

Guideline for the ONLINE S3 toolbox tool/application RIS3 Open Data Tool

ONLINE S3 – 710659 – Guidelines for the pilot experimentation phase



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HISTORY OF CHANGES

Version	Date	Contributing partner	Summary of changes
Version 0.1	2016-10-07	RIM	Structure of the document, elaboration of required information as a template for all tools
Version 1.0	2017-04-25	IIL	Initial Draft

DISCLAIMER

The opinion stated in this report reflects the opinion of the ONLINE S3 consortium and not the opinion of the European Commission.

ACKNOWLEDGEMENT

This document has been elaborated within the framework of the ONLINE S3 project, which has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 710659.



BACKGROUND AND RATIONAL

Ongoing studies concerning the use of open data on EU Structural Funds have shown that most data currently published by EU national and regional authorities are not yet compatible with the fundamental requirements of the open data paradigm (Reggi, 2016). Data is rarely complete, accessible, timely, machine process-able and non-proprietary. Open Data Tools operate on such data overcoming the issues previously highlighted, making such data compatible and easily accessible.

An RIS3 Open Data Tool has been developed to facilitate the use of published open data concerning EU projects when tracking specialisations. The tool works as a form of data repository that enables the tracking of projects and initiatives implemented in each region.

Currently, open data tools are not widely used in non-publicly funded projects. However, the effective use of this tool, facilitates the tracking of project themes and topics in each region which maybe cross-referenced with S3 priorities. The data made available by the tool can be highly valuable in tracking progress towards defined objectives and vision, and to inform the RIS3 update process.

Figure 1 provides the rationale behind this ONLINE S3's application.

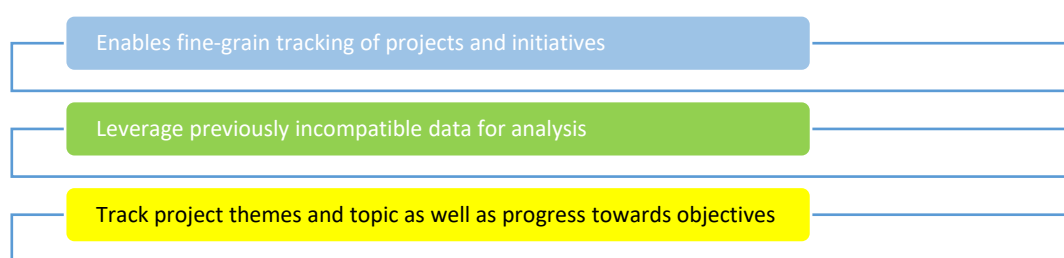


Figure 1 Rational behind this ONLINE S3 application



DESCRIPTION OF THE APPLICATION

The RIS3 Open Data Tool is a form of data repository that allows for a **finely grained tracking of projects and initiatives** implemented in each region with **links to respective S3 priorities**. Data is mined using an automated collection system which mirrors the CORDIS (Community Research and Development Information Service) database (EU Publications Office, 2017) along with additional information extracted from project and coordinator websites.

An Open Data Platform (ODP) backend, based on CKAN, supports the tool. Together the ODP and Tool operate as a web directory of projects and organisation such that it enables users to **search for up-to-date information concerning regional projects** including project outcomes.

The ODP has full access to publicly available data through the ODP API (Application Programming Interface), which provides functions to access relevant data stored by the platform, and allows the inclusion of both structured and unstructured content such as data that may be available through individual project websites and progress reports as well as results through RIS3 innovation maps (see the description of method 5.6).

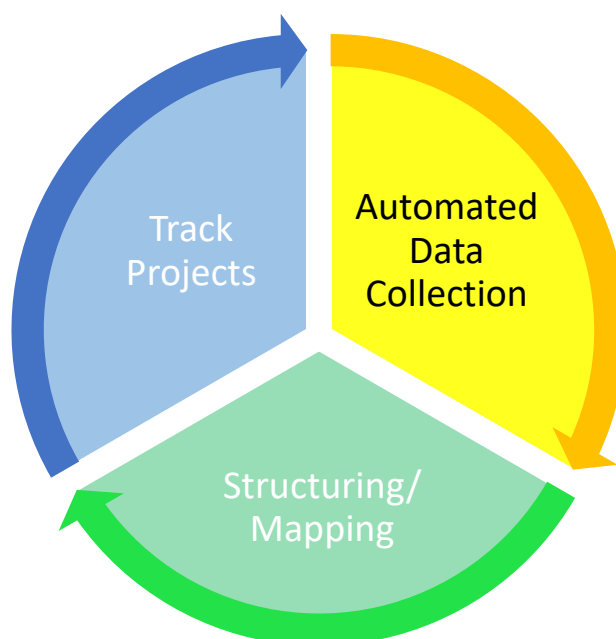


Figure 2 Overview of this ONLINE S3 application



BENEFITS TO KEY ACTORS AND STAKEHOLDERS

Ongoing studies have highlighted a clear gap regarding the use of RIS3 implementation methods. Tools for tracking data concerning publicly funded projects and initiatives are not widely used which makes this process difficult and time-consuming without such an aid.

Policy makers and other interested parties will be able to use this RIS3 Open Data Tool to track progress within regions towards their objectives and collective vision. The tool will provide data on the number of projects implemented and their linkage to corresponding S3 priorities in order to facilitate this. This will aid in measuring progress against the vision of the S3 in the region.

The tool may also be useful for those taking part in the project as a means of tracking how well they have progressed against the projects objectives and as a means of publicising projects and expertise among peers.

Subsequently, the tool also has an impact on the data analysis method 5.6: RIS3 Innovation Maps. The quality of the data that is processed and presented by this is influenced by the operation of the Open Data Tool, as it will act as one of its main data sources.

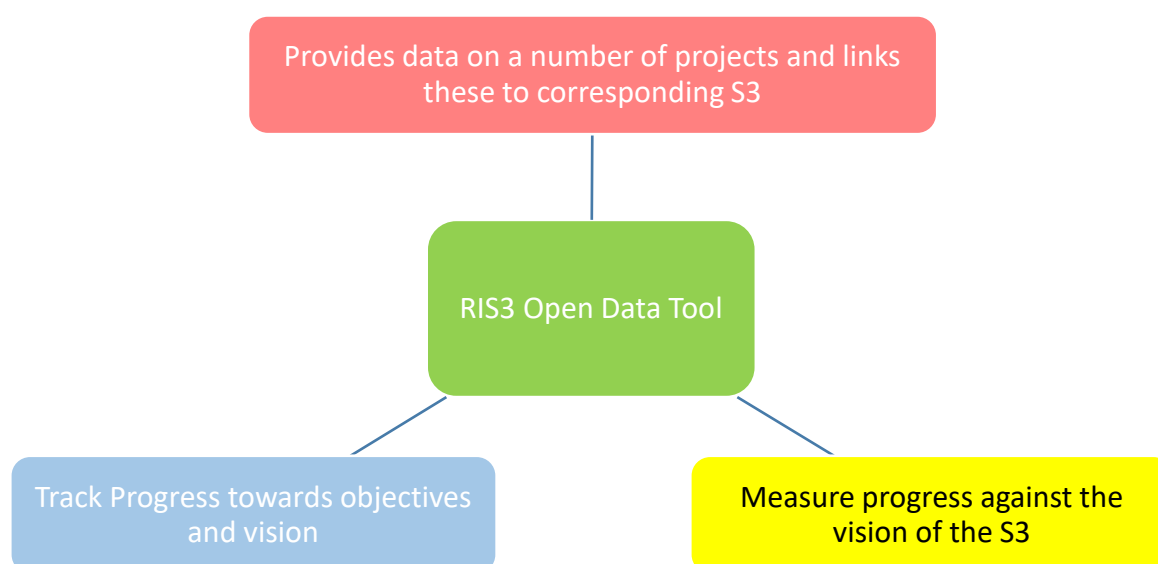


Figure 3 Benefits to stakeholders when using this ONLINE S3 application

KEY ISSUES AND REQUIREMENTS

Requirements

Various types of data concerning RIS3 projects are sourced for compilation by the Open Data Tool Platform, each source is considered reliable and up-to-date. Data sources are synchronised to enable the effective tracking of changes in terms of user notifications. This is achieved using data archived by the CORDIS project where a generic, standardised model has been devised to represent projects and organisations. The Open Data Tool builds upon this offering further information extracted to create linkage between each project and the corresponding S3 priority to be supported by the objectives of the project.

Relevant Data sources include:

- CORDIS
 - Regional S3 Project Websites
 - Regional S3 Project Progress Review Reports
- Online S3 Platform
 - Regional Innovation Maps

Project
Project ID, Acronym, Title, URL
Coordinator, Country, Consortium
Call, Programme, Funding Scheme
Objective, Topics, Subjects

Organisation
Organisation ID, Short Name, Name, Address
Projects, Roles, State of Participation, Activity Type

Process

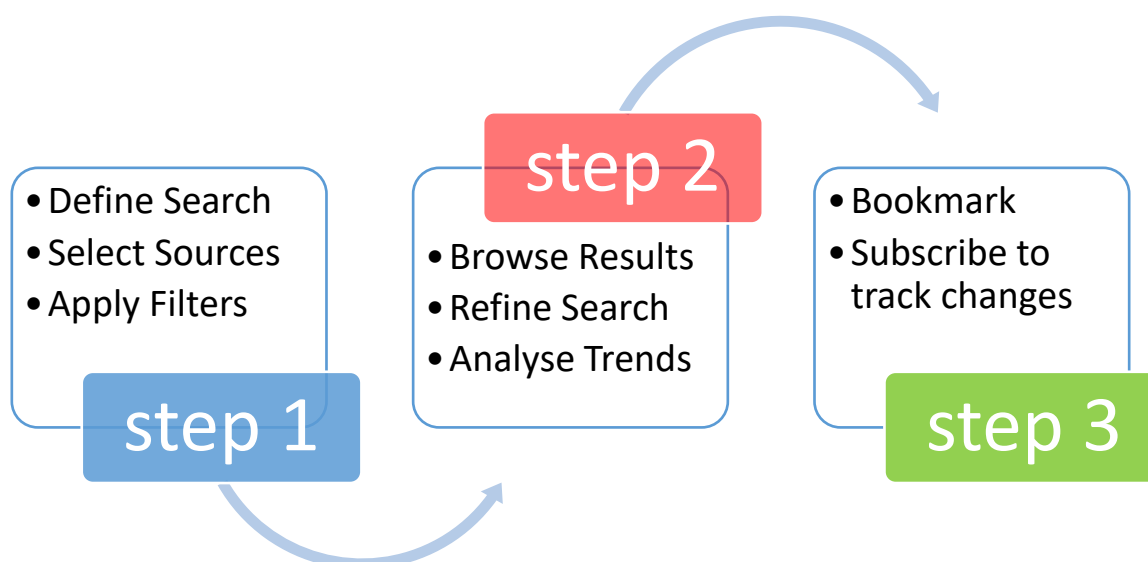


Figure 4 Key issues when using this ONLINE S3 application

Timeframe

Data made available by the tool is to be fed into the Innovation Maps tool for further analysis.



A STEP-BY-STEP GUIDE

1. Define a search term concerning one of the following properties of the projects in interest:
 - Project- Title, Acronym, ID, Objective;
 - Coordinator, Country of Origin;
 - Call, Programme, Funding Scheme;

The screenshot shows the Online S3 Platform interface. At the top, there is a navigation bar with links: Online S3 Project, Applications, Toolbox, Analytics, Support, and Contact. Below this is a blue header with the Online S3 Platform logo and the text 'RIS3 Open Data Tool'. There are links for 'About', 'Use cases', and 'Access to application', along with 'Sign in' and 'Sign up' buttons. The main content area is titled 'RIS3 Open Data Tool' and 'Projects and Organisations'. It contains a search bar with the text 'Earth' and a dropdown menu with options: Acronym, Title, ID, Coordinator, Coordinator Country, Call, Programme, and Funding Scheme. The dropdown menu is currently open, showing the 'Acronym' option selected. To the right of the search bar, there are buttons for 'Download Guide' and 'Access to application'. Below these is a section for 'Bookmarked Projects' which shows 'No bookmarks to show. Add bookmarks by clicking (🔖)'. At the bottom, there is a footer with 'Online S3 Project | Applications | Toolbox | Analytics | Support | Contact' and 'Copyright © 2016-2017 OnlineS3 Project'. On the right side of the footer, there is a logo for the European Union and text: 'Funded by the Horizon 2020 Framework Programme of the European Union.'

2. Select frameworks, filters and sorting parameters to refine the search further to narrow down on projects of interest.

The screenshot shows the Online S3 Platform interface with search results. The search bar still contains 'Earth' and the dropdown menu is set to 'Acronym'. Below the search bar, there is a section for 'Frameworks' with four icons: Horizon 2020, a blue square, a blue circle, and a blue circle with a white 'X'. The 'Horizon 2020' icon is selected. Below the frameworks section, there is a 'Sort By' dropdown menu with 'Query' selected, and a 'Show: 10 per page' dropdown menu. At the bottom, there is a footer with 'Online S3 Project | Applications | Toolbox | Analytics | Support | Contact' and 'Copyright © 2016-2017 OnlineS3 Project'. On the right side of the footer, there is a logo for the European Union and text: 'Funded by the Horizon 2020 Framework Programme of the European Union.'

Figure 5 Step 1 for using this ONLINE S3 application



3. Explore the search results concerning projects and participating organisations.

Search: Earth

Acronym

Results: Projects Organisations

Records 1-10 of

[PROJECT] EarthServer-2 - Agile Analytics on Big Data Cubes

ID: 654367

Website: nan

Start date: 2015-05-01, End date: 2018-04-30

Status: Signed

Objective: EarthServer-2 makes Agile Analytics on Big Earth Data Cubes of sensor, image, simulation, and statistics data a commodity for non-experts and experts alike through navigation, extraction, aggregation, and recombining of any-size space/time data cub. Read more

Coordinator: Jacobs University Bremen Ggmbh, DE

Call: H2020-INFRA-2014-2

Programme: H2020-EU 1.4 1.3

Funding: RIA

[PROJECT] Earth core - Exploring Thermodynamic Properties of Earth's Core-Forming Materials

ID: 647723

Website: nan

Start date: 2015-05-01, End date: 2020-05-31

Status: Signed

Objective: It is known that the Earth's core is less dense than pure iron by about 7%, which is due to the presence of a light element(s) such as Si, S, C, O, and H. The goal of this project is to construct a thermodynamic model of the Earth's central core. A p... Read more

Coordinator: The University Of Edinburgh, UK

Call: ERC-2014-CoG

Programme: H2020-EU 1.1

Funding: ERC-CoG

[ORGANISATION] JacobsUni - JACOBS UNIVERSITY BREMEN GGMBH

ID: 999897147

URL: www.jacobs-university.de

Address: Campus Ring 1, BREMEN, 28759, DE

Projects:

EarthServer-2: Coordinator

[ORGANISATION] PML - PLYMOUTH MARINE LABORATORY

ID: 999484024

URL: http://www.pml.ac.uk

Address: Prospect Place, The Hoe, PLYMOUTH, PL1 3DH, UK

Projects:

EarthServer-2: Participant

4. Select a project to get more information concerning the consortium and breakdown.

Project Overview:

[PROJECT] EarthServer-2 - Agile Analytics on Big Data Cubes

ID: 654367

Website: nan

Start date: 2015-05-01, End date: 2018-04-30

Status: Signed

Objective: EarthServer-2 makes Agile Analytics on Big Earth Data Cubes of sensor, image, simulation, and statistics data a commodity for non-experts and experts alike through navigation, extraction, aggregation, and recombining of any-size space/time data cubes; easy to install & maintain value-adding services extending the existing portfolio of data and compute centers; based on open standards; in particular, the OGC Big Data standards and the forthcoming ISO SQL/MDA ("Multi-Dimensional Arrays") standard. In the Joint Research Activity, the project will advance the existing, world-leading radsaman Array Database technology wrt. query functionality, inter-federation data processing with automatic data and query distribution, tape archive integration, and 3D/4D visualization based on NASA's virtual globe technology. In the Services Activity, large data centers (ECMWF, PML, MEO/ESA, GeoScience Australia, JacobsUni) will set up water, air, weather, and planetary services on 3D & 4D data cubes up to Petabyte-size with user-tailored clients for both visual and textual ad hoc mismatches. In the Networking Activity, the project will advance open Big Data standards in OGC, RDA, and ISO (in particular, write ISO SQL/MDA). Further, all adequate channels will be used for strong dissemination & exploitation, specifically: writing a monograph explaining OGC Big Geo Data standards, scientific publications & active conference organization. Earth science data user workshops for each domain addressed; actively contributing technology & experience to GEO / GEOSS and further bodies; establish standardized Big Geo Data benchmark and run it against EarthServer-2 and further relevant systems. Altogether, EarthServer-2 will maintain and extend the lead in Big Earth Data Services established in the highly successful EarthServer-1 project. Being already supported by ESA, radsaman will form an enabling building block for COPERNICUS / Sentinel.

Coordinator: Jacobs University Bremen Ggmbh, DE

Call: H2020-INFRA-2014-2

Programme: H2020-EU 1.4 1.3

Funding: RIA

More Info:

Consortium Map Finance

JACOBSUNI
JACOBS UNIVERSITY BREMEN GGMBH
Campus Ring 1, Bremen, 28759, DE
Role: Coordinator
Activity Type: HES
URL: www.jacobs-university.de

PML
PLYMOUTH MARINE LABORATORY
Prospect Place, The Hoe, Plymouth, PL1 3DH, UK
Role: Participant
Activity Type: REC
URL: http://www.pml.ac.uk

CITE
COMMUNICATION & INFORMATION TECHNOLOGIES EXPERTS ANONYMOS ETAREIA ENYOLLESTIKON KAI ANAPTYXIAKON YPIRESION
Ethnikis Antistaseos 178, Karsanaki, 16122, EL
Role: Participant
Activity Type: PRC
URL: nan

Map Satellite

JACOBS UNIVERSITY BREMEN GGMBH X
Campus Ring 1, Bremen, 28759, DE
EarthServer-2 Project Coordinator
HES

Breakdown

Total Cost: €2839743.75
Max Contribution: €2839743

MEEO: €393750.00 13.9 %
JacobsUni: €841618.00 29.6 %
PML: €314250.00 11.1 %
CITE: €3371750.00 11.5 %
ECMWF: €376875.00 20.3 %
RADSAMAN: €357500.00 13.6 %

Figure 6 Step 2 for using this ONLINE S3 application



5. Save projects to the bookmark panel for ease-of-access at a later stage.

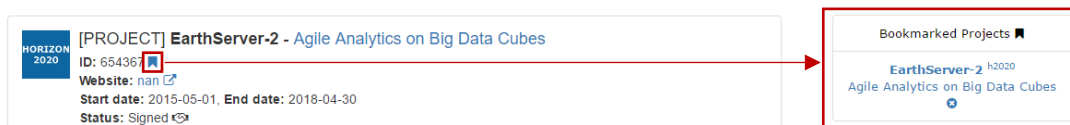


Figure 7 Step 3 for using this ONLINE S3 application



FURTHER INFORMATION

Please refer to the RIS Open Data Tool (5.7) methodology fiche created for WP1 of the Online S3 project for further information on the underlying method.

Please refer to the RIS Open Data Tool (5.7) analysis of online applications and e-tools supporting the implementation of the method created for WP2 of the Online S3 project for further information on the design of the tool.



REFERENCES

Foray, D., Goddard, J., Goenaga Beldarrain, X., Landabaso, M., McCann, P., Morgan, K., Nauwelaers, C., Ortega-Argilés, R. Guide to Research and Innovation Strategies for Smart Specialisation (Ris 3), Smart Specialisation Platform. Regional Policy. available at <http://s3platform.jrc.ec.europa.eu/s3pguide>; European Commission; 2012.