

The European Network of Research Infrastructures and Industry for Collaboration
H2020 INFRAINNOV-02-2019
Grant Agreement Number: 871112



Deliverable Report:
D1.2 Data Management Plan

Version 2

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1. Project Deliverable Information Sheet

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Authorship	Written by	Anne-Charlotte Joubert (ESS), Madison Bell (ESS)
	Contributors	Ilaria Nardello (SZN), Nikolaj Zangenberg (DTI), Edward Mitchell (ESRF), Spyros Goudelis (EATRIS), Nigel Wagstaff (EATRIS), Tamara Carapina (EATRIS), Anton Ussi (EATRIS)
	Reviewed by	Anne-Charlotte Joubert (ESS), Madison Bell (ESS) – after discussion with ENRIITC General Assembly
	Approved	ENRIITC StB

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4. List of Abbreviations

CA	Consortium Agreement
CSA	Coordination and Support Action
DMP	Data Management Plan
DMSC	Data Management and Software Centre
DTI	Danish Technological Institute
EATRIS	European Infrastructure for Translational Medicine
EC	European Commission
EEN	Enterprise Europe Network
ENRIITC	European Network of Research Infrastructure and Industry for Collaboration
ESFRI	European Strategy Forum on Research Infrastructures
ESRF	European Synchrotron Radiation Facility
ESS	European Spallation Source ERIC
FAIR	Findable, Accessible, Interoperable, and Reusable
GA	Grant Agreement
GDPR	General Data Protection Regulation
ICO(s)	Industry Contract Officer(s)
ILO(s)	Industry Liaison Officer(s)
KPI(s)	Key Performance Indicator(s)
RI(s)	Research Infrastructure(s)
StB	Steering Board
WP(s)	Work Package(s)
WPL(s)	Work Package(s) Leader
SZN	Stazione Zoologica Anton Dohrn Napoli

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6. Executive Summary

This document is Deliverable 1.2 and concerns the Data Management Plan (DMP) for the H2020 project ENRIITC. The Plan follows the H2020 FAIR Data Management Plan (DMP) template (version 26 July 2016). The purpose of this deliverable is to support the data management life cycle for all data that will be collected, processed or generated by the project. It will provide a description of the data types the project will generate and how the data will be collected and stored and made available for validation, exploitation and re-use by others. The information in this DMP will be updated during the course of the project. The data management plan is a living document and will be updated with changes to metadata format and requirements.

7. Report on Implementation Process and Status of Deliverable

7.1. Data Summary

7.1.1. Purpose of the data collection

The ENRIITC project aims to build a permanent pan-European Network of Industrial Liaison and Contact Officers (ILOs and ICOs) and enable industry to become a full partner of research infrastructures whether it is as a user, a supplier, or a co-creator. In order to enhance the collaboration between RIs and industry, ENRIITC will work around four key objectives:

1. Establish a sustainable European Network of ILOs and ICOs which enables mutual learning
2. Map collaboration potential between research infrastructures and industry,
3. Develop and refine strategies and best practices to foster these collaborations,
4. Raise awareness among industry for collaboration opportunities at research infrastructures, and demonstrate impact.

In order to fulfil these objectives, the following data will be collected:

Personal data

The ENRIITC Network consists of people working either in the research infrastructure sector (RI staff such as managers, ICOs, procurement and innovation officers, etc.), as ILOs being appointed by national governments, or in industry.

In order to interact with them and facilitate networking between the ENRIITC Network members, personal data (i.e. contact details) needs to be collected and processed.

All personal collected are only shared among the Project beneficiaries if the concerned data subject has expressively given consent, and will be kept for up to 5 years after the payment of the balance after the end of the Project. (in line with the EC H2020 rules), unless expressed consent is given for a longer period.

In case of an event organised by an external party (a party who is not a Project beneficiary, i.e. an Associate or another organisation not in the consortium organising an event in which ENRIITC network members would be invited), personal data will be shared with the concerned external party following permission from the owner of the personal data.

Industry related data

In order to gain understanding of the collaboration potential between RIs and industry, a mapping of the landscape will be done through WP2. The mapping will be split into two tasks one targeting 'industry as supplier' (T2.1), and one targeting 'industry as a user' (T2.2), another task (T2.5) will be dedicated to deepen the understanding of the collaboration by proceeding with phone or face-to-face

interviews with selected companies. The ILOs and RIs will be asked to supply names of companies, together with contacts in those companies, that will be interviewed as part of Task 2.5.

Data will be collected and organised into the following categories:

Category	Industry as a supplier survey (Task 2.1)	Industry as a user survey (Task 2.2)	Drivers and Barriers to Industry-RI engagement (T2.5)
1	Background information (information about the RI)		Background information (information about the company)
2	General questions for ILOs (based country, employment institution, dedicated resources – FTEs, RI involvement related questions)	Questions regarding the internal organisation of the RI towards industrial usage	Questions regarding the internal organisation of the industry towards RI usage
3	ILO activity and performances	Questions relating to the companies using the RI, including phone interviews with a sample of companies, and covering 3 main sectors: How are you organised internally towards companies? How do you market your services and communicate with industry? Which industrial sectors are you working with?	
4	Questions to ILO representatives relating to the perceived drivers and barriers to industry-RI engagement and the role of intermediary figure and other measures to support the active exchanges between RIs and Industry	Questions to RI representatives relating to the perceived drivers and barriers to industry-RI engagement and the role of intermediary figure and other measures to support the active exchanges between RIs and Industry	Questions to Industry representatives relating to the perceived drivers and barriers to industry-RI engagement and the role of intermediary figure and other measures to support the active exchanges between RIs and Industry

Answers to the questionnaires will only be available in its complete form among the Project beneficiaries. Data will be anonymised before sharing the results further than the project beneficiaries, and it will be shared in accordance to the ENRIITC Open Access Policy (Annex 1).

Scientific data

Since ENRIITC is a H2020 CSA project, no scientific data will be produced within the Project.

Statistics of ENRIITC activities

In order to monitor the performance of the Project and to be able to report on its KPIs, statistics of the events, communication, and dissemination activities will be obtained. This data includes number of visitors at the events, workshops and webinars, as well as number of page visits to the ENRIITC website and the number of followers on the social media platforms. In addition, details of and reports from meetings held, presentations given, speeches made, outreach events and other interactions with project stakeholders (including industry parties) will be documented.

Project Management related data

In order to fulfil the requirements of the obligations of GA No 871112, Project related data will be collected.

7.1.2. Types and formats of collected data

The following types and formats of data will be generated and collected:

Personal data

Data such as contact details (name, email, phone number), affiliations, networking interests, participation in networking activities, special dietary requirements (this will be requested when organising events including catering) will be directly collected from the data owner. Registrations to the ENRIITC contact database will take place via a dedicated, password protected Indico pages (Annex 2). Data is exported and maintained in XRM+, which is the ESS designed data base developed under the H2020 funded BrightnESS project (Grant Agreement number 676548). Personal data will also be collected by ENRIITC consortium partners when organising ENRIITC events. In this case, the data collector will be using their own registration platform and will be responsible as data controller.

Industry related data

Survey questions can be found in Annex 3. The questionnaires have been prepared as an MS-Word document and will be exported to the secured online platform. The collected data will be processed and anonymised using survey tools and analytics. The results will be transposed into MS-Office Suite for reporting purposes.

Statistics of ENRIITC activities

Key performance indicators (KPIs) will be identified to measure the performance of the ENRIITC activities and will include:

- Number of impressions
- Numbers of members and followers on social media platforms
- Number of participants in events and meetings
- Numbers of responses to surveys.

Project management related data

Project related data are Deliverables and publications, contracts and agreements, procurement documentation, Project reports, minutes, Project financial monitoring, etc. Project related data are documents generated by the standard MS Office suite such as Word, Excel and PPT files, as well as PDF documents.

7.1.3. Origin of the data

Personal/professional data

Personal and professional data are provided by ENRIITC Network members directly by means of double-opt-in registration for Network membership, for subscribing to the ENRIITC newsletter and for registering to the Network events and activities.

Industry related data

Such data will be provided directly by organisations identified within the ENRIITC Network and approached by the WP2 task partners; project partners will also be able to use their own networks and contacts. Selected companies and organisations will be invited to fill-in surveys via service platforms such as Survey Monkey or another secure online platform. The survey will also be available on the ENRIITC website via a link redirecting to the survey online platform. Phone interviews with a sample of the selected companies will also be used to collect data in a second phase.

Statistics of ENRIITC related activities

Event statistics will be generated automatically by evaluating the events registrations (see personal/professional data). Website analytics are generated automatically through Google analytics. This function has been added on the ENRIITC website. It monitors the behaviour of visitors as well as their interaction with the website. The analytics of the ENRIITC social media accounts are produced separately by each platform. Social media analytics for Twitter, YouTube and LinkedIn are given under the analytics section of each profile.

Project management related data

Provided by all grant beneficiaries and made available by the Project coordinator adhering to the principles of the GA and CA. ENRIITC data will be collected and mostly generated by ENRIITC task participants, task co-leaders, and ENRIITC beneficiaries.

The table below summaries the purposes types, formats, and origins of the data generated/collected by the project:

Data category	Purpose of data	Type of data	Format of data	Origin of data
Personal data	ENRIITC Network. Interaction between the Network members	Contact details (name, email, phone number), affiliations, networking interests, participation in networking activities	Online service platform and exported in MS-Excel format, stored on ESS XRM+ database	Collected through an online service platform (e.g. Indico, Cognito forms or Survey Monkey or Event Brite, or other secure online platform)
		Photos	Jpeg, ...	Pictures taken during events by project beneficiaries, or project Associates If collected from outside the project, consent from data owner will be expressly collected
		Videos	MP4	
Industry-related data	Mapping of RI-Industry collaboration to gain understanding of the collaboration potential between RIs and industry	Survey questions, anonymised data	MS-Suite (Word, Excel)	Collected through an online service platform (e.g. Indico, Cognito forms or Survey Monkey or Event Bryte, or other secure online platform)) via selected organisations, and analysed by project beneficiaries. Anonymised data are stored and accessible on the project share document system OwnCloud set-up by ESS, and hosted on ESS servers
Scientific data	N/A	N/A	N/A	N/A
Statistics of ENRIITC activities	Measure the performance of the project	KPIs	MS-Suite (Word, Excel)	Project task/work-package leaders, website supplier, and made available

				by project coordinator
Project management data	Fulfil the requirements of the obligations of GA No 871112	Reports, meeting minutes, deliverables, legal documents: Grant Agreement and Consortium Agreement, etc.	MS-Suite (Word, Excel, PPT), PDF, text	Project Beneficiaries, project task/work-package leaders, and made available by project coordinator
Informative data (events, news, etc.)			Text	Project task/work-package leaders Project Associates
Training material			PPT, PDF	Project shared document system Own Cloud, input from task leaders, project Associates

Table 1: Summary of documents and data produced in ENRIITC

7.1.4. Re-use of existing data

Work package 2 “Mapping of research infrastructure-industry collaboration” will consider related surveys and reports produced in the framework of other EU-funded projects such as ENVRIPlus, RI-PATHS, SEIRI, ERIC FORUM, CORBEL, Calipso+, or previously developed and used by project beneficiaries (i.e. EMSO, ESRF, etc.).

7.1.5. Expected size of the data

The size of the collected and generated data is expected to be in the Megabytes range. This may change over the lifetime of the project and will be accordingly updated in the data management plan.

7.1.6. Data utility

The documents and results will be useful to all the ENRIITC project beneficiaries and Associates, but also to the entire Community comprising, ESFRI RIs and national research infrastructures, European ILOs and ICOs, and political stakeholders such as the European Commission. Only public documents, mainly reports and deliverables will be shared openly. Personal data will not be shared unless express written consent from the data owner.

7.2. FAIR data

7.2.1. Making data findable, including provisions for metadata

The ENRIITC project will not produce or use research or scientific data. Therefore, it is not expected to have any data produced and/or used in the project discoverable with metadata, identifiable and locatable by means of a standard identification mechanism (e.g. persistent and unique identifiers such as Digital Object Identifiers). In case this changes during the lifetime of the project, the data management plan will be updated.

ENRIITC will use an internal naming convention for documents based on “YYYYMMDD_Deliverable_Dx.y_name of the document_ENRIITC_version_initials of the last person who worked on the document” e.g. “20200227_Deliverable_D1.1_KoM_Minutes_ENRIITC_22_ACJ”.

Documents generated by ENRIITC can be searched for via the project website. They are organised in a logical way to make it easy to browse.

Version numbers for documents will be based on their dates. When it comes to final deliverables (PDF version uploaded on the website and on the EC portal), it is expected to have only one version of the document. In case there is a need for a revised version, the data generated will be tagged version 1.1, version 2.1 etc.

The ENRIITC project will mostly create documents (deliverables, reports, strategic papers, etc.), using Dublin core metadata (title, authors, abstract, dates, etc.).

7.2.2. Making data openly accessible

Deliverables documents will be shared on open access in ENRIITC (all deliverables are public). Relevant statistics on the website or newsletter or other important findings from the project will be published on open access.

The ENRIITC project is about setting-up a Network and thus involves the collection of personal and professional data. ENRIITC Project beneficiaries are committed to be compliant with General Data Protection Regulation¹ (GDPR). Open access documents will be available on the project website, and will also be uploaded on the EC portal. ENRIITC website will be actively maintained by ESS, EATRIS, and ENRIITC partners for at least five years after the payment of the balance after the end of the Project. Project beneficiaries, ENRIITC Associates or other stakeholders that would like certain content to be published on the ENRIITC website have been invited via the ENRIITC Newsletter to send a mail to enriitc@ess.eu containing the content and the necessary personal data and copyright clearance.

Personal and professional data are collected using an online service (Indico) hosted on ESS servers. Registration on the Indico page dedicated to ENRIITC personal data collection is done on a voluntary basis. Data owners are invited to register on the ENRIITC contact base through their own organisation or via the ENRIITC Project website.

When subscribing to the Project Newsletter, data owners either 1. register to the ENRIITC Indico page, where data is then exported on the newsletter database on Mailchimp, or 2. register to the newsletter through the Mailchimp website via a subscription link found on the ENRIITC website. A copy of the ENRIITC contact database is saved on ESS servers.

Most of the documents published on the project website will be in PDF. Therefore, access to internet is needed to access the website. Deliverables will require a pdf reader to read and MS-word to modify. In case other methods or software tools will be needed during the lifetime of the project, the data management plan will be updated.

Most of the project data is generated using standard software that are widely used.

Collected and generated data that is only accessible to ENRIITC Project beneficiaries will be accessible on the shared document system OwnCloud hosted by ESS. Access to OwnCloud is managed by ESS. ESS has shared a password-protected link with Project beneficiaries. ENRIITC OwnCloud is open to anyone who has received the link and password. Project coordinator ESS prepared guidelines on how to use and access ESS Own Cloud. The document has been shared with all the project beneficiaries. Access to Own Cloud has been restricted to upload and download only. This has been agreed in order

¹ REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation)

to facilitate the use of the share documents system. Only work package leaders have editing accesses. A specific link with an associated password has been created for that purpose. As project coordinator and owner of the system, ESS has all the access rights.

There is no need for a data access committee. However, project coordinator ESS will receive internal support from ESS DMSC for any matter related to Own Cloud.

7.2.3. Increase data re-use (through clarifying licences)

Data generated under ENRIITC will mostly be in the form of documents. These will be openly available in text, markdown, MS-Word, and PDF formats. Deliverables will be available immediately on the project website after approval of the EC project officer and will remain useable.

Personal data collected during the project will only be shared with ENRIITC beneficiaries upon permission of the owner of the data. The concerned data will only be useable during the lifetime of the project and up to five years after the end of the project in line with the EC H2020 rules.

7.3. Allocation of resources

There is no research data envisaged from ENRIITC. Documents are stored on ESS servers which hosting costs are covered by the ESS project. Public deliverables are submitted on the EC portal at no cost for the project. However, in line with H2020 rules, all project related data will be kept for the required minimum of five years after the end of the project. WP1 – Task1.4 will set-up a long-term sustainability plan which will include the maintenance of the ENRIITC data repository and web interface by the partners. All costs associated to data preservation or maintenance after the project closing will be discussed among the partners, and decision on who will cover the costs will be taken accordingly. ESS project coordinator, together with the work-package and task leaders are responsible for the data management in the ENRIITC project

7.4. Data security

Usual computer logon accounts to computers and online storages with additional authenticator for the registration systems will be used. The website will be secured with firewall, hidden login page, and will be spam-protected. The actual server will also keep backups of the entire website and database. It will be possible to recover any information from the website and to restore the entire website within minutes if some downtime or intrusions would occur. The website can also be reset into the last time the backup was created. Project data will be preserved at the online space of the ENRIITC cloud storage hosted by ESS, and the website will be running for at least 5 years after the end of the project.

7.5. Ethical aspects

ENRIITC beneficiaries are aware of the ethical issues that may be involved when gathering and storing research data, and the requirement to ensure that there are measures in place to monitor all activities taken during the term of the project, and ensure their compliance with the appropriate regulations. ENRIITC has one Ethics requirements as deliverable D1.8 POPD - Requirement No. 2, these will outline the ethical considerations which will apply to the data management in the ENRIITC Project. A privacy policy will be developed for and available on the website.

7.6. Other issues

ENRIITC does not use any other national/funder or otherwise procedures for data management.



7.7.1. Annex 1: ENRIITC Open Access Policy

ENRIITC Open Access policy for the data collected for the realisation of deliverable D2.1

I. Nardello, ENRIITC - WP2 Leader

Based on the **ENRIITC Open Access Data Policy** (*I. Nardello, 18th of August 2021*), the data collected for the realisation of ENRIITC D2.1 will be exploited under the following conditions:

- Data of D.2.1 may only be provided to third parties outside the project consortium for research purposes;
- Data of D.2.1 may only be provided to third parties outside the project consortium in anonymised form;
- As a licensing agreement, the publication of any research utilising these data would be accompanied by:
 - A standard citation of the ENRIITC Project, to acknowledge data ownership, e.g. “The data was collected through the ENRIITC project funded by the European Framework for Research and Innovation Horizon 2020, under grant agreement 871112”;
 - The name/s of the person/s who contributed to at least 2 out of 3 of the following actions should be offered to be included in the publication, unless this right is waived by same person/s:
 - ✓ Obtaining funding for the research
 - ✓ Collecting the data
 - ✓ Analysing the data
- Considering the following tables (Tab. 1 and Tab. 2), the persons who would qualify as data holders for D2.1, and who should be contacted in case of interest in these data, are:
 - The WP2 Leader: **Ilaria Nardello**
 - The T2.1 co-Leaders, limited to the data collected and analysed under T1.1 - “ILO Survey, Industry as a supplier” **Sylwia J. Wojtowicz; and: John Picard;**
 - The T2.2 co-Leaders, limited to the data collected and analysed under T1.2 - “ICO Survey, Industry as a user”: **Nikolaj Zangenberg; and: Nigel Wagstaff**

Table 1: Potential data holders for T2.1 data. Affiliations are from the time that the work was performed and should be confirmed upon use of the data.

Potential data holders	Obtaining funding for the research	Collecting the data	Analysing the data
WP2 leader: <ul style="list-style-type: none"> • Ilaria Nardello, SZN 	x	x	x
T2.1 co-Leader (at the time of writing): <ul style="list-style-type: none"> • Sylwia J. Wojtowicz, WPT • John Picard, EMSO 	x	x	x
T2.1 participants <ul style="list-style-type: none"> • Ana Belen, CDTI 	x	x	

<ul style="list-style-type: none"> • Javier Echavarri Delmas, CDTI • Ed Mitchell, ESRF 			
Other consortium participants	x		

Table 2: Potential data holders for T2.2 data

Consortium Participants	Obtaining funding for the research	Collecting the data	Analysing the data
WP2 leader: <ul style="list-style-type: none"> • Ilaria Nardello, SZN 	x	x	x
T2.2 co-Leaders: <ul style="list-style-type: none"> • Nikolaj Zangenberg, DTI • Nigel Wagstaff, EATRIS 	x	x	x
T2.2 participants <ul style="list-style-type: none"> • Ed Mitchell, ESRF • John Picard, EMSO • Franciska de Jong, CLARIN • Anne Charlotte Joubert, ESS 	x	x	
Other consortium participants	x		

7.7.2. Annex 2: Screenshot of ENRIITC Indico page for personal data registration



ENRIITC Partners, Associates, Others

16 December 2019 to 31 December 2022
Europe/Stockholm timezone

Event Description
Registration
Contact
enriitc@esss.se
enriitc@ess.eu

Event Description

ENRIITC Data Consent

The European Network of Research Infrastructures and Industry for Collaboration (ENRIITC) is aiming at addressing the gap between research infrastructures (RIs) and Industrial Liaison and Contact Officers (ILOs/ICOs) and releasing their full potential by building a permanent pan-European network of ILOs and ICOs. This will be done in a community-driven, cross-functional, cross-sectoral, multiplier-based way which will be inclusive and enable all interested parties to actively participate. By supporting the establishment of strategic, cross-border partnerships between industry and research infrastructures, ENRIITC will enable win-win results for all parties.

There are many collaboration opportunities to participate to take advantage of the benefits that will result from ENRIITC. Collaboration is essential for the success of ENRIITC, there will also be opportunities to engage in the implementation of various project activities. These consist of the mapping of collaborations between RIs and industry, knowledge sharing, exchange of best practices and trainings for ILOs/ICOs, and identifying case studies on innovation which were initiated by RIs or in which RIs played a central role. Among the activities, there will also be the organisation of different event, including two major events where as Associates of the ENRIITC project you will play a central role. The first event will be the Big Science Business Forum (Granada 6-9 October 2020), and an ENRIITC closing conference to be organised in Brussels in the second part of 2022.

In order to facilitate the future collaboration ESS would like to collect your personal data and comply with personal data laws (GDPR) by keeping your personal data up-to-date, protecting your information from loss, misuse, unauthorised access and disclosure by ensuring appropriate technical measures are in place.

Kindly participate in the registration for data consent to ESS. For any questions or concerns, please do not hesitate to contact enriitc@esss.se.



 ENRIITC is funded by the European Union Framework Programme for Research and Innovation Horizon 2020, under grant agreement 871112.

[Help](#) | [Contact](#)

7.7.3. Annex 3: ENRIITC Mapping questionnaires

The European Network of Research Infrastructures and Industry for Collaboration
H2020 INFRAINNOV-02-2019
Grant Agreement Number: 871112



Milestone M3
WP 2 Survey questionnaire
(output of work performed under T2.1, T2.2 T2.3, T2.4 and T2.5)

Version: 31 March 2020

1. Project Milestone Information Sheet

ENRIITC Project	Project Ref. No. 871112	
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	Milestone No.: M3	
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	EC Project Officer: Patricia Postigo McLaughlin	

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Authorship	Written by	Ilaria Nardello (SZN)
	Contributors	Nikolaj Zangenberg (DTI) Sylvia Wójtowicz (WPT) John Picard (EMSO) Gerard Cornet (DTI) Nigel Wagstaff (EATRIS) Franciska de Jong (CLARIN) Edward Mitchell (ESRF) Javier Echavarri Delmas (CDTI) Jorge Lopez Reig (CDTI)
	Reviewed by	Ute Gunsenheimer (ESS)
	Approved	ENRIITC StB

ENRIITC - WP2 - Milestone n.3

31st of March 2020

Introduction

Research infrastructures (RIs) play an increasingly important role in the EU innovation ecosystem. Pan-EU initiatives such as the **Innovation Union** or the **European Strategy Forum on Research Infrastructures** are crucial in enabling Industry to become a full partner of RIs, whether it is as suppliers, users, or co-developers.

In order to boost the RI-industry partnerships, the action of the existing intermediary figures, detailed below, could be enhanced to increment the industry use of the RI services and facilities, the industrial uptake of research technologies and the co-creation of value. These figures are:

Industrial Liaison Officers (ILOs) based at governmental agencies, which are occupied with accounting for return of national investment on the deployment of research infrastructure (especially Big-Science-type of RIs);

Industry Contact Officers (ICOs) are RI staff (typically ESFRI RIs), in charge of encouraging the economical use of their facility by private players and developing business relations with all potential industrial suppliers of innovative components or services.

With a timeline of 36 months, 11 partners from seven countries, and a strong support from 61 Associate RIs, **ENRIITC** will support the establishment of robust functional connections among ILOs and ICOs, in the form of **a permanent, community-driven, cross-functional, cross-sectoral, multiplier-based and inclusive pan-European network of ILOs and ICOs**.

In this context, we (WP2) will realise series of survey to inform the project on the current state of play of industry-RI relations, as mediated by ILOs and ICOs, who will be the primary target recipients of our questionnaire. Industry will also be contacted for their perspective on the barriers/drivers to RI-Industry engagement. In detail, this survey will:

- *Map competencies, key actors and sectors of "industry as a supplier" relationships with RIs (T2.1);*
- *Investigate the industrial usage of RIs (T2.2);*
- *Analyse the indicators for the performance of ILOs and ICOs that are active in the realm of research infrastructures (T2.3);*
- *Gain an insight on what drives or hinders the reciprocal engagement of industry and RI, whether as suppliers or users, based on actual experiences (T2.5).*

Expected

A series of mappable records, against geography, application sector, key tech-know-logical competences and strategic recommendations.

Results:

Outcome:

The results will inform the development of a strategy and methodology to build, train and empower a pan-EU network of coordinated RI ILOs and ICOs charged with greatly boosting EU RIs' dialogue and cooperation with industry.

Methodology

20

Primary information will be harnessed through a series of surveys with different target recipients. The main survey delivery mechanism will be an on-line survey tool, either commercial (e.g.; survey Monkey) or based on some of the participants’ internal resources. Phone calls and contact interview will be realised in case the survey was sub-optimally attended.

The surveys will be organised by target recipients, including ILOs, ICOs, Procurement officers, industry and associations (see table 1, below)

<i>Table 1: Target Survey Recipients</i>					
WP2-Survey Target Recipients	T2.1	T2.2	T2.3	T2.4	T2.5
1a. RI_ICOs	x	x	..	..	..
1b. RI_Procurement Officers	x	..	..	x	..
2. ILOs	x	..	x	x	..
3. National authorities	..	..	..	..	..
4. Industry	..	..	..	x	x

Guiding principles:

- Questions will be shaped so that they are, as much as possible: i) clear; and: ii) closed (with checkboxes);
- The questions must be unique for each target recipient;
- Selection of a small set of questions (between 5 and 20), for each task;

Target Audience:

EU Commission, ESFRI, RIs, Industry, Industry Associations, National Authorities, Pan-EU Innovation support organizations and hubs (i.e. EIT Kics, EOSC Hub etc.)

References:

The reference industry sector categorisation is modified from the Commission’s (https://ec.europa.eu/growth/sectors_en) to also include: Cultural Heritage, Energy, Environment and ICT / Data. We also add a tick-box for “Other categories”, to allow for a bottom-up RI-service categorisation was taken from “EMBRC-ERIC business plan, update 2017” (Nardello et al. 2017, pag 24)

The questionnaire was informed by the ENVRI Plus questionnaire D18.5 RI-Innovation_readiness roadmap (v.2)

Inspiration for defining driver and barriers in RI-Industry relations was taken from the ABT Interreg project (2013-15)

Survey deadlines:

31.03.2020: M3 Questionnaire ready

30.09.2020: D2.1.a and b: Report on the mapping exercises

Survey #1: Questionnaire to ILOs supporting “Big Science”-type RIs

1. General questions for ILOs

1.1 *In which country are you an appointed ILO?*

1.2 *In which type of institution are you (ILO) employed?*

- Public Agency
- University
- Research and Technology Organisation (RTO)
- Research centre
- Private company

Comment.....

1.3 *What kind of RIs do you support?*

- International RIs
- National RIs
- Regional RIs

Comment.....

1.4 *What of the following research domain(s) do your supplying industry(ies) typically serve?*

- Energy
- Health and Food
- Environment
- Social and Cultural Innovation
- Physical Sciences and Engineering
- Data Computing and Digital Research Infrastructure

1.5 *Which of the following industry sectors do your company clients primarily belong to?*

- Aeronautics
- Automotive
- Biotechnology
- Chemicals
- Construction
- Cosmetics
- Cultural Heritage
- Energy
- Environment
- Defense
- Electrical and electronic engineering
- Firearms
- Food and beverages

- Gambling
- Health
- ICT /data
- Maritime
- Mechanical engineering
- Medical devices
- Postal services
- Pressure equipment and gas appliances
- Raw materials, metals, minerals and forest-based industries
- Social economy
- Space
- Textiles, Fashion and creative industries
- Tourism
- Toys
- Other

1.6 *Are these companies engaging with RIs mainly to provide off the shelf products or are you aware that those companies are also engaging in innovation?*

2. ILO activity and performance

2.1 *Do you belong to an ILO network? (check all that apply)*

- National
- EU
- International

2.2 *How do you engage with your national industry?*

- Industry portal
 - Portal homepage URL
- Database of companies
- Newsletters
- Events for industry

2.3 *Approximately, how many person-months (PMs) per year are allocated for ILO services to the RIs which you are involved with?*

2.4 *How many companies are you engaged with via your ILO network?*

.....

2.5 *How many of these are active in RI projects and cooperation opportunities - please indicate an approximate percentage (%)?*

.....

2.6 Which types of supplies or collaborations are typical for the companies that you are engaged with? (check all that apply and provide an approximate percentage)?

- Standard or off-the-shelf supplies
- Customised products
- System integration contracts
- Consultancy (Man-hours)
- Co-development partnerships
- Licensing and tech-transfer/commercialization contracts
- Strategic alliance contracts
- Other

2.7 What are other relevant stakeholders, which you engage with, supporting industry-RI collaboration? Please, check all that apply.

- ILO Networks
- Industrial associations
- Interest groups
- Technology clusters
- Innovation hubs
- EU facilitator organisations (e.g.: EIT, KICs, EOSC Hub, etc.)
- National Agencies
- Others...

2.8 How is your performance as an ILO evaluated?

- Geo-return / value of national contracts
- Joint industry-RI-university collaborations
- Technology-transfer activities
- Other.....

2.9 What is the relative importance of the following goals according to your views as an ILO? Check all that applies and rate them on a scale of 1-5.

- 1-5: Raising georeturn (supporting national companies win tenders)
- 1-5: Promoting innovation (i.e.: co-development activities between companies, RIs and universities)
- 1-5: Promoting knowledge transfer
- 1-5: Improve supplier base for the RI
- 1-5: Other_____

2.10 What tools do you use to achieve the abovementioned goals (rank in terms of relevance)?

- Support on tenders
- Meetings with representatives of RI and Industry,
- Information on funding
- Active support with filling tender documentation
- Matchmaking

- Marketing/visibility of companies
- Other

2.11 *What is your country's strategy to achieve georeturn?*

.....

2.12 *What is your RI/s strategy to achieve georeturn?*

.....

2.13 *From an ILO perspective, what kind of activity would effectively support your companies engage with RIs (check all that apply and rank 1-5)?*

- on tenders: (1-5)
- on meetings, on support/funding information: (1-5)
- active support with tendering: (1-5)
- matchmaking: (1-5)
- marketing: (1-5)

2.14 *Do you have national technology roadmaps and/or a mapping of relevant key technology strengths?*

- Yes
- No

2.15 *What are the main obstacles you and the RIs encounter in trying to promote stronger RI-Industry cooperation?*

Comment

2.16 *ENRIITC would like to offer you a free web-survey of the companies relevant for the RIs.*

This survey will be organized as follows:

- You receive a link to a questionnaire
- You send the link to your industrial contacts and solicit response
- The industrial contacts answer the questionnaire anonymously on-line
- You receive the results of the survey

Would you be available to participate in a such a survey?

- Yes
- No

2.18 *ENRIITC would like to interview 1-3 companies who have successfully collaborated with your RI for use in case studies. Would you be willing to share the names of 1-3 company contacts for us to interview?*

- Yes
- No

* * * * *

Survey #2: Questionnaire to ICOs or equivalent staff of ESFRI roadmap-type RIs

1: General information about the RI

1.1 What is the name of the RI?

.....

1.2 What year was the RI established

Year _____

1.3 If applicable, in what year was the RI included on the ESFRI Roadmap?

Year _____

1.4 If applicable, what is this RI's status on the ESFRI Roadmap?

- Landmark
- Project

1.5 To which ESFRI scientific domain does the RI belong?

- Energy
- Environment
- Health & Food
- Physical Sciences & Engineering
- Social & Cultural Innovation
- Digit
- None / Other

1.6 What is the phase of development of the RI?

- Preparatory phase
- Fully operational

1.7 What is the legal status of the RI? (tick all that apply)

- ERIC
- Research Performing Organization
- National Not-for-Profit Association
- Other

1.8 Is the RI a distributed or single-sited facility?

- Distributed
With nodes/facilities in how many/which EU countries?
- Single-sited

1.9 Name of the RI Host Country

.....

1.10 What is the Human Resources capacity (either employed or in-kind personnel) of the RI headquarters/central management office, in terms of Full Time Equivalent units (FTEs)?

.....

1.11 What is the Human Resources capacity (either employed or in-kind personnel) of the RI's NODES, in terms of Full Time Equivalent units (FTEs)?

.....

1.12 What is the approximate annual budget of the RI, including Member contribution, EU projects, and income from services?

- Less than 500.000 EUR
- Between 500.000 and 1 M-EUR
- Between 1 M-EUR and 5 M-EUR
- Between 1 M-EUR and 5 M-EUR
- Above 10 M-EUR

1.13 Please provide approximate percentages of the RI annual budget composition:

- Member contribution: ...
- EU projects:
- Income from services: ...

1.14 What stages of Research & Development activity does your RI engage *Industry* in? (tick all that apply)

- Pre-competitive research
- Feasibility studies
- Proof of concept/Demonstration
- Commercialisation

2: Organization of RI industry-liaison activities.

2.1 a full-time central hub/headquarters industry contact or equivalent officer responsible for strengthening and coordinating the RI's cooperation strategy and activities with Industry?

- yes
- no

2.2 a website/portal which includes prominent information and services specifically for industry?

- yes
- no

2.3 a strategy for collaboration with companies?

- yes
- no

2.4 an active Industry Advisory Committee (IAC)?

- yes
 - As a subset of the RIs main Advisory Committee
 - As a distinct committee
- no

2.5 Participate in a "green" technology promotion program (i.e. Green Deal, Climate Partnership, etc.) together with industry partners.

- yes
 - name of the program(s): _____
- no

2.6 a label certifying quality and compliance of instruments and processes with international standards

- yes
- no

2.7 a database of current and prospective industry clients (suppliers, users, partners)?

- yes
 - Supplier companies
 - User companies
 - Collaboration partners
- no

2.8 a central-hub/headquarters procurement office?

- yes

How many FTEs _____
- no

2.9 a central-hub/headquarters communications office with commercial promotion experience and skills?

- yes

How many FTEs _____
- no

2.10 Does your RI have an active program of joint Technology Innovation Pilots involving industry?

- yes

Number of current pilots ...
- no

2.11 Which of the following statements apply to your RI? (tick any that apply)

- Your RI maintains a central Innovation Hub/Service offering industry-cooperation information, support, tools and training to RI distributed facilities/nodes
- All/most outreach activities towards industry are run autonomously by the distributed facilities
- The RI Central Hub maintains an online catalogue of RI services and technologies targeting industry
- The RI has brochures/information materials specifically addressing industry clients
- The RI maintains a standard “corporate” overview (powerpoint) presentation targeting industry audiences
- The RI publishes an online portfolio of industry-cooperation Use Cases and Success Stories
- The RI maintains a calendar of key industry-partnering events (tradeshows, workshops, conferences)
- RI headquarters/Central Hub regularly organizes and/or participates in promotional and brokerage events targeting industry

2.12 To reach industry, your RI cooperates regularly with

- National ILOs and ILO networks
- Ministry/Embassy Science Attaches and Commercial Counsellors
- National technology cluster(s), science parks, innovation hubs
- Pan-EU Innovation promotion organizations (i.e. EIT Kics, EOSC Hub etc.)

3: RI industry-collaboration practices

3.1 RI Cooperation agreements with industry.

Does the RI publicise information and tools to encourage/ facilitate collaboration with industry, such as

- Pricing policy
- IP Protection Policy
- Other

3.2: Which of these measures do you think would help the most to develop collaboration between the RI and industry?

(tick only one)

- Financial subsidies
- Education programmes
- Industry Training programmes
- Match-Making Events
- Others ...

3.3 Does the RI engage in public-private-partnerships or other collaborations for R&D&I targeting industry?

(Tick all that apply)

- Industrial partnership / long-term agreements
- Transfer of technology / licensing
- Projects
- Pilots
- Other types of collaboration

4: RI organization on procurement

4.1 Does the RI regularly communicate/share its procurement, upgrade and maintenance plans/programs with industry?

- yes
- no

4.2 Does the RI announce upcoming tenders on a website?

- yes
- no

4.3 Do you see an advantage of all RIs announce upcoming tenders on a common website?

- yes.

Main advantages _____

- no

Why not? _____

4.4 Do you maintain a database of supplier companies?

- no (go to 4.5)
- yes

How many companies are on your database? ...

4.5 What is approximately your annual expense in terms of industrial supplier contracts?

€.....

5: Which of these services does your RI offer to companies?

5.1 Access to the infrastructure for

- testing and quality/standards compliance validation of instruments and processes
- data mining, modeling via the RI Data Portal
- specialized training
- consultancy services
- RI-industry exchange programs
- Joint advocacy campaigns support

5.2 Space and logistics support for custom development and trials in your Central Hub or at a member facility?

- yes
- no

5.3 Data products and applications development support

- yes
- no

5.4 Is your RI's current collaboration with industry clients mostly one-off/impromptu or part of a systematic long-term plan/relationship?

- Mostly one-off impromptu
- part of systematic long-term plan/relationship

5.5 Which RI services do your industry clients request most (tick those that apply)

- Access
 - Raw data
 - Data processing tools
 - Instrumentation testing, homologation, co-development
- Advice and consultancy
- Joint Advocacy/promotional
- Training and Education
- Other _____

5.6 What is your RI income from collaboration with industry?

- Yes
 - Annual RI revenues from industry collaborations*
 - Less than 10 k-EUR
 - Between 10 k-EUR and 100 k-EUR
 - Between 100 k-EUR and 1 M-EUR
 - More than 1 M-EUR

No, why not? _____

5.7 Number of industry clients/customers for your RI

Average annual number of company enquiries to the RI services: _____

Average number of unique company clients/customers per year: _____

6: Approximately, what type of enterprises does the RI engage with and what is the number of unique clients on an annual basis?

(Tick all that apply)

- SMEs
Number of unique SME clients per year: _____
- Large companies (> 250 employees).
Number of unique Large company clients year _____
- Multinational companies.
Number of unique MNE clients per year: _____
- Local companies (companies in the vicinity of the RI headquarters or of a distributed facility)
Number of unique local company clients per year: _____
- RI host country enterprises
Number of unique RI-host-country company clients per year: _____
- Intermediary/ system integrator-type companies
Number of unique Intermediary/ system integrator-type companies per year: _____

6.1. Business areas of your industrial clients/customers

From which business areas do industrial clients/customers use the IR -or could potentially use the RI? (categories are copied from https://ec.europa.eu/growth/sectors_en – added categories: Cultural Heritage, Energy, Environment and ICT / Data)

Aeronautics industries.

- Uses
- Could potentially use.

Automotive industry.

- Uses
- Could potentially use.

Biotechnology

- Uses
- Could potentially use.

Chemicals

- Uses
- Could potentially use.

Construction

- Uses
- Could potentially use.

Cosmetics

- Uses
- Could potentially use.

Cultural Heritage

- Uses
- Could potentially use.

Defense industries

- Uses
- Could potentially use.

Electrical and electronic engineering industries

- Uses
- Could potentially use.

Energy

- Uses
- Could potentially use.

Environment

- Uses
- Could potentially use.

Firearms

- Uses
- Could potentially use.

Food and drink industry

- Uses
- Could potentially use.

Gambling

- Uses
- Could potentially use.

Healthcare industries

- Uses
- Could potentially use.

ICT / data

- Uses
- Could potentially use.

Maritime industries

- Uses
- Could potentially use.

Mechanical engineering

- Uses
- Could potentially use.

Medical devices

- Uses
- Could potentially use.

Postal services

- Uses
- Could potentially use.

Pressure equipment and gas appliances

- Uses
- Could potentially use.

Raw materials, metals, minerals and forest-based industries

- Uses

- Could potentially use.
- Social economy
 - Uses
 - Could potentially use.
- Space
 - Uses
 - Could potentially use.
- Textiles, Fashion and creative industries
 - Uses
 - Could potentially use.
- Tourism
 - Uses
 - Could potentially use.
- Toys
 - Uses
 - Could potentially use.
- Other
 - Uses
 - Could potentially use.

7 Free web-survey of industrial clients/customers

7.1 ENRIITC would like to offer you a free web-survey of companies engaged with you RI. The survey will take 5-10 mins and ask questions about the current and future collaborations between the company and RIs and which tools may be used to lower barriers for use. The data will be used by the ENRIITC to identify best practices and propose new activities.

The surveying will be organized like this:

- You receive a link to a questionnaire that you send to your industrial clients/customers
- The companies answer the questionnaire anonymously on-line
- You receive the results of the survey

Would you be willing to participate in the conduction of such a survey?

- Yes
- No

7.2 *ENRIITC would like to interview 1-3 companies who have successfully collaborated with the RI for use in case studies. If you are willing, please share the names of 1-3 company contacts for us to interview:*

- Name of Companies using your RI services:
- Name of Companies supplying products or services to your RI:
- Name of Companies involved in R&D collaborations:
- Comment..

Survey #3: Questionnaire to Industry

1. Background information

1.1 Industry Location Country...

1.2 Industry Size

- Start-ups.
- SMEs
- Large companies (> 250 employees). If possible, note number of clients
- Multi-national companies. If possible, note number of clients:

1.3 Industry Sector

- Aeronautics industries.
- Automotive industry
- Biotechnology
- Chemicals
- Construction
- Cosmetics
- Defense industries
- Electrical and electronic engineering industries
- Firearms
- Food and drink industry
- Gambling
- Healthcare industries
- Maritime industries
- Mechanical engineering
- Medical devices
- Postal services
- Pressure equipment and gas appliances
- Raw materials, metals, minerals and forest-based industries.
- Social economy
- Space
- Textiles, Fashion and creative industries
- Tourism
- Toys
- Environment
- ICT /data
- Cultural Heritage
- Energy

- Other..

1.4 Industry Annual Turnover

€.....

2. Barriers and Drivers to industry-RI engagement

2.1 Do you have a strategy to engage in public-private-partnerships or collaborations for RD&I?

- Partnerships
- Collaborations
- Projects
- Pilots
- Education
- Training
- Other....

2.2 Is your engagement with public research sector subsidised?

Y/N

Comment..

2.3 If your company engages with RI, what are the main reason(s) for doing so?

- innovation support,
- specialised R&D needs,
- visibility,
- image
- Other

2.4 What RI service do you mainly use? (select all that applies)

- Raw materials
- Access to specific environment (either natural or artificial)
- Experimental facilities (Technology platforms, E-infrastructure, data and associated services, Supporting facilities)
- Advice and consultancy

Training and Education

2.5 Do you have a dedicated or partially dedicated person with a mission to engage in R&D with the public research sector?

Yes
n. FTEs....

NO

2.6 What proportion of your budget goes/comes in through R&D activity?

- 0-2%
- 2-5%
- 5-20%
- >20%

2.7 An active joint Green Technologies Advocacy Programme together with industry/research partners?

- Y
- N
- Comment..

2.8 What measures do you think would incentivise RI-industry collaboration?

- Financial subsidies
- Education programme
- Training Programmes
- Match-Making Events
- Others...

2.9 Are you aware of the following events (Select all that apply):

- BSBF2020
- ASTP
- Others...

2.10 What tools do you use to achieve the abovementioned goals (rank in terms of relevance)?

- Financials support to attend meetings
- Information on funding opportunities
- Active support in responding to tenders
- Matchmaking
- Marketing/visibility of companies
- Other

2.11 What kind of support do you expect (in terms of information, actions, deliverables) from an ILO (check all that apply and provide an approximate percentage)?:

- Responding to tenders,
- Organising matchmaking meetings
- Funding information,
- Marketing/visibility

2.12 Do you participate in the preparation of national technology roadmaps?

Y

N

Comment...

2.13 Do you participate in any RI Advisory Committee for Technology Development and Innovation

Y

N

Comment...

2.14 Do you have any further comments/feedback on industrial use or engagement with the European Ris?

Y

N

Comment...