools catalogue:
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Executive summary

What is the focus of this Deliverable?

The deliverable D4.7 is the outcome of T4.3 “Open and FAIR data in practice” work on the creation of tools for RDM following the data lifecycle. It develops and deploys two tools: a) RoLECT, the NI4OS-Europe tool related to technical solutions to address researchers’ needs with respect to the assessment of the legal and ethical aspects of the European Open Science Cloud’s (EOSC) Rules of Participation (RoP), before they onboard their resources to EOSC. b) RePol - Repository Policy Generator, the NI4OS-Europe tool that supports the generation of policies for repositories, increasing thereby their trustworthiness. This document provides an update of the development reported in D4.5 “Delivery of legal, technical and procedural tools”.

What is next in the process to deliver the NI4OS-Europe results?

D4.7 is the final version, featuring all planned elements and characteristics of the RoLECT and the RePol tools, which have been delivered through several intermediate releases. This deliverable concludes the NI4OS-Europe contribution to the development of tools supporting ORDM.

What are the deliverable contents?

This is only an accompanying document. The actual deliverable is a demonstrator accessible through a link. The related documentation is available on the NI4OS-Europe project public wiki.

Conclusions and recommendations

The WP4 deliverables contribute to ORDM and FAIR. The deliverables submitted during the first eight months of the project offer analysis and categorization of the existing guidelines, policies, technical solutions, tools and models addressing FAIR and open science issues. This work has essentially contributed to the identification of gaps in the current scenery and steered the development of the NI4OS-Europe demonstrators.

1. Overview

This deliverable is part of Work Package 4 (WP4) of the NI4OS-Europe project and the work related to the support of ORDM and FAIR. D4.7 delivers two NI4OS-Europe tools, RoLECT and RePol.

- a. The EOSC RoP Legal & Ethics Compliance tool (RoLECT) aims to facilitate the assessment of the legal and ethical compliance of a resource (such as a service) based on EOSC Rules of Participation (RoP), which have been analyzed and transformed into a number of sections and questions. The tool can be used either in a guest mode or as a registered user. The second option offers additional features, such as the possibility to save the work and complete the assessment at a later stage, access to past assessments, copy of a previous assessment into a new one and update only the required fields and more.
- b. The Repository Policy Generator tool (RePol) helps the user create and maintain a comprehensive and clear repository policy or privacy policy for a web-based service. It can be used, however, to generate any other type of document, due to the versatile nature of its configurable forms and FreeMarker templates. The user can access RePol through a web browser. Authentication is not needed.

This document provides only the accompanying information, as the actual deliverable are the two demonstrators. This is the final version of the tools where all planned functionalities have been implemented and released and the tools are fully operational.

RoLECT

Access to the tool	https://rolect.ni4os.eu/
GitHub link to the RoLECT backend service	https://github.com/ni4os-europe/rolect-application
Documentation and architecture	https://wiki.ni4os.eu/index.php/EOSC_RoP_Legal_%26_Ethics_Compliance_-_Description_and_Documentation
Detailed user manual	https://rolect.ni4os.eu/files/rolect-manual.pdf

RePol

Access to the tool	https://repol.ni4os.eu/
GitHub link to the RePol backend service	https://github.com/RCUB-Official/RePol
Documentation and architecture	https://wiki.ni4os.eu/index.php/RePol
Detailed user manual	https://wiki.ni4os.eu/index.php/RePol

2. Summary of changes since the initial version

2.1. EOSC RoP Legal & Ethics Compliance

RoLECT tool has been designed and developed as a self-assessment tool, facilitating the monitoring of a resource's compliance with EOSC, focusing on the legal and ethical rules of participation. Detailed work has been done by legal experts to map the corresponding rules into distinct questions split into 9 categories. The technical team used these questions and their interconnections as a basis for designing and developing a pluggable and adaptable tool to guide its users through a step-by-step wizard into the most important aspects of what they need to establish before onboarding their resource data or service to EOSC. The result of the self-assessment is an automatic pdf report with indications about the importance of each question with respect to the EOSC RoP. Users can exploit this information to perform any mitigation actions required.

The application works either in a guest mode or through external authentication for the registration of users to the application (NI4OS-Europe AAI or social login). The latter provides additional functionality including storing draft assessments, loading of stored assessments and finalization, copying an existing assessment into a new one and assessment history.

The NI4OS-Europe team responsible for the content development of RoLECT follows closely all related discussions within the EOSC Association and participates actively in the RoP Task Force. The tool has a clear dependence on the EOSC RoP, and it has been therefore designed to be dynamic in terms of the questions and their interconnections, so as to easily adjust to any changes. To achieve this, the wizard is modelled using a custom schema in JSON format and is loaded by the front-end application dynamically, without prior knowledge of the actual questions. This allows RoLECT to be adapted whenever the RoP changed and increases the sustainability of the tool.

A detailed end-user guide and technical information are available to assist RoLECT users in exploiting it, while a dedicated "contact us" page has been set up for direct communication. RoLECT is currently at TRL8 and has been onboarded to the NI4OS-Europe Agora Catalogue.

2.2. Repository Policy Generator

A trustworthy repository should have a transparent policy, informing users about the roles, responsibilities, rights and procedures aimed at ensuring that their deposited data are preserved and disseminated in line with the FAIR principles. A repository policy is a prerequisite for onboarding data repositories to NI4OS-Europe and EOSC service catalogues. That is why it was decided to provide a tool that would facilitate the making of key choices and drafting of policy documents. The specification and exchange of metadata in repositories have been largely defined in the context of OpenAIRE, EOSC Enhance, EOSCpilot and FAIRsFAIR. At the same time, it was found that along with the lack of awareness that a repository should have a clearly defined policy, deciding on the rules of repositories' operation and expressing these decisions through comprehensive

repository policies is a major problem for their owners and managers. RePol –Repository Policy Generator is an open-source web application that guides users through the process of defining policies for repositories and web-based services. It helps in defining and maintaining comprehensive and clear repository and privacy policies. Generated privacy policies are suitable for any kind of service. A step-by-step wizard and self-explanatory forms guide users through the process. By choosing options in a form, users shape a policy document with predefined policy clauses formulated in line with the current best practice. The resulting policy document may be downloaded as an XML file, additionally customized, and integrated into the service or repository. The collected data and the key elements of the generated policy are provided in a machine-readable format. This allows for an automated interpretation of created policies and extraction of repository-level metadata for inclusion in registries, catalogues and various operational and data discovery tools. The resulting policy document may be downloaded, additionally edited, and integrated into a repository. RePol helps service owners meet the requirements for participation and onboarding to EOSC. This extensible web application was originally designed to generate policies for repositories. However, it can be configured to generate any other type of document. Along with repository policies, RePol currently supports a workflow for defining generic privacy policies suitable for any kind of service. RePol is in production (TRL8). It has been onboarded to the NI4OS-Europe Agora Catalogue and made available to the other repositories and services in the NI4OS-Europe partner countries and beyond.

3. Future steps and sustainability

The current version of RoLECT concludes the related work in the frame of the NI4OS-Europe project. It includes four distinct, yet interoperating components: user management, data management, compliance validator and the configurator that supports the dynamic update of the sections and questions of RoLECT, towards a sustainable tool that can easily be adapted for future updates and enhancements of the EOSC RoP.

The tool has reached a high maturity level, both in terms of technical development and legal analysis of RoP. The development team follows closely any discussion and progress on EOSC RoP, as RoLECT highly relies on related processes. The participation in the EOSC RoP Compliance Monitoring Task Force and the monitoring of the outputs of the other groups will inform any future updates and releases of RoLECT if needed. In addition, future updates are foreseen based on any potential feedback received by the end-users concerning not only the actual assessment questions but also the rest functionality and the User Interface's friendliness.

RoLECT will be onboarded to EOSC through the NI4OS-Europe pre-production platform, in which it is already available.

Whether RoLECT becomes in the future part of any "official" EOSC certification mechanisms and schemes remains to be seen, as the related landscape is still foggy. It certainly has this potential, but this depends to a large extent on factors outside the NI4OS-Europe consortium. In any case, the development of a business model and sustainability plan at the final stages of the project will take all the above options into account.

Since its initial release, RePol has been continuously updated based on users' feedback and analysis of service policies listed in the NI4OS-Europe Agora catalogue. This work will continue, as well as further promotion of the tool and refinement of the policy templates. The UoB has used RePol to maintain policies of its publication and data repositories (currently 32) and to develop its institutional privacy policy. Its output was the basis for the institutional privacy policy of the Serbian NREN AMRES, which may also use it to draft more detailed privacy policies for some of its services. By creating new templates, it can be easily adapted for new applications.

These uses and RePol's versatility create a strong drive to sustain RePol beyond and after NI4OS-Europe, in addition to its current good visibility and potentially even wider use within EOSC and other open-science-related initiatives and projects in which the UoB is or will be involved.