DELIVERABLE

# Open and Universal Science Project (OPUS)

OPUS helps reform the assessment of research towards a system that incentivise researchers to practice #OpenScience



WP2 INTERVENTIONS TO TEST IN THE PILOTS

# Deliverable 2.1 Interventions to test in the pilots

Author: Emma Day (UK Vitae)

Horizon Europe Programme 2021 – 2027 HORIZON-WIDERA-2021-ERA-01-45 HORIZON Coordination and Support Actions Project number: 101058471 Project name: Open Universal Science Project acronym: OPUS

Project starting date: 1 September 2022 Project end date: 31 August 2025 Project duration: 36 months



The OPUS project is financed by European Union through the GRANT AGREEMENT no. 101058471 concluded with the European Research Executive Agency (REA), under the powers delegated by the European Commission.

Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Research Executive Agency (REA). Neither the European Union nor the granting authority can be held responsible for them.

opusproject.eu

# TABLE OF CONTENTS

1. Introd	duction	6
1.1	Overview	6
1.2	Methodology	6
1.3	Principles	7
1.4	Structure	8
2. Meta	a-Interventions	9
3. OPU	S Researcher Assessment Framework (RAF)	11
3.1. R	esearch	11
3.1	1. Proposals	11
3.1	.2. Methods	11
3.1	.3. Data	12
3.1	.4. Software	15
3.1	.5. Publications	16
3.1	.6. Materials	18
3.2. I	Education	19
3.2	2.1. Courses	19
3.2	2.2. Resources	19
3.2	2.3. Teaching	20
3.2	2.4. Supervision	21
3.2	2.5 Skills	22
3.3. L	_eadership	23
3.3	3.1 People	23
3.3	3.2 Projects	24
3.3	3.3 Organisation	24
4.3	3.4 Recognition	25
3.4. \	/alorisation	26
3.4	1.1 Communication	26
3.4.2	Engagement	28
3.4.3	Innovation	30
4. OPU	S Open Science Career Assessment Matrix (OS-CAM)	32
4.1. R	esearch	32
4.1	1. Proposals	32
4.1	.2. Methods	33
4.1	.3. Data	34
4.1	.4. Software	36





# TABLE OF FIGURES

Figure 1 Categories, Subcategories and Indicator Groups of Researcher Assessment	
Framework	8
Figure 2 - Intervention Categories to Support RAF and OSCAM	9

# TABLE OF TABLES

Table 1 – Research Assessment Framework and Open Science Career Assessment Matrix –	-
Meta Interventions	9
Table 2: Generic Interventions for Research – Subcategory Proposals	11
Table 3 : Generic Interventions for Research – Subcategory Methods	11
Table 4; Generic Interventions for Research – Subcategory Data	12
Table 5: Generic Interventions for Research – Subcategory Software	15
Table 6: Generic Interventions for Research – Subcategory Publications	16
Table 7: Generic Interventions for Research – Subcategory Materials	18
Table 8: Generic Indicators for Education – Subcategory Courses	19
Table 9: Generic Interventions for Education – Subcategory Resources	19
Table 10: Generic Indicators for Education – Subcategory Teaching	20
Table 11: Generic Interventions for Education – Subcategory Supervision	21
Table 12 Generic Interventions for Education – Subcategory Skills	22
Table 13: Generic Interventions for Leadership – Subcategory People	23
Table 14: Generic Interventions for Leadership – Subcategory Projects	24
Table 15: Generic Interventions for Leadership – Subcategory Organisation	24
Table 16: Generic Interventions for Leadership – Subcategory Recognition	25
Table 17: Generic Interventions for Valorisation – Subcategory Communication	26
Table 18: Generic Interventions for Valorisation – Subcategory Engagement	28
Table 19: Generic Interventions for Valorisation – Subcategory Innovation	30
Table 20: Open Science Interventions for Research – Subcategory Proposals	32
Table 21: Open Science Interventions for Research – Subcategory Methods	33
Table 22: Open Science Interventions for Research – Subcategory Data	34
Table 23: Open Science Interventions for Research – Subcategory Software	36
Table 24: Open Science Interventions for Research – Subcategory Publications	38
Table 25: Open Science Interventions for Research – Subcategory Materials	39
Table 26: Open Science Interventions for Education – Subcategory Courses	40
Table 27: Open Science Interventions for Education – Subcategory Resources	41
Table 28: Open Science Interventions for Education – Subcategory Teaching	42
Table 29: Open Science Interventions for Education – Subcategory Supervision	43
Table 30: Open Science Interventions for Education – Subcategory Skills	44
Table 31: Open Science Interventions for Leadership – Subcategory People	45
Table 32: Open Science Interventions for Leadership – Subcategory Projects	46
Table 33: Open Science Interventions for Leadership – Subcategory Organisation	47
Table 34: Open Science Interventions for Leadership – Subcategory Recognition	48
Table 35: Open Science Interventions for Valorisation – Subcategory Communication	49
Table 36: Open Science Interventions for Valorisation – Subcategory Engagement	51
Table 37: Open Science Interventions for Valorisation – Subcategory Innovation	54



## **Document Information**

Title	Interventions to Test in the Pilots
Document reference	D3.1
Distribution	Public
Deliverable Leader	CRAC-Vitae, UK
Authors	Emma Day
Date	30 June 2023
Status	Final (Following Internal and External Review)

## **Document Revision History**

Version	Date	Authors/Contributors/Reviewers	Description
0.1	14/06/23	Emma Day	First version drafted
0.3	29/06/2023	Emma Day (Vitae), Gareth O'Neill (TGB), Volker Beckmann (MESR), Clare Viney (Vitae), Fleur Lebhardt (TGB), Mostafa Moonir Shawrav (MCAA), Sal Music (ICoRSA), Mayya Sundukova (MCAA), and Wilhelm Widmark (SU)	Second version drafted after internal and external reviews and feedback from project partners and technical formatting
1.0	30/06/2023	Emma Day (Vitae)	Final version finalised and formally submitted to European Commission

## Responsibility

The sole responsibility for the content of this publication lies with the authors. Views and opinions expressed are those of the author(s) and do not necessarily reflect those of the European Union (EU) or European Research Executive Agency (REA). Neither the EU nor the granting authority can be held responsible for them. The European Commission is not responsible for any use that may be made of the information contained therein.

*(July 2023)* This deliverable has been submitted to the European Commission, but has not yet gone through the review and approval process (expected before the end of 2023).

## Copyright/Legal Disclaimer

This document may not be copied, reproduced, or modified in whole or in part for any purpose without written permission from the OPUS Consortium. In addition, an acknowledgment of the authors and all applicable portions of the copyright notice must be clearly referenced in any document using all or parts of this deliverable. All rights reserved. This document may change without notice.



# 1. Introduction

### 1.1 Overview

This report is **D2.1 of the OPUS project on Interventions to Test in the Pilots.** It proposes a first draft framework of interventions that has been designed to support and accompany the **OPUS Research Assessment Framework (RAF)** which offers a comprehensive suite of indicators and metrics for research-performing organisations (RPOs) and research-funding organisations (RFOs) to assess researchers for career progression and grant applications. It will also support a specific framework of indicators and metrics to incentivise and reward Open Science career practice, the **Open Science Career Assessment Matrix (OSCAM)**. Detailed description of the framework can be found **in D3.1 Indicators/Metrics to Test in the Pilots** which should be read in partnership with this document.

This is intended to be a draft framework which will then be tested in two ways during the OPUS project. Firstly, it will be open to wider sector consultation which we intend will be credible and robust to align and build on existing similar initiatives that are in progress for example, the Coalition for Advancing Research Assessment (COARA) and another Horizon Europe project GRASP OS. Secondly it will be tested as part of the OPUS project in our three-pilot RPOs and two RFOs. Feedback will then be incorporated and considered in detail to inform the final versions of the two complementary frameworks – **D2.4 Interventions for Open Science** and **D3.4 Indicators for Open Science**.

### 1.2 Methodology

#### D1.1 State of the Art on Open Science Initiatives and D1.2 State of the Art on Open

Science literature provided a comprehensive basis for developing both the indicators and the interventions, highlighting key themes and essential frameworks that would form the basis for development. Alongside this a meeting with proposed pilot organisations explored further the development of the frameworks and how interventions might work practically in the pilot organisations. It also helped the project to gain an understanding of work already underway in each institution, highlighting where practice could be shared but also the different contexts, languages, approaches, and level to which open science is embedded. This informed our approach and highlighted the need to ensure that both frameworks are both wide ranging but equally able to be tailored to the needs of individual organisations. It also validated that the interventions must support the indicators.

The RAF builds on **key policy developments in research assessment and Open Science** as identified in deliverable D1.2 of OPUS on State-of-the-Art on an Open Science Ecosystem [1]:

- San Francisco Declaration on Research Assessment (DORA) [2]
- Leiden Manifesto for Research Metrics [3]
- Hong Kong Principles [4]
- Recommendations by the Open Science Policy Platform (OSSP) [5] [6]
- Recommendations on Science and Scientific Researchers [7] and Open Science [8]



- Agreement on Reforming Research Assessment [9]
- Research Evaluation in a Context of Open Science and Gender Equality [10]
- Conclusions on Research Assessment and Implementation of Open Science [11]
- European Framework for Research Careers including European Charter for Researchers [12]

The RAF also builds on **key frameworks in research assessment and Open Science** with a focus on developing new indicators and metrics and supporting Open Science as identified in D1.2:

- Researcher Development Framework (RDF) [13]
- Evaluation of Research Careers Fully Acknowledging Open Science Practices [14]
- Next-generation Metrics [15]
- Recommendations of the OSPP on Next-Generation Metrics [16]
- Mutual Learning Exercise on Open Science on Altmetrics and Rewards [17]
- Open Science Monitor [18]
- Indicator Frameworks for Fostering Open Knowledge Practices in Science and Scholarship [19]
- A Pathway towards Multidimensional Academic Careers [20]

The OPUS project decided to approach the development of the two frameworks by first establishing the indicators and metrics frameworks (RAF and OSCAM) and then in turn developing sets of interventions to support them.

### 1.3 Principles

The RAF has been developed and should be implemented according to **10 guiding principles**:

- 1. Provide a comprehensive framework of indicators and metrics for RPOs and RFOs
- 2. Provide a framework which applies across countries, disciplines, and organisations
- 3. Provide a framework which combines both quantitative and qualitative assessment
- 4. Focus on the assessment of individual researchers and not teams, groups, or units
- 5. Cover the full spectrum of activities by researchers and not just research activities
- 6. Offer a generic framework which allows open and non-open activities by researchers
- 7. Offer a specific framework which focuses on Open Science activities by researchers
- 8. Distinguish process, output, and outcome indicators to capture the lifecycle of activities
- 9. Formulate indicators and metrics at a high level of description for universal application
- Leave selection, refinement and prioritisation of indicators and metrics to RPOs and RFOs



### 1.4 Structure

The OPUS RAF *interventions* are structured around the dimensions of the main RAF. There are five main assessment categories with Subcategories.

The interventions are divided by the indicator that they support and then are subdivided into the following categories:



#### **OPUS FRAMEWORK**

Figure 1 Categories, Subcategories and Indicator Groups of Researcher Assessment Framework

Each indicator group further consists of **3 types of indicators** with associated quantitative metrics:

- Process: Activity which is in development or is ongoing
- Output: Clear endpoint or tangible product of a process
- Outcome: Immediate or short-term result of an output

They are supported by five categories of interventions:

- **Policy** Senior management support for the collection of the data and evidence required for the indicator with clear strategies and procedure to do this.
- **Resource** Adequate resource (financial, people and time) to support the collection of data and evidence required for the indicator.
- **Repository** An easily accessible and suitable repository or database to support the collection of data and evidence required for the indicator.
- Awareness Raising Researchers know how and why they should be collecting the data and evidence required in the indicator and understand the link to researcher assessment.
- **Training** Training provided to support the collection of the data and evidence required in the indicator and that researchers have the knowledge and skills to do this.



This is shown below:



Figure 2 - Intervention Categories to Support RAF and OSCAM

# 2. Meta-Interventions

This set of meta-interventions has been developed as an overarching set of interventions for any RPO or RFO that wishes to implement the RAF or OSCAM Framework. They are intended as a starting point for consideration and implementation at a the top level of an organisation.

Table 1 – Research Assessment Framework and Open Science Career Assessment Matrix – Meta Interventions

Category	Research Assessment Framework	Open Science Career Assessment Matrix
Policy	<ul> <li>Senior management decision and approval to use the framework at their institution.</li> <li>Senior management decision on the set of indicators they wish to use in their institution.</li> <li>Senior management develop policies and procedures that support the collection of metrics and data relevant to the indicators with clear guidelines and expectations.</li> </ul>	<ul> <li>Senior management approval and decision, involving all relevant parties to collect and make open metrics and data that are specific to the selected indicator.</li> <li>Senior management decision on which indicators they wish to use in their institution.</li> <li>Senior management develop policies and procedures that support collection of metrics and data relevant to the specific indicators and advocate making open access with clear guidelines and explanation.</li> </ul>



Resources	•	Allow researchers time (and supporting budget) to record the relevant metrics and upload the relevant evidence for the selected indicators. Ensure there is a member (or members) of staff responsible for monitoring, assisting and understanding any ethical queries that arise form collection of data relevant to the selected indicators. Provide expertise and support relevant to the topic of the selected indicators.	•	Allow researchers time (and supporting budget) to record, upload and <b>make</b> <b>open</b> metrics and data relevant to the selected indicators. Ensure there is a member (or members) of staff responsible for monitoring upload of metrics and data relevant to the selected indicator <b>are open with an</b> <b>understanding of any ethical issues</b> <b>this may create</b> . Provide expertise and support relevant to the topic of the selected indicators and <b>how to make the topic open</b> .
Repository	•	Ensure there is an appropriate and easily accessible database or repository to record the metrics and data relevant to the selected indicators.	•	Ensure there is a suitable and easily accessible database or repository to record data and metrics relevant to the selected indicators and <b>that this is</b> <b>open access</b> .
Awareness Raising	•	Ensure researchers are aware of what they should be recording for the selected indicators and where they can get training in how to do this and who they should go to for help.	•	Ensure researchers know that they should record and <b>ensure open access</b> for all documents relevant to the selected indicators and where they can receive training in how to do this and who they should go to for help.
	•	Ensure researchers understand the benefit to them as individuals and the institution of recording the metrics and data relevant to the indicators and that they understand the link to researcher assessment.	•	Explain to researchers the <b>benefit of</b> <b>making the selected indicators open</b> to them as individuals and the institution and that they understand the link to researcher assessment.
Training	•	Train researchers in where and how to log metrics and data relevant to the selected indicators. Train researchers in the skills	•	Train researchers in where and how to log and <b>ensure open access</b> <b>documents</b> relevant to selected indicators.
		indicators	•	relevant to specific indicators.
	•	<ul> <li>Ensure there are a range of best practice proposal examples that researchers can access and draw upon relevant to the selected indicators.</li> </ul>	•	Train researchers in how to make documents relevant to specific indicators open access including issues specific to academic discipline and any ethical concerns.
			•	Ensure there are <b>best practice open</b> <b>access examples</b> relevant to the specific indicators selected.



# 3. OPUS Researcher Assessment Framework (RAF)

This set of interventions should be used in partnership with the overarching framework shown in Appendix A – Tables of Researcher Assessment Framework with Indicators and Metrics and D3.1 Indicators and Metrics to test in the pilots.

### 3.1. Research

#### 3.1.1. Proposals

Indicator Group			Indicator Type	Quantitative Metric	
Proposal Development			Process	# of Project Proposals being developed	
			Output	# of Project Proposals Submitted	
			Outcome	# of Project Proposals Granted	
Category	RAF	Proposal	Development Interv	entions	
Policy	•	Senior m proposal Senior m the numl institutio	management approval and decision to collect the number of project sals being developed, submitted, and granted across the institution. management develop policies and procedures to support the collection of mber of proposals being developed, submitted and granted across the ion including clear guidelines and explanations		
Resources	•	Allow resproposal evidence Ensure the assisting the number	searchers time (and supporting budget) to record the number of project als being developed, submitted and granted and upload the relevant e. there is a member (or members) of staff responsible for monitoring, g and understanding any ethical queries that arise from the collection of ber of project proposals being developed, submitted and granted.		
_	•	Provide	expertise and support in proposal writing and development		
Repository	•	Ensure the record the the	there is an appropriate and easily accessible database or repository to the number of project proposals being developed, submitted and granted.		
Awareness • Ensure Raising develop this and		Ensure r develop this and	esearchers know tha ed, submitted, and gi who they should go	t they should record all project proposals being ranted and where they can get training in how to do to for help.	
<ul> <li>Ensure researchers understand the benefit to them as in institution of recording the number of project proposals submitted, and granted, that they have trust in the proce link to researcher assessment.</li> </ul>			nd the benefit to them as individuals and the Imber of project proposals being developed, they have trust in the process and that there is a clear t.		
Training	•	Train res submitte	esearchers in where and how to log project proposals being developed, ted, and granted.		
	•	Train res Ensure tl access a	esearchers in proposal writing and development. • there are a range of best practice proposal examples that researchers ca • and draw upon.		

#### Table 2: Generic Interventions for Research – Subcategory Proposals

#### 3.1.2. Methods

Indicator Group	Indicator Type	Quantitative Metric
Methods Development	Process	# of Method Sets Being Developed
	Output	# of Method Sets Finalised
	Outcome	# of Method Sets Implemented
		# of Method Sets Accessed
		# of Method Sets Cited

#### Table 3 : Generic Interventions for Research – Subcategory Methods



Category	RAF	<sup>E</sup> Methods Development Interventions
Policy	•	Senior management approval and decision to collect number of methods sets being developed, finalised and implemented across the institution. Senior management approval and decision to collect the number of method sets
	•	accessed and cited across the institution. Senior management develop policies and procedures to support the collection of method sets being developed, finalised and implemented across the institution including clear guidelines and explanations.
	•	Senior management develop policies and procedures to support the collection of method sets access and cited across the institution including clear guidelines and explanations.
Resources	•	Allow researchers time (and supporting budget) to record the number of methods sets, being developed, finalised and implemented across the institution and upload the relevant evidence.
	•	Allow researchers time (and supporting budget) to record the number of methods sets accessed and cited across the institution and upload the relevant evidence.
	•	Ensure there is a member (or members) of staff responsible for monitoring, assisting, and understanding any ethical queries with the recording of the number of method sets being developed and finalised.
	•	Ensure there is a member (or members) of staff responsible for monitoring, assisting and understanding any ethical queries with the recording of the number of methods sets accessed and cited across the institution.
	•	Provide expertise and support in development and management of method sets.
Repository	•	Ensure there is a suitable and easily accessible database or repository to record method sets being developed, finalised and implemented across the institution.
	•	Ensure there is an appropriate and easily accessible database or repository to record method sets accessed and cited across the institution.
Awareness Raising	•	Ensure researchers know that they should record all method sets, being developed, finalised, and implemented and where they can receive training in how to do this and who they should go to for help.
	•	Ensure researchers know that they should record all method sets accessed and cited and where they can receive training in how to do this and who they should go to for help.
	•	Ensure researchers understand the benefit of recording the number of methods sets being developed and utilised to them as individuals and the institution, that they trust the process and that there is a clear link to research assessment.
Training	•	Train researchers in where and how to log the number of methods sets developed and finalised across the institution.
	•	Train researchers in where and how to log the number of methods sets accessed and cited across the institution.
	•	Train researchers in the development of method sets.
	•	Ensure there are a range of best practice examples of method sets that researchers can access and draw upon.

### 3.1.3. Data

### **Data Planning Interventions**

#### Table 3:

Tabla	1. Conoria	Intonyontions	for Bosoarch	Subcatagon/ Data
lane	4, Generic	menvenuons	IOI Research -	Subcalegoly Dala

Indicator Group	Indicator Type	Quantitative Metric
Data Planning	Process	# of (FAIR) Data Management Plans Being Developed
	Output	# of (FAIR) Data Management Plans Finalised
	Outcome	# of (FAIR) Data Management Plans Implemented
Data Management	Process	# of (FAIR) Data Sets Being Developed
	Output	# of (FAIR) Data Sets Finalised



			# of (FAIR) Data Sets Archived		
		Outcome	# of (FAIR) Data Sets Accessed		
			# of (FAIR) Data Sets Cited		
Data Review		Process	# of (FAIR) Data Set Peer Reviews Being Drafted		
		Output	# of (FAIR) Data Set Peer Reviews Submitted		
		Outcome	# of (FAIR) Data Set Peer Reviews Accepted		
Category		RAF D	ata Planning Interventions		
Policy	<ul> <li>Senior manag institut</li> </ul>	Senior management approval and decision to collect the number of data management plans being developed, finalised, and implemented across the institution.			
	<ul> <li>Senior the nur implem</li> </ul>	Senior management develop policies and procedures to support the collection of the number of data management plans being developed, finalised and mplemented including clear guidelines and explanations.			
Resource	<ul> <li>Allow r manag institut</li> </ul>	Allow researchers time (and supporting budget) to record the number of data management plans being developed, finalised and implemented across the institution and upload the relevant evidence for the selected indicators.			
	<ul> <li>Ensure assistir numbe the ins</li> </ul>	<ul> <li>there is a member (or ng and understanding or of data management titution.</li> </ul>	members) of staff responsible for monitoring, any ethical queries with that arise from monitoring the t plans developed, finalised and implemented across		
	<ul> <li>Provide plans.</li> </ul>	e expertise and suppo	rt in the development of quality data management		
Repository	<ul> <li>Ensure record implem</li> </ul>	Ensure there is an appropriate and easily accessible database or repository to record the number of data management plans being developed, finalised and implemented across the institution.			
Awareness Raising	<ul> <li>Ensure manag can red</li> </ul>	Ensure researchers know that they should record the number of data management plans being developed, finalised, and implemented and where they can receive training in how to do this and who they should go to for help.			
	<ul> <li>Ensure institut proces</li> </ul>	Ensure researchers understand the benefit of them as individuals and the institution of recording the number of data management plan, that they trust the process and that there is a link to researcher assessment.			
Training	<ul> <li>Train re plans b</li> </ul>	Train researchers in where and how to record the number of data management plans being developed, finalised, and implemented.			
	Train re     Ensure	Train researchers in development of quality data management plans.			
	resear	esearchers can access and draw upon.			
Category		RAF Dat	a Management Interventions		
Ропсу	<ul> <li>Senior manag</li> <li>Senior</li> </ul>	management approva ement plans being de management approva	I and decision to collect the number of FAIR data veloped, finalised and archived across the institution. I and decision to collect the number of FAIR data		
	<ul> <li>Senior management develop policies and procedures to support the collection the number of FAIR data management plans being developed, finalised and archived across the institution with clear guidelines and expectations.</li> </ul>				
	<ul> <li>Senior the nur institut</li> </ul>	Senior management develop policies and procedures to support the collection of the number of FAIR data management plans accessed and cited across the institution with clear guidelines and expectations.			
Resource	<ul> <li>Allow r manag</li> </ul>	esearchers time (and s ement plans being de	supporting budget) to record the number of FAIR data veloped, finalised, and archived across the institution.		
	Allow r     manag	esearchers time (and s ement plans accessed	supporting budget) to record the number of FAIR data I and cited across the institution.		
	<ul> <li>Ensure assistir data m institut</li> </ul>	anagement plans beir ion.	ding any ethical queries that arise for the number of og developed, finalised, and archived across the		
	<ul> <li>Ensure assistir FAIR d</li> </ul>	there is a member (or ng with and understan ata management plan	members) of staff responsible for monitoring, ding any ethical queries that arise for the number of s accessed and cited across the institution.		
	<ul> <li>Provide plans.</li> </ul>	e expertise and suppo	rt in the development of FAIR data management		



Repository	• Ensure there is a suitable and easily accessible database or repository to record the number of FAIR data management plans being developed, finalised and archived across the institution.
	<ul> <li>Ensure there is an suitable and easily accessible database or repository to record the number of FAIR data management plans accessed and cited across the institution.</li> </ul>
Awareness Raising	• Ensure researchers know that they should record the number of FAIR data management plans being developed, finalised, and archived and where they can receive training in how to do this and who they should go to for help.
	<ul> <li>Ensure researchers know that they should record the number of FAIR data management plans accessed and cited and where they can receive training in how to do this and who they should go to for help.</li> </ul>
	<ul> <li>Ensure researchers understand the benefit of recording the number of FAIR data plans in these ways and that they understand the benefit to them as individuals and the institution, that the trust the process and the link to researcher assessment.</li> </ul>
Training	<ul> <li>Train researchers in where and how to record the number of FAIR data management plans being developed, finalised, and implemented.</li> </ul>
	<ul> <li>Train researchers in where and how to record the number of FAIR data management plans developed accessed and cited.</li> </ul>
	• Train researchers in the development of FAIR data management plans.
	<ul> <li>Ensure there are a range of best practice examples of FAIR data management plans that researchers can access and draw upon.</li> </ul>
Category	RAF Data Review Interventions
Policy	• Senior management approval and decision to collect the number of peer reviews being drafted, submitted, and accepted across the institution.
	<ul> <li>Senior management develop policies and procedures to support the collection of the number of peer reviews being drafted, submitted and accepted across the institution, with clear guidelines and expectations.</li> </ul>
Resource	<ul> <li>Allow researchers time (and supporting budget) to record the number of peer reviews being drafted submitted and accepted across the institution.</li> </ul>
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring, assisting with and understanding any ethical queries for collecting the number of peer reviews being drafted, submitted and accepted.</li> </ul>
	Provide expertise and support in the development of peer reviews
Repository	<ul> <li>Ensure there is an appropriate and easily accessible database or repository to record the number of peer reviews being drafted, submitted and accepted.</li> </ul>
Awareness Raising	• Ensure researchers know that they should record all peer reviews being drafted, submitted, and accepted and where they can receive training in how to do this and who they should go to for help.
	<ul> <li>Ensure researchers understand the benefit to them as individuals and to the institution of collecting the number of peer reviews being drafted, submitted and accepted that the trust the process and understand the link to researcher assessment.</li> </ul>
Training	<ul> <li>Train researchers in where and how to record peer reviews being drafted, submitted, and accepted.</li> </ul>
	Train researchers in the peer review process.
	<ul> <li>Ensure there are best practice examples of peer reviews that researchers can access and draw upon.</li> </ul>



### 3.1.4. Software

Indicator Group Indicator Type		Indicator Type	Quantitative Metric	
Software Development		Process	# of Software Sets Being Developed	
		Output	# of Software Sets Finalised	
			# of Software Sets Archived	
		Outcome	# of Software Sets Accessed	
			# of Software Sets Cited	
Software Review	N	Process	# of Software Set Peer Reviews Being Drafted	
		Output	# of Software Set Peer Reviews Submitted	
		Outcome	# of Software Set Peer Reviews Accepted	
Category		RAF softwa	are Development Interventions	
Policy Resource	<ul> <li>Senior m being de</li> <li>Senior m accesse</li> <li>Senior m the numl institutio</li> <li>Senior m the numl guideling</li> <li>Allow resevidence across th</li> <li>Allow resevidence institutio</li> <li>Ensure t assisting software</li> <li>Ensure t assisting software</li> </ul>	<ul> <li>Senior management approval and decision to collect the number of software sets being developed, finalised, and archived across the institution.</li> <li>Senior management approval and decision to collect the number of software sets accessed and cited across the institution.</li> <li>Senior management develop policies and procedures to support the collection of the number of software sets being developed, finalised and archived across the institution with clear guidelines and explanation.</li> <li>Senior management develop policies and procedures to support the collection of the number of software sets being developed, finalised and archived across the institution with clear guidelines and explanation.</li> <li>Senior management develop policies and procedures to support the collection of the number of software sets accessed and cited across the institution with clear guidelines and explanation.</li> <li>Allow researchers time (and supporting budget) to record and upload the relevant evidence for the number of software sets accessed and cited across the institution.</li> <li>Allow researchers time (and supporting budget) to record and upload the relevant evidence for the number of software sets accessed and cited across the institution.</li> <li>Ensure there is a member (or members) of staff responsible for monitoring, assisting with and understanding any ethical queries for recording the number of software sets developing, finalised and archived.</li> <li>Ensure there is a member (or members) of staff responsible for monitoring, assisting with and understanding any ethical queries with recording the number of software sets developing, finalised and archived.</li> </ul>		
Denesiten	Provide	Provide expertise and support in the development of software sets.		
Repository	<ul> <li>Ensure t software</li> </ul>	here is an appropriat sets beina develope	e database or repository to record the number of ed, finalised and archived across the institution.	
	<ul> <li>Ensure t sets accord</li> </ul>	Ensure that there is an appropriate database to record the number of software sets accessed and cited across the institution.		
Awareness Raising	<ul> <li>Ensure r develope to do this</li> </ul>	Ensure researchers know that they should record all software sets being developed, finalised, and implemented and where they can receive training in how to do this and who they should go to for help and support.		
<ul> <li>Ensure researchers know that that they should record all software se and cited and where they can receive training in how to do this and should go to for help and support.</li> </ul>		at that they should record all software sets accessed n receive training in how to do this and who they oport.		
	<ul> <li>Ensure r institutio process</li> </ul>	sure researchers understand the benefit to them as individuals and to the titution of recording the number of software sets utilised, that the trust the process and understand the link to researcher assessment.		
Training	<ul> <li>Train res finalised</li> </ul>	earchers in where a , and implemented.	nd how to record software sets being developed,	
	<ul> <li>Train res</li> </ul>	earchers in where a	nd how to record software sets cited and accessed.	
	<ul> <li>Irain res</li> <li>Ensure t access a</li> </ul>	Train researchers in development of software sets. Ensure there are best practice examples of software sets that researchers can access and draw upon.		

#### Table 5: Generic Interventions for Research – Subcategory Software



Category	RAF Software Review Interventions
Policy	<ul> <li>Senior management approval and decision to collect the number of software set peer reviews being drafted, submitted and accepted.</li> <li>Senior management develop policies and procedures to support the collection of software set peer reviews that are being drafted, submitted and accepted.</li> </ul>
	including guidelines and explanation
Resource	<ul> <li>Allow researchers time (and supporting budget) to record the number of software set peer reviews being drafted, submitted, and accepted across the institution and upload relevant supporting evidence.</li> </ul>
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring, assisting with and understanding any ethical queries for the recording the number of software set peer reviews being drafted, submitted and accepted.</li> </ul>
	<ul> <li>Provide expertise and support in the development of software set peer reviews</li> </ul>
Repository	<ul> <li>Ensure there is an appropriate and easily accessible database or repository to record the number of software peer reviews being drafted, submitted and accepted.</li> </ul>
Awareness Raising	<ul> <li>Ensure researchers know that they should record all software set peer reviews being drafted, submitted, and accepted and where they can receive training in how to do this and who they should go to for help.</li> </ul>
	<ul> <li>Ensure researchers understand the benefit of recording the number of software sets peer reviews being drafted, submitted and accepted to them as individuals and the institution, that they trust the process and understand the link to researcher assessment.</li> </ul>
Training	<ul> <li>Train researchers in where and how to record software set peer reviews being drafted, submitted, and accepted.</li> </ul>
	<ul> <li>Train researchers in the software set peer review process.</li> </ul>
	<ul> <li>Ensure there are best practice examples of software peer reviews that researchers can access and draw upon.</li> </ul>

### 3.1.5. Publications

Indicator Group	p	Indicator Type	Quantitative Metric	
Publication Drafting Process		Process	# of Publications Being Drafted	
		Output	# of Publications Submitted	
		Outcome	# of Publications Published	
			# of Publications Accessed	
			# of Publications Cited	
Publication Rev	iew	ew Process # of Publication Peer Reviews Being Drafted		
		Output	# of Publication Peer Reviews Submitted	
		Outcome	# of Publication Peer Reviews Accepted	
Category Research Assessment Framework		ch Assessment Framework		
Policy	<ul> <li>Senior m being dr</li> </ul>	Senior management approval and decision to collect the number of publications being drafted submitted and published across the institution		
	<ul> <li>Senior m accesse</li> </ul>	Senior management approval and decision to collect the number of publications accessed and cited across the institution.		
	<ul> <li>Senior m the num institutio</li> </ul>	Senior management develop policies and procedures to support the collection of the number of publications being drafted submitted and published across the institution with clear guidelines and explanation.		
	<ul> <li>Senior m the num guideline</li> </ul>	Senior management develop policies and procedures to support the collection of the number of publications accessed and cited across the institution with clear guidelines and explanation.		
Resource	<ul> <li>Allow read</li> <li>publicati</li> <li>upload t</li> </ul>	Allow researchers time (and supporting budget) to record the number of publications being drafted, submitted, and published across the institution and upload the relevant evidence.		

Table 6. Generic interventions for Research – Subcategory Publications	Table	6: Generic	Interventions fo	r Research –	Subcategory	Publications
--	-------	------------	------------------	--------------	-------------	--------------



	Allow researchers time (and supporting budget) to record the number of publications, accessed and cited across the institution and upload the relevant evidence.
	Ensure there is a member (or members) of staff responsible for monitoring, assisting with and understanding any ethical queries for collecting the number of publications being drafted, submitted, and published across the institution.
	Ensure there is a member (or members) of staff responsible for monitoring, assisting with and understanding any ethical queries with collecting the number of publications accessed and cited across the institution.
-	Provide expertise and support in quality publications.
Repository	Ensure there is an appropriate and easily accessible database or repository to record the number of publications being drafted, submitted, and published acros the institution.
	Ensure that there is an appropriate and easily accessible database or repository record the number of publications accessed and cited across the institution.
Awareness Raising	Ensure researchers know that they should record all publications being drafted, submitted, and published and where they can receive training in how to do this and who they should go to for help and support.
	Ensure researchers know that that they should record all publications accessed and cited and where they can receive training in how to do this and who they should go to for help and support.
	Ensure researchers understand the benefit of recording the number of publications to both individuals and the institution, that they trust the process and understand the link to researcher assessment.
Training	Train researchers in where and how to record publications being drafted, finalise and implemented.
	Train researchers in where and how to record publications cited and accessed.
	Train researchers in how to publish.
	Ensure that there are best practice examples of a range of quality publications th
	researchers can access and draw upon.
Category	RAF Publication Review Interventions
Policy	Senior management approval and decision to collect the number of publication peer reviews being drafted, submitted, and accepted.
	Senior management develop policies and procedures to support the collection o the number of publication peer reviews being drafted, submitted, and accepted, with clear guidelines and expectations.
Resource	Allow researchers time (and supporting budget) to record the number of publication peer reviews being drafted, submitted, and accepted and to upload the relevant evidence.
	Ensure there is a member (or members) of staff responsible for recording, assistir with and understanding any ethical queries for recording the number of publication peer reviews being drafted, submitted, and accepted.
	Provide expertise and support in the development of publication peer reviews.
Repository	Ensure there is an appropriate and easily accessible database or repository to record the number of publication peer reviews being drafted submitted and accepted.
Awareness Raising	Ensure researchers know that they should record all publication peer reviews being drafted, submitted, and accepted and where they can get training in how to do this and who they should go to for help.
	Ensure researchers understand the benefit of recording publication peer reviews to them as individuals and the institution, that they trust the process and understand the link to researcher assessment.
Training	Train researchers in where and how to record publication peer reviews being drafted, submitted, and accepted.
	Train researchers in the publication peer review process.
	Ensure there are best practice examples of publication peer reviews that researchers can access and draw upon.



#### 3.1.6. Materials

Indicator Group		Indicator Type	Quantitative Metric		
Materials Development Process		Process	# of Material Sets Being Developed		
Output		Output	# of Material Sets Finalised		
		Outcome	# of Material Sets Implemented		
			# of Material Sets Accessed		
			# of Material Sets Cited		
Category		Research Ass	essment Framework Interventions		
Policy	<ul> <li>Senior m being de Senior m</li> </ul>	Senior management approval and decision to collect the number of materials being developed, finalised, and implemented across the institution.			
	accesse	d and cited across th	e institution.		
	<ul> <li>Senior m the num institutio</li> </ul>	nanagement develop ber of materials bein n including clear gui	policies and procedures to support the collection of g developed, finalised, and implemented across the delines and explanation.		
	<ul> <li>Senior m the num guideline</li> </ul>	Senior management develop policies and explanation. Senior management develop policies and procedures to support the collection of he number of materials accessed and cited across the institution including clear guidelines and explanation.			
Resource	<ul> <li>Allow resident</li> <li>being de relevant</li> </ul>	Allow researchers time (and supporting budget) to record the number of materials being developed, finalised, and implemented across the institution and upload the relevant evidence.			
	<ul> <li>Allow researchers time (and supporting budget) to record the number of n being developed, accessed, and cited across the institution and upload th relevant evidence.</li> </ul>				
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring, assisting with and understanding any ethical queries for recording the number materials developing, finalised and implemented across the institution.</li> </ul>				
	<ul> <li>Ensure t assisting materials</li> </ul>	Ensure there is a member (or members) of staff responsible for monitoring, assisting with and understanding any ethical queries for recording the number of naterials accessed and cited across the institution.			
	Provide	rovide expertise and support in materials development.			
Repository	<ul> <li>Ensure t record th across th</li> </ul>	Ensure there is an appropriate and easily accessible database or repository to record the number of materials being developed, finalised, and implemented across the institution.			
-	<ul> <li>Ensure t number</li> </ul>	e that there is an appropriate and easily accessible database to record the er of materials accessed and cited across the institution.			
Awareness Raising	<ul> <li>Ensure researchers know that they should record all materials being devel finalised, and implemented and where they can receive training in how to and who they should go to for help and support.</li> </ul>		It they should record all materials being developed, nd where they can receive training in how to do this or help and support.		
	<ul> <li>Ensure r cited and go to for</li> </ul>	researchers know that that they should record all materials accessed and ad where they can receive training in how to do this and who they should or help and support.			
	<ul> <li>Ensure r being de institutio assessm</li> </ul>	sure researchers understand the benefit of recording the number of materia ing developed, finalised and implemented to both them as individuals and t titution, that they trust the process and understand the link to researcher sessment.			
Training	<ul> <li>Train res and impl</li> </ul>	earchers in where a emented.	nd how to record materials being developed, finalised		
	<ul> <li>Train res</li> </ul>	earchers in where a	nd how to record materials cited and accessed.		
	Train res	earchers in material	s development.		
	<ul> <li>Ensure t research</li> </ul>	Ensure there are a range of best practice examples of quality materials that researchers can access and draw upon.			

 Table 7: Generic Interventions for Research – Subcategory Materials



## 3.2. Education

#### 3.2.1. Courses

#### Table 8: Generic Indicators for Education – Subcategory Courses

Indicator Grou	p	Indicator Type	Quantitative Metric		
Course Development Process		Process	# of Courses Being Developed		
		Output	# of Courses Finalised		
		Outcome	# of Courses Implemented		
Category		Resear	ch Assessment Framework		
Policy	<ul> <li>Senior management approval and decision to collect information on the number courses being developed, finalised and implemented across the institution.</li> <li>Senior management develop policies and procedures to support the collection or information on the number of courses being developed, finalised, and implemented including clear guidelines and explanation.</li> </ul>				
Resource	<ul> <li>Allow respectively being dependent of the second dependent of the</li></ul>	Allow researchers time (and supporting budget) to record the number of courses being developed, finalised and implemented across the institution and upload the relevant evidence. Ensure there is a member (or members) of staff responsible for monitoring, assisting with and understanding any ethical issues the collection of the number of courses being developed, finalised and implemented across the institution.			
_	<ul> <li>Provide</li> </ul>	Provide expertise and support in course development,			
Repository	<ul> <li>Ensure the record the the institution</li> </ul>	Ensure there is an appropriate and easily accessible database or repository to record the number of courses being developed, finalised, and implemented across the institution.			
Awareness Raising	<ul> <li>Ensure range</li> <li>finalised</li> <li>and who</li> <li>Ensure range</li> <li>recording</li> <li>understage</li> </ul>	Ensure researchers know that they should record all courses being developed, finalised, and implemented and where they can receive training in how to do this and who they should go to for help and support. Ensure researchers understand the benefit to individuals and the institution of recording this information about courses, that they trust the process and understand the link to researcher assessment.			
Training	<ul> <li>Train res and impl</li> </ul>	earchers in where ar emented.	nd how to record courses being developed, finalised,		
	<ul> <li>Train res</li> </ul>	earchers in course d	evelopment		
	<ul> <li>Ensure the search</li> </ul>	here are a range of b ers could access and	best practice examples of courses developed that d draw upon.		

### 3.2.2. Resources

Table 9:	Generic	Interventions	for	Education -	Subcategory	Resources
----------	---------	---------------	-----	-------------	-------------	-----------

Indicator Grou	Indicator Group Indicator Type		Quantitative Metric	
Resource Development Process		Process	# of Resources Being Developed	
		Output	# of Resources Finalised	
		Outcome	# of Resources Implemented	
			# of Resources Accessed	
			# of Resources Cited	
Category	RAF Resource Development Interventions			
Policy	<ul> <li>Senior m resource</li> </ul>	Senior management approval and decision to collect information on the number of resources being developed, finalised, and implemented.		
	<ul> <li>Senior management approval and decision to collect information on the number or resources accessed and cited.</li> </ul>			
	<ul> <li>Senior m number guideline</li> </ul>	Senior management develop policies and procedures to collect information on th number of resources being developed, finalised, and implemented with clear guidelines and explanation.		



	<ul> <li>Senior management develop policies and procedures to collect information on the number of resources accessed and cited with clear guidelines and explanation.</li> </ul>
Resource	<ul> <li>Allow researchers time (and supporting budget) to record the number of resources being developed, finalised, and implemented across the institution and upload the relevant evidence.</li> </ul>
	<ul> <li>Allow researchers time (and supporting budget) to record the number of resources accessed and cited across the institution.</li> </ul>
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring, assisting with and understanding any ethical issues for the collection of the number of resources being developed, finalised, and implemented across the institution.</li> </ul>
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring, assisting with and understanding any ethical issues for the collection of the number of resources accessed and cited across the institution.</li> </ul>
	<ul> <li>Provide expertise and support in resource development.</li> </ul>
Repository	<ul> <li>Ensure there is an appropriate and easily accessible database or repository to record the number of resources being developed, finalised and implemented across the institution.</li> </ul>
	<ul> <li>Ensure there is an appropriate and easily accessible database or repository to record the number of resources accessed and cited across the institution</li> </ul>
Awareness Raising	<ul> <li>Ensure researchers know that they should record all resources, being developed finalised and implemented and where they can receive training in how to do this and who they should go to for help and support.</li> </ul>
	<ul> <li>Ensure researchers know that they should record all resources that have been accessed and cited and where they can receive training in how to do this and who they should go to for help and support.</li> </ul>
	<ul> <li>Ensure researchers understand the benefit of recording the number of resources being developed, finalised and implemented to both themselves as individuals, that they trust the process and understand the institution and the link to researcher assessment.</li> </ul>
Training	<ul> <li>Train researchers in where and how to record resources being developed, finalised and implemented.</li> </ul>
	Train researchers in resource development.
	<ul> <li>Ensure there are a range of best practice examples of resources developed that researchers can access and draw upon.</li> </ul>

#### 3.2.3. Teaching

#### Table 10: Generic Indicators for Education – Subcategory Teaching

Indicator Group		Indicator Type	Quantitative Metric
Student Teaching		Process	# of Course Hours Assigned
		Output	# of Course Hours Taught
		Outcome	# of Students Passed in Courses
Category		RAF sti	udent Teaching Interventions
Policy	<ul> <li>Senior of coult</li> <li>Senior in releving</li> <li>Senior of the clear g</li> </ul>	management approv rse hours assigned a management approv vant courses across t management develo number of course ho juidelines and explar	val and decision to collect information on the number nd taught across the institution. val and decision to collect number of students passed the institution. op policies and procedures to support the collection iurs assigned and taught across the institution with nation.
	<ul> <li>Senior management develop policies and procedures to support the co of the number of students that have passed these courses with clear gu and explanation.</li> </ul>		op policies and procedures to support the collection hat have passed these courses with clear guidelines
Resource	<ul> <li>Allow r that are upload</li> </ul>	Allow researchers time (and supporting budget) to record the number of course that are being currently taught and have been taught across the institution and upload relevant evidence.	



	• Allow researchers or others time (and supporting budget) to record the number of students that have passed these courses across the institution and upload relevant evidence.
	• Ensure there is a member (or members) of staff responsible for monitoring, assisting with and understanding any ethical issues for the collection of the number of course hours assigned and taught across the institution.
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring, assisting with and understanding any ethical issues for the recording of the number of students that have passed these courses across the institution.</li> </ul>
	<ul> <li>Provide expertise and support in teaching.</li> </ul>
Repository	• Ensure there is an appropriate and easily accessible database or repository to record the number of course hours assigned and taught across the institution.
	<ul> <li>Ensure there is an appropriate and easily accessible method or database for recording the number of students that achieve a pass in relevant courses.</li> </ul>
Awareness Raising	• Ensure researchers know that they should record all course hours assigned and taught and where they can receive training in how to do this and who they should go to for help and support.
	<ul> <li>Ensure researchers know that they should record number of students who achieve a pass in relevant courses taught.</li> </ul>
	<ul> <li>Ensure researchers understand the benefits to them as individuals and the institution of recording this data on course hours assigned, taught and student pass rates and that they trust the process and understand the link to researcher assessment</li> </ul>
Training	<ul> <li>Train researchers in where and how to record course hours assigned and taught.</li> </ul>
	• Train researchers in where and how to record the number of students who achieve a pass in relevant courses taught.
	Train researchers in teaching methods.
	• Ensure there are a range of best practice courses available that researchers can access and draw upon.

### 3.2.4. Supervision

Indicator Group		Indicator Type	Quantitative Metric
Student Superv	vision	Process	# of Students Being Supervised
		Output	# of Students Supervised
		Outcome	# of Supervised Student Theses
			# of Supervised Students Graduated
Category		RAF	Supervision Interventions
Policy	<ul> <li>Senior management approval and decision to collect the number of students currently being supervised or that have been supervised across the institution.</li> <li>Senior management approval and decision to collect the number of student theses of those supervised and number of students graduated across the institution.</li> <li>Senior management develop policies and procedures to support the collection of the number of students that researchers are currently supervising or have supervised including clear guidelines and explanation.</li> <li>Senior management develop policies and procedures to support the collection of the number of students who publish a theses or graduate with clear guidelines and explanation.</li> </ul>		
Resource	<ul> <li>Allow resthat are institutio</li> <li>Allow restors of stude</li> </ul>	Allow researchers time (and supporting budget) to record the number of courses that are being currently supervised or have been supervised in the past across the institution. Allow researchers time to record the number of students theses and the number of students graduated across the institution.	

#### Table 11: Generic Interventions for Education – Subcategory Supervision



	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring and assisting with the collection of the number of students that are currently or have been supervised.</li> </ul>
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring and assisting with the recording number of students graduated and theses.</li> <li>Provide expertise and support in supervision.</li> </ul>
Repository	<ul> <li>Ensure there is an appropriate database to record the number of students currently being supervised or that have been supervised.</li> <li>Ensure there is an appropriate method or database for recording the number of students that have completed their theses and graduated.</li> </ul>
Awareness Raising	<ul> <li>Ensure researchers know that they should record all students currently being supervised and where they can receive training in how to do this and who they should go to for help and support.</li> <li>Ensure researchers know that they should record and monitor the number of students they have supervised who have completed their thesis or graduated.</li> <li>Ensure researchers understand the benefits to them as individuals and the institution of recording this data on students they are curpencised and the</li> </ul>
	resulting number who have produced a theses or graduated that they trust the process and understand the link to researcher assessment
Training	• Train researchers in where and how to record students that are currently being or that have been supervised.
	<ul> <li>Irain researchers in where and how to record the number of students they have supervised who have completed their thesis or graduated.</li> </ul>
	Irain researchers in supervision.
	Ensure researchers know where to go to receive support in supervision.
	• Try to find best practice examples of supervision that researchers can access and draw upon.

### 3.2.5 Skills

#### Table 12 Generic Interventions for Education – Subcategory Skills

Indicator Grou	ıp	Indicator Type	Quantitative Metric	
Skills Development		Process	# of Skills Courses Being Followed	
		Output	# of Skills Courses Completed	
		Outcome	# of Skills Certificates Obtained	
Category		R,	AF Skills Interventions	
Policy	<ul> <li>Senior m skills cou institutio</li> <li>Senior m informati and obta</li> </ul>	nanagement approva urses researchers are n. nanagement develop ion on the number of nined including clear	I and decision to collect information on the number of e following, have completed, and obtained across the policies and procedures to support the collection of f courses researchers are following, have completed quidelines and explanation.	
Resource	<ul> <li>Allow reactive years</li> <li>Ensure tassisting following</li> <li>Provide</li> </ul>	Allow researchers time (and supporting budget) to record the number of courses they are following, have completed and obtained by them individually. Ensure there is a member (or members) of staff responsible for monitoring and assisting with the collection of the number of skills courses researchers are following, have completed and obtained across the institution. Provide a comprehensive programme of skills courses for researchers		
Repository	<ul> <li>Ensure t record th obtained</li> </ul>	Ensure there is an appropriate and easily accessible database for researchers to record the number of skills courses they are following, have completed and obtained.		
Awareness Raising	<ul> <li>Ensure r they are training i</li> <li>Ensure r recordin</li> </ul>	Ensure researchers know that they should record the number of skills courses, they are following, have completed and obtained and where they can receive training in how to do this and who they should go to for help and support. Ensure researchers understand the benefit to individuals and the institution of recording this information about skills courses, that they trust the process and		
	understand the link to researcher assessment.			



Training	•	Train researchers in where and how to record the number of skills courses they are following, have completed and obtained. Train researchers in the programme of skills courses for researchers that are
		offered by the institution.
	•	Ensure there is clear advice and guidance on attending skills courses with a clear link to career development and academic success.

### 3.3. Leadership

### 3.3.1 People

#### Table 13: Generic Interventions for Leadership – Subcategory People

Indicator Group		Indicator Type	Quantitative Metric	
Staff Supervision		Process	# of Staff Being Supervised	
		Output	# of Staff Supervised	
		Outcome	# of Supervised Staff Theses	
			# of Supervised Staff Projects	
Category		RAF Sta	ff Supervision Interventions	
Policy	<ul> <li>Senior r researcl</li> </ul>	nanagement approva ner is supervising or l	I and decision to collect the number of staff that a nas supervised across the institution.	
	<ul> <li>Senior r projects supervis</li> </ul>	Senior management approval and decision to collect the number of theses and projects that have been produced by staff that a researcher is supervising or has supervised		
	<ul> <li>Senior r the num clear gu</li> </ul>	nanagement develop ber of staff that resea idelines and explana	policies and procedures to support the collection of archers are supervising or have supervised including tion.	
	<ul> <li>Senior r the num supervis</li> </ul>	<ul> <li>Senior management develop policies and procedures to support the collectio the number of theses written or projects completed by staff a researcher has supervised or is supervising including clear guidelines and explanation</li> </ul>		
Resource	<ul> <li>Allow re are curr</li> </ul>	Allow researchers time (and supporting budget) to record the number of staff they are currently supervising or have supervised across the institution.		
	<ul> <li>Allow researchers time (and supporting budget) to recor written and projects completed by staff that have superv across the institution.</li> </ul>			
<ul> <li>Ensure there is a member (or members) of staff responsible assisting with the collection of the number of staff that a res supervising or has supervised.</li> </ul>			members) of staff responsible for monitoring and of the number of staff that a researcher is currently d.	
	<ul> <li>Ensure there is a member (or members) of staff responsible for moni assisting with the collection of the number of these written or projec by staff that a researcher is supervising or has supervised.</li> </ul>			
	<ul> <li>Provide</li> </ul>	Provide expertise and support in supervision of staff.		
Repository	<ul> <li>Ensure the num the reset</li> </ul>	Ensure there is an easily accessible and suitable database or repository to record the number of staff currently being supervised or that have been supervised by the researcher.		
	<ul> <li>Ensure to number research</li> </ul>	insure there is an easily accessible database or repository for recording the number of theses written or projects completed by staff supervised by the esearcher.		
Awareness Raising	<ul> <li>Ensure is currently training</li> <li>Ensure is and prowing where the help and the provide the providet the providet the providet the</li></ul>	researchers know that y supervising or that in how to do this and researchers know that jects completed by st hey can receive training d support.	at they should record number of staff they are they have supervised and where they can receive I who they should go to for help and support. At they should record the number of theses written taff that have supervised or are supervising and ing in how to do this and who they should go to for	
	recordir	ig this information ab and the link to resear	out staff supervision, that they trust the process and cher assessment	



Training	<ul> <li>Train researchers in where and how to record the number of staff they have supervised or are supervising.</li> <li>Train researchers in where and how to record the number of theses written or projects completed by staff they have supervised or are supervising.</li> </ul>
	<ul> <li>Train researchers in supervision of staff.</li> <li>Ensure researchers know where to go to receive support in supervision of staff.</li> <li>Try to find best practice examples of supervision of staff that researchers can access and draw upon.</li> </ul>

### 3.3.2 Projects

Indicator Group		Indicator Type	Quantitative Metric	
Project Management		Process	# of Projects Being Managed	
		Output	# of Projects Completed	
		Outcome	# of Projects Successfully Evaluated	
Category		Project	Management Interventions	
Policy	<ul> <li>Senior n research evaluate</li> </ul>	<ul> <li>Senior management approval and decision to collect the number of projects t researcher is managing, has completed and that have been successfully evaluated.</li> </ul>		
	<ul> <li>Senior n the num have be</li> </ul>	Senior management develop policies and procedures to support the collection the number of projects that a researcher is managing, has completed and that have been successfully evaluated including clear guidelines and explanation.		
Resource	<ul> <li>Allow re they are across the</li> </ul>	Allow researchers time (and supporting budget) to record the number projects they are managing, have completed and that have been successfully evaluated across the institution.		
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring assisting with the collection of the number of projects that a researcher is managing, has completed and that have been successfully evaluated.</li> </ul>			
Popositon/	Provide	Provide expertise and support in project management.		
Repository	<ul> <li>Ensure t research evaluate</li> </ul>	Ensure there is an appropriate database to record the number of projects researchers are managing, have completed and that have been successfully evaluated.		
Awareness Raising	<ul> <li>Ensure r currently and whe for help</li> </ul>	Ensure researchers know that they should record the number of projects they are currently managing, have completed and that have been successfully evaluated and where they can receive training in how to do this and who they should go to for help and support.		
	<ul> <li>Ensure r recordin and und</li> </ul>	Ensure researchers understand the benefit to individuals and the institution of recording this information about project management, that they trust the proce and understand the link to researcher assessment		
Training	<ul> <li>Train res currently</li> </ul>	searchers in where a y managing, have coi	nd how to record the number of projects they are mpleted and that have been successfully evaluated.	
	<ul> <li>Train res</li> </ul>	searchers in project r	nanagement.	
	<ul> <li>Ensure r</li> </ul>	esearchers know wh	ere to go to receive support in project management.	
	<ul> <li>Try to fir access a</li> </ul>	nd best practice exan and draw upon.	nples of project managment that researchers can	

#### Table 14: Generic Interventions for Leadership – Subcategory Projects

### 3.3.3 Organisation

Table 15: Generic Interventions for Leadership – Subcategory Organisa
---

Indicator Group	Indicator Type	Quantitative Metric
Unit Management	Process	# of Unit Management Positions Assigned
	Output	# of Unit Management Positions Completed
		# of Agreed Unit Management Outputs



		Outcome	# of Agreed Unit Management Outcomes		
Category		RAF Uni	t Management Interventions		
Policy	<ul> <li>Senior r Manage institutio</li> <li>Senior r outputs</li> <li>Senior r the num researcl</li> <li>Senior r</li> </ul>	Senior management approval and decision to collect the number of Unit Management Positions assigned and completed by a researcher across the institution. Senior management approval and decision to collect the number of agreed outputs and outcomes for the unit across the institution. Senior management develop policies and procedures to support the collection of the number of unit management positions assigned and completed by a researcher including clear guidelines and explanation. Senior management develop policies and procedures to collect the number of			
	agreed guidelin	outputs and outcome les and explanation.	s for the unit across the institution including clear		
Resource	<ul> <li>Allow researchers time (and supporting budget) to record the number positions that they have been assigned and completed across the inst</li> <li>Allow researchers time (and supporting budget) to record the number outputs and outcomes from units across the institution.</li> </ul>				
	<ul> <li>Ensure to assisting complet</li> <li>Ensure to assisting units.</li> </ul>	g with the collection of ted. there is a member (or g with the collection of	of the number of unit positions assigned and that have members) of staff responsible for monitor and of the number of agreed outputs and outcomes from		
Repository	<ul> <li>Provide</li> <li>Ensure t</li> </ul>	there is an appropriat	re database to record the number of unit		
Repeatery	manage	ement positions that h	ave been assigned and completed.		
	<ul> <li>Ensure t and out</li> </ul>	there is an appropriat comes for units.	e database to record the number of agreed outputs		
Awareness Raising	Ensure complet should g	researchers know that ted and where they ca go to for help and sup researchers know that	It they should record the unit positions assigned and an receive training in how to do this and who they oport.		
	and out who the	comes for units and v ey should go to for he	where they can receive training in how to do this and lp and support.		
	<ul> <li>Ensure i recordir underst</li> </ul>	ng this information ab and the link to resear	out unit management, that they trust the process and cher assessment		
Training	<ul> <li>Train re have be</li> <li>Train re outcome</li> </ul>	searchers in where a en assigned and hav searchers in where a es for units.	nd how to record the number of unit positions they e completed. nd how to record the number of agreed outputs and		
	<ul> <li>Train re</li> <li>Ensure</li> <li>Try to fin and draw</li> </ul>	searchers in unit (tea researchers know wh nd best practice exan w upon.	m or department) management ere to go to receive support in Unit Management. nples of Unit Managment that researchers can access		

### 4.3.4 Recognition

Indicator Group	Indicator Type	Quantitative Metric
Expert Positions	Process	# of Expert Positions Assigned
	Output	# of Expert Positions Completed
		# of Expert Position Outputs
	Outcome	# of Expert Position Outcomes
		# of Expert Achievement Awards

 Table 16: Generic Interventions for Leadership – Subcategory Recognition



Category	RAF ExpertPositions Interventions
Policy	<ul> <li>Senior management approval and decision to collect the number of expert positions assigned and completed by a researcher across the institution.</li> <li>Senior management approval and decision to collect the number of expert position outputs, outcomes and achievement awards across the institution.</li> <li>Senior management develop policies and procedures to support the collection of expert positions assigned and completed by a researcher including clear guidelines and explanation.</li> <li>Senior management develop policies and procedures to collect the number of expert positions.</li> </ul>
	expert position outputs, outcomes and achievement awards for the unit across the institution including clear guidelines and explanation.
Resource	<ul> <li>Allow researchers time (and supporting budget) to record the number of expert positions assigned and completed across the institution.</li> <li>Allow researchers time (and supporting budget) to record the number of expert positions outputs, outcomes, and achievement awards across the institution.</li> </ul>
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring and assisting with the collection of the number of expert positions assigned and that have completed.</li> </ul>
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitor and assisting with the collection of the number of expert positions outputs, outcomes and achievement awards.</li> </ul>
	<ul> <li>Provide expertise and supporting in achieving expert positions.</li> </ul>
Repository	<ul> <li>Ensure there is an appropriate database to record the number of expert positions that have been assigned and completed.</li> <li>Ensure there is an appropriate database to record the number of expert positions outputs, outcomes and achievement awards.</li> </ul>
Awareness Raising	<ul> <li>Ensure researchers know that they should record any expert positions assigned and completed and where they can receive training in how to do this and who they should go to for help and support.</li> </ul>
	<ul> <li>Ensure researchers know that they should record the number of expert positions outputs, outcomes and achievement awards where they can receive training in how to do this and who they should go to for help and support.</li> </ul>
	<ul> <li>Ensure researchers understand the benefit to individuals and the institution of recording this information about expert positions, that they trust the process and understand the link to researcher assessment</li> </ul>
Training	<ul> <li>Train researchers in where and how to record the number of expert positions they have been assigned and have completed.</li> <li>Train researchers in where and how to record the number of expert positions outputs, outpu</li></ul>
	Train researchers in how to find expert position expertupities
	<ul> <li>Frain researchers in now to find expert position opportunities.</li> <li>Ensure researchers know where to go to receive support in expert positions.</li> <li>Provide best practice examples and case studies of expert positions that researchers can access and draw upon.</li> </ul>

## 3.4. Valorisation

### 3.4.1 Communication

Indicator Group	Indicator Type	Quantitative Metric
Public Writing	Process	# of Publications Being Drafted
	Output	# of Publications Published
	Outcome	# of Publications Accessed
		# of Publications Cited
Public Speaking	Process	# of Appearances Planned
	Output	# of Appearances Made

 Table 17: Generic Interventions for Valorisation – Subcategory Communication



		Outcome	# of Appearances Accessed		
			# of Appearances Cited		
Category		RAF P	ublic Writing Interventions		
Policy	<ul> <li>Seni</li> <li>bein</li> <li>Seni</li> </ul>	<ul> <li>Senior management approval and decision to collect the number being drafted and published across the institution.</li> <li>Senior management approval and decision to collect the number</li> </ul>			
	acce Seni	essed and cited across th	e institution.		
	<ul> <li>Senior management develop policies and procedures to support the co publications being drafted and published by a researcher including clea guidelines and explanation.</li> </ul>				
	<ul> <li>Seni publ</li> <li>explain</li> </ul>	Senior management develop policies and procedures to collect the number of publications accessed and cited by a researcher including clear guidelines and explanation.			
Resource	<ul> <li>Allow publ</li> </ul>	w researchers time (and s ications being drafted ar	supporting budget) to record the number of nd published across the institution.		
	<ul> <li>Allow publ</li> </ul>	w researchers time (and s ications accessed and ci	supporting budget) to record the number of ted across the institution.		
	<ul> <li>Ensu assis acro</li> </ul>	re there is a member (or sting with the collection o ss the institution.	members) of staff responsible for monitoring and of the number of publications drafting and published		
	<ul> <li>Ensu assis acro</li> </ul>	rre there is a member (or sting with the collection c ss the institution.	members) of staff responsible for monitor and of the number of publications accessed and cited		
	<ul> <li>Prov</li> </ul>	ide expertise and suppo	rting in public writing.		
Repository	<ul> <li>Ensubein</li> </ul>	ire there is an appropriat g drafted and published	e database to record the number of publications across the institution.		
	<ul> <li>Ensu acce</li> </ul>	Ensure there is an appropriate database to record the number of publications accessed and cited across the institution.			
Awareness Raising	<ul> <li>Ensuand they</li> </ul>	Ensure researchers know that they should record any publications being drafted and have published and where they can receive training in how to do this and who they should go to for help and support.			
	<ul> <li>Ensu acce they</li> </ul>	re researchers know that ressed and cited and whe should go to for help an	at they should record the number of publications re they can receive training in how to do this and who d support.		
	<ul> <li>Ensureco reco unde</li> </ul>	Ensure researchers understand the benefit to individuals and the institution of recording this information about public writing, that they trust the process and understand the link to researcher assessment			
Training	<ul> <li>Trair bein</li> </ul>	<ul> <li>Train researchers in where and how to record the number publications being drafted and have published.</li> </ul>			
	<ul> <li>Trair have</li> </ul>	n researchers in where an e accessed and cited.	nd how to record the number of publications they		
	• Trair	n researchers in public w	riting.		
	• Ensu	ire researchers know wh	ere to go to receive support in public writing.		
	Try t     rese	o find best practice exan archers can access and (	nples and case studies of public writing that draw upon		
Category	1050	RAF Pu	blic Speaking Interventions		
Policy	<ul> <li>Seni spea</li> </ul>	or management approva king appearances plann	I and decision to collect the number of public ed and made across the institution.		
	<ul> <li>Seni spea</li> </ul>	or management approva king appearances acces	I and decision to collect the number of public seed and cited across the institution.		
	<ul> <li>Seni publ guid</li> </ul>	or management develop ic speaking appearances elines and explanation.	policies and procedures to support the collection of s planned and made by a researcher including clear		
	<ul> <li>Seni publ guid</li> </ul>	or management develop ic speaking appearances elines and explanation.	policies and procedures to collect the number of s accessed and cited by a researcher including clear		
Resource	<ul> <li>Allow spea</li> </ul>	w researchers time (and s aking appearances plann	supporting budget) to record the number of public ed and made across the institution.		
	<ul> <li>Allow spea</li> </ul>	w researchers time (and s king appearances acces	supporting budget) to record the number public used and cited across the institution.		



	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring and assisting with the collection of the number of public speaking appearances planned and made across the institution.</li> </ul>
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitor and assisting with the collection of the number of public speaking appearances accessed and cited across the institution.</li> </ul>
	<ul> <li>Provide expertise and supporting in public writing.</li> </ul>
Repository	• Ensure there is an appropriate database to record the number of public speaking appearances planned and made across the institution.
	<ul> <li>Ensure there is an appropriate database to record the number of public speaking appearances accessed and cited across the institution.</li> </ul>
Awareness Raising	<ul> <li>Ensure researchers know that they should record any public speaking appearances they have planned or have made and where they can receive training in how to do this and who they should go to for help and support.</li> </ul>
	<ul> <li>Ensure researchers know that they should record the number of public speaking appearances and cited and where they can receive training in how to do this and who they should go to for help and support.</li> </ul>
	<ul> <li>Ensure researchers understand the benefit to individuals and the institution of recording this information about public speaking, that they trust the process and understand the link to researcher assessment</li> </ul>
Training	<ul> <li>Train researchers in where and how to record the number public speaking appearances they have planned or have made.</li> </ul>
	<ul> <li>Train researchers in where and how to record the number of public speaking appearances they have accessed and cited.</li> </ul>
	Train researchers in public speaking.
	• Ensure researchers know where to go to receive support in public speaking.
	<ul> <li>Provide best practice examples and case studies of public speaking that researchers can access and draw upon.</li> </ul>

#### 3.4.2 Engagement

Indicator Group		Indicator Type	Quantitative Metric
Intersectoral Engagement		Process	# of Intersectoral Engagements
		Output	# of Intersectoral Outputs
		Outcome	# of Intersectoral Outcomes
			# of Organisations Engaged
Citizen Engage	ement	Process	# of Citizen Science Activities Ongoing
		Output	# of Citizen Science Activities Completed
			# of Citizen Science Outputs
		Outcome	# of Citizen Science Outcomes
			# of Citizen Scientists Engaged
Category		RAF Interse	ctoral Engagement Interventions
Policy	<ul> <li>Senior n engager</li> <li>Senior n outcome</li> <li>Senior n intersect and exp</li> <li>Senior n</li> </ul>	Senior management approval and decision to collect the number of intersectoral engagements and outputs by a researcher across the institution. Senior management approval and decision to collect the number of intersectoral outcomes and organisations engaged across the institution. Senior management develop policies and procedures to support the collection of intersectoral engagements and outputs by a researcher including clear guidelines and explanation. Senior management develop policies and procedures to collect the number of	
	intersec clear gu	toral outcomes and c idelines and explana	brganisations engaged across the institution including tion.
Resource	<ul> <li>Allow re intersect</li> </ul>	Allow researchers time (and supporting budget) to record the number of intersectoral engagements and outputs across the institution.	

#### Table 18: Generic Interventions for Valorisation – Subcategory Engagement



	<ul> <li>Allow researchers time (and supporting budget) to record the number of intersectoral outcomes and organisations engaged across the institution.</li> <li>Ensure there is a member (or members) of staff responsible for monitoring and assisting with the collection of intersectoral collaborations and outputs across the institution.</li> </ul>
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitor and assisting with the collection of the number of intersectoral outcomes and organisations engaged with across the institution.</li> </ul>
<b>_</b>	Provide expertise and supporting in intersectoral collaborations.
Repository	<ul> <li>Ensure there is an appropriate database to record the number of intersectoral collaborations and outputs across the institution.</li> </ul>
	<ul> <li>Ensure there is an appropriate database to record the number of intersectoral outcomes and organisations engaged with across the institution.</li> </ul>
Awareness Raising	<ul> <li>Ensure researchers know that they should record any intersectoral collaborations and outputs developed and where they can receive training in how to do this and who they should go to for help and support.</li> <li>Ensure researchers know that they should record the number of outcomes and organisations engaged with and where they can receive training in how to do this</li> </ul>
	<ul> <li>and who they should go to for help and support.</li> <li>Ensure researchers understand the benefit to individuals and the institution of recording this information about intersectoral engagement and that they trust the</li> </ul>
Training	<ul> <li>Train researchers in where and how to record the number of intersectoral collaborations and outputs developed.</li> </ul>
	<ul> <li>Train researchers in where and how to record the number of intersectoral outcomes and organisations engaged with.</li> </ul>
	Train researchers in how to find intersectoral collaborations.
	<ul> <li>Ensure researchers know where to go to receive support in finding and achieving intersectoral collaborations.</li> </ul>
	• Provide best practice examples and case studies of intersectoral collaborations that researchers can access and draw upon.
Category	RAF Citizen Engagement Interventions
Policy	<ul> <li>Senior management approval and decision to collect the number of citizen science activities that are ongoing and completed researchers across the institution.</li> </ul>
	• Senior management approval and decision to collect the number of citizen science outputs, outcomes and citizen scientists engaged across the institution.
	<ul> <li>Senior management develop policies and procedures to support the collection of citizen science activities that are ongoing or completed by a researcher including clear guidelines and explanation.</li> </ul>
	<ul> <li>Senior management develop policies and procedures to collect the number of citizen science outputs, outcomes and number of citizen scientists engaged by individual researchers across the institution including clear guidelines and explanation.</li> </ul>
Resource	• Allow researchers time (and supporting budget) to record the number of citizen science activities that are ongoing and completed across the institution.
	<ul> <li>Allow researchers time (and supporting budget) to record the number of citizen science outputs, outcomes and the number of citizen scientists engaged across the institution.</li> </ul>
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring and assisting with the collection of the number of citizen scientist activities ongoing and completed across the institution.</li> </ul>
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitor and assisting with the collection of the number of citizen science, outputs and outcomes and the number of citizen scientists engaged with across the institution</li> </ul>
	Provide expertise and supporting in citizen science.
Repository	• Ensure there is an appropriate database to record the number of citizen science activities ongoing and completed across the institution.
	<ul> <li>Ensure there is an appropriate database to record the number of citizen science outputs, outcomes and the number of citizen scientists engaged with across the institution.</li> </ul>



Awareness Raising	<ul> <li>Ensure researchers know that they should record any intersectoral citizen science activities that are ongoing and completed and where they can receive training in how to do this and who they should go to for help and support.</li> <li>Ensure researchers know that they should record the number of citizen science outputs, outcomes and the number of citizen scientists engaged with and where they can receive training in how to do this and who to do this and who they should go to for help and support.</li> <li>Ensure researchers understand the benefit to individuals and the institution of recording this information about citizen science and that they trust the process and understand the link to researcher assessment</li> </ul>
Training	<ul> <li>Train researchers in where and how to record the number of citizen scientists activities ongoing and completed.</li> <li>Train researchers in where and how to record the number of citizen science outputs, outcomes and the number of citizen scientists engaged with.</li> <li>Train researchers in citizen science.</li> <li>Ensure researchers know where to go to receive support in citizen science.</li> <li>Provide best practice examples and case studies of citizen science that researchers can access and draw upon.</li> </ul>

#### 3.4.3 Innovation

Indicator Group		Indicator Type	Quantitative Metric
Research Exploitation		Process	# of Research Outputs Being Legalised
		Output	# of Research Outputs with Defined IPR
			# of Research Outputs Patented
		Outcome	# of Research Outputs with Licenses
Entrepreneuria	al Spirit	Process	# of Spin-offs/Start-ups Being Created
		Output	# of Spin-offs/Start-ups Created
		Outcome	# of Spin-off/Start-up Employees
			# of Spin-off/Start-up Products
			# of Spin-off/Start-up Services
Category		RAF Rese	arch Exploitation Interventions
	<ul> <li>Senior n outputs institutio</li> <li>Senior n the num research</li> <li>Senior n research across th</li> </ul>	that are in the procest nanagement approve with defined IPR, pat in. nanagement develop her including clear gun nanagement develop noutputs with define- ne institution includin	as of being legalised across the institution. If and decision to collect the number of research ented and with licenses by researchers across the policies and procedures to support the collection of uts that are in the process of being legalised by a uidelines and explanation. Policies and procedures to collect the number of d IPR, patents or licenses by individual researchers og clear guidelines and explanation.
Resource	<ul> <li>Allow re outputs</li> <li>Allow re of resea</li> <li>Ensure t assisting being le</li> <li>Ensure t number across tl</li> <li>Provide defined</li> </ul>	searchers time (and s that are currently in t searchers time (and s rch outputs with defi here is a member (or galised across the in here is a member (or or research outputs ne institution. expertise and suppo IPR patents and lice	supporting budget) to record the number of research he process of being legalised across the institution. supporting budget) to record the number the number ned IPR, patents awarded and licensed. "members) of staff responsible for monitoring and of the number of research outputs in the process of stitution. "members) of staff responsible for monitoring the with defined IPR, patents awarded and licensed "rting in legalisation of research outputs including nsing

#### Table 19: Generic Interventions for Valorisation – Subcategory Innovation



Repository	•	Ensure there is an appropriate database to record the number of research outputs in the process of being legalised across the institution.
	•	Ensure there is an appropriate database to record the number of research outputs with defined IPR, patents awarded and licensed across the institution.
Awareness Raising	•	Ensure researchers know that they should record any research outputs in the process of being legalised and where they can receive training in how to do this and who they should go to for help and support.
	•	Ensure researchers know that they should record the number of research outputs with defined IPR, patents awarded and licensed and where they can receive training in how to do this and who they should go to for help and support.
	•	Ensure researchers understand the benefit to individuals and the institution of recording this information about research exploitation and that they trust the process and understand the link to researcher assessment
Training	•	Train researchers in where and how to record the number of research outputs that are in the process of being legalised.
	•	Train researchers in where and how to record the number of research outputs with defined IPR, patents awarded, and licenses granted.
	•	Train researchers in legalisation of research outputs including IPR, patents and licensing.
	•	Ensure researchers know where to go to receive support in legalisation of research outputs including defined IPR, patents and licensing.
	•	Provide best practice examples and legalisation of research outputs including defined IPR, patents and licensing that researchers can access and draw upon.
Category		RAF Entrepreneurial Spirit Interventions
Policy	•	Senior management approval and decision to collect the number of Spin- offs/Start-ups that are in the process currently being created or that have been created across the institution.
	•	Senior management approval and decision to collect the number of Spin-off/Start- up employees, products and services across the institution.
	•	Senior management develop policies and procedures to support the collection of the number of Spin-offs/Start-ups that are in the process currently being created her including clear guidelines and explanation.
	•	Senior management develop policies and procedures to collect the number of Spin-off/Start-up employees, products and services across the institution including clear guidelines and explanation.
Resource	•	Allow researchers time (and supporting budget) to record the number of Spin- offs/Start-ups that are in the process currently being created or that have been created across the institution.
	•	Allow researchers time (and supporting budget) to record the number the number of Spin-off/Start-up employees, products and services across the institution.
	•	Ensure there is a member (or members) of staff responsible for monitoring and assisting with the collection of the number of of Spin-offs/Start-ups that are in the process currently being created or that have been created across the institution.
	•	Ensure there is a member (or members) of staff responsible for monitoring the number of Spin-off/Start-up employees, products and services across the institution.
	•	Provide expertise and support in Spin-offs and Start-ups
Repository	•	Ensure there is an appropriate database to record the number of research outputs in the process of being legalised across the institution.
	•	Ensure there is an appropriate database to record the number of research outputs with IPR, patents awarded and licensed across the institution.
Awareness Raising	•	Ensure researchers know that they should record Spin-offs/Start-ups that are in the process currently being created or that have been created across the institution. and where they can receive training in how to do this and who they should go to for help and support.
	•	Ensure researchers know that they should record the number of Spin-off/Start-up employees, products and services across the institution and where they can receive training in how to do this and who they should go to for help and support.
	•	Ensure researchers understand the benefit to individuals and the institution of recording this information about entrepreneurial spirit, that they trust the process and understand the link to researcher assessment
Training	•	Train researchers in where and how to record Spin-offs/Start-ups that are in the process currently being created or that have been created



•	Train researchers in where and how to record the number of Spin-off/Start-up employees, products and services.
•	Train researchers in how to establish a Spin-offs/Start-ups
•	Ensure researchers know where to go to receive support in Spin-offs/Start-ups
•	Try to find best practice examples and legalisation of Spin-offs/Start-ups that researchers can access and draw upon.

# 4. OPUS Open Science Career Assessment Matrix (OS-CAM)

### 4.1. Research

#### 4.1.1. Proposals

Indicator Group		Indicator Type	Quantitative Metric	
Proposal Development		Process	# of Developing Project Proposals Openly Available	
		Output	# of Submitted Project Proposals Openly Available	
		Outcome	# of Granted Project Proposals Openly Available	
		€ of Granted Project Proposals Involving Ope Science		
Category		OSCAM Proj	oosal Development Interventions	
Ροιιςγ	<ul> <li>Senior m proposa the fund</li> <li>Senior m</li> </ul>	Senior management approval and decision to collect and make open project proposals being developed, submitted, granted across the institution, and record the funding received. Senior management develop policies and procedures to make project proposals		
_	openly a	available (where poss	sible) with clear guidelines and explanation.	
Resource	<ul> <li>Allow re project p and to re</li> </ul>	Allow researchers time (and supporting budget) to record, upload and make open project proposals being developed, submitted and granted across the institution and to record the funding received.		
	<ul> <li>Ensure t and ensured granted that they</li> </ul>	Ensure there is a member (or members) of staff responsible for monitoring uploa and ensuring openly available project proposals being developed, submitted an granted are open with an understanding of any ethical issues this may create, ar that they record the funding received.		
	<ul> <li>Provide</li> </ul>	Provide expertise and support in proposal writing and development.		
Repository	<ul> <li>Ensure t project p and can</li> </ul>	Ensure there is suitable and easily accessible database or repository to record project proposals, developed, submitted and granted and that this is open access and can record the funding received.		
Awareness Raising	<ul> <li>Ensure r project p where th help.</li> </ul>	Ensure researchers know that they should record and ensure open access for all project proposals, developed, submitted, granted and the funding received and where they can receive training in how to do this and who they should go to for help.		
	<ul> <li>Ensure r recordin they trus</li> </ul>	Ensure researchers understand the benefit to individuals and the institution of recording this information about project proposals that are openly available, that they trust the process and understand the link to researcher assessment		
Training	Train res proposa	Train researchers in where and how to log and ensure open access of project proposals being developed, submitted, granted and the funding received.		
		searchers in proposa	i writing and development.	
	<ul> <li>Train res</li> <li>specific</li> </ul>	specific to academic discipline and any ethical concerns.		
	<ul> <li>Ensure t</li> </ul>	here are best practic	e examples of open access proposals developed.	

 Table 20: Open Science Interventions for Research – Subcategory Proposals



#### 4.1.2. Methods

Indicator Group		Indicator Type	Quantitative Metric	
Methods Development		Process	# of Developing Method Sets Openly Available	
		Output	# of Finalised Method Sets Openly Available	
		Outcome	# of Openly Available Method Sets Implemented	
			# of Openly Available Method Sets Accessed	
		# of Openly Available Method Sets Cited		
Category		OSCAM Met	hods Development Interventions	
Policy	<ul> <li>Senior m being de</li> </ul>	nanagement approva eveloped, finalised, a	I and decision to collect the number of methods sets nd implemented across the institution.	
	<ul> <li>Senior m accesse</li> </ul>	nanagement approva d and cited across th	I and decision to collect the number of methods sets in institution.	
	<ul> <li>Senior m develop clear gui</li> </ul>	nanagement develop ed, finalised, and imp idelines and explana	policies and procedures to make method sets being plemented openly available (where possible) with tion.	
	<ul> <li>Senior m openly a guideling</li> </ul>	nanagement develop wailable method sets es and expectations	policies and procedures to record the number of accessed and cited (where possible) with clear	
Resource	<ul> <li>Allow real access n institutio</li> </ul>	Allow researchers time (and supporting budget) to record, upload and make open access method sets, being developed, finalised, and implemented across the institution.		
	<ul> <li>Allow readers n</li> </ul>	<ul> <li>Allow researchers time (and supporting budget) to record, upload and make access method sets accessed and cited across the institution.</li> </ul>		
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring up of method sets developed, finalised, and implemented across the institution a ensuring they are open access, with an understanding of any ethical issues th may create.</li> </ul>			
	<ul> <li>Ensure t of methor open action</li> </ul>	Ensure there is a member (or members) of staff responsible for monitoring upload of method sets accessed and cited across the institution and ensuring they are open access; with an understanding of any ethical issues this may create.		
	<ul> <li>Provide and ensitient</li> </ul>	Provide expertise and support in development and management of method sets and ensuring they are open access,		
Repository	<ul> <li>Ensure t method</li> </ul>	Ensure there is a suitable and easily accessible database or repository to recormethod sets developed, finalised, and implemented and that this is open accession accession of the set of t		
	<ul> <li>Ensure t method</li> </ul>	Ensure there is a suitable and easily accessible database or repository to record method sets accessed and cited and that this is open access.		
Awareness Raising	<ul> <li>Ensure r method training</li> </ul>	Ensure researchers know that they should record and make open access all method sets, developed, finalised, and implemented and where they can receir training in how to do this and who they should go to for help.		
	<ul> <li>Ensure r method this and</li> </ul>	esearchers know tha sets accessed and c who they should go	It they should record and make open access all ited and where they can receive training in how to do to for help.	
	<ul> <li>Explain t them as the link t</li> </ul>	Explain to researchers the benefit of making method sets open access to both them as individuals and the institution, that they trust the process and understa the link to research assessment.		
Training	<ul> <li>Train residevelop</li> </ul>	searchers in where a ed, finalised and imp	nd how to log openly available method sets being lemented.	
	<ul> <li>Train res and cited</li> </ul>	searchers in where a d.	nd how to log openly available method sets accessed	
	• Train res	searchers in develop	ment of openly available method sets.	
	<ul> <li>Train res</li> <li>specific</li> </ul>	searchers in how to e to academic disciplir	ensure method sets are open access including issues ne and any ethical concerns.	
	<ul> <li>Ensure t</li> </ul>	here are a range of b	best practice examples of open access method sets.	

Table 21: Open Science Interventions for Research – Subcategory Methods



### 4.1.3. Data

Indicator Group		Indicator Type	Quantitative Metric	
Data Planning		Process	# of (FAIR) Developing Data Management Plans Openly Available	
		Output	# of (FAIR) Finalised Data Management Plans Openly Available	
		Outcome	# of (FAIR) Implemented Data Management Plans Openly Available	
Data Managem	nent	Process	# of (FAIR) Data Set Peer Reviews Being Drafted	
		Output	# of Finalised (FAIR) Data Sets Openly Available	
			# of Archived (FAIR) Data Sets Openly Available	
		Outcome	# of Openly Available (FAIR) Data Sets Accessed	
			# of Openly Available (FAIR) Data Sets Cited	
Data Review		Process	# of (FAIR) Data Set Peer Reviews Being Drafted	
		Output	# of Submitted (FAIR) Data Set Peer Reviews Openly Available	
		Outcome	# of Accepted (FAIR) Data Set Peer Reviews	
Category		OSCAM	Data Planning Interventions	
Policy	<ul> <li>Senior m</li> </ul>	nanagement approva	and decision to collect the number of openly	
	available across th	e data management   ne institution.	plans being developed, finalised, and implemented	
	<ul> <li>Senior m openly a</li> </ul>	nanagement policies wailable (where poss	and procedures to make data management plans sible) with clear guidelines and explanation.	
Resource	<ul> <li>Allow res</li> </ul>	searchers time (and s	supporting budget) to record, upload and make open	
access dat across the Ensure the and ensuri implement ethical issu		lata management plans being developed, finalised, and implemented ne institution.		
		here is a member (or members) of staff responsible for monitoring upload		
		ented are open acces	ss (where possible) with an understanding of any	
		ssues this may create	2.	
	<ul> <li>Provide manage</li> </ul>	<ul> <li>Provide expertise and support in the development of openly available data management plans.</li> </ul>		
Repository	<ul> <li>Ensure there is a suitable and any series of the series of</li></ul>		d easily accessible database or repository to record	
	project proposals being deve open access.		eloped, infansed and implemented and that this is	
Awareness Raising	Ensure r	esearchers know the	at they should record and ensure open access for all	
Kuising	they can	n receive training in how to do this and who they should go to for help.		
Explain t		to researchers the benefit of making data management plans open access		
	to both them as individuals and the institution and the link to researcher assessment.			
Training	• Train res	searchers in where a	nd how to share openly available data management	
<ul> <li>plans being develop</li> <li>Train researchers in</li> <li>Train researchers in any issues specific to</li> </ul>		being developed, finalised, and implemented.		
		n researcners in the development of openly available data management plans.		
		es specific to the rele	evant academic discipline and any ethical concerns.	
<ul> <li>Ensure there are a range of b management plans</li> </ul>		here are a range of t ment plans	pest practice examples of openly available data	
Category		OSCAM D	ata Management Interventions	
Policy	<ul> <li>Senior m available</li> </ul>	nanagement approva EΔIR data manager	al and decision to collect the number of openly	
	across th	ne institution.	nent sets being developed, intalised, and archived	
<ul> <li>Senior management appro available FAIR data management</li> </ul>		nanagement approva e FAIR data manager	al and decision to collect the number of openly nent sets accessed and cited across the institution.	

#### Table 22: Open Science Interventions for Research – Subcategory Data



	Senior management develop policies and procedures to make FAIR data sets openly available (where possible) with clear guidelines and explanations.		
Resource	<ul> <li>Allow researchers time (and supporting budget) to record, upload and make open FAIR data management plans being developed, finalised and archived across the institution.</li> </ul>		
	<ul> <li>Allow researchers time (and supporting budget) to record and upload and make open FAIR data management plans accessed and cited across the institution.</li> </ul>		
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring upload of and ensuring FAIR data sets being developed, finalised and archived are open access (where possible) with an understanding of any ethical issues this may create.</li> </ul>		
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring upload of and ensuring FAIR data sets accessed and cited are open access (where possible) with an understanding of any ethical issues this may create</li> <li>Provide expertise and support in the development of openly available FAIR data</li> </ul>		
	sets.		
Repository	<ul> <li>Ensure there is a suitable and easily accessible database or repository to record FAIR datasets developed, finalised and implemented and that this is open access.</li> <li>Ensure there is a suitable and easily accessible database or repository to record FAIR datasets accessed and cited and that this is open access.</li> </ul>		
Awareness Raising	<ul> <li>Ensure researchers know that they should record all openly available FAIR datasets developed, finalised and implemented and where they can receive training in how to do this and who they should go to for help and support.</li> </ul>		
	<ul> <li>Ensure researchers know that they should record all openly available FAIR datasets accessed and cited and where they can receive training in how to do this and who they should go to for help and support.</li> </ul>		
	• Explain to researchers the benefit of making FAIR datasets openly available to both them as individuals and the institution, that they trust the process and understand the link to research assessment.		
Training	<ul> <li>Train researchers in where and how to log and ensure open access of FAIR datasets developed, finalised, and implemented.</li> </ul>		
	<ul> <li>Train researchers in where and how to record open access FAIR datasets cited and accessed.</li> </ul>		
	<ul> <li>Train researchers in the development of openly available FAIR datasets</li> </ul>		
	<ul> <li>Train researchers in how to make FAIR datasets open access including any issues specific to academic disciplines and any ethical concerns.</li> </ul>		
	<ul> <li>Ensure there are best practice examples of openly available FAIR datasets developed.</li> </ul>		
Category	OSCAM Data Review Interventions		
Policy	<ul> <li>Senior management approval and decision to collect and make open (FAIR) Data set peer reviews being drafted, submitted and accepted.</li> </ul>		
	<ul> <li>Senior management develop policies and procedures to make (FAIR) data set peer reviews openly available (where possible) with clear guidelines and explanation.</li> </ul>		
Resource	<ul> <li>Allow researchers time (and supporting budget) to record, upload and make open (FAIR) data set peer reviews being drafted, submitted and accepted across the institution.</li> </ul>		
	• Ensure there is a member (or members) of staff responsible for monitoring upload and ensuring (FAIR) data set peer reviews being drafted, submitted and accepted are open with an understanding of any ethical issues this may create.		
	<ul> <li>Provide expertise and support in the development of openly accessible (FAIR) data set peer reviews.</li> </ul>		
Repository	<ul> <li>Ensure there is a suitable and easily accessible database or repository to record (FAIR) data set peer reviews drafting, submitted and accepted and that this is open access.</li> </ul>		
Awareness Raising	• Ensure researchers know that they should record and ensure open access for all (FAIR) data set peer reviews being drafted, submitted and accepted and where they can receive training in how to do this and who they should go to for help.		
	<ul> <li>Explain to researchers the benefit of making(FAIR) data set peer reviews open access to both them as individuals and the institution and the link to researcher assessment.</li> </ul>		
Training	• Train researchers in where and how to share openly available (FAIR) data set peer reviews being drafted, submitted and accepted.		



•	Train researchers in the (FAIR) data set peer review process.
•	Train researchers in how to make (FAIR) data set peer review open access including any issues specific to the relevant academic discipline and any ethical concerns.
•	Ensure there are a range of best practice examples of (FAIR) data set peer reviews.

#### 4.1.4. Software

Indicator Group		Indicator Type	Quantitative Metric		
Software Development		Process	# of Developing Software Sets Openly Available		
		Output	# of Finalised Software Sets Openly Available		
			# of Archived Software Sets Openly Available		
		Outcome	# of Openly Available Software Sets Accessed		
			# of Openly Available Software Sets Cited		
Software Review	W	Process	# of Draft Software Set Peer Reviews Openly Available		
		Output	# of Submitted Software Set Peer Reviews Openly Available		
		Outcome	# of Accepted Software Set Peer Reviews Openly Available		
Category		OSCAM Soft	ware Development Interventions		
Policy	<ul> <li>Senior m develop</li> </ul>	nanagement approva ed. finalised and arcl	I and decision to make software sets being nived across the institution openly available.		
	<ul> <li>Senior m citod acr</li> </ul>	nanagement approva	Il and decision to make software sets accessed and		
	<ul> <li>Senior m</li> </ul>	nanagement develop	oss the institution openly available, anagement develop policies and procedures to make software sets		
	openly a	vailable (where poss	ible) with clear guidelines and explanation.		
Resource	<ul> <li>Allow residence</li> <li>software</li> </ul>	searchers time (and supporting budget) to record, upload and make open sets being developed, finalised and archived across the institution.			
	<ul> <li>Allow residence</li> <li>sets accession</li> </ul>	Allow researchers time (and supporting budget) to collect the number of software sets accessed and cited across the institution.			
<ul> <li>Ensure there is a member (or members) of staff upload and ensuring software sets being devel open access (where possible) with an understa create.</li> <li>Provide expertise and support in the developm sets</li> </ul>		here is a member (or and ensuring softwar cess (where possible	members) of staff responsible for monitoring the e sets being developed, finalised and archived are ) with an understanding of any ethical issues this may		
		rt in the development of openly available software			
Repository	<ul> <li>Ensure t being de</li> </ul>	Ensure there is a suitable and easily accessible database to record software sets being developed, finalised and archived and that this is open access.			
	<ul> <li>Ensure t accesse</li> </ul>	Ensure there is a suitable and easily accessible database to record software sets accessed and cited and that this is open access.			
Awareness Raising	<ul> <li>Ensure researchers know that they should record and ensure open access for a software sets being developed, finalised and archived and where they can rece training in how to do this and who they should go to for help.</li> </ul>				
<ul> <li>Ensure researchers know that they should record and e software sets accessed and cited and where they can i do this and who they should go to for help</li> </ul>		at they should record and ensure open access for all cited and where they can receive training in how to go to for help.			
	<ul> <li>Explain t them as</li> </ul>	<ul> <li>Explain to researchers the benefit of making software sets open access to bot them as individuals and the institutions and the link to researcher assessment.</li> </ul>			
Training	<ul> <li>Train residevelop</li> </ul>	searchers in where a ed, finalised and arcl	nd how to share openly available software sets being nived.		
	Train res accesse	searchers in where a d and cited.	nd how to share openly available software sets		
Train researchers in develop			ment of openly available software sets.		

Table 23: Open	Science Interventions	for Research -	Subcategory Software
----------------	-----------------------	----------------	----------------------



	• Train researchers in how to make software sets open access including any issues specific to the relevant academic discipline and any ethical concerns.
	• Ensure there are a range of best practice examples of open access software sets.
Category	OSCAM Software Review Interventions
Policy	• Senior management approval and decision to collect the number of openly available software set peer reviews being drafted, submitted and accepted across the institution.
	<ul> <li>Senior management develop policies and procedures to make software set peer reviews openly available (where possible) with clear guidelines and expectations.</li> </ul>
Resource	• Allow researchers time (and supporting budget) to record, upload and make open access software set peer reviews being drafted, submitted and accepted across the institution.
	• Ensure there is a member (or members) of staff responsible for monitoring upload and ensuring software set peer reviews drafting, submitted and accepted are open access (where possible) with an understanding of any ethical issues this may create.
	<ul> <li>Provide expertise and support in the development of openly available software set peer reviews</li> </ul>
Repository	<ul> <li>Ensure there is a suitable and easily accessible database or repository to record software set peer reviews being drafted, submitted, and accepted and that this is open access.</li> </ul>
Awareness Raising	• Ensure researchers know that they should record and ensure open access for all software set peer reviews being drafted, submitted, and accepted and where they can receive training in how to do this and who they should go to for help.
	<ul> <li>Explain to researchers the benefit of making software set peer reviews open access to both them as individuals and the institution, that they trust the process and understand the link to researcher assessment.</li> </ul>
Training	• Train researchers in where and how to record open software set peer reviews drafted, submitted and accepted.
	Train researchers in the software set peer review process.
	<ul> <li>Train researchers in how to make software set peer reviews open access including any issues specific to the relevant academic discipline and any ethical concerns.</li> </ul>
	<ul> <li>Ensure there are a range of best practice examples of open access software set peer reviews.</li> </ul>



#### 4.1.5. Publications

Indicator Group		Indicator Type	Quantitative Metric		
Publication Drafting		Process	# of Drafting Publications Openly Available		
		Output	# of Submitted Publications Openly Available		
		Outcome	# of Published Publications Openly Available		
			# of Openly Available Publications Accessed		
			# of Openly Available Publications Cited		
Publication Rev	iew	Process	# of Draft Publication Peer Reviews Openly		
		1100000	Available		
		Output	# of Submitted Publication Peer Reviews Openly		
		Outcome	# of Accepted Publication Peer Reviews Openly		
			Available		
Category		OSCAM Pu	blication Drafting Interventions		
Policy	<ul> <li>Senior n submitte</li> </ul>	nanagement approva	l and decision to make publications being drafted, only available		
	<ul> <li>Senior n</li> </ul>	nanagement approva	I and decision to make publications accessed and		
	cited ac	ross the institution op	penly available,		
_	<ul> <li>Senior n available</li> </ul>	nanagement develop e (where possible) wi	policies and procedures to make publications openly th clear guidelines and explanation.		
Resource	<ul> <li>Allow re publicat</li> </ul>	searchers time (and s	supporting budget) to record, upload and make open		
	<ul> <li>Allow re</li> </ul>	searchers time (and s	ons being aratted, submitted and published across the institution.		
	publicat	ons accessed and cited across the institution.			
Ensure the		here is a member (or	iere is a member (or members) of staff responsible for monitoring upload iring publications are open access (where possible) with an		
understanding of any e		anding of any ethical	issues this may create.		
	<ul> <li>Provide</li> </ul>	Provide expertise and support in the development of openly available publication			
Repository	<ul> <li>Ensure t publicat</li> </ul>	Ensure there is a suitable and easily accessible database or repository to record publications being drafted, submitted and published that this is open access.			
Awareness Raising	<ul> <li>Ensure r publicat training</li> </ul>	esearchers know tha ions being drafted, su in how to do this and	It they should record and ensure open access for all ubmitted and published and where they can receive who they should go to for help.		
	<ul> <li>Ensure r publicat this and</li> </ul>	<ul> <li>Ensure researchers know that they should record and ensure open access f publications accessed and cited and where they can receive training in how this and who they should go to for help.</li> </ul>			
Explain to restrict the second s		presearchers the benefit of making publications open access to both			
	them as the link	individuals and the in to researcher assess	nstitutions that they trust the process and understand ment.		
Training	<ul> <li>Train res drafted,</li> </ul>	searchers in where an submitted and publis	nd how to share openly available publications being shed.		
	Train researchers in where a accessed and cited		nd how to record openly available publications		
	• Train res	searchers in drafting	publications.		
Train res		searchers in how to n	nake publications open access including any issues		
	<ul> <li>specific</li> <li>Ensure t</li> </ul>	to the relevant acade here are a range of b	emic discipline and any ethical concerns. best practice examples of openly available		
Catagony		ions	CAM Publication Doview		
Policy	<ul> <li>Senior n</li> </ul>	nanagement approva	Land decision to make publication peer reviews that		
-	are bein	g drafted, submitted	and published openly available.		
<ul> <li>Senior management and available peer reviews</li> </ul>		nanagement approva e peer reviews that a	l and decision to collect the number of openly re being drafted, submitted and accepted across the		
<ul> <li>Senior management deve reviews openly available</li> </ul>		nanagement develop openly available (wh	policies and procedures to make publication peer ere possible) with clear guidelines and expectations.		

#### Table 24: Open Science Interventions for Research – Subcategory Publications



-	
Resource	<ul> <li>Allow researchers time (and supporting budget) to record, upload and make open access publication peer reviews drafting, submitted and accepted across the institution.</li> </ul>
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring upload and ensuring publication peer reviews drafting, submitted and accepted are open access (where possible) with an understanding of any ethical issues this may create.</li> </ul>
	<ul> <li>Provide expertise and support in the development of openly available publication peer reviews.</li> </ul>
Repository	<ul> <li>Ensure there is a suitable and easily accessible database or repository to record publication peer reviews that are being drafted, submitted and accepted across the institution.</li> </ul>
Awareness Raising	<ul> <li>Ensure researchers know that they should record and ensure open access for all publication peer reviews drafting, submitted and accepted and where they can receive training in how to do this and who they should go to for help.</li> </ul>
	<ul> <li>Explain to researchers the benefit of making publication peer reviews open access to both them as individuals and the institution, that they trust the process and understand the link to researcher assessment.</li> </ul>
Training	<ul> <li>Train researchers in where and how to record openly available publication peer reviews being drafted, submitted and accepted.</li> </ul>
	<ul> <li>Train researchers in the publication peer review process.</li> </ul>
	<ul> <li>Train researchers in how to develop openly available publication peer reviews including any issues specific to the relevant academic discipline and any ethical concerns.</li> </ul>
	<ul> <li>Ensure there are a range of best practice examples of openly available publication peer reviews.</li> </ul>

### 4.1.6. Materials

Table	25: Open	Science Interventio	ons for Research –	Subcategory Materials
TUDIC	20. Open			oubcategory materials

Indicator Group		Indicator Type	Quantitative Metric	
Materials Development		Process	# of Developing Material Sets Openly Available	
		Output	# of Finalised Material Sets Openly Available	
		Outcome	# of Implemented Material Sets Openly Available	
			# of Openly Available Material Sets Accessed	
			# of Openly Available Material Sets Cited	
Category		OSCAN	A Material Set Interventions	
Policy	<ul> <li>Senior m material</li> <li>Senior m material</li> <li>Senior m openly a</li> </ul>	Senior management approval and decision to collect number of openly available material sets being developed, finalised and implemented across the institution. Senior management approval and decision to collect number of openly available material sets accessed and cited across the institution. Senior management develop policies and procedures to make material sets openly available (where possible) with clear guidelines and explanation		
Resource	<ul> <li>Allow restaccess n</li> <li>Allow restaccess n</li> <li>Allow restaccess n</li> <li>Ensure to f and e access (or create.</li> <li>Ensure to number any ethic</li> <li>Provide sets</li> </ul>	searchers time (and s naterial sets develop searchers time (and s sets accessed and c here is a member (or nsuring materials be where possible) with here is a member (or of openly available n cal issues this may cr expertise and suppo	supporting budget) to record, upload and make open ed, finalised and implemented across the institution. supporting budget) to record openly available ited across the institution. members) of staff responsible for monitoring upload ing developed, finalised and implemented are open an understanding of any ethical issues this may members) of staff responsible for recording the naterials accessed and cited with an understanding of reate. rt in the development of openly available material	



<ul> <li>Repository         <ul> <li>Ensure there is a suitable and easily accessible database or repository to record material sets being developed, finalised, and accessed and that this is open access.</li> <li>Ensure there is a suitable and easily accessible database to record openly available material sets accessed and cited.</li> </ul> </li> <li>Awareness Raising         <ul> <li>Ensure researchers know that they should record and ensure open access for all material sets being developed, finalised and implemented and where they can receive training in how to do this and who they should go to for help.</li> <li>Ensure researchers know that they should record all openly available material sets accessed and cited and where they can receive training in how to do this and who they should go to for help.</li> <li>Explain to researchers the benefit of making material sets open access to both them as individuals and the institutions, that they trust the process and understand the link to researcher assessment.</li> </ul> </li> <li>Train researchers in where and how to share openly accessible material sets being drafted, finalised and implemented.</li> <li>Train researchers in where and how to record openly available material sets accessed and cited.</li> <li>Train researchers in how to make material sets open access including any issues specific to the relevant academic discipline and any ethical concerns.</li> <li>Ensure there are a range of best practice examples of open access material sets.</li> </ul>		
<ul> <li>available material sets accessed and cited.</li> <li>Awareness Raising</li> <li>Ensure researchers know that they should record and ensure open access for all material sets being developed, finalised and implemented and where they can receive training in how to do this and who they should go to for help.</li> <li>Ensure researchers know that they should record all openly available material sets accessed and cited and where they can receive training in how to do this and who they should go to for help.</li> <li>Ensure researchers the benefit of making material sets open access to both them as individuals and the institutions, that they trust the process and understand the link to researcher assessment.</li> <li>Train researchers in where and how to share openly accessible material sets being drafted, finalised and implemented.</li> <li>Train researchers in where and how to record openly available material sets accessed and cited.</li> <li>Train researchers in developing material sets.</li> <li>Train researchers in how to make material sets open access including any issues specific to the relevant academic discipline and any ethical concerns.</li> <li>Ensure there are a range of best practice examples of open access material sets.</li> </ul>	Repository	<ul> <li>Ensure there is a suitable and easily accessible database or repository to record material sets being developed, finalised, and accessed and that this is open access.</li> <li>Ensure there is a suitable and easily accessible database to record openly</li> </ul>
<ul> <li>Awareness Raising</li> <li>Ensure researchers know that they should record and ensure open access for all material sets being developed, finalised and implemented and where they can receive training in how to do this and who they should go to for help.</li> <li>Ensure researchers know that they should record all openly available material sets accessed and cited and where they can receive training in how to do this and who they should go to for help.</li> <li>Explain to researchers the benefit of making material sets open access to both them as individuals and the institutions, that they trust the process and understand the link to researcher assessment.</li> <li>Train researchers in where and how to share openly accessible material sets being drafted, finalised and implemented.</li> <li>Train researchers in where and how to record openly available material sets accessed and cited.</li> <li>Train researchers in developing material sets.</li> <li>Train researchers in how to make material sets open access including any issues specific to the relevant academic discipline and any ethical concerns.</li> <li>Ensure there are a range of best practice examples of open access material sets.</li> </ul>		available material sets accessed and cited.
<ul> <li>Ensure researchers know that they should record all openly available material sets accessed and cited and where they can receive training in how to do this and who they should go to for help.</li> <li>Explain to researchers the benefit of making material sets open access to both them as individuals and the institutions, that they trust the process and understand the link to researcher assessment.</li> <li>Train researchers in where and how to share openly accessible material sets being drafted, finalised and implemented.</li> <li>Train researchers in where and how to record openly available material sets accessed and cited.</li> <li>Train researchers in developing material sets.</li> <li>Train researchers in how to make material sets open access including any issues specific to the relevant academic discipline and any ethical concerns.</li> <li>Ensure there are a range of best practice examples of open access material sets.</li> </ul>	Awareness Raising	• Ensure researchers know that they should record and ensure open access for all material sets being developed, finalised and implemented and where they can receive training in how to do this and who they should go to for help.
<ul> <li>Explain to researchers the benefit of making material sets open access to both them as individuals and the institutions, that they trust the process and understand the link to researcher assessment.</li> <li>Train researchers in where and how to share openly accessible material sets being drafted, finalised and implemented.</li> <li>Train researchers in where and how to record openly available material sets accessed and cited.</li> <li>Train researchers in developing material sets.</li> <li>Train researchers in how to make material sets open access including any issues specific to the relevant academic discipline and any ethical concerns.</li> <li>Ensure there are a range of best practice examples of open access material sets.</li> </ul>		<ul> <li>Ensure researchers know that they should record all openly available material sets accessed and cited and where they can receive training in how to do this and who they should go to for help.</li> </ul>
<ul> <li>Training</li> <li>Train researchers in where and how to share openly accessible material sets being drafted, finalised and implemented.</li> <li>Train researchers in where and how to record openly available material sets accessed and cited.</li> <li>Train researchers in developing material sets.</li> <li>Train researchers in how to make material sets open access including any issues specific to the relevant academic discipline and any ethical concerns.</li> <li>Ensure there are a range of best practice examples of open access material sets.</li> </ul>		<ul> <li>Explain to researchers the benefit of making material sets open access to both them as individuals and the institutions, that they trust the process and understand the link to researcher assessment.</li> </ul>
<ul> <li>Train researchers in where and how to record openly available material sets accessed and cited.</li> <li>Train researchers in developing material sets.</li> <li>Train researchers in how to make material sets open access including any issues specific to the relevant academic discipline and any ethical concerns.</li> <li>Ensure there are a range of best practice examples of open access material sets.</li> </ul>	Training	<ul> <li>Train researchers in where and how to share openly accessible material sets being drafted, finalised and implemented.</li> </ul>
<ul> <li>Train researchers in developing material sets.</li> <li>Train researchers in how to make material sets open access including any issues specific to the relevant academic discipline and any ethical concerns.</li> <li>Ensure there are a range of best practice examples of open access material sets.</li> </ul>		<ul> <li>Train researchers in where and how to record openly available material sets accessed and cited.</li> </ul>
<ul> <li>Train researchers in how to make material sets open access including any issues specific to the relevant academic discipline and any ethical concerns.</li> <li>Ensure there are a range of best practice examples of open access material sets.</li> </ul>		<ul> <li>Train researchers in developing material sets.</li> </ul>
<ul> <li>Ensure there are a range of best practice examples of open access material sets.</li> </ul>		• Train researchers in how to make material sets open access including any issues specific to the relevant academic discipline and any ethical concerns.
		Ensure there are a range of best practice examples of open access material sets.

### 4.2. Education

### 4.2.1. Courses

#### Table 26: Open Science Interventions for Education – Subcategory Courses

Indicator Group		Indicator Type	Quantitative Metric
Course Development		Process	# of Open Science Courses Being Developed
			# of Developing Courses Openly Available
		Output	# of Open Science Courses Finalised
			# of Finalised Courses Openly Available
		Outcome	# of Open Science Courses Implemented
			# of Implemented Courses Openly Available
Category		Open Science Ca	reer Assessment Matrix Interventions
Policy	<ul> <li>Senior management approval and decision to collect the number of open sc courses that are being developed, finalised and implemented across the institution.</li> <li>Senior management approval and decision to collect the number of openly available courses that are being developed finalised and implemented across institution.</li> <li>Senior management develop policies and procedures to make open courses are being developed, finalised and implemented open access (where possib with clear guidelines and explanation.</li> <li>Senior management develop policies and procedures to implement open sc access with clear guidelines and explanation.</li> </ul>		al and decision to collect the number of open science oped, finalised and implemented across the al and decision to collect the number of openly ing developed finalised and implemented across the policies and procedures to make open courses that and implemented open access (where possible) planation. policies and procedures to implement open science and explanation.
Resource	<ul> <li>Allow re courses institutio</li> <li>Allow re open sci and imp</li> <li>Ensure t number the instit</li> </ul>	<ul> <li>Allow researchers time (and supporting budget) to record, upload and make op courses that are being developed, finalised and implemented across the institution.</li> <li>Allow researchers time (and supporting budget) to record, upload and make op open science courses that are openly available that are being developed, finaliand implemented across the institution.</li> <li>Ensure there is a member (or members) of staff responsible for monitoring the number of open science courses developed, finalised and implemented across the institution.</li> </ul>	



	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring number courses openly available and for assisting with making them open access (where possible) with an understanding of any ethical issues this may create.</li> <li>Provide expertise in design of open science courses</li> <li>Provide expertise in course development</li> </ul>
Repository	<ul> <li>Ensure there is an appropriate database and repository to record the number of open science courses being developed, finalised and implemented across the institution.</li> <li>Ensure there is a suitable and easily accessible database or repository to record and upload courses openly available.</li> </ul>
Awareness Raising	<ul> <li>Ensure researchers are aware of the institution policy to make open science courses as open as possible.</li> <li>Ensure researchers know that they should record, upload and share all open science courses being developed, finalised and implemented and where they can receive training in how to do this and who they should go to for help and support.</li> <li>Ensure researchers know that they should record, upload and share all courses developed openly.</li> <li>Explain to researchers the benefit of making open science courses open access to both them as individuals and the institution, that they trust the process and understand the link to researcher assessment</li> </ul>
Training	<ul> <li>Train researchers in where and how to record open science courses being developed, finalised and implemented.</li> <li>Train researchers in where and how to make open science courses openly available.</li> <li>Train researchers in open science course development</li> <li>Train researchers in how to share courses developed, finalised and implemented openly.</li> </ul>

### 4.2.2. Resource Development

Table 27	: Open	Science	Interventions	for	Education -	Subcategory	Resources
	. Open	Science	interventions	101	Laucation	Subcutegory	Resources

Indicator Group		Indicator Type	Quantitative Metric	
Resource Development		Process	# of Open Science Resources Being Developed	
			# of Developing Resources Openly Available	
		Output	# of Open Science Resources Finalised	
			# of Finalised Resources Openly Available	
		Outcome	# of Open Science Resources Implemented	
			# of Implemented Resources Openly Available	
Category		OSCAM Reso	ource Development Interventions	
Policy	<ul> <li>Senior m open sci</li> <li>Senior m resource</li> <li>Senior m informat and impl</li> <li>Senior m informat finalised</li> </ul>	<ul> <li>Senior management approval and decision to collect information on the number of open science resources being developed, finalised and implemented.</li> <li>Senior management approval and decision to collect information on the number of resources openly available being developed, finalised and implemented.</li> <li>Senior management develop policies and procedures to support the collection of information on the number of open science resources being developed finalised and implemented including clear guidelines and explanation.</li> <li>Senior management develop policies and procedures to support the collection of information on the number of resources openly available being developed, finalised and implemented including clear guidelines and explanation.</li> </ul>		
<ul> <li>Allow researchers time (and supporting budget) to record, upload and ma open science resources being developed, finalised and implemented.</li> <li>Allow researchers time (and supporting budget) to record upload and mal resources openly available being developed, finalised and implemented.</li> <li>Ensure there is a member (or members) of staff responsible for monitoring number of resources being developed, finalised and implemented across institution.</li> </ul>		supporting budget) to record, upload and make open, g developed, finalised and implemented. supporting budget) to record upload and make open, eing developed, finalised and implemented. members) of staff responsible for monitoring the eveloped, finalised and implemented across the		



	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring the number of resources openly available, being developed, finalised and implemented.</li> </ul>
	<ul> <li>Provide expertise and support in resource development and how to ensure course materials are open access.</li> </ul>
	<ul> <li>Provide expertise in design of open science resources.</li> </ul>
Repository	<ul> <li>Ensure there is an appropriate database and repository to record the number of open science resources being developed, finalised and implemented across the institution.</li> </ul>
	• Ensure there is an appropriate database and repository to record the number of resources openly available.
Awareness Raising	• Ensure researchers are aware of the institution policy to make resources as open as possible.
	<ul> <li>Ensure researchers know that they should record, upload and share all open science resources being developed, finalised and implemented and where they can receive training in how to do this and who they should go to for help and support.</li> </ul>
	• Ensure researchers know that they should record, upload and share all resources developed openly.
	• Explain to researchers the benefit of making resources openly available to both them as individuals and the institution, that they trust the process and understand the link to researcher assessment.
Training	• Train researchers in where and how to record resources being developed, finalised and implemented.
	Train researchers in resource development
	• Train researchers in how to share resources being developed, finalised and implemented openly.
	• Train researchers in how to incorporate open science in the resources they develop.
	Ensure there are best practice examples of open access resources available.

### 4.2.3. Teaching

Table 28: Oper	Science Interventions	for Education –	Subcategory 1	[eaching
----------------	-----------------------	-----------------	---------------	----------

Indicator Group		Indicator Type	Quantitative Metric
Student Teaching Process		Process	# of Open Science Course Hours Assigned
		Output	# of Open Science Course Hours Taught
		Outcome	# of Students Passed in Open Science Courses
			# of Students Passed in Openly Available Courses
Category		OSCAM S	tudent Teaching Interventions
Policy	<ul> <li>Senior m courses</li> </ul>	nanagement approva hours assigned or ta	l and decision to collect the number of open science ught across the institution.
	<ul> <li>Senior m have pase currently</li> <li>Senior m are curre with clear</li> </ul>	Senior management approval and decision to collect the number of students th have passed open science courses or courses openly available open science currently being taught or that have been taught across the institution. Senior management policies and procedures to make open science courses that are currently being taught or that have been taught open access (where possib with clear quidelines and explanation	
Resource	<ul> <li>Allow re- of open across th</li> <li>Allow re- science</li> <li>Ensure t number taught a</li> <li>Ensure t number</li> </ul>	researchers time (and supporting budget) to record and upload the num in science courses that are currently being taught or that have been taught is the institution and make materials open access. researchers time to record the number of students who have passed op the courses or courses openly available across the institution. If there is a member (or members) of staff responsible for monitoring the er of open science courses that are currently being taught or have been tacross the institution and any ethical issues this might create.	



	available and providing assistance with ensuring materials are open access with an understanding of any ethical issues this may create.
	<ul> <li>Provide expertise and support in teaching and how to ensure course materials are open access.</li> </ul>
	<ul> <li>Provide expertise in design of open science courses</li> </ul>
Repository	<ul> <li>Ensure there is an appropriate database and repository to record and upload the number of open science courses that are currently being taught or have been taught across the institution.</li> </ul>
	<ul> <li>Ensure there is an appropriate database to record the number of students who have passed open science courses or courses openly available that are currently being taught or have been taught across the institution.</li> </ul>
	<ul> <li>Ensure there is an appropriate database to record the number of students who have passed teaching courses that are openly available both currently or that have been taught across the institution.</li> </ul>
Awareness Raising	<ul> <li>Ensure researchers are aware that open science courses are available to them for teaching purposes.</li> </ul>
	<ul> <li>Ensure researchers know that they should record, upload and share all open science courses taught or currently being taught.</li> </ul>
	<ul> <li>Ensure researchers know that they should record, upload and share all open science teaching courses (where possible) and where they can receive training in how to do this and who they should go to for help and support.</li> </ul>
	<ul> <li>Explain to researchers the benefit of making courses that are being taught or have been taught openly available to both them as individuals and the institution, that they trust the process and understand the link to researcher assessment.</li> </ul>
Training	• Train researchers in where and how to record and upload courses being currently taught or that have been taught.
	<ul> <li>Train researchers in teaching methods.</li> </ul>
	<ul> <li>Train researchers in how to share open science courses taught and courses that have been taught openly.</li> </ul>
	• Train researchers in how to incorporate open science in their course materials.
	<ul> <li>Ensure there are best practice examples of open access teaching courses available.</li> </ul>

### 4.2.4. Supervision

Indicator Group		Indicator Type	Quantitative Metric	
Student Supervision		Process	# of Students Being Supervised in Open Science	
		Output	# of Students Supervised in Open Science	
		Outcome	# of Supervised Student Theses Openly Available	
			# of Supervised Students in Open Science Graduated	
Category		OSCAM Stu	udent Supervision Interventions	
Policy	<ul> <li>Senior m research</li> <li>Senior m student open sci</li> <li>Senior m of the nu in open sci</li> <li>Senior m of the nu and the</li> </ul>	Senior management approval and decision to collect the number of students that researchers are supervising and have supervised in open science. Senior management approval and decision to collect number of supervised student theses that are openly available and the number of supervised students i open science that have graduated. Senior management develop policies and procedures that support the collection of the number of researchers that are being supervised or have been supervised in open science (where possible) with clear guidelines and explanation. Senior management develop policies and procedures that support the collection of the number of researchers supervised student theses that are openly available and the number of researchers supervised student theses that are openly available		
(where possible) with clear guidelines and explanation.			uidelines and explanation.	
Resource • Allow researchers time to rec or have supervised in open s		searchers time to rec supervised in open s	cord the number of students that they are supervising cience.	

#### Table 29: Open Science Interventions for Education – Subcategory Supervision



	<ul> <li>Allow researchers time to record the number of supervised student theses that are openly available and the number of supervised students in open science that have graduated.</li> <li>Ensure there is a member (or members) of staff responsible for monitoring the</li> </ul>
	number of students that are being supervised or have been supervised in open science across the institution.
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring the theses that are openly available and the number of supervised students in open science that have graduated.</li> </ul>
	<ul> <li>Provide expertise and support in open science supervision.</li> </ul>
Repository	<ul> <li>Ensure there is an appropriate database to record the number of students currently being supervised or that have been supervised in open science.</li> </ul>
	<ul> <li>Ensure there is an appropriate method or database for recording the number of supervised theses that are openly available and the number of supervised students in open science that have graduated</li> </ul>
Awareness Raising	<ul> <li>Ensure researchers know that they should record all students currently being supervised or that have been supervised in open science and where they can receive training in how to do this and who they should go to for help and support.</li> </ul>
	<ul> <li>Ensure researchers know that they should record the number of supervised theses that are openly available and the number of supervised students in open science that have graduated and where they can receive training in how to do this and who they should go to for help and support.</li> </ul>
	<ul> <li>Explain to researchers the benefit of collecting data on the number of students that are being or have been supervised in open science to both them as individuals and the institution, that they trust the process and understand the link to researcher assessment.</li> </ul>
Training	<ul> <li>Train researchers in where and how to record the number of students that are currently or that have been supervised.</li> </ul>
	• Train researchers in where and how to record the number of students they have supervised who have completed their thesis or graduated.
	<ul> <li>Train researchers in open science supervision.</li> </ul>
	<ul> <li>Ensure researchers know where to go to receive support in supervision.</li> </ul>
	<ul> <li>Ensure there are some best practice examples of open science supervision available.</li> </ul>

### 4,2.5 Skills

#### Table 30: Open Science Interventions for Education – Subcategory Skills

Indicator Group		Indicator Type	Quantitative Metric
Skills Development		Process	# of Open Science Skills Being Followed
		Output	# of Open Science Skills Courses Completed
		Outcome	# of Open Science Skills Certificates Obtained
Category	OSCAM Skills	s Development Interv	ventions
Policy	<ul> <li>Senior management approva open science skills courses in obtained across the institutio</li> </ul>		al and decision to collect information on the number of ndividuals are following, have completed and on.
information on th completed and o		ion on the number o ed and obtained incl	f open science skills courses individuals are following, uding clear guidelines and explanation.
Resource • Allow researchers time (and s science skills courses individ them,		searchers time (and skills courses individ	supporting budget) to record the number of open uals are following, have completed and obtained by
	Ensure t assisting individua an unde	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring assisting with the collection of the number of open science skills courses individuals are following, have completed and obtained across the instituti an understanding of any ethical issues this may create.</li> </ul>	
Provide a research		a comprehensive proners.	ogramme of open science skills courses for



Repository	<ul> <li>Ensure there is an appropriate and easily accessible database for researchers to record the number of open science skills courses they are following, have completed, and obtained.</li> </ul>
Awareness Raising	<ul> <li>Ensure researchers know that they should record the number of open science skills courses they are following, have completed, and obtained and where they can receive training in how to do this and who they should go to for help and support.</li> </ul>
	<ul> <li>Ensure researchers understand the benefit to individuals and the institution of recording this information about open science skills courses, that they trust the process and understand the link to researcher assessment.</li> </ul>
Training	<ul> <li>Train researchers in where and how to record the number of open science skills courses they are following, have completed and obtained.</li> <li>Train researchers in the programme of open science skills courses for researchers that are offered by the institution.</li> </ul>
	<ul> <li>Ensure there is clear advice and guidance on attending open science skills courses with a clear link to career development and academic success.</li> </ul>

# 4.3 Leadership

### 4.3.1. People

Indicator Group		Indicator Type	Quantitative Metric	
Staff Supervision		Process	# of Staff Being Supervised in Open Science	
		Output	# of Staff Supervised in Open Science	
		Outcome	# of Supervised Staff Theses Openly Available	
			# of Supervised Staff Projects involving Open Science	
Category		Open Scie	ence Career Assessment Matrix	
Policy	<ul> <li>Seni rese</li> <li>Seni stud proje</li> <li>Seni of th sciel</li> <li>Seni of th proje have</li> </ul>	or management approva archers are supervising or management approva ent theses that are oper ects in open science by or management develop e number of staff that ar nce (where possible) by or management develop e number of staff theses ects involving open science been supervised by res	al and decision to collect the number of staff that and have supervised in open science. al and decision to collect number of supervised ally available and the number of supervised staff staff researchers are supervising or have supervised. o policies and procedures that support the collection e being supervised or have been supervised in open researchers with clear guidelines and explanation. o policies and procedures that support the collection is that are openly available and the number of staff nce by staff that are currently being supervised or searchers.	
Resource	<ul> <li>Allow have</li> <li>Allow open rese</li> <li>Ensu num sciel issue</li> <li>Ensu num invo supe crea</li> </ul>	w researchers time to re e supervised in open scie w researchers time to re nly available and the nur archers are supervising ure there is a member (o ber of staff that are bein nce by researchers acro es this may create. ure there is a member (o ber of theses that are op lving open science by st ervised by researchers w te.	esearchers time to record the number of staff that they are supervising of upervised in open science. esearchers time to record the number of supervised staff theses that are available and the number of staff projects in open science by staff chers are supervising or have been supervised. there is a member (or members) of staff responsible for monitoring the r of staff that are being supervised or have been supervised in open e by researchers across the institution, with an understanding of any ethic this may create. there is a member (or members) of staff responsible for monitoring the r of theses that are openly available and the number of staff projects ng open science by staff that are currently being supervised or have beer is a may be available and the number of staff projects and open science by staff that are currently being supervised or have beer is may be available and the number of staff projects and open science by staff that are currently being supervised or have beer is may be available and the number of staff projects and open science by staff that are currently being supervised or have beer is may be available and the number of staff projects and open science by staff that are currently being supervised or have beer is a may be available and the number of staff projects and open science by staff that are currently being supervised or have beer is a may be available and the number of staff projects and open science by staff that are currently being supervised or have beer is a may be available and the number of staff projects and open science by staff that are currently being supervised or have beer is a may be available and the number of staff projects and open science by staff that are currently being supervised or have beer is a staff that are currently be available and the number of staff that are be available and the number of staff that are be available and the number of staff that are be available and the number of staff that are be available and the number of staff that are be available	
Repository	Prov     Fnsi	ride expertise and suppo ire there is an appropria	te database or repository to record the number of	
. ,	staff	currently being supervis	sed or that have been supervised in open science.	

Table 31: Open Science Intervention	s for Leadership –	<b>Subcategory People</b>
-------------------------------------	--------------------	---------------------------



	<ul> <li>Ensure there is an appropriate database or repository for recording the number of supervised staff theses that are openly available and the number of staff projects involving open science by staff that have been supervised by researchers or are currently being supervised.</li> </ul>
Awareness Raising	<ul> <li>Ensure researchers know that they should record all staff currently being supervised or that have been supervised in open science and where they can receive training in how to do this and who they should go to for help and support.</li> <li>Ensure researchers know that they should record the number of supervised staff theses that are openly available and the number of supervised staff projects involving open science and where they can receive training in how to do this and who they should go to for help and support.</li> <li>Explain to researchers the benefit of collecting data on the number of staff that are being or have been supervised in open science to both them as individuals and the institution, that they trust the process and understand the link to researcher assessment.</li> <li>Explain to researchers the benefit of collecting data on staff theses that are openly available and staff projects involving open science in which they have supervised staff to both them as individuals, and the institution, that they trust the process and understand they have supervised staff to both them as individuals, and the institution, that they trust the process and understand they have supervised staff to both them as individuals, and the institution, that they trust the process and understand they have supervised staff to both them as individuals, and the institution, that they trust the process and understand they trust the process and understand they trust the process and understand they have supervised staff to both them as individuals, and the institution, that they trust the process and understand they have supervised staff to both them as individuals, and the institution, that they trust the process and understand they trust the process and understand they trust the process and understand they have supervised staff to both them as individuals, and the institution, that they trust the process and understand they trust the process and understand they trust the process and understand they trust the process</li></ul>
Training	<ul> <li>Train researchers in where and how to record the number of staff that are surrently or that have been supervised by researchers.</li> </ul>
	<ul> <li>Train researchers in where and how to record the number of staff theses that have been written and are openly available and the number of open science projects in which staff they have supervised or are supervising are involved.</li> </ul>
	Train researchers in open science supervision.
	• Ensure researchers know where to go to receive support in supervision of staff.
	<ul> <li>Ensure there are some best practice examples of open science staff supervision available.</li> </ul>

# 4.3.2 Projects

Indicator Group		Indicator Type	Quantitative Metric
Project Management		Process	# of Projects involving Open Science Being Managed
		Output	# of Projects involving Open Science Completed
		Outcome	# of Projects involving Open Science Successfully Evaluated
Category		OSCAM Pro	oject Management Interventions
Policy	<ul> <li>Senior m involving or have</li> </ul>	Senior management approval and decision to collect the number of projects involving open science that researchers are currently managing, have complete or have been successfully evaluated across the institution.	
<ul> <li>Senior management develop policies and procedures that support the co of the number of projects involving open science that researchers are ma have completed and that have been successfully evaluated (where possitic clear guidelines and explanation.</li> </ul>		policies and procedures that support the collection olving open science that researchers are managing, we been successfully evaluated (where possible) with tion.	
Resource	<ul> <li>Allow researchers time to record the number of projects involv they are currently managing, have completed and that have be evaluated.</li> </ul>		cord the number of projects involving Open Science have completed and that have been successfully
	<ul> <li>Ensure t number managin institutio</li> <li>Provide</li> </ul>	Ensure there is a member (or members) of staff responsible for monitoring the number of projects involving Open Science that researchers are currently managing, have completed and that have been successfully evaluated across the institution with an understanding of any ethical issues this may create. Provide expertise and support in projects involving Open Science.	
Repository	<ul> <li>Ensure t projects and that</li> </ul>	<ul> <li>Ensure there is an appropriate database or repository to record the number of projects involving open science that researchers are managing, have completed and that have been successfully evaluated.</li> </ul>	
Awareness Raising	<ul> <li>Ensure researchers know that they should record the number of projects invol Open Science they are managing, have completed and that have been</li> </ul>		



	successfully evaluated and where they can receive training in how to do this and who they should go to for help and support.
•	Explain to researchers the benefit of collecting data on the number of projects that they are managing, have completed and that have been successfully evaluated to both them as individuals and the institution, that they trust the process and understand the link to researcher assessment.
•	Train researchers in where and how to record the number of projects that they are currently managing, have completed and that have been successfully evaluated. Train researchers in projects involving Open Science.
•	Ensure researchers know where to go to receive support in projects involving Open Science.
•	Ensure there are some best practice examples of projects involving Open Science available.
	•

### 4.3.3 Organisation

Indicator Group		Indicator Type	Quantitative Metric
Unit Management		Process	# Unit Management Positions in Open Science Assigned
		Output	# Unit Management Positions in Open Science Completed
			# of Agreed Unit Managementt) Outputs involving Open Science
		Outcome	# of Agreed Unit Management Outputs involving Open Science
Category		OSCAM U	nit Management Interventions
Policy	<ul> <li>Senior n manage complet</li> </ul>	Senior management approval and decision to collect the number of unit management positions in open science that researchers have been assigned a completed.	
	<ul> <li>Senior n manage</li> </ul>	nanagement approva ment outputs and ou	I and decision to collect the number of agreed Unit tcomes involving open science.
	<ul> <li>Senior n of the nu and com</li> </ul>	nanagement develop umber of unit manage opleted with clear gui	policies and procedures that support the collection ement positions in open science that are assigned delines and explanation.
	<ul> <li>Senior n of the nu science</li> </ul>	<ul> <li>Senior management develop policies and procedures that support the colle of the number of agreed unit management outputs and outcomes involving science with clear guidelines and explanation.</li> </ul>	
Resource	<ul> <li>Allow re open sc</li> </ul>	<ul> <li>Allow researchers time to record the number of unit management positions in open science that researchers have been assigned and completed.</li> </ul>	
	<ul> <li>Allow re and oute</li> </ul>	searchers time to col comes involving oper	llect the number of agreed unit management outputs n science.
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring number of unit management positions in open science that researchers ha assigned and completed across the institution with an understanding of ar ethical issues this may create.</li> </ul>		members) of staff responsible for monitoring the positions in open science that researchers have been oss the institution with an understanding of any e.
	<ul> <li>Ensure t number science create.</li> </ul>	Ire there is a member (or members) of staff responsible for monitoring the ber of agreed unit management outputs and outcomes involving open nce across the institution, with an understanding of any ethical issues this m te.	
	<ul> <li>Provide Science</li> </ul>	expertise and suppo	rt in projects involving Unit Management in Open
Repository	<ul> <li>Ensure t Manage</li> </ul>	here is an appropriat ment positions in ope	e database to record the number of Unit en science assigned and completed.
	<ul> <li>Ensure t manage</li> </ul>	here is an appropriat ment outputs and ou	e database to record the number of agreed unit tcomes involving open science.
Awareness Raising	<ul> <li>Ensure r positions training</li> </ul>	esearchers know tha s in open science ass in how to do this and	It they should record the number of Unit Management signed and completed and where they can receive who they should go to for help and support.

#### Table 33: Open Science Interventions for Leadership – Subcategory Organisation



<ul> <li>Ensure researchers know that they should record the number agreed unit management outputs and outcomes involving open science and where they can receive training in how to do this and who they should go to for help and support.</li> <li>Explain to researchers the benefit of collecting data on the number of Unit management positions in open science assigned and completed to them as individuals and the institution, that they trust the process and understand the link to researcher assessment.</li> <li>Explain to researchers the benefit of collecting data on the number of unit management outputs and outcomes involving open science to them as individuals and the institution, so that they trust the process and understand the link to researcher assessment.</li> </ul>
<ul> <li>Train researchers in where and how to record the number of unit management positions in open science assigned and completed.</li> <li>Train researchers in where and how to record the number of agreed unit management outputs and outcomes involving open science.</li> <li>Train researchers in Unit management in open science.</li> <li>Ensure researchers know where to go to receive support in Open Science Unit Management.</li> <li>Ensure there are some best practice examples of projects involving Open Science</li> </ul>
Unit Management.

### 4.3.4 Recognition

Table 34: Open	Science Interventions for	<sup>-</sup> Leadership –	<ul> <li>Subcategory</li> </ul>	Recognition
----------------	---------------------------	---------------------------	---------------------------------	-------------

Indicator Group		Indicator Type	Quantitative Metric
Expert Positions		Process	# of Expert Positions in Open Science Assigned
		Output	# of Expert Positions in Open Science Completed
			# of Open Science Expert Position Outputs
			# of Expert Position Outputs Openly Available
Category		OSCAM I	Expert Positions Interventions
Policy	<ul> <li>Senior m expert p</li> <li>Senior m expert p outcome</li> <li>Senior m of the nu assigned</li> <li>Senior m of the nu openly a</li> </ul>	nanagement approva ositions that research nanagement approva osition outputs, expe es openly available a nanagement develop umber of open science d and completed with nanagement develop umber of open science vailable, expert posi	I and decision to collect the number of open science hers have been assigned and completed. I and decision to collect the number of open science ert position outputs openly available, expert position nd expert achievement awards in open science. I policies and procedures that support the collection ce expert positions that researchers have been n clear guidelines and explanation. I policies and procedures that support the collection ce expert position outputs, expert position outputs tion outcomes openly available and expert
Resource	<ul> <li>Allow reresearch</li> <li>Allow reoutputs, openly a guideling</li> <li>Ensure t number and com</li> <li>Ensure t number</li> <li>Ensure t number</li> <li>Ensure t number</li> <li>Provide</li> </ul>	<ul> <li>achievement awards in open science with clear guidelines and explanation.</li> <li>Allow researchers time to record the number of open science expert positions researchers have been assigned and completed.</li> <li>Allow researchers time to record the number of open science expert position outputs, expert position outputs openly available, expert position outcomes openly available and expert achievement awards in open science with clear guidelines and explanation.</li> <li>Ensure there is a member (or members) of staff responsible for monitoring the number of open science expert positions that researchers have been assigned and completed across the institution.</li> <li>Ensure there is a member (or members) of staff responsible for monitoring the number of expert position outputs, expert position outputs openly available, expert position outputs, expert position outputs, expert position outputs openly available, expert position outputs openly available, expert position outputs, expert position outputs openly available, expert position outputs openly available, expert position outputs, expert position outputs openly available, expert position outcomes openly available and expert achievement awards in open science across the institution.</li> </ul>	
Repository	<ul> <li>Ensure t expert p</li> </ul>	here is an appropriat ositions that researc	e database to record the number of open science hers have been assigned and completed.



	<ul> <li>Ensure there is an appropriate database to record the number of expert position outputs, expert position outputs openly available, expert position outcomes openly available and expert achievement awards in open science across the institution.</li> </ul>
Awareness Raising	<ul> <li>Ensure researchers know that they should record the number of open science expert positions that researchers have been assigned and completed and where they can receive training in how to do this and who they should go to for help and support.</li> <li>Ensure researchers know that they should record the number of Expert position</li> </ul>
	outputs, expert position outputs openly available, expert position outcomes openly available and expert achievement awards in open science and where they can receive training in how to do this and who they should go to for help and support.
	• Explain to researchers the benefit of collecting data on the number of open science expert positions that researchers have been assigned and completed them as individuals and the institution, that they trust the process and understand the link to researcher assessment.
	<ul> <li>Explain to researchers the benefit of collecting data on the number of expert position outputs, expert position outputs openly available, expert position outcomes openly available and expert achievement awards in open science to them as individuals and the institution and the link to researcher assessment.</li> </ul>
Training	<ul> <li>Train researchers in where and how to record the open science expert positions that researchers have been assigned and completed.</li> </ul>
	<ul> <li>Train researchers in where and how to record the number of expert position outputs, expert position outputs openly available, expert position outcomes openly available and expert achievement awards in open science,</li> </ul>
	<ul> <li>Train researchers in open science expert positions.</li> </ul>
	<ul> <li>Ensure researchers know where to go to receive support in open science expert positions.</li> </ul>
	• Ensure there are some best practice examples of projects involving open science expert positions.

### 4.4 Valorisation

#### 4.4.1 Communication

Table 35: Open So	cience Interventions	for Valorisation –	Subcategory C	Communication

Indicator Group		Indicator Type	Quantitative Metric	
Public Writing		Process	# of Draft Publications Openly Available	
		Output	# of Published Publications Openly Available	
		Outcome	# of Openly Available Publications Accessed	
			# of Openly Available Publications Cited	
Public Speaking		Process	# of Appearances on Open Science Planned	
		Output	# of Appearances on Open Science Given	
		Outcome	# of Appearances on Open Science Accessed	
			# of Appearances on Open Science Cited	
			# of Appearances Openly Available	
Category		OSCAM	Public Writing Interventions	
Policy	<ul> <li>Senior n available</li> <li>Senior n</li> </ul>	Senior management approval and decision to collect the number of openly available publications that are being drafted and published across the institution. Senior management approval and decision to collect the number of openly		
available publications access			sed and cited across the institution.	
<ul> <li>Senior management develop policies and procedures to support the colle and sharing of openly available publications drafting and published by a researcher including clear guidelines and explanation.</li> </ul>			policies and procedures to support the collection ble publications drafting and published by a uidelines and explanation.	



	Senior management develop policies and procedures to collect the number of openly available publications accessed and cited by a researcher including clear guidelines and explanation.			
Resource	• Allow researchers time (and supporting budget) to record and upload the number of openly available publications drafting and published across the institution.			
	• Allow researchers time (and supporting budget) to record the number of openly available publications accessed and cited across the institution.			
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring and assisting with the collection of the number of openly available publications that are being drafted and published across the institution and support to help make them open.</li> </ul>			
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitor and assisting with the collection of the number of openly available publications accessed and cited across the institution.</li> </ul>			
<b>D</b>	Provide expertise and supporting in public writing.			
Repository	<ul> <li>Ensure there is an appropriate database to record and share the number of openly available publications that are being drafted and published across the institution.</li> </ul>			
-	• Ensure there is an appropriate database to record the number of openly available publications accessed and cited across the institution.			
Awareness Raising	<ul> <li>Ensure researchers know that they should record and make open (where possible) publications they are drafting and have published and where they can receive training in how to do this and who they should go to for help and support.</li> </ul>			
	• Ensure researchers know that they should record the number of openly available publications accessed and cited and where they can receive training in how to do this and who they should go to for help and support.			
	<ul> <li>Ensure researchers understand the benefit to individuals and the institution of recording this information about openly available publications, that they trust the process and understand the link to researcher assessment</li> </ul>			
Training	• Train researchers in where and how to record the number and upload the documents for openly available publications they are drafting and have published.			
	• Train researchers in where and how to record the number of openly available publications they have accessed and cited.			
	<ul> <li>Train researchers in openly available public writing.</li> </ul>			
	<ul> <li>Ensure researchers know where to go to receive support in openly available public writing.</li> </ul>			
	<ul> <li>Try to find best practice examples and case studies of openly available public writing that researchers can access and draw upon.</li> </ul>			
Category	OSCAM Public Speaking Interventions			
Policy	• Senior management approval and decision to collect the number of public speaking appearances on open science planned and given across the institution.			
	• Senior management approval and decision to collect the number open science public speaking appearances accessed and cited across the institution.			
	• Senior management approval and decision to make as collect and make public speaking appearances openly available (where possible).			
	• Senior management develop policies and procedures to support the collection of open science public speaking appearances planned and given by a researcher including clear guidelines and explanation.			
	<ul> <li>Senior management develop policies and procedures to collect the number of open science public speaking appearances accessed and cited by a researcher including clear guidelines and explanation.</li> </ul>			
	<ul> <li>Senior management develop policies and procedures to public speaking appearances openly available (where possible) including clear guidelines and explanation.</li> </ul>			
Resource	<ul> <li>Allow researchers time (and supporting budget) to record the number of open science public speaking appearances planned and given across the institution.</li> </ul>			
	• Allow researchers time (and supporting budget) to record the number open science public speaking appearances accessed and cited across the institution.			
	<ul> <li>Allow researchers time (and supporting budget) to make public speaking appearances openly available (where possible).</li> </ul>			
	• Ensure there is a member (or members) of staff responsible for monitoring and assisting with the collection of the number of open science public speaking appearances planned and made across the institution.			



	<ul> <li>Ensure there is a member (or members) of staff responsible for monitor and assisting with the collection of the number of open science public speaking appearances accessed and cited across the institution.</li> <li>Ensure there is a member (or members) of staff responsible for monitoring, assisting and helping to make open public appearances (where possible.)</li> <li>Provide expertise and supporting in public speaking</li> </ul>
Repository	<ul> <li>Ensure there is an appropriate database to record the number of open science public speaking appearances planned and made across the institution.</li> <li>Ensure there is an appropriate database to record the number of open science public speaking appearances accessed and cited across the institution.</li> <li>Ensure there is an appropriate database to record and assist with making open, openly available public appearances.</li> </ul>
Awareness Raising	<ul> <li>Ensure researchers know that they should record any open science public speaking appearances they have planned or have made and where they can receive training in how to do this and who they should go to for help and support.</li> <li>Ensure researchers know that they should record the number of open science public speaking appearances and cited and where they can receive training in how to do this and who they should go to for help and support.</li> <li>Explain to researchers the benefit of collecting data on the number of openly available public speaking appearances they have planned and make to them as individuals and the institution, that they trust the process and understand the link to researchers the benefit of making public appearances openly available (where possible) to them as individuals and the institution, that they trust the process and understand the link to researchers the benefit of making public appearances openly available (where possible) to them as individuals and the institution, that they trust the process and understand the link to researchers the benefit of making public appearances openly available (where possible) to them as individuals and the institution, that they trust the process and understand the link to researcher assessment.</li> </ul>
Training	<ul> <li>Train researchers in where and how to record the number open science public speaking appearances they have planned or have made.</li> <li>Train researchers in where and how to record the number of open science public speaking appearances they have accessed and cited</li> <li>Train researchers in where and how to record and share openly available public speaking appearances.</li> <li>Train researchers in open science public speaking</li> <li>Train researchers in public speaking</li> <li>Ensure researchers know where to go to receive support in public speaking.</li> <li>Try to find best practice examples and case studies of open science public speaking that researchers can access and draw upon.</li> </ul>

# 4.4 Engagement

### 4.4.2 Intersectoral Engagement

Table 36: Open Science Interventions for Va	alorisation – Subcategory Engagement
---	--------------------------------------

Indicator Group	Indicator Type	Quantitative Metric
Intersectoral Engagement	Process	# of Intersectoral Engagements involving Open Science
	Output	# of Intersectoral Outputs involving Open Science
	Outcome	# of Intersectoral Outcomes involving Open Science
		# of Organisations Engaged for Open Science
Citizen Engagement	Process	# of Citizen Science Activities involving Open Science Ongoing
	Output	# of Citizen Science Activities involving Open Science Completed
		# of Citizen Science Outputs for Open Science
	Outcome	# of Citizen Science Outcomes for Open Science
		# of Citizen Scientists Engaged in Open Science



Category	OSCAM Intersectoral Engagement Interventions
Policy	<ul> <li>Senior management approval and decision to collect the number of intersectoral engagements and outputs for open science by a researcher across the institution.</li> </ul>
	• Senior management approval and decision to collect the number of intersectoral outcomes for open science and organisations engaged for open science across the institution.
	<ul> <li>Senior management develop policies and procedures to support the collection of intersectoral collaborations involving open science and outputs for open science by a researcher including clear guidelines and explanation.</li> </ul>
	<ul> <li>Senior management develop policies and procedures to collect the number of intersectoral outcomes for open science and organisations engaged for open science across the institution including clear guidelines and explanation.</li> </ul>
Resource	• Allow researchers time (and supporting budget) to record the number of intersectoral collaborations involving open science and outputs for open science across the institution.
	<ul> <li>Allow researchers time (and supporting budget) to record the number of intersectoral outcomes for open science and organisations engaged for open science across the institution.</li> </ul>
	• Ensure there is a member (or members) of staff responsible for monitoring and assisting with the collection of intersectoral collaborations for open science and intersectoral outputs for open science across the institution.
	• Ensure there is a member (or members) of staff responsible for monitor and assisting with the collection of the number of intersectoral outcomes for open science and organisations engaged for open science. across the institution.
	<ul> <li>Provide expertise and supporting in intersectoral collaborations involving open science.</li> </ul>
Repository	• Ensure there is an appropriate database to record and make open the number of intersectoral collaborations involving and outputs for open science across the institution.
	• Ensure there is an appropriate database to record and make open the number of intersectoral outcomes for open science and organisations engaged for open science with across the institution.
Awareness Raising	• Ensure researchers know that they should record and make open any intersectoral collaborations involving open science and outputs for open science developed and where they can receive training in how to do this and who they should go to for help and support.
	<ul> <li>Ensure researchers know that they should record and make open the number of intersectoral outcomes for open science and organisations for open science engaged with and where they can receive training in how to do this and who they should go to for help and support.</li> </ul>
	• Explain to researchers the benefit of collecting and making open data on the number of intersectoral engagements involving open science and outputs for open science to both, them as individuals and the institution, that they trust the process and understand the link to researcher assessment.
	• Explain to researchers the benefit of collecting and intersectoral outcomes for open science and organisations engaged for open science both to them as individuals and the institution, that they trust the process and the understand the link to researcher assessment.
Training	<ul> <li>Train researchers in where and how to record and make open intersectoral collaborations involving open science and outputs for open science.</li> </ul>
	• Train researchers in where and how to record and make open intersectoral outcomes for open science and organisations engaged for open science.
	• Train researchers in how to find open science intersectoral collaborations.
	• Ensure researchers know where to go to receive support in finding and achieving open science intersectoral collaborations.
	• Try to find best practice examples and case studies of open science intersectoral collaborations that researchers can access and draw upon.
Category	OSCAM Citizen Engagement Interventions
Policy	<ul> <li>Senior management approval and decision to collect the number of citizen science activities involving open science that are ongoing and completed researchers across the institution.</li> </ul>



	<ul> <li>Senior management approval and decision to collect the number of citizen science for open science outputs, outcomes and citizen scientists engaged across the institution.</li> </ul>
	• Senior management develop policies and procedures to support the collection of citizen science activities involving open science that are ongoing or completed by a researcher including clear guidelines and explanation.
	<ul> <li>Senior management develop policies and procedures to collect the number of citizen science outputs for open science, outcomes for open science and number of citizen scientists engaged by individual researchers across the institution including clear guidelines and explanation.</li> </ul>
Resource	• Allow researchers time (and supporting budget) to record and make open the number of citizen science activities involving open science that are ongoing and completed across the institution.
	<ul> <li>Allow researchers time (and supporting budget) to record the number of citizen science outputs for open science, outcomes for open science and the number of citizen scientists engaged across the institution and make them open (where possible).</li> </ul>
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring and assisting with the collection of the number of citizen scientist activities ongoing and completed across the institution and to support open access (where possible)</li> </ul>
	• Ensure there is a member (or members) of staff responsible for monitor and assisting with the collection of the number of citizen science, outputs and outcomes and the number of citizen scientists engaged with across the institution and to support open access (where possible)
	Provide expertise and supporting in citizen science involving open science
Repository	• Ensure there is an appropriate database to record and make open the number of citizen science activities involving open science ongoing and completed across the institution.
	• Ensure there is an appropriate database to record and make open the number of citizen science outputs for open science, outcomes for open science and the number of citizen scientists engaged with across the institution.
Awareness Raising	<ul> <li>Ensure researchers know that they should record and make open any citizen science activities involving open science that are ongoing and completed and where they can receive training in how to do this and who they should go to for help and support.</li> </ul>
	• Ensure researchers know that they should record and make open the number of citizen science outputs for open science, outcomes for open science and the number of citizen scientists engaged with and where they can receive training in how to do this and who they should go to for help and support.
	• Explain to researchers the benefit of collecting and making open data on the number of citizen science activities involving open science that are ongoing or completed to both, them as individuals and the institution, that they trust the process and understand the link to researcher assessment.
	• Explain to researchers the benefit of collecting and making open the number of citizen science outputs for open science, outcomes for open science and the number of citizen scientists engaged to both them as individuals and the institution, that they trust the process and understand the link to research assessment.
Training	• Train researchers in where and how to record the number of citizen scientist's activities involving open science that are ongoing and completed.
	• Train researchers in where and how to record the number of citizen science outputs for open science, outcomes for open science and the number of citizen scientists engaged in open science with.
	Train researchers in citizen science for open science.
	<ul> <li>Ensure researchers know where to go to receive support in citizen science involving open science.</li> </ul>
	Try to find best practice examples and case studies of citizen science involving     open science that researchers can access and draw upon.



### 4.4.3 Innovation

Indicator Group		Indicator Type	Quantitative Metric	
Research Exploitation		Process	# of Openly Available Research Outputs Being Legalised	
		Output	# of Openly Available Research Outputs with defined IPR	
			# of Openly Available Research Outputs Patented	
		Outcome	# of Research Outputs with Open Licenses	
Entrepreneuria	l Spirit	Process	# of Open Science Spin-offs/Start-ups Creating	
		Output	# of Open Science Spin-offs/Start-ups Being Created	
		Outcome # of Open Science Spin-off/Start-up Employe		
			# of Open Science Spin-off/Start-up Products	
			# of Open Science Spin-off/Start-up Services	
Category		OSCAM Res	search Exploitation Interventions	
Policy	<ul> <li>Senior m available institutio</li> <li>Senior m available</li> </ul>	nanagement approva e research outputs th n. nanagement approva e research outputs w	Il and decision to collect the number of openly at are in the process of being legalised across the Il and decision to collect the number of openly ith defined IPR, patents awarded, and licenses	
	<ul> <li>granted across the institution.</li> <li>Senior management develop policies and procedures to support the collection of the number of openly available research outputs that are in the process of being legalised across the institution including clear guidelines and explanation.</li> <li>Senior management develop policies and procedures to collect the number of openly available research outputs with defined IPR, patents awarded and license granted by individual researchers across the institution including clear guideline</li> </ul>			
Resource	<ul> <li>Allow resources number legalised</li> </ul>	<ul> <li>Allow researchers time (and supporting budget) to record and make open the number of openly available research outputs that are in the process of being legalised across the institution.</li> </ul>		
	<ul> <li>Allow researchers time (and available research outputs v granted make them open (v</li> </ul>		supporting budget) to record the number of openly ith defined IPR, patents awarded, and licenses nere possible).	
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring and assisting with the collection of the number of openly available research outputs the process of being legalised across the institution and to support open access (where possible)</li> </ul>			
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitor and assisting with the collection of the number of openly available research outputs with defined IPR, patents awarded, and licenses granted across the institution ar to support open access (where possible)</li> <li>Provide expertise and supporting in openly available research outputs, defined IPR, Patents and Licensing</li> </ul>			
Repository	<ul> <li>Ensure t openly a legalised</li> </ul>	Ensure there is an appropriate database to record and make open the number of openly available research outputs that are currently in the process of being legalised across the institution.		
•	<ul> <li>Ensure t openly a granted</li> </ul>	Isure there is an appropriate database to record and make open the number of Denly available research outputs with defined IPR, patents awarded and licenses anted across the institution.		
Awareness Raising	<ul> <li>Ensure r research they can support.</li> </ul>	<ul> <li>Ensure researchers know that they should record and make open openly available research outputs that are currently in the process of being legalised and where they can receive training in how to do this and who they should go to for help and support.</li> </ul>		
<ul> <li>Ensure researchers know that they should record and make open the numb openly available research outputs with defined IPR, patents awarded and line</li> </ul>			It they should record and make open the number of tputs with defined IPR, patents awarded and licenses	

#### Table 37: Open Science Interventions for Valorisation – Subcategory Innovation



Training	<ul> <li>granted and where they can receive training in how to do this and who they should go to for help and support.</li> <li>Explain to researchers the benefit of collecting and making openly available research outputs that are in the process of being legalised to both, them as individuals and the institution, that they trust the process and understand the link to researcher assessment.</li> <li>Explain to researchers the benefit of collecting and making open openly available research outputs with defined IPR, patents awarded, and licenses granted to both them as individuals and the institution, so that they trust the process and understand the link to research outputs with defined IPR, patents awarded, and licenses granted to both them as individuals and the institution, so that they trust the process and understand the link to research assessment.</li> <li>Train researchers in where and how to record the number of openly available research outputs that are in the process of being legalised.</li> <li>Train researchers in where and how to record the number of openly available research outputs with defined IPR, patents awarded and licenses awarded.</li> <li>Train researchers in openly available research outputs legalising, defined IPR, patents and licensing.</li> <li>Ensure researchers know where to go to receive support in legalisation of research outputs, defined IPR, patents and licensing.</li> <li>Try to find best practice examples and case studies of openly available research</li> </ul>
Category	outputs defined IPR, patents and licensing citizen science that researchers can access and draw upon. OSCAM Entrepreneurial Spirit Interventions
Policy	Senior management approval and decision to collect the number of open science
-	spin-offs/starts ups that are being created or have been created across the institution.
	<ul> <li>Senior management approval and decision to collect the number of open science spin-offs/start-ups employees, products and services across the institution.</li> </ul>
	<ul> <li>Senior management develop policies and procedures to support the collection of the number of open science spin-offs/starts ups that are being created or have been created across the institution including clear guidelines and explanation.</li> </ul>
	<ul> <li>Senior management develop policies and procedures to collect the number of open science spin-offs/start-ups employees, products and services across the institution including clear guidelines and explanation.</li> </ul>
Resource	<ul> <li>Allow researchers time (and supporting budget) to record and make open the number of open science spin-offs/starts ups that are being created or have been created across the institution.</li> </ul>
	<ul> <li>Allow researchers time (and supporting budget) to record the number of open science spin-offs/start-ups employees, products and services across the institution including clear guidelines and explanation.</li> </ul>
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitoring and assisting with the collection of the number of open science spin-offs/starts ups that are being created or have been created and to support open access (where possible)</li> </ul>
	<ul> <li>Ensure there is a member (or members) of staff responsible for monitor and assisting with the collection of the number of open science spin-offs/starts ups that are being created or have been created and to support open access (where possible)</li> </ul>
Dopositori	Provide expertise and support in all aspects of open science start-ups/spin-offs
κεροsitory	<ul> <li>Ensure there is an appropriate database to record and make open the number of number of open science spin-offs/starts ups that are being created across the institution.</li> </ul>
	<ul> <li>Ensure there is an appropriate database to record and make open the number of number of open science spin-offs/start-ups employees, products and services across the institution.</li> </ul>
Awareness Raising	<ul> <li>Ensure researchers know that they should record and make open, open science spin-offs/starts ups and where they can receive training in how to do this and who they should go to for help and support.</li> </ul>
	<ul> <li>Ensure researchers know that they should record and make open the open science spin-offs/starts ups and where they can receive training in how to do this and who they should go to for help and support.</li> </ul>
	<ul> <li>Explain to researchers the benefit of collecting and making openly available open science spin-offs/starts to both, them as individuals and the institution, that they trust the process and understand the link to researcher assessment.</li> </ul>



	• Explain to researchers the benefit of collecting and making open, open science spin-offs/starts ups that are being created or have being created and the number of employees, products and services these created to both them as individuals and the institution, that they trust the process and understand the link to research assessment.
Training	• Train researchers in where and how to record the number of open science spin- offs/start ups openly available that are being or have been created.
	<ul> <li>Train researchers in where and how to record the number of open science spin- offs/start-ups employees, products and services.</li> </ul>
	<ul> <li>Train researchers in all aspects of Open Science Spin-off/Start-up.</li> </ul>
	<ul> <li>Ensure researchers know where to go to receive support in Open Science Spin- off/Start-ups</li> </ul>
	<ul> <li>Try to find best practice examples and case studies of Open Science Spin-off/Start ups that researchers can access and draw upon.</li> </ul>

### 5. Next Steps

This is very much an initial draft of this intervention supporting framework and we anticipate that there will be many further iterations. The next eighteen months will allow the pilot institutions to test the framework thoroughly in their institutions and provide regular feedback on how they are finding both the indicators and the interventions to support them. Alongside this a comprehensive sector wide consultation will take place in addition to ongoing conversations with key organisations, projects and sector partners to ensure that the final OPUS framework output is thoroughly embedded and a practical and usable tool for European RPOs and RFOs. We have already identified several points to consider and ideas for how the final framework could be improved. They are:

- *The size and scope of the framework* is designed to be comprehensive whilst allowing individual organisations to select their priorities. Are there are areas that we have excluded and have the right categories and indicator groups been selected?
- *The language* is deliberately broad to allow for different interpretations of the framework. Is it informative enough? Do we have the right categories of interventions and again has anything been excluded?
- **Practical case studies and examples** Should we provide examples of particular types of interventions in order to demonstrate good practice and ensure the framework is user friendly particularly providing more information about the qualified support staff that would help to implement the framework and with the monitoring, teaching and awareness raising. It may also be useful to highlight examples of repositories and databases that would work to incorporate the collection of metrics (cumulatively) and as open research repositories.
- Suitability for RFO's This draft framework is pitched for RPOs and we need to
  explore have this might relate to RFOs including the interplay between the generic
  and open science frameworks. This may mean translating the questions into an easy
  to use questionnaire for RFOs. It is important to consider interventions from
  alternative perspectives.



### **End Notes**

[1] There are 5 pilot organisations in OPUS. The 3 pilot RPOs are Nova University of Lisbon, University of Cyprus, and University of Rijeka. The 2 pilot RFOs are Research Council of Lithuania and Executive Agency for Higher Education, Research, Development, and Innovation Funding.

[2] We would like to thank Amanda Crowfoot, Barend Mons, Cecilia Cabello Valdés, Volker Beckmann, and Wilhelm Widmark for their input and feedback on the framework and deliverables.

[3] We would like to thank Association of European Research Libraries (LIBER), Coalition for Advancing Research Assessment (CoARA), cOAlition S, EOSC Steering Board, and European Organisation for Nuclear Research (CERN) for preliminary discussions on the framework.

[4] We would like to thank Clifford Tatum, Ismael Refols Garcia, Karel Luijben, Ludo Waltman, and Mark van de Sanden for extensive discussions on the framework and research assessment.

[5] Five types of indicators were originally considered: Input; Process; Output; Outcome; Impact. The input indicator was ruled out as this was not deemed relevant for the activities of researchers. The impact indicator was also ruled out as this typically looks at long-term and societal impact which is difficult to define and causally prove within the scope of individual researcher assessment.



### References

[1] Huntingford, Jessica, Juliana Chaves Chaparro, John Crowley, Emma Day, Katarina Haluskova, Fleur Lebhardt, Dragana Mitrovic, and Gareth O'Neill (2023) *Initial State-of-the-Art on an Open Science Ecosystem.* Deliverable D1.2 of the Open Universal Science (OPUS) project. To be published in 2023.

[2] Website of the San Francisco Declaration on Research Assessment (DORA). Link: [https://sfdora.org]. Accessed 30 June 2023.

[3] Website of the Leiden Manifesto for Research Metrics. Link: [<u>http://www.leidenmanifesto.org</u>]. Accessed 30 June 2023.

[4] Webpage of the Hong Kong Principles hosted by the World Conference on Research Integrity Foundation (WCRIF). Link: [https://www.wcrif.org/guidance/hong-kong-principles]. Accessed 30 June 2023.

[5] Open Science Policy Platform (OSPP) (2018) *OSPP-REC. Open Science Policy Platform Recommendations*. Link: [https://op.europa.eu/en/publication-detail/-/publication/5b05b687-907e-11e8-8bc1-01aa75ed71a1]. Accessed 30 June 2023.

[6] Open Science Policy Platform (OSPP) (2020) *Progress on Open Science. Towards a Shared Research Knowledge System*. Link: [https://op.europa.eu/en/publication-detail/-/publication/d36f8071-99bd-11eaaac4-01aa75ed71a1]. Accessed 30 June 2023.

[7] United Nations Educational, Scientific, and Cultural Organisation (UNESCO) (2017) *Recommendation on Science and Scientific Researchers*. Annex II of the Records of the 39th Session of the UNESCO General Conference. Link: [https://unesdoc.unesco.org/ark:/48223/pf0000260889]. ccessed 30 June 2023.

[8] United Nations Educational, Scientific, and Cultural Organisation (UNESCO) (2021) *Recommendation on Open Science*. Link: [https://unesdoc.unesco.org/ark:/48223/pf0000379949]. Accessed 30 June 2023.

[9] Webpage of the Agreement on Reforming Research Assessment hosted by the Coalition for Advancing Research Assessment (CoARA) Link: [https://coara.eu/agreement/the-agreement-full-text]. Accessed 30 June 2023.

[10] European Research Area and Innovation Committee (ERAC) Triangle Task Force (2021) *Research Evaluation in a Context of Open Science and Gender Equality.* Link: [https://data.consilium.europa.eu/doc/document/ST-1201-2021-INIT/en/pdf]. Accessed 30 June 2023.

[11] European Council (2022) *Council Conclusions on Research Assessment and Implementation of Open Science*. Conclusions adopted by the European Council at European Council Meeting 3877 in June 2022. Link: [https://www.consilium.europa.eu/media/56958/st10126-en22.pdf]. Accessed 30 June 2023.

[12] European Commission (2023) *Technical Document on a European Framework for Research Careers*. Unpublished document for the European Research Area and Innovation Committee (ERAC) Plenary Meeting in February 2023.

[13] Vitae (2011) *Researcher Development Framework*. Link: [https://www.vitae.ac.uk/vitaepublications/rdf-related/researcher-development-framework-rdf-vitae.pdf]. Accessed 30 June 2023.

[14] O'Carroll, Conor, Cecilia Cabello Valdés, Fulvio Esposito, Eeva Kaunismaa, Karen Maas, David McAllister, Janet Metcalfe, Bernard Rentier, and Karen Vandevelde (2017) *Evaluation of Research Careers* 



*Fully Acknowledging Open Science Practices. Rewards, Incentives, and/or Recognition for Researchers Practising Open Science.* Link: [https://op.europa.eu/en/publication-detail/-/publication/47a3a330-c9cb-11e7-8e69-01aa75ed71a1]. Accessed 30 June 2023.

[15] Wilsdon, James, Judit Bar-Ilan, Robert Frodeman, Elisabeth Lex, Isabella Peters, and Paul Wouters (2017) Next-generation Metrics. Responsible Metrics and Evaluation for Open Science. Link: [https://op.europa.eu/en/publication-detail/-/publication/b858d952-0a19-11e7-8a35-01aa75ed71a1]. Accessed 30 June 2023.

[16] Rossel, Christophe, Marta Dias Agostinho, Kristiina Hormia-Poutanen, Ernst Kristiansen, Rebecca Lawrence, Sabina Leonelli, Natalia Manola, Eva Méndez, and Michela Vignoli (2017) *Recommendations of the OSPP on Next-Generation Metrics.* Presentation by the Altmetrics Working Group of the Open Science Policy Platform (OSPP) in November 2017. Link: [https://ec.europa.eu/research-and-innovation/sites/default/files/rio/events/Next-

<u>Generation%2520Metrics\_C.%2520Rossel%2520and%2520R.%2520Lawrence.pdf</u>]. Accessed 30 June 2023.

[17] Miedema, Frank, Kim Holmberg, Sabina Leonelli, and Katja Mayer (2018) *Mutual Learning Exercise. Open Science. Altmetrics and Rewards.* Link: [https://op.europa.eu/en/publication-detail/-/publication/449cc187-693f-11e8-ab9c-01aa75ed71a1]. Accessed 30 June 2023.

[18] Webpage of the Open Science Monitor hosted by the European Commission. Link: [https://researchand-innovation.ec.europa.eu/strategy/strategy-2020-2024/our-digital-future/open-science/openscience-monitor/about-open-science-monitor\_en]. Accessed 30 June 2023.

[19] Wouters, Paul, Alis Oancea, Ismael Ràfols Garcia, James Holbrook, Merle Jacob, and Shina Caroline Lynn Kamerlin (2019) *Indicator Frameworks for Fostering Open Knowledge Practices in Science and Scholarship.* Link: [https://op.europa.eu/en/publication-detail/-/publication/b69944d4-01f3-11ea-8c1f-01aa75ed71a1]. Accessed 30 June 2023.

[20] League of European Research Universities (LERU) (2022) *A Pathway towards Multidimensional Academic Careers. A LERU Framework for the Assessment of Researchers.* Link: [https://www.leru.org/publications/a-pathway-towards-multidimensional-academic-careers-a-leru-framework-for-the-assessment-of-researchers]. Accessed 30 June 2023.



## 6. Appendix A – Table of Researcher Assessment Framework with Indicators and Metrics

Category	Subcategory	Indicator Group	Dimension	Indicator Type	Quantitative Metric
Research	Proposals	Proposal Development	Generic	Process	# of Project Proposals Being Developed
				Output	# of Project Proposals Submitted
				Outcome	# of Project Proposals Granted
					€ of Project Proposals Granted
			Open	Process	# of Developing Project Proposals Openly Available
			-	Output	# of Submitted Project Proposals Openly Available
				Outcome	# of Granted Project Proposals Openly Available
					€ of Granted Project Proposals involving Open Science
	Methods	Methods Development	Generic	Process	# of Method Sets Being Developed
				Output	# of Method Sets Finalised
				Outcome	# of Method Sets Implemented
					# of Method Sets Accessed
					# of Method Sets Cited
			Open	Process	# of Developing Method Sets Openly Available
			-	Output	# of Finalised Method Sets Openly Available
				Outcome	# of Openly Available Method Sets Implemented
					# of Openly Available Method Sets Accessed



				# of Openly Available Method Sets Cited
Data	Data Planning	Generic	Process	# of (FAIR) Data Management Plans Being Developed
			Output	# of (FAIR) Data Management Plans Finalised
			Outcome	# of (FAIR) Data Management Plans Implemented
		Open	Process	# of (FAIR) Developing Data Management Plans Openly Available
			Output	# of (FAIR) Finalised Data Management Plans Openly Available
			Outcome	# of (FAIR) Implemented Data Management Plans Openly Available
	Data Management	Generic	Process	# of (FAIR) Data Sets Being Developed
			Output	# of (FAIR) Data Sets Finalised
				# of (FAIR) Data Sets Archived
			Outcome	# of (FAIR) Data Sets Accessed
				# of (FAIR) Data Sets Cited
		Open	Process	# of Developing (FAIR) Data Sets Openly Available
			Output	# of Finalised (FAIR) Data Sets Openly Available
				# of Archived (FAIR) Data Sets Openly Available
			Outcome	# of Openly Available (FAIR) Data Sets Accessed
				# of Openly Available (FAIR) Data Sets Cited
	Data Review	Generic	Process	# of (FAIR) Data Set Peer Reviews Being Drafted
			Output	# of (FAIR) Data Set Peer Reviews Submitted
			Outcome	# of (FAIR) Data Set Peer Reviews Accepted



		Open	Process	# of Draft (FAIR) Data Set Peer Reviews Openly Available
			Output	# of Submitted (FAIR) Data Set Peer Reviews Openly Available
			Outcome	# of Accepted (FAIR) Data Set Peer Reviews Openly Available
Software	Software Development	Generic	Process	# of Software Sets Being Developed
			Output	# of Software Sets Finalised
				# of Software Sets Archived
			Outcome	# of Software Sets Accessed
				# of Software Sets Cited
		Open	Process	# of Developing Software Sets Openly Available
		-	Output	# of Finalised Software Sets Openly Available
		-		# of Archived Software Sets Openly Available
			Outcome	# of Openly Available Software Sets Accessed
				# of Openly Available Software Sets Cited
	Software Review	Generic	Process	# of Software Set Peer Reviews Being Drafted
			Output	# of Software Set Peer Reviews Submitted
			Outcome	# of Software Set Peer Reviews Accepted
		Open	Process	# of Draft Software Set Peer Reviews Openly Available
			Output	# of Submitted Software Set Peer Reviews Openly Available
			Outcome	# of Accepted Software Set Peer Reviews Openly Available
Publications	Publication Drafting	Generic	Process	# of Publications Being Drafted



			Output	# of Publications Submitted
			Outcome	# of Publications Published
				# of Publications Accessed
				# of Publications Cited
		Open	Process	# of Draft Publications Openly Available
			Output	# of Submitted Publications Openly Available
			Outcome	# of Published Publications Openly Available
		_		# of Openly Available Publications Accessed
		-		# of Openly Available Publications Cited
	Publication Review	Generic	Process	# of Publication Peer Reviews Being Drafted
			Output	# of Publication Peer Reviews Submitted
			Outcome	# of Publication Peer Reviews Accepted
		Open	Process	# of Draft Publication Peer Reviews Openly Available
			Output	# of Submitted Publication Peer Reviews Openly Available
		-	Outcome	# of Accepted Publication Peer Reviews Openly Available
Materials	Materials Development	Generic	Process	# of Material Sets Being Developed
			Output	# of Material Sets Finalised
			Outcome	# of Material Sets Implemented
				# of Material Sets Accessed
				# of Material Sets Cited



			Open	Process	# of Developing Material Sets Openly Available
				Output	# of Finalised Material Sets Openly Available
			-	Outcome	# of Implemented Material Sets Openly Available
			-		# of Openly Available Material Sets Accessed
			-		# of Openly Available Material Sets Cited
Education	Courses	Course Development	Generic	Process	# of Courses Being Developed
				Output	# of Courses Finalised
				Outcome	# of Courses Implemented
			Open	Process	# of Open Science Courses Being Developed
			-		# of Developing Courses Openly Available
			-	Output	# of Open Science Courses Finalised
			-		# of Finalised Courses Openly Available
			-	Outcome	# of Open Science Courses Implemented
			-		# of Implemented Courses Openly Available
	Resources	Resource Development	Generic	Process	# of Resources Being Developed
				Output	# of Resources Finalised
				Outcome	# of Resources Implemented
					# of Resources Accessed
					# of Resources Cited
			Open	Process	# of Open Science Resources Being Developed



				# of Developing Deservess Openhy Available
				# of Developing Resources Openiy Available
		_	Output	# of Open Science Resources Finalised
		-		# of Finalised Resources Openly Available
		-	Outcome	# of Open Science Resources Implemented
				# of Implemented Resources Openly Available
Teaching	Student Teaching	Generic	Process	# of Course Hours Assigned
			Output	# of Course Hours Taught
			Outcome	# of Students Passed in Courses
		Open	Process	# of Open Science Course Hours Assigned
			Output	# of Open Science Course Hours Taught
		-	Outcome	# of Students Passed in Open Science Courses
		-		# of Students Passed in Openly Available Courses
 Supervision	Student Supervision	Generic	Process	# of Students Being Supervised
			Output	# of Students Supervised
			Outcome	# of Supervised Student Theses
				# of Supervised Students Graduated
		Open	Process	# of Students Being Supervised in Open Science
			Output	# of Students Supervised in Open Science
			Outcome	# of Supervised Student Theses Openly Available
				# of Supervised Students in Open Science Graduated



	Skills	Skills Development	Generic	Process	# of Skills Courses Being Followed
				Output	# of Skills Courses Completed
				Outcome	# of Skills Certificates Obtained
			Open	Process	# of Open Science Skills Courses Being Followed
				Output	# of Open Science Skills Courses Completed
				Outcome	# of Open Science Skills Certificates Obtained
Leadership	People	Staff Supervision	Generic	Process	# of Staff Being Supervised
				Output	# of Staff Supervised
				Outcome	# of Supervised Staff Theses
					# of Supervised Staff Projects
			Open	Process	# of Staff Being Supervised in Open Science
			-	Output	# of Staff Supervised in Open Science
			-	Outcome	# of Supervised Staff Theses Openly Available
					# of Supervised Staff Projects involving Open Science
	Projects	Project Management	Generic	Process	# of Projects Being Managed
				Output	# of Projects Completed
				Outcome	# of Projects Successfully Evaluated
			Open	Process	# of Projects involving Open Science Being Managed
				Output	# of Projects involving Open Science Completed
				Outcome	# of Projects involving Open Science Successfully Evaluated



	Organisation	Unit Management	Generic	Process	# Unit Management Positions Assigned
				Output	# Unit Management Positions Completed
					# of Agreed Unit Management Outputs
				Outcome	# of Agreed Unit Management Outcomes
			Open	Process	# Unit Management Positions in Open Science Assigned
				Output	# Unit Management Positions in Open Science Completed
					# of Agreed Unit Management Outputs involving Open Science
				Outcome	# of Agreed Unit Management Outcomes involving Open Science
	Recognition	Expert Positions	Generic	Process	# of Expert Positions Assigned
				Output	# of Expert Positions Completed
					# of Expert Position Outputs
				Outcome	# of Expert Position Outcomes
					# of Expert Achievement Awards
			Open	Process	# of Expert Positions in Open Science Assigned
				Output	# of Expert Positions in Open Science Completed
					# of Open Science Expert Position Outputs
					# of Expert Position Outputs Openly Available
				Outcome	# of Expert Position Outcomes Openly Available
					# of Expert Achievement Awards for Open Science
Valorisation	Communication	Public Writing	Generic	Process	# of Publications Being Drafted



			Output	# of Publications Published
			Outcome	# of Publications Accessed
				# of Publications Cited
		Open	Process	# of Draft Publications Openly Available
			Output	# of Published Publications Openly Available
		-	Outcome	# of Openly Available Publications Accessed
		-		# of Openly Available Publications Cited
	Public Speaking	Generic	Process	# of Appearances Planned
			Output	# of Appearances Made
			Outcome	# of Appearances Accessed
				# of Appearances Cited
		Open	Process	# of Appearances on Open Science Planned
			Output	# of Appearances on Open Science Given
			Outcome	# of Appearances on Open Science Accessed
		-		# of Appearances on Open Science Cited
				# of Appearances Openly Available
Engagement	Intersectoral Engagement	Generic	Process	# of Intersectoral Engagements
			Output	# of Intersectoral Outputs
			Outcome	# of Intersectoral Outcomes
				# of Organisations Engaged



		Open	Process	# of Intersectoral Engagements involving Open Science
		-	Output	# of Intersectoral Outputs involving Open Science
		-	Outcome	# of Intersectoral Outcomes involving Open Science
		-		# of Organisations Engaged for Open Science
	Citizen Engagement	Generic	Process	# of Citizen Science Activities Ongoing
			Output	# of Citizen Science Activities Completed
				# of Citizen Science Outputs
			Outcome	# of Citizen Science Outcomes
				# of Citizen Scientists Engaged
		Open	Process	# of Citizen Science Activities involving Open Science Ongoing
		-	Output	# of Citizen Science Activities involving Open Science Completed
		-		# of Citizen Science Outputs involving Open Science
		-	Outcome	# of Citizen Science Outcomes involving Open Science
				# of Citizen Scientists Engaged in Open Science
Innovation	Research Exploitation	Generic	Process	# of Research Outputs Being Legalised
			Output	# of Research Outputs with Defined IPR
				# of Research Outputs Patented
			Outcome	# of Research Outputs with Licenses
		Open	Process	# of Openly Available Research Outputs Being Legalised
			Output	# of Openly Available Research Outputs with Defined IPR



			# of Openly Available Research Outputs Patented
		Outcome	# of Research Outputs with Open Licenses
Entrepreneurial Spirit	Generic	Process	# of Spin-offs/Start-ups Being Created
		Output	# of Spin-offs/Start-ups Created
		Outcome	# of Spin-off/Start-up Employees
			# of Spin-off/Start-up Products
			# of Spin-off/Start-up Services
	Open	Process	# of Open Science Spin-offs/Start-ups Being Created
		Output	# of Open Science Spin-offs/Start-ups Created
		Outcome	# of Open Science Spin-off/Start-up Employees
			# of Open Science Spin-off/Start-up Products
			# of Open Science Spin-off/Start-up Services

