

# **The evolution of Responsible Research and Innovation in Europe: The MoRRI indicators report**

Monitoring Report

Annex

*Pre-publication version (February 2018)*

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## **APPENDIX 1: RRI DIMENSIONS IN MEMBER STATES – A**

### **SCORECARD APPROACH**

In this final section, we aimed to apply a scorecard approach to the used RRI indicators and identify thus relative strengths and weaknesses by indicator for each country (see the Tables below).

The scorecard methodology for assigning 'performance' scores for each indicator is rather straightforward by using the distribution of the countries' scores to assign a score being above, close to, or below average performance:

- Above average performance is obtained when the indicator score is among the highest 33% of the observed scores for all countries;
- Close to average performance is obtained when the indicator score is among the middle 33% of the observed scores for all countries;
- Below average performance is obtained when the indicator score is among the lowest 33% of the observed scores for all countries.

The performance is shown as traffic lights: above-average performance is indicated with a green dot, close-to-average performance with a yellow one, and below-average with a red dot. The methodology makes sure that there is an equal distribution of green, yellow and red dots for each indicator.

The scorecard shows the relative strengths and weaknesses for each country compared to the other countries. The user should bear in mind that the nature of the indicators differs - some indicators refer to statistical data and other indicators are based on opinion-based data. Also, data gaps lead rather often to 'blanks', which does not indicate that the country does not have anything relevant in the given indicator but rather, that information was not available for all countries.

The scorecards are useful to identify individual dimensions where relative performance could be improved.

Figure 1 RRI scorecard - Gender Equality

Indicator	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK
GE1: Share of RPOs with gender equality plans	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GE2.1: Share of female researchers by sector - all sectors	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GE2.2: Share of female researchers - business enterprise sector	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GE2.3: Share of female researchers - government sector	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GE2.4: Share of female researchers -higher education	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GE3: Share of RPOs promoting gender content in research	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GE4.1: Dissimilarity index: Higher education sector	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GE4.2: Dissimilarity index: Government sector	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GE5: Share of RPOs with policies to promote gender in research content	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GE6: Glass ceiling index	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GE7.1: Gender wage gap - academic professions	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GE7.2: Gender wage gap - technicians and associate professionals	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GE8: Share of female heads of RPOs	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GE9: Share of gender-balanced recruitment committees	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GE10: Share of female authors and inventors	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Figure 2 RRI scorecard - Science Literacy and Science Education

Indicator	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK
SLSE1: Importance of societal aspects of science in science curricula for 15-16 year-old students	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SLSE2: RRI related training at HEIs	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SLSE3: Science communication Culture	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SLSE4.1: Organisational memberships in ECSA	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
SLSE4.2: Citizen science publications	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Figure 3 RRI scorecard - Public engagement

Indicator	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK
PE1: Models of public involvement in S&T decision making	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
PE2: Policy-oriented engagement with science	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
PE3: Citizen preferences for active participation in S&T decision making	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
PE4: Active information search about controversial technologies	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
PE5: Public engagement performance mechanisms at the level of RPOs	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
PE7: Embedment of public engagement activities in the funding structure of key public research funding agencies	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
PE8: Public engagement elements as evaluative criteria in research proposal evaluations	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
PE9: Research and innovation democratisation index	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
PE10: National infrastructure for involvement of citizens and societal actors in research and innovation	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Figure 4 RRI scorecard - Ethics

Indicator	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK
E1a: Ethics at the level of RPOs - Ethics committees	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
E1a: Ethics at the level of RPOs - Research Integrity offices	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
E1b: Ethics at the level of HEI (Composite)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
E1b: Ethics at the level of PRO (Composite)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
E2: National ethics committees index				●	●			●	●	●		●	●		●				●	●						●	●	●
E3a: Research funding organisations index	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
E3b: Research funding organisations index (Composite)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Figure 5 RRI scorecard - Open Access

Indicator	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK
OA1.1: Share of Open Access publications	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
OA1.2: Citation scores for OA publications	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
OA4: Public perception of Open Access	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
OA5: Funder mandates	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
OA6: Research performing organisations' support structures for researchers as regards incentives and barriers for data sharing	●		●	●	●	●	●	●	●	●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Figure 6 RRI scorecard - Governance

Indicator	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	UK
GOV1: Use of science in policy-making	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GOV2: RRI-related governance mechanisms within research funding and performing organisations	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
GOV3: RRI-related governance mechanisms within research funding and performing organisations	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

## APPENDIX 2: INDICATOR FICHES

Appendix 2 provides a detailed description of each of the final RRI indicators of the report in a tailored indicator fiche. The purpose of describing each indicator in a more synthetic and schematic way is to provide clear, specified, transparent and homogenous indicator descriptions that will help to ensure the best possible starting point for future replicability of the indicators. The fiches are divided into three blocks of information:

- **Indicator Characteristics:** Provides the main general information on the indicator. This is inspired from the indicator fiches of the report “Metrics and indicators of Responsible Research and Innovation” (D3.2).
- **Data collection specifications:** Provides detailed information on the process, from collecting the data to building the indicator.
- **Assessment of RRI indicators:** Using a colour code system (Green, Yellow, Red) it provides for each indicator an assessment on the basis of three criteria.
  - **Availability of data:** Gives an indication on the data’s availability in terms of country coverage.
  - **Statistical Robustness:** When opportune, a series of statistical tests (validation procedure) have been conducted to assess the indicators robustness. A detailed description on the nature and purpose of the tests is given below.
  - **Feasibility/Replicability:** It provides an interpretation on the degree of replicability of the indicator. Regarding the complexity to obtain the data and to construct the indicator.

### *Short note on the validation procedure*

In order to investigate the properties of the MoRRI indicators, a validation procedure was developed and implemented for the indicators. A first step concerns the general quality of the survey questions on which the indicators are based. Very high item non-response suggests that questions were very difficult to understand or to answer, thus raising questions on data reliability. In such cases, indicators were suggested for removal.

Additional tests were applied that sought to examine the following questions:

- **Is the indicator internally consistent?** This issue is only relevant for composite indicators. While we expect each subpart of a composite indicator to measure different aspects, they should all relate the same theme and thus be positively correlated. A simple statistic of internal consistency is Cronbach’s Alpha. A simple rule is that a value greater than 0.7 suggests internal consistency. Slightly lower values (0.55-0.70) were flagged, but not considered problematic. Much lower values were considered to be problematic and provide an indication that alternative specifications should be considered.
- **For composite indicators with alpha values of less than 0.70, alternative specifications were considered.** These alternatives were used to examine the robustness of the indicators, i.e. do slight changes to the indicator specifications result in changes in country rankings? As a simple test, we calculated the number of countries that change five or more spots in rankings when alternatives are used. If a large number of countries change greatly, then the indicator is not considered robust.
- **An additional issue is to what extent country differences can be considered to be substantial.** For survey data, this depends to a large degree on the variance within country responses compared to the variance between countries. Knowledge of this can be important for interpretation of differences in country rankings. We calculate and report a simple measure, intra-class correlations (defined as the share of total variance that is between-country as opposed to within-country). Low values for intra-



class correlations indicate that variance within country is high compared to between countries, which suggests that small differences in values between countries are likely not statistically significant.

These validation checks have primarily been conducted on indicators based on primary data, though, where possible, they were also conducted on secondary data. In some cases, for simple indicators where there was no obvious alternative specification to measure the same conceptual indicator, no validation tests were conducted. In order to ease presentation, the validation results are also colour-coded.

- Green is given for simple and conceptually sound indicators where now equivalent alternative is available or for composite indicators with high internal consistency (alpha greater than 0.7).
- Yellow is given for cases where internal consistency is slightly below desired levels and where intra-class correlation is low. For these cases, our assessment is that the quality of these indicators is acceptable for presentation and use, but perhaps can be further improved in future data collection.
- Red colour is given to cases that were found to be problematic and where the indicator was either revised or dropped.

The following table presents an overview of the results obtained of this exercise for each indicator.

Indicator	Availability of data	Statistical robustness	Feasibility/ Replicability
GE1			
GE2		<i>no validation conducted</i>	
GE3			
GE4		<i>no validation conducted</i>	
GE5			
GE6		<i>no validation conducted</i>	
GE7		<i>no validation conducted</i>	
GE8			
GE9			
GE10		<i>no validation conducted</i>	
SLSE1		<i>no validation conducted</i>	
SLSE2			
SLSE3		<i>no validation conducted</i>	
SLSE4			
PE1		<i>no validation conducted</i>	
PE2			
PE3			
PE4			
PE5			
PE6 (DROPPED)		-	
PE7			
PE8			
PE9			
PE10			
OA1			
OA2 (DROPPED)		-	
OA3			
OA4			
OA5		<i>no validation conducted</i>	
OA6			
E1a			
E1b			
E2		<i>no validation conducted</i>	
E3a			
E3b			
GOV1		<i>no validation conducted</i>	
GOV2			
GOV3			

## 1 Gender equality

Information item	GE1
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Share of RPOs (HEI and PRO) with gender equality plans</b>
<b>Primary/secondary data</b>	Primary data (from survey)
<b>Description</b>	GE1 measures institutional engagement in gender equality work. The existence of a gender equality plan (GEP) indicates institutionalised activities for gender equality. A GEP is a consistent set of provisions and actions aimed at ensuring gender equality.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	HEI survey (conducted in 2016) PRO survey (conducted in 2017)
<b>Time-series</b>	No. Survey conducted once, for years 2014, 2015 and 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	RPOs / Countries
<b>Coverage</b>	Sample of the HEI and PRO population of each EU-28 Member State
<b>Data collection specifications</b>	
<b>Data collection</b>	Indicator built from Question n°19 of HEI and PRO surveys, namely: "Does your organisation have a gender equality plan?" <i>See Appendix 3 (survey questionnaires)</i>
<b>Indicator building</b>	Country scores are the average of the individual scores of each organisation. The score is given by: Yes = 1pt No / Not Applicable = 0 pt <i>*Don't Know = not considered</i>  Country scores range from 0 to 1
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	HEI survey: Data collected for all EU-28 countries with diverging response rates. No responses for Luxembourg. PRO survey: Data collected for all EU-28 countries, with diverging response rates. No responses for Estonia and Luxembourg <i>See Appendix 4 and 5 with specific response rates</i>
<b>Statistical robustness</b>	Simple, straightforward indicator, no obvious alternatives. Indicator of gender equality plans may not fully function as indicator of efforts in general to promote GE in HEIs (large variation in country results). Intraclass: 0.47 (indicates high share of variation is between country)
<b>Feasibility / Replicability</b>	Simple indicator with high degree of replicability
<b>Comments/caveats</b>	To avoid survey fatigue and allow to better capture institutional changes over time, it is recommended to replicate this indicator with a frequency of minimum 3 years.

Information item	GE2
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Share of female researchers by sector</b>
<b>Primary/secondary data</b>	Indicator is based on secondary (already existing) data
<b>Description</b>	Share of female researchers by sector is a base calculation of the gender distribution of researchers currently in the labour force. The indicator is available for each of the higher education, government and business sectors at the national level. The availability of sector specific data will allow for an appreciation of changes in women's participation in research in these various sectors. This enables the monitoring of expanding and declining opportunity for women.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	Eurostat: Statistics on research and development (rd_p_femres)
<b>Time-series</b>	Most countries biennial – but data availability differs according to countries
<b>Unit of measure</b>	Metric – share of female researchers
<b>Unit of analysis</b>	Countries
<b>Coverage</b>	EU-28 Member States
<b>Data collection specifications</b>	
<b>Data collection</b>	Data extracted from Eurostat "Statistics on research and development (rd_p_femres)". Data presented in full-time equivalent (FTE) form.
<b>Indicator building</b>	-
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Very good availability. Data missing for Finland and the UK
<b>Statistical robustness</b>	<i>Indicator from She Figures (no validation conducted).</i>
<b>Feasibility / Replicability</b>	Simple indicator with high degree of replicability
<b>Comments/caveats</b>	-

Information item	GE3
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Share of RFOs promoting gender content in research</b>
<b>Primary/secondary data</b>	Primary data (from survey)
<b>Description</b>	The share of RFOs promoting gender content in research measures the extent to which RFOs take actions to ensure the integration of the gender dimension in research content. This indicator illustrates the integration of gender as part of research design and the research process. It entails sex and gender analysis being integrating into basic and applied research proposals and/or assessments when allocating research and development funding.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	RFO survey (conducted in 2016)
<b>Time-series</b>	No. Survey conducted once, for years 2014, 2015 and 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	RFOs / Countries
<b>Coverage</b>	Sample of the RFO population of each EU-28 Member State
<b>Data collection specifications</b>	
<b>Data collection</b>	Indicator built from Question n°19 of RFO survey, namely: "When allocating research and innovation funding in years 2014, 2015 and 2016, did your organisation include the gender dimension in research content?" <i>See Appendix 3 (survey questionnaires)</i>
<b>Indicator building</b>	Country scores are the average of the individual scores of each organisation. The score is given by: Yes, standard criterion = 1 Yes, specific criterion = 0.5 No/ Not App = 0 <i>*Don't Know = not considered</i>  Country scores range from 0 to 1
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	RFO survey: Data collected for all EU-28 countries with diverging response rates. No responses for Luxembourg and Latvia. <i>See Appendix 4 and 5 with specific response rates</i>
<b>Statistical robustness</b>	Possible alternative: binary indicator (yes=1, no=0). No country changes 5 or more spots in ranking for this alternative. Intraclass: 0.42 (indicates high share of variation is between country)
<b>Feasibility / Replicability</b>	Simple indicator with high degree of replicability
<b>Comments/caveats</b>	To avoid survey fatigue and allow to better capture institutional changes over time, it is recommended to replicate this indicator with a frequency of minimum 3 years.

Information item	GE4
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Dissimilarity index</b>
<b>Primary/secondary data</b>	Secondary (already existing) data
<b>Description</b>	The Dissimilarity Index provides a theoretical measurement of the percentage of women and men who would have to move to another field of science to ensure a gender balanced distribution across fields. It measures the distance from balanced gender distribution across fields for horizontal segregation in research.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	SHE FIGURES
<b>Time-series</b>	All 3 years (at least up to now)
<b>Unit of measure</b>	Metric – share of men and women for the distance of balanced gender distribution across fields (interval)
<b>Unit of analysis</b>	Countries
<b>Coverage</b>	EU-27
<b>Data collection specifications</b>	
<b>Data collection</b>	Based on EUROSTAT data (rd_p_perisci), seven fields are used as basis for this computed indicator.
<b>Indicator building</b>	Details are not provided in the methodology of the SHE Figures
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Very good availability. Data missing for France
<b>Statistical robustness</b>	<i>Secondary data, no validation conducted.</i>
<b>Feasibility / Replicability</b>	Simple indicator with high degree of replicability
<b>Comments/caveats</b>	

Information item	GE5
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Share of RPOs (HEI and PRO) with policies to promote gender in research content</b>
<b>Primary/secondary data</b>	Primary data (from survey)
<b>Description</b>	GE5 investigates the extent RPOs take actions to ensure the integration of the gender dimension in research content. This indicator focuses on the integration of the gender dimension in research programmes and projects.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	HEI survey (conducted in 2016) PRO survey (conducted in 2017)
<b>Time-series</b>	No. Survey conducted once, for years 2014, 2015 and 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	RPOs / Countries
<b>Coverage</b>	Sample of the HEI and PRO population of each EU-28 Member State
<b>Data collection specifications</b>	
<b>Data collection</b>	Indicator built from Question n°20 of HEI and PRO surveys, namely: "Does your organisation have implemented processes to promote the integration of a gender dimension in research and innovation content of projects and studies, for example information and qualification tools or concrete rewards and incentives?" <i>See Appendix 3 (survey questionnaires)</i>
<b>Indicator building</b>	Country scores are the average of the individual scores of each organisation. The score is given by: Yes = 1pt No / Not Applicable = 0 pt <i>*Don't Know = not considered</i>  Country scores range from 0 to 1
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	HEI survey: Data collected for all EU-28 countries with diverging response rates. No responses for Luxembourg. PRO survey: Data collected for all EU-28 countries, with diverging response rates. No responses for Estonia and Luxembourg <i>See Appendix 4 and 5 with specific response rates</i>
<b>Statistical robustness</b>	<i>Simple straightforward indicator, no obvious alternative specifications. No validation conducted.</i>
<b>Feasibility / Replicability</b>	Simple indicator with high degree of replicability
<b>Comments/caveats</b>	To avoid survey fatigue and allow to better capture institutional changes over time, it is recommended to replicate this indicator with a frequency of minimum 3 years. it complements the newly developed indicator for the SHE Figures 2015 on

Information item	GE6
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Glass ceiling index</b>
<b>Primary/secondary data</b>	Secondary data
<b>Description</b>	The Glass Ceiling Index measures women's chances of reaching the highest academic ranks relative to men's chances. It illustrates the difficulties women have to reach the highest organisational levels within RPOs. The proportion of women at academic levels A, B and C can be compared with the proportion of men at these levels. The share of women in Grade A as a comparison to the share of women in academia overall can be compared with the results for men. These data cover the higher education sector at the national level.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	SHE FIGURES
<b>Time-series</b>	All 3 years (at least up to now)
<b>Unit of measure</b>	Metric – share of women in grade A in relation to share of women in academia (interval)
<b>Unit of analysis</b>	Countries
<b>Coverage</b>	EU-28
<b>Data collection specifications</b>	
<b>Data collection</b>	Data extracted from SHE FIGURES
<b>Indicator building</b>	-
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Very good availability.
<b>Statistical robustness</b>	<i>Secondary data, no validation conducted.</i>
<b>Feasibility / Replicability</b>	Simple indicator with high degree of replicability
<b>Comments/caveats</b>	

Information item	GE7
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Gender wage gap</b>
<b>Primary/secondary data</b>	Secondary data
<b>Description</b>	The gender wage gap indicator measures gender variations with respect to annual and hourly earnings, and is used as a proxy for gender equality in the academic as well as the non-academic research sector.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	Eurostat ISCO-08 code 2 and 3 – Academic Profession, Technicians and Associate Professionals
<b>Time-series</b>	Yes
<b>Unit of measure</b>	Metric – difference in gross annual earnings between women and men in relation to male gross annual earnings (interval)
<b>Unit of analysis</b>	Countries
<b>Coverage</b>	EU-28
<b>Data collection specifications</b>	
<b>Data collection</b>	Data extracted from Eurostat. Data presented for “Academic Professions” and for “Technicians and associate professions”. The Gender wage gap is given by the average hourly remuneration.
<b>Indicator building</b>	-
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Very good availability.
<b>Statistical robustness</b>	<i>Secondary data, no validation conducted.</i>
<b>Feasibility / Replicability</b>	Simple indicator with high degree of replicability
<b>Comments/caveats</b>	-



Information item	GE8
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Share of female heads of RPOs (HEI and PRO)</b>
<b>Primary/secondary data</b>	Primary data (from survey)
<b>Description</b>	The share of female heads of research performing organisations captures the share of those headed by women. It can be interpreted as an indicator of gender balance in decision making and, therefore, the structural setting for gender equality
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	HEI survey (conducted in 2016) PRO survey (conducted in 2017)
<b>Time-series</b>	No. Survey conducted once, for years 2014, 2015 and 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	RPOs / Countries
<b>Coverage</b>	Sample of the HEI and PRO population of each EU-28 Member State
<b>Data collection specifications</b>	
<b>Data collection</b>	Indicator built from Question n°22 of HEI and PRO surveys, namely: "Please specify the gender of the person who was/is head of your organisation in 2014, 2015 and 2016 (Head of organisation: highest decision-making official in the organisation (e.g. rector or equivalent in the academy, president or equivalent in non-academic research organisations))" <i>See Appendix 3 (survey questionnaires)</i>
<b>Indicator building</b>	Country scores are the average of the individual scores of each organisation. The score is given by: Male=0 Female=1  Country scores range from 0 to 1
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	HEI survey: Data collected for all EU-28 countries with diverging response rates. No responses for Luxembourg. PRO survey: Data collected for all EU-28 countries, with diverging response rates. No responses for Estonia and Luxembourg <i>See Appendix 4 and 5 with specific response rates</i>
<b>Statistical robustness</b>	<i>Simple straightforward indicator, no obvious alternative specifications. No validation conducted.</i>
<b>Feasibility / Replicability</b>	Simple indicator with high degree of replicability
<b>Comments/caveats</b>	To avoid survey fatigue and allow to better capture institutional changes over time, it is recommended to replicate this indicator with a frequency of minimum 3 years.

Information item	GE9
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Share of gender-balanced recruitment committees at RPOs (HEI and PRO)</b>
<b>Primary/secondary data</b>	Primary data (from survey)
<b>Description</b>	This indicator monitors female participation in decision making. The indicator captures the share of recruitment committees for internationally recognised researchers which are gender balanced. It can be interpreted as an indicator of the gender balance of the decision-making process.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	HEI survey (conducted in 2016) PRO survey (conducted in 2017)
<b>Time-series</b>	No. Survey conducted once, for years 2014, 2015 and 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	RPOs / Countries
<b>Coverage</b>	Sample of the HEI and PRO population of each EU-28 Member State
<b>Data collection specifications</b>	
<b>Data collection</b>	Indicator built from Question n°23 and 24 of HEI and PRO surveys, namely: Q°23: "How many recruitment committees for leading researcher positions did your organisation set up in 2014, 2015 and 2016 for the recruitment of researchers? Q°24: "In how many recruitment committees for leading researcher positions the share of female members was equal or higher than 40% of the total committee members? <i>See Appendix 3 (survey questionnaires)</i>
<b>Indicator building</b>	The indicator is calculated as the share from "the number of recruitment committees where the share of female was equal or higher than 40% of the total committee members" (Question 24) divided by the "Total number of recruitment committees for leading researchers set up by the organisation" (Question 23)  Country scores are the average of the individual scores of each organisation. Country scores range from 0 to 1
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	HEI survey: Data collected for all EU-28 countries with diverging response rates. No responses for Luxembourg. PRO survey: Data collected for all EU-28 countries, with diverging response rates. No responses for Estonia and Luxembourg <i>See Appendix 4 and 5 with specific response rates</i>
<b>Statistical robustness</b>	<i>Simple straightforward indicator, no obvious alternative specifications. No validation conducted.</i>
<b>Feasibility / Replicability</b>	Simple indicator with high degree of replicability
<b>Comments/caveats</b>	To avoid survey fatigue and allow to better capture institutional changes over time, it is recommended to replicate this indicator with a frequency of minimum 3 years.

Information item	GE10
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Share of female inventors and authors</b>
<b>Primary/secondary data</b>	Indicator is based on register data (Databases), but own compilation and analysis is necessary.
<b>Description</b>	Number and share of female inventors and authors illuminates developments in women's representation across fields and sectors over time, on the basis of bibliometric data and patent counts. It captures both the number and share of female authors on scientific publications by scientific discipline, and the number and share of female inventors on patents by sector of activity.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	Scopus (for authors) PATSTAT (for patents)
<b>Time-series</b>	Yes
<b>Unit of measure</b>	Metric – share of female inventors and authors (interval)
<b>Unit of analysis</b>	Inventors in patent applications and authors of publications
<b>Coverage</b>	EU-28
<b>Data collection specifications</b>	
<b>Data collection</b>	<i>Data about publications (articles, letters, notes and reviews) and authors are extracted from Scopus (years 2005-16), data about transnational patents applications and inventors are extracted from PATSTAT (years 2005-15). Gender information is added by applying a gender identification method based on forenames.</i>
<b>Indicator building</b>	The indicator uses fractional counting of the publications and patents. By this, each publication/patent is weighted according to the relative share of a country and a gender. The share of publications/patents with a female author/inventor is computed in relation to the number of all publications/patents of a country.
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Very good availability.
<b>Statistical robustness</b>	<i>Secondary data, no validation conducted.</i>
<b>Feasibility / Replicability</b>	Simple indicator with high degree of replicability
<b>Comments/caveats</b>	Patents for the year 2016 not available. Publication follows after expiry of 18 months period from the date of filing or the earliest priority date.

## 2 Science literacy and science education

Information item	SLSE1
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Importance of societal aspects of science in science curricula for 15-18 year-old students</b>
<b>Primary/secondary data</b>	Primary data (from desk research)
<b>Description</b>	SLSE1 looks at controversial science topics and their coverage in the curricula of 15 to 18-year-old students. This indicator specifically looks at two controversial science topics, genetically modified organisms (GMO) and nuclear energy. It records whether social, economic, environmental and ethical aspects are taught and discussed in relation to these two controversial topics
<b>Qual / Quant</b>	Qualitative
<b>Source of data</b>	Desk research and interviews, conducted by network of country correspondents
<b>Time-series</b>	No
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	Country (if due to the education system structure the unit of analysis is on the sub-country i.e. regional level, then the choice is made in cooperation with the project team)
<b>Coverage</b>	EU-28
<b>Data collection specifications</b>	
<b>Data collection</b>	<p>A qualitative assessment has been written based on the responses to the following questions.</p> <ol style="list-style-type: none"> <li>Does the curriculum address the controversial character of either one of the two topics? "yes" "no"</li> <li>Which of the following issues is addressed by the curriculum in relation to the controversial topic (GMO, nuclear energy)? <ol style="list-style-type: none"> <li>social aspects, such as consequences for the society or agriculture</li> <li>environmental aspects, such as the effects of monocultures or resistances, atomic waste storage etc.</li> <li>ethical aspects, such as development issues like the „golden rice“, intergenerational fairness etc.</li> </ol> </li> <li>To what degree are they covered? Are they important aspects of the topic or only mentioned in passing? Please briefly explain the reasons for your assessment.</li> </ol>
<b>Indicator building</b>	<p>The indicator is built following qualitative assessment based on the responses to the addressed questions. 1 point is given to each response where the answer is "Yes" (for questions 1 to 2c), and an additional point is given if the answer to question 3 is "These aspects are covered substantially".</p> <p>The country scores range from 0 to 5.</p>
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Good availability. More difficult to collect in countries where the educational structure is decentralised (e.g. Belgium, United Kingdom, Germany). Data not collected for Germany
<b>Statistical robustness</b>	<i>No validation conducted</i>
<b>Feasibility / Replicability</b>	It requires the mobilisation of a network of country correspondents to conduct the desk research at country level. Not possible to conduct centrally.
<b>Comments/caveats</b>	

Information item	SLSE2
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>RRI-related training at HEIs</b>
<b>Primary/secondary data</b>	Primary data (from survey)
<b>Description</b>	SLSE2 provides information to what extent RRI-related aspects such as ethical, economic, environmental, legal and social aspects (EEELSA) are part of the education of young researchers.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	HEI survey (conducted in 2016)
<b>Time-series</b>	No. Survey conducted once, for years 2014, 2015 and 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	HEIs / Countries
<b>Coverage</b>	Sample of the HEI population of each EU-28 Member State
<b>Data collection specifications</b>	
<b>Data collection</b>	Indicator built from Question n°25 of HEI survey, namely: "Did PhD students' trainings include RRI-related aspects (such as ethical, economic, environmental, legal and social aspects) in 2014, 2015 and 2016?" <i>See Appendix 3 (survey questionnaires)</i>
<b>Indicator building</b>	Country scores are the average of the individual scores of each organisation. The score is given by: Yes (mandatory) = 1pt Yes (voluntary) = 0.5pt No/ Not App = 0pt <i>*Don't Know = not considered</i>  Country scores range from 0 to 1
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	HEI survey: Data collected for all EU-28 countries with diverging response rates. No responses for Luxembourg. <i>See Appendix 4 and 5 with specific response rates</i>
<b>Statistical robustness</b>	Possible alternative: binary indicator (yes==1, no=0). Five countries change 5 or more spots in ranking for this alternative.
<b>Feasibility / Replicability</b>	Simple indicator with high degree of replicability
<b>Comments/caveats</b>	To avoid survey fatigue and allow to better capture institutional changes over time, it is recommended to replicate this indicator with a frequency of minimum 3 years.

Information item	SLSE3
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Science Communication Culture</b>
<b>Primary/secondary data</b>	Secondary
<b>Description</b>	<p>This composite indicator summarizes the overall national science communication culture. It was originally developed for the MASIS project. It builds on six parameters that collectively form a framework for describing the science communication culture of a specific country. These include</p> <ul style="list-style-type: none"> <li>• the degree of institutionalization (e.g. the presence of popular science magazines, regularity of science section in newspapers, dedicated science communication in television etc.),</li> <li>• political attention to the field,</li> <li>• the scale and diversity of actor involvement,</li> <li>• traditions for popularization within academia,</li> <li>• public interest in science and technology,</li> <li>• and finally, the training and organizational characteristics of science journalism in the country.</li> </ul>
<b>Qual / Quant</b>	Qualitative
<b>Source of data</b>	Data from the MASIS project, specifically the publication Mejlgard et al (2012), Locating science in society across Europe: Clusters and conferences, Science and Public Policy 39, pp. 741-750
<b>Time-series</b>	No.
<b>Unit of measure</b>	Ordinal
<b>Unit of analysis</b>	Countries
<b>Coverage</b>	EU-28
<b>Data collection specifications</b>	
<b>Data collection</b>	Data collection is based on country reports produced by a network of national experts, following a common guideline and template.
<b>Indicator building</b>	Categorisations based on qualitative assessment of data according to the six parameters listed above.
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Good availability of data
<b>Statistical robustness</b>	Secondary data, no validation conducted
<b>Feasibility / Replicability</b>	The indicator is feasible as a one-off source. In order to recollect data across countries, a setup similar to the MASIS project would be required. This involves national experts conducting desk research and interviews in their respective countries. The guidelines from the MASIS project could be adopted.
<b>Comments/caveats</b>	

Information item	SLSE4
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Citizen science activities in RPOs</b>
<b>Primary/secondary data</b>	Primary
<b>Description</b>	SLSE4 captures if research performing organisations are engaged in citizen science in projects or through scientific publications about it. Since the indicator basis concerns rather small numbers, the indicator is presented in absolute numbers for the two aspects, namely: <ol style="list-style-type: none"> <li>1. Number of member organisations in the European Citizen Science Association (ECSA), and</li> <li>2. The number of scientific publications concerning 'citizen science'.</li> </ol>
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	ECSA, annual reports Bibliometric data: Scopus
<b>Time-series</b>	2015, 2016. Updates depending on ECSA annual overview
<b>Unit of measure</b>	Absolut figures
<b>Unit of analysis</b>	Countries
<b>Coverage</b>	EU-28
<b>Data collection specifications</b>	
<b>Data collection</b>	<ol style="list-style-type: none"> <li>1. From ECSA annual report, we collected the number of members by country in the ECSA (2015 and 2016)</li> <li>2. Using Scopus, we collected the number of "citizen science" publications per country 2015 and 2016</li> </ol>
<b>Indicator building</b>	The indicator consists of two components: <ol style="list-style-type: none"> <li>a. The number of members by country in the ECSA</li> <li>b. The number of "citizen science" publications per country</li> </ol>
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Good availability for publications. ECSA annual membership breakdown can be obtained.
<b>Statistical robustness</b>	<i>No validation conducted. However, membership-based data tends to have several biases such as host country bias, organisational bias, etc. Statistical robustness questionable since in many countries only one or two members.</i>
<b>Feasibility / Replicability</b>	Requires access to the ECSA reports and contact with the association to double check data. Overall the feasibility is good.
<b>Comments/caveats</b>	Membership-based data is biased and thus the data basis for the indicator suggests a limited level of relevant information on the subject matter.

### 3 Public engagement

Information item	PE1
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Models of public involvement in S&amp;T decision making</b>
<b>Primary/secondary data</b>	Secondary
<b>Description</b>	Models of public involvement in S&T decision making is a two-dimensional indicator. On one dimension is the degree of formalisation of structures and mechanisms, at the national level, for the involvement of citizens in decisions about science and technology. On the second dimension is the degree to which citizens are involved in making decisions. The two dimensions are considered to reflect the degree of overall democratization of science and technology decision-making. On the basis of these two dimensions, countries are grouped into a four-category typology.
<b>Qual / Quant</b>	Qualitative
<b>Source of data</b>	Indicator presented in Mejlgaard et al (2012): 'Locating Science in Society across Europe – Clusters and Consequences', in <i>Science and Public Policy</i> 39(6): 741-50, p. 746, table 3.
<b>Time-series</b>	No.
<b>Unit of measure</b>	Nominal
<b>Unit of analysis</b>	Countries
<b>Coverage</b>	Coverage includes the EU-28 except Malta
<b>Data collection specifications</b>	
<b>Data collection</b>	Data collection is based on country reports produced by a network of national experts, following a common guideline and template.
<b>Indicator building</b>	Categorisations based on qualitative assessment of data according to the dimensions listed above.
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Existing data cover very well across Europe
<b>Statistical robustness</b>	<i>No validation conducted</i>
<b>Feasibility / Replicability</b>	The indicator is feasible as a one-off source. In order to recollect data across countries, a setup similar to the MASIS project would be required. This involves national experts conducting desk research and interviews in their respective countries. The guidelines from the MASIS project could be adopted.
<b>Comments/caveats</b>	Typology with two dimensions; hence numeric value of indicator has little meaning. Breaking PE1 up into two separate indicators would allow measurement of each individual dimension.



Information item	PE2
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Policy-oriented engagement with science</b>
<b>Primary/secondary data</b>	Secondary
<b>Description</b>	Policy-oriented engagement with science is an individual-level indicator of the reported actual engagement of citizens. It combines three items from the 2010 Eurobarometer on 'Europeans, science and technology': 1) Do you attend public meetings or debates about science and technology? 2) Do you sign petitions or join street demonstrations on matters of nuclear power, biotechnology or the environment? 3) Do you participate in the activities of a non-governmental organisation dealing with science and technology related issues?
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	Eurobarometer 340, wave 73.1 from 2010
<b>Time-series</b>	Only 2 out of the three items applied are time series (data available for 2005), while the third is not.
<b>Unit of measure</b>	Numerical value (average score on index)
<b>Unit of analysis</b>	The basic data unit is individuals, but the indicator is an aggregated measure at country level
<b>Coverage</b>	EU28
<b>Data collection specifications</b>	
<b>Data collection</b>	Data extracted from Eurobarometer
<b>Indicator building</b>	The indicator is calculated as a mean national score aggregated from a representative sample of citizens by country.
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Existing data cover very well across Europe
<b>Statistical robustness</b>	Possible alternative: binary indicator (yes==1, no=0). One country changes 5 or more spots in ranking for this alternative. Cronbach's alpha: 0.58 (close to desired level). Intraclass: 0.02 (very low, indicating that most variation is within country).
<b>Feasibility / Replicability</b>	The indicator is feasible for application. However, continued future data collection would be expensive, unless aligned with the Eurobarometer series work
<b>Comments/caveats</b>	

Information item	PE3
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Citizen preferences for active participation in S&amp;T decision making</b>
<b>Primary/secondary data</b>	Secondary
<b>Description</b>	<p>This indicator is derived from the special Eurobarometer on RRI, which reads: 'What is the level of involvement citizens should have when it comes to decisions made about science and technology?' with the following response categories:</p> <ol style="list-style-type: none"> <li>1. citizens do not need to be involved or informed;</li> <li>2. citizens should only be informed;</li> <li>3. citizens should be consulted and their opinions should be considered;</li> <li>4. citizens should participate and have an active role;</li> <li>5. citizens' opinions should be binding; and</li> <li>6. don't know.</li> </ol> <p>The indicator reports the share of citizens at the national level expressing a preference for active participation.</p>
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	Data are from special Eurobarometer 401
<b>Time-series</b>	No
<b>Unit of measure</b>	Numerical value (share of citizens in a country opting for active participation)
<b>Unit of analysis</b>	The basic data unit is individuals, but the indicator is an aggregated measure at country level
<b>Coverage</b>	EU28
<b>Data collection specifications</b>	
<b>Data collection</b>	Data extracted from Eurobarometer
<b>Indicator building</b>	The indicator is calculated as a mean national score aggregated from a representative sample of citizens by country.
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Existing data cover very well across Europe
<b>Statistical robustness</b>	<i>Simple straightforward indicator, no obvious alternative specifications. No validation conducted.</i>
<b>Feasibility / Replicability</b>	The indicator is feasible for application. However, continued future data collection would be expensive, unless aligned with the Eurobarometer series work
<b>Comments/caveats</b>	

Information item	PE4
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Active information search about controversial technology</b>
<b>Primary/secondary data</b>	Secondary
<b>Description</b>	<p>This indicator is built as a composite measure based on three individual items from the 2010 Eurobarometer on biotechnology. It divides respondents into three categories depending on their responses to background items concerning GM food. The three categories of responses are:</p> <ol style="list-style-type: none"> <li>1. "have heard and talked and/or searched for information";</li> <li>2. "have heard but not talked or searched for information"; and</li> <li>3. "have not heard".</li> </ol> <p>The indicator taps into degrees of active information search, or what could be considered horizontal engagement, around controversial technologies.</p>
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	Eurobarometer 341, wave 73.1 from 2010.
<b>Time-series</b>	No
<b>Unit of measure</b>	Numerical value (share of citizens who have heard and talked and/or searched for information)
<b>Unit of analysis</b>	The basic data unit is individuals, but the indicator is an aggregated measure at country level
<b>Coverage</b>	EU28
<b>Data collection specifications</b>	
<b>Data collection</b>	Data extracted from Eurobarometer
<b>Indicator building</b>	The indicator is calculated as a mean national score aggregated from a representative sample of citizens by country.
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Existing data cover very well across Europe
<b>Statistical robustness</b>	<i>Simple straightforward indicator, no obvious alternative specifications. No validation conducted.</i>
<b>Feasibility / Replicability</b>	The indicator is feasible for application. However, continued future data collection would be expensive, unless aligned with the Eurobarometer series work
<b>Comments/caveats</b>	

Information item	PE5
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Public engagement performance mechanisms at the level of research institutions (HEI and PRO)</b>
<b>Primary/secondary data</b>	Primary data (from survey)
<b>Description</b>	The indicator is based on data collection at the level of universities and public research agencies, which are aggregated to the national level. The indicator reports the level of public engagement mechanisms implemented within universities and research institutions at the country level.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	HEI survey (conducted in 2016) PRO survey (conducted in 2017)
<b>Time-series</b>	No. Survey conducted once, for years 2014, 2015 and 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	RPOs / Countries
<b>Coverage</b>	Sample of the HEI and PRO population of each EU-28 Member State
<b>Data collection specifications</b>	
<b>Data collection</b>	Indicator built from Question n°26 and 27 of HEI (respectively Q°25 and Q°26 of PRO survey), namely: Q°26 (HEI)/Q°25 (PRO): "Which of the following mechanisms does your institution apply in order to interact with citizens and societal stakeholders? Please consider whether there are changes in the practices of your institution over the years by providing answers for 2014, 2015, and 2016 (check those that apply)?" Q°27 (HEI)/Q°26 (PRO): "Which of the following statements come closest to the situation at your research institution? Please consider whether the priorities changed over the years by providing answers for 2014, 2015, and 2016?" <i>See Appendix 3 (survey questionnaires)</i>  <i>*Originally, the indicator also included Q°28 (HEI)/Q°27 (PRO), but this question was dropped as a result of the Validation test - see below</i>
<b>Indicator building</b>	The indicator is a composite made of: a) The country score from the response to Q°26 (1pt per option ticked). Scores ranging from 0 to 14 have been normalised from 0 to 1. b) The country score from the response to Q°27 (1pt per option ticked). Scores ranging from 1 to 3 have been normalised from 0 to 1. Country scores are the average of the individual scores of each organisation. The final indicator is an average between the scores a. and b.
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	HEI survey: Data collected for all EU-28 countries with diverging response rates. No responses for Luxembourg. PRO survey: Data collected for all EU-28 countries, with diverging response rates. No responses for Estonia and Luxembourg <i>See Appendix 4 and 5 with specific response rates</i>
<b>Statistical robustness</b>	Results of validation test for original version of indicator: Possible alternative: reduce Q26 to three levels (bottom 33% = 1; middle 33%=2; top 33%=3) and Q28 to binary indicator. 15 countries change 5 or more spots in ranking for this alternative. Cronbach's alpha = 0.17 (very low). Intraclass=0.06 (very low, indicating that most variation is within country). <b>NOTE: Based on this test, the indicator was revised (description of current version listed above in "Indicator building"). Current version performs well on all measures of robustness.</b> Results of validation test for current version of indicator: Possible alternative: remove Q28. 2 countries change 5 or more spots in ranking for this alternative. Cronbach's alpha = 0.84 (satisfactory). Intraclass=0.03 (very low, indicating that most variation is within country)
<b>Feasibility / Replicability</b>	Composite indicator. Complexity level is moderate.
<b>Comments/caveats</b>	To avoid survey fatigue and allow to better capture institutional changes over time, it is recommended to replicate this indicator with a frequency of minimum 3 years.

Information item	PE6 (DROPPED)
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Dedicated resources for Public Engagement</b>
<b>Primary/secondary data</b>	Primary data (from survey)
<b>Description</b>	The indicator is based on data collection at the level of universities and public research agencies, which will be aggregated to the national level. The indicator reports the national average budget share reserved for Public Engagement activities within universities and research institutions at the country level.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	HEI survey (conducted in 2016) PRO survey (conducted in 2017)
<b>Time-series</b>	No. Survey conducted once, for years 2014, 2015 and 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	RPOs / Countries
<b>Coverage</b>	Sample of the HEI and PRO population of each EU-28 Member State
<b>Data collection specifications</b>	
<b>Data collection</b>	Indicator built from Question n°5 and 29 of HEI and PRO surveys, namely: Q°5: "Please indicate the overall budget of your institution in Euro (€) for the years 2014, 2015, 2016 In case your financial year is spread within two years, please report as follows: 2014/2015 under 2014; 2015/2016 under 2015; 2016/2017 under 2016." Q°29: "Please indicate the institutional budget in Euros for the years 2014, 2015 and 2016 reserved for activities relating to public engagement and outreach programmes such as "open university days", "science festivals", "conferences/lectures aimed at the general public" etc. <i>See Appendix 3 (survey questionnaires)</i>
<b>Indicator building</b>	The indicator is calculated as the share from "the institutional budget in Euros for activities relating to public engagement" (Question 29) divided by the "Overall budget of the institution" (Question 5)  Country scores are the average of the individual scores of each organisation. Country scores range from 0 to 1
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Overall response rate to the specific questions extremely low or answers provided inconsistent. RPOs may not have a clear track of the institutional budget reserved for activities relating to public engagement and outreach programmes. There was not enough data to build a robust indicator.
<b>Statistical robustness</b>	-
<b>Feasibility / Replicability</b>	Indicator is resource demanding, it requires the effort of country correspondents to collect data from RPOs and follow-up by phone to make sure the data provided is consistent and reliable.
<b>Comments/caveats</b>	Most organisations skipped Q°29. When answers were provided, we found there were inconsistent in many cases - a misunderstanding of the question could be the cause - sometimes the budget given in Q29 is higher than the overall HEI budget, which cannot be the case.

Information item	PE7
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Embedment of public engagement activities in the funding structure of key public research funding agencies</b>
<b>Primary/secondary data</b>	Primary data (from survey)
<b>Description</b>	The indicator describes whether a country's largest and most prominent research funding agencies (typically research councils) allocate competitive funding to activities (mechanisms, programs, projects) where public engagement elements explicitly are targeted. These could, e.g., be specific research activities on public engagement, programmes supporting outreach activities etc.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	RFO survey (conducted in 2016)
<b>Time-series</b>	No. Survey conducted once, for years 2014, 2015 and 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	RFOs / Countries
<b>Coverage</b>	Sample of the RFO population of each EU-28 Member State
<b>Data collection specifications</b>	
<b>Data collection</b>	Indicator built from Question n°21 and n°23 of RFO survey, namely: Q°21: "Some research funding organisations contribute to Public Engagement through their funding schemes. Please indicate, if any of the following activities have been supported by targeted funding schemes in your organisation (Please tick all relevant boxes)" Q°23: "Please indicate the extent to which your funding agency has engaged with citizens and societal actors when developing its funding strategies" <i>See Appendix 3 (survey questionnaires)</i>
<b>Indicator building</b>	The indicator is a composite made of: a. The country score from the response to Q°21 (1pt per option ticked; No = 0). Scores ranging from 0 to 3 have been normalised from 0 to 1. b. The country score from the response to Q°23 (Likert scale). Scores ranging from 1 to 5 have been normalised from 0 to 1. The final indicator is an average between the scores a. and b. Country scores range from 0 to 1
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	RFO survey: Data collected for all EU-28 countries with diverging response rates. No responses for Luxembourg and Latvia. <i>See Appendix 4 and 5 with specific response rates</i>
<b>Statistical robustness</b>	Possible alternative: reduce Q23 to binary indicator. One country changes 5 spots or more in ranking for this alternative. Cronbach's alpha=0.55 (close to desired level). Intraclass=0.12 (very low, indicating that most variation is within country).
<b>Feasibility / Replicability</b>	Composite indicator. Complexity is minor.
<b>Comments/caveats</b>	To avoid survey fatigue and allow to better capture institutional changes over time, it is recommended to replicate this indicator with a frequency of minimum 3 years.

Information item	PE8
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Public engagement elements as evaluative criteria in research proposal evaluations</b>
<b>Primary/secondary data</b>	Primary data (from survey)
<b>Description</b>	The indicator describes whether a country's largest and most prominent research funding agencies (typically research councils) take public engagement elements into account for the evaluation of research and innovation projects.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	RFO survey (conducted in 2016)
<b>Time-series</b>	No. Survey conducted once, for years 2014, 2015 and 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	RFOs / Countries
<b>Coverage</b>	Sample of the RFO population of each EU-28 Member State
<b>Data collection specifications</b>	
<b>Data collection</b>	Indicator built from Question n°24 of RFO survey, namely: "Please indicate the extent to which Public Engagement has been a criterion for the appraisal of research applications" <i>See Appendix 3 (survey questionnaires)</i>
<b>Indicator building</b>	Country scores are the average of the individual scores of each organisation. Responses were given in a Likert scale (1 to 5).  Country scores have been normalised in a range from 0 to 1
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	RFO survey: Data collected for all EU-28 countries with diverging response rates. No responses for Luxembourg and Latvia. <i>See Appendix 4 and 5 with specific response rates</i>
<b>Statistical robustness</b>	Straightforward indicator with no suitable alternative. Reduction to binary indicator would result in large decline in country variation.
<b>Feasibility / Replicability</b>	Simple indicator with high degree of replicability
<b>Comments/caveats</b>	To avoid survey fatigue and allow to better capture institutional changes over time, it is recommended to replicate this indicator with a frequency of minimum 3 years.

Information item	PE9
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Research &amp; Innovation democratization index</b>
<b>Primary/secondary data</b>	Primary data (from survey)
<b>Description</b>	This indicator is based on opinions from public stakeholders on the degree of engagement of citizens and societal actors in research and innovation processes. This composite indicator is based on two questions in a dedicated Science in Society (SiS) survey (MoRRI 2017), which asked for the present situation as well as opinions on changes during the previous two years. To all these questions, respondents were asked to what extent they agree and whether or not the situation has improved/worsened/remained unchanged. The second question asked about awareness of legal frameworks in a given country, requiring citizens and CSO participation in S&T decision making.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	Science in Society (SiS) survey (MoRRI 2016)
<b>Time-series</b>	No. Survey conducted once, for year 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	The basic unit is organisations, specifically different stakeholder organisations, but the information is aggregated to the national level
<b>Coverage</b>	Sample of the Science in Society stakeholders' population of each EU-28 Member State
<b>Data collection specifications</b>	
<b>Data collection</b>	Indicator built from Question n°5 and 6 of SiS survey, namely: Q°5: "Based on your experience and knowledge of the current situation in your country, please indicate the extent to which you agree with the following statements" Q°6: "Are you aware of legal frameworks in your country which require participation of citizens and civil society organisations in science and technology decision making?" <i>See Appendix 3 (survey questionnaires)</i>
<b>Indicator building</b>	The indicator is a composite made of: a. The country score from the response to Q°5 (Likert scale). Scores ranging from 1 to 5 have been normalised from 0 to 1. b. The country score from the response to Q°6 (Yes=1pt; No=0pt). Scores ranging from 0 to 1 The final indicator is an average between the scores a. and b. Country scores range from 0 to 1
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	SiS survey: Data collected for all EU-28 countries with overall high response rates. <i>See Appendix 4 and 5 with specific response rates</i>
<b>Statistical robustness</b>	Cronbach's alpha=0.74 (indicating that set of questions function well as composite indicator). Intraclass=0.04 (very low, indicating that most variation is within country).
<b>Feasibility / Replicability</b>	Composite indicator. Complexity is moderate.
<b>Comments/caveats</b>	To avoid survey fatigue and allow to better capture institutional changes over time, it is recommended to replicate this indicator with a frequency of minimum 3 years.



Information item	PE10
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Research &amp; Innovation democratization index</b>
<b>Primary/secondary data</b>	Primary data (from survey)
<b>Description</b>	The indicator is based on a stakeholder survey among organisations centrally located in the broader 'science in society' field. The indicator is a composite measure based on a limited number of survey questions all tapping into the organisational landscape – or infrastructure – for involving citizens and societal actors in research and innovation. The indicator summarizes the degree of development of the national infrastructure for involvement of citizens and societal actors in research and innovation.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	Science in Society (SiS) survey (MoRRI 2016)
<b>Time-series</b>	No. Survey conducted once, for year 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	The basic unit is organisations, specifically different stakeholder organisations, but the information is aggregated to the national level
<b>Coverage</b>	Sample of the Science in Society stakeholders' population of each EU-28 Member State
<b>Data collection specifications</b>	
<b>Data collection</b>	Indicator built from Question n°8 of SiS survey, namely: "Based on your experience and knowledge of the current situation in your country, please indicate the extent to which you agree with the following statements" <i>See Appendix 3 (survey questionnaires)</i>
<b>Indicator building</b>	Country scores are the average of the individual scores of each organisation. Responses were given in a Likert scale (1 to 5).  Country scores have been normalised in a range from 0 to 1
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	SiS survey: Data collected for all EU-28 countries with high response rates. <i>See Appendix 4 and 5 with specific response rates</i>
<b>Statistical robustness</b>	<i>Simple straightforward indicator, no obvious alternative specifications. No validation conducted.</i>
<b>Feasibility / Replicability</b>	Simple indicator with high degree of replicability
<b>Comments/caveats</b>	To avoid survey fatigue and allow to better capture institutional changes over time, it is recommended to replicate this indicator with a frequency of minimum 3 years.

## 4 Open Access

Information item	OA1
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Open Access Literature</b>
<b>Primary/secondary data</b>	Primary
<b>Description</b>	The indicator will calculate the number and share of publications that have some 'free' online accessibility (both in Gold and Green OA).
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	Web of Science. Mendeley. Open Access databases (based on Crossref, DAOJ and ROAD).
<b>Time-series</b>	Yes
<b>Unit of measure</b>	Raw counts and shares
<b>Unit of analysis</b>	Countries, regions, disciplines, institutions and authors.
<b>Coverage</b>	All countries, disciplines, institutions, authors with publications in the Web of Science.
<b>Data collection specifications</b>	
<b>Data collection</b>	WoS database
<b>Indicator building</b>	
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Very good availability
<b>Statistical robustness</b>	The WoS database is commonly available containing millions of publications. Even the smaller European countries have more than ~500 publications on a yearly basis, making calculations robust. For OA publishing this WoS database is the source where evidence for OA is indicated. This means that OA publishing is always related to all published papers, which is a sound method.
<b>Feasibility / Replicability</b>	The method is fully replicable. However, the sources that are used to find evidence for open access are delayed in their updating of the newer publications. This means that when the years 2015-2016 are analysed again in the next years, the shares will probably be higher. And if new sources are added to find evidence of open access, the shares may get higher.
<b>Comments/caveats</b>	The share of open access publishing is a reasonable indicator as long as we are still in the transition towards full open access. This is a situation that will at some point be the dominant (business) model. As this is a transition period, the increase in OA publishing does not necessarily reflect policy responsiveness, or MS policies, but a system change.

Information item	OA2 (DROPPED)
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Data publications and citations per country</b>
<b>Primary/secondary data</b>	Primary
<b>Description</b>	The open data indicator is based on the metadata offered by DataCite. DataCite is an international consortium of public research institutions, funding bodies and publishers worldwide whose mission is to promote open research data accessibility and tracking. For the latter, DataCite advocates for the use of Digital Object Identifiers (DOI)
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	The Data Citation Index (DCI) on the Web of Science.
<b>Time-series</b>	Yes
<b>Unit of measure</b>	Raw counts and possible some relative measures at the country level.
<b>Unit of analysis</b>	Countries
<b>Coverage</b>	All European countries
<b>Data collection specifications</b>	
<b>Data collection</b>	-
<b>Indicator building</b>	-
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Data has been obtained from DataCite, a consortium providing DOIs to datasets recorded in data centres from all over the world. See " <i>comments/caveats</i> "
<b>Statistical robustness</b>	-
<b>Feasibility / Replicability</b>	A thorough recent study ( <a href="https://www.sciencedirect.com/science/article/pii/S1751157717300834">https://www.sciencedirect.com/science/article/pii/S1751157717300834</a> ) has shown the important data and conceptual limitations regarding DataCite as a source for reliable Open Data indicators. Although, the source is considered the most promising, more research and development is needed in order to be able to provide reliable indicators on open data production. Considering this situation, we refrain from providing indicators based on this source beyond those reported in the link mentioned above.
<b>Comments/caveats</b>	Indicator OA2, which aimed to analyse open data practice by assessing the number of data sets in repositories proved to be an invalid indicator for the time being. Open data practices differ across science fields (in some fields it is common, whereas in others it is almost absent); standardization of curation and findability are still under development; and cultural perceptions about data and access to data are not common. This was shown in the report: Open data; a researcher perspective (2017). More practically, the DataCite, which is currently the most reliable source to analyse repositories across the world, shows that the distribution of repositories is uneven. However, whether this reflects an actual situation or an analytical bias is unclear right now. Any conclusion from such data would be unsound.

Information item	OA3
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Social media outreach/take up of Open Access Literature and open research data</b>
<b>Primary/secondary data</b>	Primary
<b>Description</b>	OA3 informs how OA European publications are being disseminated across social media tools.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	The indicator is built on data retrieved from the Web of Science (OA publications) and altmetric.com (twitter and Wikipedia references)
<b>Time-series</b>	From 2012 onwards
<b>Unit of measure</b>	Raw counts, shares and ratios.
<b>Unit of analysis</b>	Countries
<b>Coverage</b>	All countries (aggregated based on institutions/author affiliations) with OA publications in the Web of Science and with a DOI are included in the altmetric.com database.
<b>Data collection specifications</b>	
<b>Data collection</b>	Data collection is linked to the use of two private databases with the WoS database and Altmetric.com.
<b>Indicator building</b>	<p>Identification of OA and non-OA publications per country and year through the WoS database. Matching of altmetric.com database which contains a WoS subset, namely all the publications with a DOI. Altmetric.com provides statistical data of these publications in terms of twitter and Wikipedia use.</p> <p>Two indicators were included:</p> <ol style="list-style-type: none"> <li>(1) The ratio of OA and non-OA publications mentioned through twitter per country;</li> <li>(2) The share of OA and non-OA publications cited in Wikipedia, per country</li> </ol>
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Very good availability
<b>Statistical robustness</b>	For OA publishing the WoS database is the source where evidence for OA is indicated. This means that OA publishing is always related to all published papers, which is a sound method. OA publishing coupled to twitter and Wikipedia is fully automated, based on robust methods.
<b>Feasibility / Replicability</b>	Data collection has been based on publications from the Web of Science containing a DOI. DOIs have been matched with Altmetric.com and tweets and Wikipedia mentions have been extracted from this source. This makes the methodology easily replicable and totally feasible.
<b>Comments/caveats</b>	Given the difficulties of open data (see OA2), this indicator took only publications into account. For the time being, it is suggested to limit it to open access publications only.

Information item	OA4
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Public perception of Open Access - PPOA</b>
<b>Primary/secondary data</b>	Secondary
<b>Description</b>	The indicator on public perception of Open Access is constructed from a question in the Eurobarometer 2013. It provides the share of people who think that publicly funded research should be made available.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	Indicator presented at European Commission. Special Eurobarometer 401 on Responsible Research and Innovation (RRI), Science and Technology p. 147-151.
<b>Time-series</b>	No
<b>Unit of measure</b>	Ordinal
<b>Unit of analysis</b>	EU, national, gender, age, level of education, interest in science
<b>Coverage</b>	EU-28
<b>Data collection specifications</b>	
<b>Data collection</b>	Data extracted from Eurobarometer
<b>Indicator building</b>	The indicator is calculated as a mean national score aggregated from a representative sample of citizens by country.
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Existing data cover very well across Europe
<b>Statistical robustness</b>	<i>Simple straightforward indicator, no obvious alternative specifications. No validation conducted.</i>
<b>Feasibility / Replicability</b>	The indicator is feasible for application. However, continued future data collection would be expensive, unless aligned with the Eurobarometer series work
<b>Comments/caveats</b>	

Information item	OA5
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Funder Mandates</b>
<b>Primary/secondary data</b>	Secondary
<b>Description</b>	The indicator presents if and how many funder mandates for open access publishing there are in the EU Member States. Funder/institutional mandates relate to the policy and practice of funding institutions giving research grants or of academic institutions to request the research output to be made openly accessible.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	The indicator is presented in the Commission Staff Working Document: Impact Assessment Accompanying the document Commission Recommendation on access to and preservation of scientific information in the digital age {C(2012) 4890 final} {SWD(2012) 221 final} based on openaire.eu., available at: <a href="http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SWD:2012:0222:FIN:EN:PDF">http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=SWD:2012:0222:FIN:EN:PDF</a> , p. 88.
<b>Time-series</b>	No
<b>Unit of measure</b>	Nominal
<b>Unit of analysis</b>	National
<b>Coverage</b>	EU-27
<b>Data collection specifications</b>	
<b>Data collection</b>	Data collected in the mentioned source
<b>Indicator building</b>	-
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Good coverage of EU27
<b>Statistical robustness</b>	<i>Secondary source, no validation conducted</i>
<b>Feasibility / Replicability</b>	Medium/Low feasibility. Data is not accessible through the public website of OpenAire.
<b>Comments/caveats</b>	

Information item	OA6
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>RPO (HEI and PRO) support structures for researchers as regards incentives and barriers for data sharing</b>
<b>Primary/secondary data</b>	Primary
<b>Description</b>	OA6 captures practices and perceptions of the incentives and barriers for and against data sharing in RPOs.
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	HEI survey (conducted in 2016) PRO survey (conducted in 2017)
<b>Time-series</b>	No. Survey conducted once, for years 2014, 2015 and 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	RPOs / Countries
<b>Coverage</b>	Sample of the HEI and PRO population of each EU-28 Member State
<b>Data collection specifications</b>	
<b>Data collection</b>	Indicator built from Question n°51, 52 and 53 of HEI survey (Q°49, 50 and 51 of PRO survey), namely: Q°51: "Which of the following policies apply in your institution?" Q°52: "Which of the following open data sharing practices apply in your institution?" Q°53: "Which of the following support (in kind and in funding) options with regard to open access publishing and data sharing apply?" <i>See Appendix 3 (survey questionnaires)</i>
<b>Indicator building</b>	The indicator is a composite made of: a. The country score from the response to Q°51 (1pt per policy applied). Scores ranging from 0 to 2 have been normalised from 0 to 1. b. The country score from the response to Q°52 (1pt per practice applied). Scores ranging from 0 to 2 have been normalised from 0 to 1. c. The country score from the response to Q°53 (1pt per support option applied). Scores ranging from 0 to 4 have been normalised from 0 to 1. The final indicator is an average between the scores a, b and c. Country scores range from 0 to 1
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	HEI survey: Data collected for all EU-28 countries with diverging response rates. No responses for Luxembourg. PRO survey: Data collected for all EU-28 countries, with diverging response rates. No responses for Estonia and Luxembourg <i>See Appendix 4 and 5 with specific response rates</i>
<b>Statistical robustness</b>	Cronbach's alpha=0.78 (satisfactory). Intraclass=0.13 (very low, indicating that most variation is within country).
<b>Feasibility / Replicability</b>	Composite indicator. Complexity is moderate
<b>Comments/caveats</b>	To avoid survey fatigue and allow to better capture institutional changes over time, it is recommended to replicate this indicator with a frequency of minimum 3 years.

## 5 Ethics

Information item	E1a
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Ethics at the level of Universities and Public Research Organisations</b>
<b>Primary/secondary data</b>	Primary
<b>Description</b>	This indicator was derived from two questions in the survey of higher education institutions (MoRRI 2016) and Public Research Organisation (MoRRI 2017), namely: « Did your organisation have a Research Ethics Committee? » and « Did your institution have a Research Integrity Office? » (operating during 2014, 2015, 2016)
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	HEI survey (conducted in 2016) PRO survey (conducted in 2017)
<b>Time-series</b>	No. Survey conducted once, for years 2014, 2015 and 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	RPOs / Countries
<b>Coverage</b>	Sample of the HEI and PRO population of each EU-28 Member State
<b>Data collection specifications</b>	
<b>Data collection</b>	Indicator derived from two questions of the HEI survey (Q°30 and Q°39) and the PRO survey (Q°29 and Q°38), namely: Q°30 (HEI)/Q°29 (PRO): "Did your organisation have a Research Ethics Committee?" Q°39 (HEI)/Q°38 (PRO): "Did your institution have a Research Integrity Office?" <i>See Appendix 3 (survey questionnaires)</i>
<b>Indicator building</b>	Country scores are the average of the individual scores of each organisation derived from answers to Q°30 (HEI) - the share of RPOs having an Ethics Committee - and to Q°39 (HEI) - the share of RPOs having a Research Integrity Office. The score is given by: Yes=1pt No=0pt Country scores range from 0 to 1
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	HEI survey: Data collected for all EU-28 countries with diverging response rates. No responses for Luxembourg. PRO survey: Data collected for all EU-28 countries, with diverging response rates. No responses for Estonia and Luxembourg <i>See Appendix 4 and 5 with specific response rates</i>
<b>Statistical robustness</b>	<i>Straightforward indicator. No validation conducted</i>
<b>Feasibility / Replicability</b>	High degree of replicability
<b>Comments/caveats</b>	To avoid survey fatigue and allow to better capture institutional changes over time, it is recommended to replicate this indicator with a frequency of minimum 3 years.



Information item	E1b
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Ethics at the level of Universities and Public Research Organisations (Composite indicator)</b>
<b>Primary/secondary data</b>	Primary
<b>Description</b>	This indicator is a complex composite which uses two starting questions in the survey of higher education organisations (MoRRI2017), namely "Do you have an ethics committee/Do you have a research integrity office?", and subsequent questions on the design, functions and impacts of these institutional arrangements such as "Have the opinions [of the Ethics committee] been binding or non-binding recommendations", or "Has the Research Integrity Office been able to take independently initiative to investigate a case?"
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	HEI survey (conducted in 2016) PRO survey (conducted in 2017)
<b>Time-series</b>	No. Survey conducted once, for years 2014, 2015 and 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	RPOs / Countries
<b>Coverage</b>	Sample of the HEI and PRO population of each EU-28 Member State
<b>Data collection specifications</b>	
<b>Data collection</b>	Composite indicator derived from the questions of the HEI survey and the PRO survey, namely: HEI survey: Q30 to Q49 (Block A) PRO survey: Q29 to Q48 (Block B) <i>See Appendix 3 (survey questionnaires)</i>
<b>Indicator building</b>	E1.2 is the ethics index. The composites made from block A and block B questions are the average of all sub-questions scores in the respective blocks. The responses to the sub-questions have been given a score from 0 to 1. The Ethics index is the composite of the score of block A and Block B questions Country scores range from 0 to 1. <i>*RPOs that responded "Yes" to Q30 and/or Q39 but then did not provide at least 50% of responses to the sub-questions are excluded from the score calculation of E1.2.</i>
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	HEI survey: Data collected for all EU-28 countries with diverging response rates. No responses for Luxembourg. PRO survey: Data collected for all EU-28 countries, with diverging response rates. No responses for Estonia and Luxembourg <i>See Appendix 4 and 5 with specific response rates</i>
<b>Statistical robustness</b>	Possible alternative: exclude Q31 on number cases per year. One country changes 5 spots or more in ranking for this alternative. Cronbach's alpha=0.66 (close to desired level). Intraclass=0.27 (moderate level).
<b>Feasibility / Replicability</b>	Composite indicator. Complex indicator.
<b>Comments/caveats</b>	To avoid survey fatigue and allow to better capture institutional changes over time, it is recommended to replicate this indicator with a frequency of minimum 3 years.

Information item	E2
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>National Ethics Committees Index (NEC index)</b>
<b>Primary/secondary data</b>	Secondary data
<b>Description</b>	The index captures qualities of national ethics committee infrastructure in a country. The index measures existence, output, impact and quality of NECs. It looks at the output in terms of opinions but also in terms of contributing to public debate, policy making. It particularly looks at the role of the public of NECs by measuring the publication of work results, the organisation of public events, classification of existing public involvement mechanisms, involvement of target groups and the existence and quality of websites.
<b>Qual / Quant</b>	Qualitative
<b>Source of data</b>	EPOCH ( <a href="https://epochconference2012.wordpress.com/about">https://epochconference2012.wordpress.com/about</a> )
<b>Time-series</b>	No
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	National level. In most cases one NEC per country.
<b>Coverage</b>	Finland, United Kingdom, Germany, Greece, France, Italy, the Netherlands, Austria, Denmark, Spain, Cyprus, Sweden, Lithuania.
<b>Data collection specifications</b>	
<b>Data collection</b>	Data collected from source (Qualitative)
<b>Indicator building</b>	Index (from 0 to 1) constructed on the basis of set of qualitative criteria of the NEC. Final country score is the average score of all criteria: <ul style="list-style-type: none"> <li>- Publication of work results: "Always"=1; "Sometimes"=0</li> <li>- Organization of public events: "Yes"=1; "No"=0</li> <li>- Existence of specific public participation mechanisms: "Yes"=1; "No"=0</li> <li>- Involvement of target groups: "Yes"=1; "No"=0</li> <li>- Existence of websites: "Yes"=1; "No"=0</li> <li>- Existence of well-organized websites providing information: "Yes"=1; "No"=0</li> </ul>
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	There are NEC in most countries, however, poor coverage of NEC specificities per country in order to build the final indicator.
<b>Statistical robustness</b>	<i>No validation conducted</i>
<b>Feasibility / Replicability</b>	Composite indicator. Level of complexity is moderate. Indicator can be replicated via a survey, with support of network of country correspondents. The effort required of the correspondents is limited and the survey can be centrally administered without large costs.
<b>Comments/caveats</b>	

Information item	E3a
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Research Funding Organisations Index</b>
<b>Primary/secondary data</b>	Primary
<b>Description</b>	The indicator is based on the dedicated survey of the funding organisations (MoRRI 2016) on "Has your organisation integrated any type of ethics assessment/review in its funding decisions?"
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	RFO survey (conducted in 2016)
<b>Time-series</b>	No. Survey conducted once, for years 2014, 2015 and 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	RFOs / Countries
<b>Coverage</b>	Sample of the RFO population of each EU-28 Member State
<b>Data collection specifications</b>	
<b>Data collection</b>	Indicator derived from Q°25 of the RFO survey, namely: "Has your organisation integrated any type of ethics assessment/review in its funding decisions?" <i>See Appendix 3 (survey questionnaires)</i>
<b>Indicator building</b>	Country scores are the average of the individual scores of each organisation derived from answers to Q°25 (RFO). The score is given by: Yes=1pt No=0pt Country scores range from 0 to 1
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	RFO survey: Data collected for all EU-28 countries with diverging response rates. No responses for Luxembourg and Latvia. <i>See Appendix 4 and 5 with specific response rates</i>
<b>Statistical robustness</b>	<i>Straightforward indicator. No validation conducted</i>
<b>Feasibility / Replicability</b>	Simple indicator with high degree of replicability
<b>Comments/caveats</b>	To avoid survey fatigue and allow to better capture institutional changes over time, it is recommended to replicate this indicator with a frequency of minimum 3 years.

Information item	E3b
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Research Funding Organisations Index (Composite indicator)</b>
<b>Primary/secondary data</b>	Primary
<b>Description</b>	This indicator is a complex composite which uses the starting questions in the survey of funding organisations (MoRRI 2016), namely "Has your organisation integrated any type of ethics assessment/review in its funding decisions?" and subsequent questions on the design and numbers of projects concerned. It mirrors the indicator on "Research funding organisations index".
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	RFO survey (conducted in 2016)
<b>Time-series</b>	No. Survey conducted once, for years 2014, 2015 and 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	RFOs / Countries
<b>Coverage</b>	Sample of the RFO population of each EU-28 Member State
<b>Data collection specifications</b>	
<b>Data collection</b>	Composite indicator derived from the questions of the RFO survey, namely: Q°25 to Q°36 <i>See Appendix 3 (survey questionnaires)</i>
<b>Indicator building</b>	E3.2 is the RFO ethics index. The responses to the sub-questions have been given a score between 0 to 1. The composite is the average of all sub-questions scores.  <i>*RFOs that responded "Yes" to Q25 but then did not provide at least 50% of responses to the sub-questions are excluded from the score calculation.</i>
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	RFO survey: Data collected for all EU-28 countries with diverging response rates. No responses for Luxembourg and Latvia. <i>See Appendix 4 and 5 with specific response rates</i>
<b>Statistical robustness</b>	Possible alternative: exclude Q41 on number cases per year. One country changes 5 spots or more in ranking for this alternative. Cronbach's alpha=0.60 (close to desired level). Intraclass=0.08 (very low, indicating that most variation is within country).
<b>Feasibility / Replicability</b>	Complex indicator. The indicator is resource demanding. Requires considerable effort from country correspondents to collect the necessary responses to the survey questions.
<b>Comments/caveats</b>	To avoid survey fatigue and allow to better capture institutional changes over time, it is recommended to replicate this indicator with a frequency of minimum 3 years.

## 6 Governance

Information item	GOV1
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>Use of science in Policy making</b>
<b>Primary/secondary data</b>	Secondary
<b>Description</b>	The indicator was built based on qualitative opinions by national experts in the course of the MASIS project (2012). Two dimensions relating to the use of science-based knowledge in decision making. One dimension concerns the extent to which a formalised structure for feeding science-based knowledge into decision making is in place, e.g. in terms of institutional sites dealing with these processes. The other dimension concerns the extent to which science-based knowledge and advice have a real impact on decisions. Based on these elements, four categories of countries are identified: highly formalized procedures and high saliency; less formalized, but with considerable influence; formalized procedures but low impact of science based knowledge in policy making; and low degree of science-based knowledge in policy making.
<b>Qual / Quant</b>	Qualitative
<b>Source of data</b>	Data from the MASIS project, specifically the publication Mejlgaard et al (2012), Locating science in society across Europe: Clusters and conferences, Science and Public Policy 39, pp. 741-750
<b>Time-series</b>	No.
<b>Unit of measure</b>	Ordinal
<b>Unit of analysis</b>	Countries
<b>Coverage</b>	EU-28 Member State (except Malta)
<b>Data collection specifications</b>	
<b>Data collection</b>	Data collection is based on country reports produced by a network of national experts, following a common guideline and template.
<b>Indicator building</b>	Categorisations based on qualitative assessment of data according to the dimensions listed above.
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	Existing data cover very well across Europe
<b>Statistical robustness</b>	<i>No validation conducted</i>
<b>Feasibility / Replicability</b>	The indicator is feasible as a one-off source. In order to recollect data across countries, a setup similar to the MASIS project would be required. This involves national experts conducting desk research and interviews in their respective countries. The guidelines from the MASIS project could be adopted.
<b>Comments/caveats</b>	

Information item	GOV2
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>RRI-related governance mechanisms within research funding and research performing organisations</b>
<b>Primary/secondary data</b>	Primary
<b>Description</b>	This indicator determines whether RRI is seen as a priority issue for organisations and is supported by a formalised governance structure. The data for this indicator is gathered through HEI, PRO and RFO surveys and presented at the aggregated national level as the share of organisations having a formalised governance structure
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	Data collected through HEI, PRO and RFO surveys
<b>Time-series</b>	No. Survey conducted once, for years 2014, 2015 and 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	Countries (basic units RPOs and RFOs)
<b>Coverage</b>	EU-28
<b>Data collection specifications</b>	
<b>Data collection</b>	<p>Data collected from survey, Q°7 of the HEI, PRO and RFO surveys, namely:</p> <p>"Based on your experience and knowledge, has your organisation established processes for managing the following aspects in 2014, 2015, 2016?"</p> <p>Possible responses: Ethics; Citizen Engagement; Open Access; Gender Equality; Responsible R&amp;I</p> <p><i>See Appendix 3 (survey questionnaires)</i></p>
<b>Indicator building</b>	<p>GOV2 is a composite indicator build following 2 main steps:</p> <ol style="list-style-type: none"> <li>1) A country score for each survey (RFO, HEI and PRO) is calculated as the average of the individual scores of each organisation to Q°7. A point is given to each of the response categories ticked. Results have been normalised and go from 0 to 1.</li> <li>2) The average of the country scores of each survey (RFO, HEI and PRO) is calculated. The result is the composite indicator GOV2</li> </ol>
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	<p>HEI survey: Data collected for all EU-28 countries with diverging response rates. No responses for Luxembourg.</p> <p>PRO survey: Data collected for all EU-28 countries, with diverging response rates. No responses for Estonia and Luxembourg</p> <p>RFO survey: Data collected for all EU-28 countries with diverging response rates. No responses for Luxembourg and Latvia.</p> <p><i>See Appendix 4 and 5 with specific response rates</i></p>
<b>Statistical robustness</b>	<p>HEI: Cronbach's alpha=0.82 (satisfactory).</p> <p>Intraclass=0.03 (very low, indicating that most variation is within country).</p> <p>RFO: Cronbach's alpha=0.69 (satisfactory).</p> <p>Intraclass=0.16 (very low, indicating that most variation is within country).</p>
<b>Feasibility / Replicability</b>	Composite indicator. Complexity is moderate
<b>Comments/caveats</b>	To avoid survey fatigue and allow to better capture institutional changes over time, it is recommended to replicate this indicator with a frequency of minimum 3 years.

Information item	GOV3
<b>Indicator characteristics</b>	
<b>Name of indicator</b>	<b>RRI-related governance mechanisms within research funding and performing organisations – composite index</b>
<b>Primary/secondary data</b>	Primary
<b>Description</b>	This indicator determines whether RRI is seen as a priority issue for organisations and is supported by a formalised governance structure. The data for this indicator is gathered through HEI, PRO and RFO surveys and presented at the aggregated national level as the share of organisations having a formalised governance structure
<b>Qual / Quant</b>	Quantitative
<b>Source of data</b>	Data collected through HEI, PRO and RFO surveys
<b>Time-series</b>	No. Survey conducted once, for years 2014, 2015 and 2016
<b>Unit of measure</b>	Index (0 to 1)
<b>Unit of analysis</b>	Countries (basic units RPOs and RFOs)
<b>Coverage</b>	EU-28
<b>Data collection specifications</b>	
<b>Data collection</b>	<p>Data collected from survey, Q°13 of the HEI, PRO and RFO surveys, namely:</p> <p>"Did your organisation actively encourage the following among researchers, employees or partner organisations during 2016 —Are there changes compared to previous years?"</p> <p>Response categories: Ethics; Citizen Engagement; Open Access; Gender Equality; Responsible R&amp;I</p> <p><i>See Appendix 3 (survey questionnaires)</i></p>
<b>Indicator building</b>	<p>GOV3 is a composite indicator build following 2 main steps:</p> <ol style="list-style-type: none"> <li>1) A country score for each survey (RFO, HEI and PRO) is calculated as the average of the individual scores of each organisation to Q°13. Within each response category, the following scores are applied: "Very much"=2pt; "Somewhat"=1pt; "Not at all"=0pt. Results have been normalised and go from 0 to 1.</li> <li>2) The average of the country scores of each survey (RFO, HEI and PRO) is calculated. The result is the composite indicator GOV3</li> </ol>
<b>Assessment of RRI indicators</b>	
<b>Availability of data</b>	<p>HEI survey: Data collected for all EU-28 countries with diverging response rates. No responses for Luxembourg.</p> <p>PRO survey: Data collected for all EU-28 countries, with diverging response rates. No responses for Estonia and Luxembourg</p> <p>RFO survey: Data collected for all EU-28 countries with diverging response rates. No responses for Luxembourg and Latvia.</p> <p><i>See Appendix 4 and 5 with specific response rates</i></p>
<b>Statistical robustness</b>	<p>HEI: Cronbach's alpha=0.74 (satisfactory). Intraclass=0.12 (very low, indicating that most variation is within country).</p> <p>RFO: Cronbach's alpha=0.73 (satisfactory). Intraclass=0.23 (moderate level).</p>
<b>Feasibility / Replicability</b>	Complex indicator
<b>Comments/caveats</b>	To avoid survey fatigue and allow to better capture institutional changes over time, it is recommended to replicate this indicator with a frequency of minimum 3 years.

## APPENDIX 3: QUESTIONNAIRES

### 1 Science in Society Survey

\*

#### 1. Country

Austria

Belgium

Bulgaria

Croatia

Cyprus

Czech Republic

Denmark

Estonia

Finland

France

Germany

Greece

Hungary

Ireland

Italy

Latvia

Lithuania

Luxembourg

Malta

The Netherlands

Poland

Portugal

Romania

Slovakia

Slovenia

Spain

Sweden

United Kingdom



\*

**2. Name of your organisation**

**3. Your role in the organisation**

**4. Your name**

**5. Based on your experience and knowledge of the current situation in your country, please indicate the extent to which you agree with the following statements:**

						Looking back over the last 2 years, would you say that the situation has:		
	1 Strongly disagree	2 Tend to disagree	3 Neither agree or disagree	4 Tend to agree	5 Strongly agree	Changed to the worse	Remained the same	Changed to the better
Citizens and civil society organisations are informed about developments in research and innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Citizens and civil society organisations are consulted when political decisions about research and innovation are being made	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The opinions and advice of citizens and civil society organisations have a significant impact on political decisions about research and innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The values and expectations of citizens and civil society organisations play an important role in setting the agenda for research and innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My own organisation has been able to influence decisions about research and innovation in my country	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**6. Are you aware of legal frameworks in your country which require participation of citizens and civil society organisations in science and technology decision making?**

Yes

No

**7. If yes, please provide a brief description of the legal framework**

**8. Based on your experience and knowledge of the current situation in your country, please indicate the extent to which you agree with the following statements:**

						Looking back over the last 2 years, would you say that the situation has:		
	Strongly disagree	Tend to disagree	Neither agree nor disagree	Tend to agree	Strongly agree	Changed to the worse	Remained the same	Changed to the better
Citizens and civil society organisations have easy access to decision makers in the area of research and innovation policy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Citizens and civil society organisations are often represented in advisory bodies related to research and innovation policy	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In my country, there are multiple channels for interaction between science and broader society	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My own organisation plays an important role in mediating between science and broader society in my country	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 2 Survey for Research Funding Organisations

\*

### 1. Country

Austria

Belgium

Bulgaria

Croatia

Cyprus

Czech Republic

Denmark

Estonia

Finland

France

Germany

Greece

Hungary

Ireland

Italy

Latvia

Lithuania

Luxembourg

Malta

The Netherlands

Poland

Portugal

Romania

Slovakia

Slovenia

Spain

Sweden

United Kingdom

**2. Name of your organisation**

**3. Your role/position in the organisation**

**4. Your name**

**5. Is it within the scope of your organisation to fund research and innovation?**

It is among our main activities

It is not a core activity, but we regularly do so

Occasionally

Never

**6. What has been the size of the budget for research and innovation funding of your organisation for the period 2014-2016 (in €)?**

**In case your financial year is spread within two years, please report as follows: 2014/2015 under 2014; 2015/2016 under 2015; 2016/2017 under 2016.**

2014

2015

2016 (estimation)

**7. Based on your experience and knowledge, has your organisation established processes for managing the following aspects in 2014, 2015, 2016? Please tick all that apply**

	Ethics in research and innovation	Citizen engagement and participation of societal actors	Open access and open science	Gender equality in research and innovation	Responsible research and innovation
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**For each area you have ticked, please briefly describe the processes in place**

8. Ethics in research and innovation	
9. Citizen engagement and participation of societal actors	
10. Open access and open science	
11. Gender equality in research and innovation	
12. Responsible research and innovation	

**13. Did your organisation actively encourage the following among researchers, employees or partner organisations during 2016 —Are there changes compared to previous years?**

				Looking back over the last 2 years (2014-2015), would you say that in 2016 your organisation promotes these areas		
	Very much	Somewhat	Not at all	1 More actively	2 About the same	3 Less actively
Ethics in research and innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Citizen engagement and participation of societal actors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Open access and open science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gender equality in research and innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Responsible research and innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**For each area you have ticked, please briefly describe the processes in place**

14. Ethics in research and innovation	
15. Citizen engagement and participation of societal actors	
16. Open access and open science	
17. Gender equality in research and innovation	
18. Responsible research and innovation	



*In the following sections we are going to ask you to provide more information on some of the aspects of RRI mentioned above.*

**19. When allocating research and innovation funding in years 2014, 2015 and 2016, did your organisation include the gender dimension in research content?**

	Yes, it was a standard criterion in all programmes	Yes, it was a standard criterion in specific types of programmes	No	Don't know
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**20. Citizen Science refers to the general public engagement in scientific research activities when citizens actively contribute to science either with their intellectual effort or surrounding knowledge or with their tools and resources. Please indicate the approximate budget of your organisation for Citizen Science projects/activities (in €)?**

**In case your financial year is spread within two years, please report as follows: 2014/2015 under 2014; 2015/2016 under 2015; 2016/2017 under 2016**

2014

2015

2016

*The following questions are about 'Public Engagement', which describes the interaction between research institutions and citizens or societal stakeholders.*

**21. Some research funding organisations contribute to Public Engagement through their funding schemes. Please indicate, if any of the following activities have been supported by targeted funding schemes in your organisation (Please tick all relevant boxes)**

	Projects / activities which are primarily about disseminating research to citizens or societal stakeholders	Research projects which involve citizens or societal stakeholders in research activities	Research projects on Public Engagement (where the contents of the research is about Public Engagement)	No such activities are funded through targeted schemes
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**22. Please indicate the approximate budget size for targeted Public Engagement projects/ activities.**

**In case your financial year is spread within two years, please report as follows: 2014/2015 under 2014; 2015/2016 under 2015; 2016/2017 under 2016**

2014

2015

2016 (estimation)

**23. Please indicate the extent to which your funding agency has engaged with citizens and societal actors when developing its funding strategies :**

	To a very large extent	To a large extent	To some extent	To a small extent	To a very small or no extent
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**24. Please indicate the extent to which Public Engagement has been a criterion for the appraisal of research applications**

	To a very large extent	To a large extent	To some extent	To a small extent	To a very small or no extent
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

\* **25. Has your organisation integrated any type of ethics assessment/review in its funding decisions? Please tick 'Yes' for those years assessment processes were in place, even if no assessment has been performed.**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**26. What is the scope of ethics review in your organisation? What criteria does ethics assessment cover in your organisation?**

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**27. Has your organisation monitored ethical aspects in funding applications within all science disciplines targeted by your organisation?**

	All disciplines	Most disciplines	Some disciplines
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**28. How strong has been the influence of the processes you installed in your organisation to check projects for their ethical acceptability on the shaping of research and innovation priorities?**

	No influence (1)	(2)	(3)	(4)	Significant influence (5)
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**29. Has your organisation involved in any way different societal actors / stakeholders to assess the ethical acceptability of research that you fund?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**30. If you have involved stakeholders in checking ethical issues on the research you fund, how strong has been their influence on your funding decisions? Influence could include change in the appraisal score of proposals, changes in the objectives or the design of research etc.**

	No influence (1)	(2)	(3)	(4)	Significant influence (5)
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**31. Has your organisation involved in any way different stakeholders in assessing the societal relevance (research aiming at answering questions society asks or solving problems it faces) of the research you fund?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**32. If you have involved stakeholders in checking the societal relevance (research aiming at answering questions society asks or solving problems it faces) of the research you fund, how strong has been their influence on the research funding decisions of your organisation? Influence could include change in the appraisal score of proposals, changes in the objectives or the design of research etc.**

	No influence (1)	(2)	(3)	(4)	Significant influence (5)
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**33. Some research projects in the technical science, natural sciences and health science include social sciences and humanities to address the societal and/or ethical impact of their research. How often in recent years did research projects that your organisation funded integrate social sciences and humanities to address the societal and/or ethical impact of research in technical science, natural science or health science?**

	Always	Often	Occasionally	Rarely	Never
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**34. Some research projects involve stakeholders and/or citizens in their research design to address the societal and/or ethical impact of a research project. How often did research projects that your organisation funded include the involvement the stakeholders and/or citizens?**

	Always	Often	Occasionally	Rarely	Never
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**35. If you think about the total of projects your organisation has funded in 2014, 2015 and 2016. How many of them went through an ethics review process? Please provide an estimation of the share (%)?**

2014

2015

2016 (estimation)

**36. What is the share of research proposals for which ethics review has required substantive changes in grant application or second ethics assessment? Please provide an estimation of the share (%)?**

2014

2015

2016 (estimation)

### 3 Survey for on RRI for Higher Education Institutions

\*

#### 1. Country

Austria

Belgium

Bulgaria

Croatia

Cyprus

Czech Republic

Denmark

Estonia

Finland

France

Germany

Greece

Hungary

Ireland

Italy

Latvia

Lithuania

Luxembourg

Malta

The Netherlands

Poland

Portugal

Romania

Slovakia

Slovenia

Spain

Sweden

United Kingdom



\* **2. Name of your organisation**

**3. Your role in the organisation**

**4. Your name**

**5. Please indicate the overall budget of your institution in Euro (€) for the years 2014, 2015, 2016 In case your financial year is spread within two years, please report as follows: 2014/2015 under 2014; 2015/2016 under 2015; 2016/2017 under 2016.**

2014

2015

2016

**6. What is the number of your research staff (in all categories and type of contracts)? Years 2014, 2015 and 2016**

2014

2015

2016

**7. Based on your experience and knowledge, has your organisation established processes for managing the following aspects in 2014, 2015, 2016? Please tick all that apply**

	Ethics in research and innovation	Citizen engagement and participation of societal actors	Open access and open science	Gender equality in research and innovation	Responsible research and innovation
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**For each area you have ticked, please briefly describe the processes in place**

8. Ethics in research and innovation	
9. Citizen engagement and participation of societal actors	
10. Open access and open science	
11. Gender equality in research and innovation	
12. Responsible research and innovation	

\* 13. Did your organisation actively encourage the following among researchers, employees or partner organisations during 2016 —Are there changes compared to previous years?

				Looking back over the last 2 years (2014-2015), would you say that in 2016 your organisation promotes these areas		
	Very much	Somewhat	Not at all	1 More actively	2 About the same	3 Less actively
Ethics in research and innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Citizen engagement and participation of societal actors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Open access and open science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gender equality in research and innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Responsible research and innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

For each area you have ticked “Very much” or “Somewhat”, please briefly describe the processes in place

14. Ethics in research and innovation	
15. Citizen engagement and participation of societal actors	
16. Open access and open science	
17. Gender equality in research and innovation	
18. Responsible research and innovation	

*In the following sections we are going to ask you to provide more information on some of the aforementioned aspects of RRI.*

**19. Does your organisation have a gender equality plan? - A gender equality plan is a consistent set of provisions and actions aimed at ensuring gender equality.**

	Yes	No	Not known	Not applicable
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**20. Does your organisation have implemented processes to promote the integration of a gender dimension in research and innovation content of projects and studies, for example information and qualification tools or concrete rewards and incentives?**

	Yes	No	Not known	Not applicable
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**21. Previously you indicated that your organisation has implemented processes to promote the integration of a gender dimension in research and innovation content of projects and studies. Could you please briefly describe the processes in place?**

**22. Please specify the gender of the person who was/is head of your organisation in 2014, 2015 and 2016 (Head of organisation: highest decision-making official in the organisation (e.g. rector or equivalent in the academy, president or equivalent in non-academic research organisations))**

	Male	Female
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**23. How many recruitment committees for leading researcher positions did your organisation set up in 2014, 2015 and 2016 for the recruitment of researchers?**

2014

2015

2016 (estimation)

**24. In how many recruitment committees for leading researcher positions the share of female members was equal or higher than 40% of the total committee members?**

2014

2015

2016 (estimation)

**25. Did PhD students' trainings include RRI-related aspects (such as ethical, economic, environmental, legal and social aspects) in 2014, 2015 and 2016?**

	Yes, training in these aspects is mandatory	Yes, but training in these aspects is voluntary	No	Don't know	Not applicable
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

*The following questions are about 'Public Engagement', which is a notion that captures the interaction between your research institution and citizens or societal stakeholders.*

**26. Which of the following mechanisms does your institution apply in order to interact with citizens and societal stakeholders? Please consider whether there are changes in the practices of your institution over the years by providing answers for 2014, 2015, and 2016 (check those that apply)**

	2014	2015	2016
Research projects in partnership with non-academic organisations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Collaboration with NGO's and local government bodies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Participation in EU projects/networks about Public Engagement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community representatives in boards or committees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specific activities involving schools children visiting the institution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meetings / conferences addressed primarily to the public	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Implementation of specific action plans targeting Public Engagement at your institution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Salary incentives for public outreach activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Awards for science communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of a press and/or Public Relations office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public Engagement as a criterion for promotion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public availability of information regarding completed and ongoing research activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Publications addressed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

primarily to the public			
Organisation of outreach incentives such as 'open days' 'university festivals' etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**27. Which of the following statements come closest to the situation at your research institution? Please consider whether the priorities changed over the years by providing answers for 2014, 2015, and 2016**

	Public Engagement has high strategic priority at our research institution	Public Engagement has moderate strategic priority at our research institution	Public Engagement is not a strategic priority at our research institution
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**28. Which of the following statements come closest to the situation at your institution? Please also consider whether there are changes in the situation at your institution over the years by providing answers for 2014, 2015, and 2016 (check those that apply, check only one per year)**

	Public Engagement activities are mainly initiated by the management level at our research institution	Public Engagement activities are mainly initiated by individuals or groups of researchers at our research institution
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>



**29. Please indicate the institutional budget in Euros for the years 2014, 2015 and 2016 reserved for activities relating to public engagement and outreach programmes such as “open university days”, “science festivals”, “conferences/lectures aimed at the general public” etc.**

2014

2015

2016 (estimation)

\* **30. Did your organisation have a Research Ethics Committee operating during 2014, 2015, 2016?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**31. How many cases per year have been decided by the Research Ethics Committee?**

2014

2015

2016

**32. Has the Research Ethics Committee been able to take independently initiative to investigate a proposal?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**33. Have the applications to Research Ethics Committee been obligatory or voluntary?**

	Obligatory	Voluntary	Depending on the content of the application, it can be obligatory or voluntary
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**34. Have the applications to Research Ethics Committee covered all disciplines or have they been restricted to certain research areas?**

	All	Most	Some
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**35. What have the evaluation criteria covered in 2014, 2015 and 2016?**

	Legal requirements for research on human subjects	Legal requirements for research on animals	Additional considerations of research ethics	Societal impact of research
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**36. Have amendments to the proposals been requested based on the opinions of the Research Ethics Committee?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**37. Has the research ethics committee rejected research proposals entirely?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**38. Have the opinions of the Research Ethics Committee been binding or non-binding recommendations?**

	Binding	Non-binding
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

\* **39. Did your institution have a Research Integrity Office operating during 2014, 2015, 2016?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**40. Has the Research Integrity Office been an ad-hoc committee or a permanent board?**

	Permanent	Ad-hoc
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**41. How many cases per year have been decided by the Research Integrity Office?**

2014

2015

2016

**42. Has the Research Integrity Office been able to take independently initiative to investigate a case?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**43. Have the complains to the Research Integrity Office been covering all disciplines or have they been restricted to certain research areas?**

	All	Most	Some
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**44. What has the Research Integrity Office covered?**

	Plagiarism	Fabrication fraud authorship and intellectual property and citation/acknowledgement practices	Scientific neutrality	Conflicts of interest in peer review	Scientific advice
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**45. Have the opinions been published in anonymised form after investigation?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**46. Have the opinions of the Research Integrity Office been binding or non-binding recommendations?**

	Binding	Non-binding
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**47. Has the Research Integrity Office taken actions to raise awareness for the issue of research integrity?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**48. Has the Research Integrity Office issued recommendations for researchers, policy makers and stakeholder?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**49. Has the Research Integrity Office provided training to researchers on research integrity?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**51. Which of the following policies apply in your institution**

	2014	2015	2016
Your institution has explicit open data management regulations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your institution has explicit institutional Gold or green Open access publishing regulations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your institution chooses to follow funder or field specific incentives for open data and publication sharing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**52. Which of the following open data sharing practices apply in your institution?**

	2014	2015	2016
Repositories are provided by your institution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Repositories are provided by departments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**53. Which of the following support (in kind and in funding) options with regard to open access publishing and data sharing apply?**

	2014	2015	2016
The Library of your institution takes care of open access publishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your institution provides IT support for FAIR data practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your institution has specific budget for Open Access publishing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your institution has specific budget for the implementation of Open Data sharing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your institution provides support for on line communication (e.g. project websites) on publication and data sharing practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your institution provides training in research data sharing e.g. about curation, metadata	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## 4 Survey for on RRI for Public Research Organisations

\*

### 1. Country

Austria

Belgium

Bulgaria

Croatia

Cyprus

Czech Republic

Denmark

Estonia

Finland

France

Germany

Greece

Hungary

Ireland

Italy

Latvia

Lithuania

Luxembourg

Malta

The Netherlands

Poland

Portugal

Romania

Slovakia

Slovenia

Spain

Sweden

United Kingdom

\* **2. Name of your organisation**

**3. Your role in the organisation**

**4. Your name**

**5. Please indicate the overall budget of your institution in Euro (€) for the years 2014, 2015, 2016 In case your financial year is spread within two years, please report as follows: 2014/2015 under 2014; 2015/2016 under 2015; 2016/2017 under 2016.**

2014

2015

2016

**6. What is the number of your research staff (in all categories and type of contracts)? Years 2014, 2015 and 2016**

2014

2015

2016

\* 7. Based on your experience and knowledge, has your organisation established processes for managing the following aspects in 2014, 2015, 2016? Please tick all that apply

	Ethics in research and innovation	Citizen engagement and participation of societal actors	Open access and open science	Gender equality in research and innovation	Responsible research and innovation	N/A
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. OPTIONAL: Previously you indicated that processes for managing ethics in research and innovation have been in place during the period 2014-2016. Could you please briefly describe them?

9. OPTIONAL: Previously you indicated that processes for managing citizen engagement and participation of societal actors have been in place during the period 2014-2016. Could you please briefly describe them?

**10. OPTIONAL:** Previously you indicated that processes for managing open access and open science have been in place during the period 2014-2016. Could you please briefly describe them?

**11. OPTIONAL:** Previously you indicated that processes for managing gender equality in research and innovation have been in place during the period 2014-2016. Could you please briefly describe them?

**12. OPTIONAL:** Previously you indicated that processes for managing responsible research and innovation have been in place during the period 2014-2016. Could you please briefly describe them?

- \* **13. Did your organisation actively encourage the following among researchers, employees or partner organisations during 2016 —Are there changes compared to previous years?**

				Looking back over the last 2 years (2014-2015), would you say that in 2016 your organisation promotes these areas		
	Very much	Somewhat	Not at all	1 More actively	2 About the same	3 Less actively
Ethics in research and innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Citizen engagement and participation of societal actors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Open access and open science	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Gender equality in research and innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Responsible research and innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

- 14. OPTIONAL: Previously you indicated that your organisation actively promotes ethics in research and innovation among researchers, employees, or partner organisations. Could you please briefly describe the processes in place?**

**15. OPTIONAL:** Previously you indicated that your organisation actively promotes citizen engagement and participation of societal actors among researchers, employees, or partner organisations. Could you please briefly describe the processes in place?

**16. OPTIONAL:** Previously you indicated that your organisation actively promotes open access and open science among researchers, employees, or partner organisations. Could you please briefly describe the processes in place?

**17. OPTIONAL:** Previously you indicated that your organisation actively promotes gender equality in research and innovation among researchers, employees, or partner organisations. Could you please briefly describe the processes in place?

**18. OPTIONAL:** Previously you indicated that your organisation actively promotes responsible research and innovation among researchers, employees, or partner organisations. Could you please briefly describe the processes in place?

*In the following sections we are going to ask you to provide more information on some of the aforementioned aspects of RRI.*

**19. Does your organisation have a gender equality plan? - A gender equality plan is a consistent set of provisions and actions aimed at ensuring gender equality.**

	Yes	No	Not known	Not applicable
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**20. Does your organisation have implemented processes to promote the integration of a gender dimension in research and innovation content of projects and studies, for example information and qualification tools or concrete rewards and incentives?**

	Yes	No	Not known	Not applicable
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**21. OPTIONAL:** Previously you indicated that your organisation has implemented processes to promote the integration of a gender dimension in research and innovation content of projects and studies. Could you please briefly describe the processes in place?

**22. Please specify the gender of the person who was/is head of your organisation in 2014, 2015 and 2016 (Head of organisation: highest decision-making official in the organisation (e.g. president or equivalent in non-academic research organisations))**

	Male	Female
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**23. How many recruitment committees for leading researcher positions did your organisation set up in 2014, 2015 and 2016 for the recruitment of researchers?**

2014

2015

2016

**24. In how many recruitment committees for leading researcher positions the share of female members was equal or higher than 40% of the total committee members?**

2014

2015

2016

*The following questions are about 'Public Engagement', which is a notion that captures the interaction between your research institution and citizens or societal stakeholders.*

**25. Which of the following mechanisms does your institution apply in order to interact with citizens and societal stakeholders? Please tick all that apply.**

	2014	2015	2016
Research projects in partnership with non-academic organisations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Collaboration with NGO's and local government bodies	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Participation in EU projects/networks about Public Engagement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Community representatives in boards or committees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Specific activities involving schools children visiting the institution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Meetings / conferences addressed primarily to the public	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Implementation of specific action plans targeting Public Engagement at your institution	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Salary incentives for public outreach activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Awards for science communication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability of a press and/or Public Relations office	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public Engagement as a criterion for promotion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public availability of information regarding completed and ongoing research activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Publications addressed primarily to the public	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Organisation of outreach incentives such as 'open days' 'university festivals' etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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**26. Which of the following statements come closest to the situation at your research institution? Please consider whether the priorities changed over the years by providing answers for 2014, 2015, and 2016**

	Public Engagement has high strategic priority at our research institution	Public Engagement has moderate strategic priority at our research institution	Public Engagement is not a strategic priority at our research institution
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**27. Which of the following statements come closest to the situation at your institution? Please also consider whether there are changes in the situation at your institution over the years by providing answers for 2014, 2015, and 2016 (check those that apply, check only one per year)**

	Public Engagement activities are mainly initiated by the management level at our research institution	Public Engagement activities are mainly initiated by individuals or groups of researchers at our research institution
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**28. Please indicate the institutional budget in Euros for the years 2014, 2015 and 2016 reserved for activities relating to public engagement and outreach programmes such as “open days”, “science festivals”, “conferences/lectures aimed at the general public” etc.**

2014	<input type="text"/>
2015	<input type="text"/>
2016	<input type="text"/>

**\* 29. Did your organisation have a Research Ethics Committee operating during 2014, 2015, 2016?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**30. How many cases per year have been decided by the Research Ethics Committee?**

2014	<input type="text"/>
2015	<input type="text"/>
2016	<input type="text"/>

**31. Has the Research Ethics Committee been able to take independently initiative to investigate a proposal?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**32. Have the applications to Research Ethics Committee been obligatory or voluntary?**

	Obligatory	Voluntary	Depending on the content of the application, it can be obligatory or voluntary
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**33. Have the applications to Research Ethics Committee covered all disciplines or have they been restricted to certain research areas?**

	All	Most	Some
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**34. What have the evaluation criteria covered in 2014, 2015 and 2016?**

	Legal requirements for research on human subjects	Legal requirements for research on animals	Additional considerations of research ethics	Societal impact of research
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**35. Have amendments to the proposals been requested based on the opinions of the Research Ethics Committee?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**36. Has the research ethics committee rejected research proposals entirely?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**37. Have the opinions of the Research Ethics Committee been binding or non-binding recommendations?**

	Binding	Non-binding
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

\* **38. Did your institution have a Research Integrity Office operating during 2014, 2015, 2016?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**39. Has the Research Integrity Office been an ad-hoc committee or a permanent board?**

	Permanent	Ad-hoc
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>



**40. How many cases per year have been decided by the Research Integrity Office?**

2014

2015

2016

**41. Has the Research Integrity Office been able to take independently initiative to investigate a case?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**42. Have the complains to the Research Integrity Office been covering all disciplines or have they been restricted to certain research areas?**

	All	Most	Some
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**43. What has the Research Integrity Office covered?**

	Plagiarism	Fabrication fraud authorship and intellectual property and citation/acknowledgement practices	Scientific neutrality	Conflicts of interest in peer review	Scientific advice
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**44. Have the opinions been published in anonymised form after investigation?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**45. Have the opinions of the Research Integrity Office been binding or non-binding recommendations?**

	Binding	Non-binding
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**46. Has the Research Integrity Office taken actions to raise awareness for the issue of research integrity?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**47. Has the Research Integrity Office issued recommendations for researchers, policy makers and stakeholder?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**48. Has the Research Integrity Office provided training to researchers on research integrity?**

	Yes	No
2014	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>

**49. Which of the following policies apply in your institution?**

	Your institution has explicit open data management regulations	Your institution has explicit institutional Gold or green Open access publishing regulations	Your institution chooses to follow funder or field specific incentives for open data and publication sharing	N/A
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**50. Which of the following open data sharing practices apply in your institution?**

	Repositories are provided by your institution	Repositories are provided by departments	N/A
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**51. Which of the following support (in kind and in funding) options with regard to open access publishing and data sharing apply?**

	The Library of your institution takes care of open access publishing	Your institution provides IT support for FAIR data practices	Your institution has specific budget for Open Access publishing	Your institution has specific budget for the implementation of Open Data sharing	Your institution provides support for on line communication (e.g. project websites) on publication and data sharing practices	Your institution provides training in research data sharing e.g. about curation, metadata	N/A
2014	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2016	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**52. Here you can provide additional information for clarifying your answers in previous questions**

## APPENDIX 4: RESPONSE RATES

**Table 1 Science in Society survey - response rates**

Country	Contacts	Responses	Rate
Austria	28	24	86%
Belgium	21	7	33%
Bulgaria	28	10	36%
Croatia	36	21	58%
Cyprus	21	11	52%
Czech Republic	47	26	55%
Denmark	33	17	52%
Estonia	21	14	67%
Finland	31	10	32%
France	42	11	26%
Germany	67	20	30%
Greece	15	8	53%
Hungary	29	17	59%
Ireland	6	2	33%
Italy	14	9	64%
Latvia	22	6	27%
Lithuania	33	18	55%
Luxembourg	7	1	14%
Malta	8	8	100%
Netherlands	26	16	62%
Poland	13	4	31%
Portugal	20	14	70%
Romania	17	6	35%
Slovakia	9	9	100%
Slovenia	19	10	53%
Spain	32	11	34%
Sweden	19	9	47%
United Kingdom	22	7	32%
<b>TOTAL</b>	<b>686</b>	<b>326</b>	<b>48%</b>

**Table 2 Research Funding Organisations survey - Response rate**

Country	Contacts	Responses	Rate	Incl. Partial	Rate
Austria	11	5	45%	8	73%
Belgium	10	4	40%	5	50%
Bulgaria	3	3	100%	3	100%
Croatia	7	2	29%	4	57%
Cyprus	2	1	50%	1	50%
Czech Republic	10	4	40%	6	60%
Denmark	15	10	67%	15	100%
Estonia	4	4	100%	4	100%
Finland	8	5	63%	5	63%
France	23	2	9%	4	17%
Germany	12	2	17%	2	17%
Greece	5	3	60%	5	100%
Hungary	1	1	100%	1	100%
Ireland	11	4	36%	6	55%
Italy	22	3	14%	6	27%
Latvia	3	0	0%	0	0%
Lithuania	10	3	30%	4	40%
Luxembourg	1	0	0%	0	0%
Malta	3	3	100%	3	100%
Netherlands	9	4	44%	8	89%
Poland	3	1	33%	1	33%
Portugal	4	1	25%	1	25%
Romania	6	0	0%	0	0%
Slovakia	4	4	100%	4	100%
Slovenia	3	2	67%	2	67%
Spain	29	4	14%	7	24%
Sweden	18	7	39%	11	61%
United Kingdom	38	1	3%	6	16%
<b>TOTAL</b>	<b>275</b>	<b>83</b>	<b>30%</b>	<b>122</b>	<b>44%</b>

\*Column "Incl. Partial" provides the total response rate including "fully completed questionnaires" and "partially completed questionnaires"

**Table 3 Higher Education Institutions survey - Response rate**

Country	Contacts	Responses	Rate	Incl. Partial*	Rate
Austria	72	19	26%	32	44%
Belgium	42	5	12%	7	17%
Bulgaria	52	5	10%	5	10%
Croatia	49	6	12%	7	14%
Cyprus	8	2	25%	2	25%
Czech Republic	70	6	9%	6	9%
Denmark	16	8	50%	8	50%
Estonia	24	4	17%	4	17%
Finland	41	11	27%	12	29%
France	104	4	4%	6	6%
Germany	112	8	7%	12	11%
Greece	34	4	12%	4	12%
Hungary	64	10	16%	12	19%
Ireland	52	6	12%	10	19%
Italy	120	17	14%	20	17%
Latvia	29	5	17%	5	17%
Lithuania	40	7	18%	8	20%
Luxembourg	1	0	0%	0	0%
Malta	1	1	100%	1	100%
Netherlands	60	14	23%	16	27%
Poland	90	2	2%	2	2%
Portugal	83	2	2%	5	6%
Romania	49	8	16%	11	22%
Slovakia	34	10	29%	10	29%
Slovenia	17	4	24%	5	29%
Spain	75	14	19%	18	24%
Sweden	33	10	30%	12	36%
United Kingdom	107	16	15%	19	18%
<b>TOTAL</b>	<b>1479</b>	<b>208</b>	<b>14%</b>	<b>259</b>	<b>18%</b>

\*Column "Incl. Partial" provides the total response rate including "fully completed questionnaires" and "partially completed questionnaires"



**Table 4 Public Research Organisations survey - Response rate**

Country	Contacts	Responses	Rate	Incl. Partial*	Rate
Austria	336**	18	5%	24	7%
Belgium	31	3	10%	6	19%
Bulgaria	140	6	4%	8	6%
Croatia	26	6	23%	6	23%
Cyprus	8	7	88%	7	88%
Czech Republic	32	11	34%	14	44%
Denmark	9	1	11%	1	11%
Estonia	11	0	0%	1	9%
Finland	24	8	33%	8	33%
France	48	10	21%	10	21%
Germany	102	6	6%	6	6%
Greece	25	10	40%	13	52%
Hungary	89	7	8%	11	12%
Ireland	25	3	12%	7	28%
Italy	20	7	35%	9	45%
Latvia	19	6	32%	6	32%
Lithuania	10	3	30%	3	30%
Luxembourg	6	0	0%	2	33%
Malta	2	2	100%	2	100%
Netherlands	47	12	26%	16	34%
Poland	183	7	4%	7	4%
Portugal	21	2	10%	2	10%
Romania	28	2	7%	4	14%
Slovakia	7	2	29%	3	43%
Slovenia	55	5	9%	7	13%
Spain	49	4	8%	6	12%
Sweden	47	10	21%	11	23%
United Kingdom	86	7	8%	8	9%
<b>TOTAL</b>	<b>1486</b>	<b>165</b>	<b>11%</b>	<b>208</b>	<b>14%</b>

\*Column "Incl. Partial" provides the total response rate including "fully completed questionnaires" and "partially completed questionnaires"

\*\* Austria was kept since the 19 responses received represent the main Austrian research organisations. The very high number of initial contacts corresponds to a lower number of organisations therefore, Austria was kept.

## APPENDIX 5: NUMBER OF RESPONSES PER SURVEY

### QUESTION

Below, we present tables with the total number of responses registered per survey questions that was then used in order to build a specific indicator.

GE1: HEI survey (Q°19)			
Country	Q19_2014	Q19_2015	Q19_2016
AT	16	16	17
BE	5	5	5
BG	4	4	4
HR	6	6	6
CY	1	1	1
CZ	6	6	6
DK	8	8	8
EE	4	4	4
FI	12	12	12
FR	3	3	4
DE	9	9	9
EL	3	3	3
HU	8	8	8
IE	4	4	5
IT	11	12	13
LV	1	1	1
LT	6	6	6
MT	1	1	1
PL	2	2	2
PT	2	2	2
RO	8	8	8
SK	8	8	8
SI	4	4	4
ES	14	15	16
SE	11	11	11

NL	11	12	12
UK	15	16	16

GE1: PRO survey (Q°19)			
Country	Q19_2014	Q19_2015	Q19_2016
AT	22	22	22
BE	2	2	2
BG	5	5	5
HR	6	6	6
CY	6	6	6
CZ	10	10	10
DK	1	1	1
FI	8	8	8
FR	8	8	7
DE	5	5	5
EL	12	12	12
HU	7	7	7
IE	5	5	5
IT	6	6	5
LV	5	5	5
LT	3	3	3
MT	2	2	2
PL	6	6	7
PT	2	2	2
RO	2	2	2
SK	3	3	3
SI	5	5	5
ES	4	4	4
SE	10	10	10
NL	13	13	13
UK	7	8	7

GE3: RFO survey (Q°19)

Country	Q19_2014	Q19_2015	Q19_2016
AT	6	6	6
BE	3	3	3
BG	2	2	2
HR	2	2	2
CY	1	1	1
CZ	4	4	4
DK	11	11	11
EE	4	4	4
FI	4	5	5
FR	2	2	2
DE	2	2	2
EL	2	3	3
HU	1	1	1
IE	4	4	4
IT	5	5	5
LT	4	4	4
MT	3	3	3
PL	1	1	1
PT	1	1	1
SK	4	4	4
SI	2	2	2
ES	3	3	3
SE	9	9	9
NL	4	4	4
UK	2	2	2

GE5: HEI survey (Q°20)

Country	Q20_2014	Q20_2015	Q20_2016
AT	17	17	17
BE	5	5	5
BG	4	4	4
HR	6	6	6
CY	1	1	1
CZ	6	6	6
DK	7	7	7
EE	4	4	4
FI	12	12	12
FR	3	4	4
DE	8	8	8
EL	2	2	2
HU	5	5	5
IE	7	7	7
IT	13	13	13
LV	1	1	2
LT	6	6	6
MT	1	1	1
PL	2	2	2
PT	1	1	1
RO	8	8	8
SK	7	7	7
SI	4	4	4
ES	14	14	15
SE	10	10	10
NL	14	14	14
UK	12	13	13

GE5: PRO survey (Q°20)

Country	Q20_2014	Q20_2015	Q20_2016
AT	21	21	21
BE	3	3	3
BG	5	5	5
HR	6	6	6
CY	5	6	6
CZ	9	9	9
DK	1	1	1
FI	8	8	8
FR	7	8	8
DE	4	4	4
EL	12	12	12
HU	7	7	7
IE	4	4	4
IT	7	7	7
LV	5	5	5
LT	3	3	3
MT	2	2	2
PL	6	6	7
PT	2	2	2
RO	2	2	2
SK	3	3	3
SI	5	5	5
ES	5	5	5
SE	9	9	9
NL	12	12	12
UK	7	8	8

GE8: HEI survey (Q°22)

Country	Q22_2014	Q22_2015	Q22_2016
AT	20	20	20
BE	5	5	5
BG	5	5	5
HR	7	7	7
CY	2	2	2
CZ	6	6	6
DK	8	8	8
EE	4	4	4
FI	12	12	12
FR	4	4	4
DE	9	9	9
EL	4	4	4
HU	9	9	9
IE	8	8	8
IT	13	13	13
LV	5	5	5
LT	8	8	8
MT	1	1	1
PL	2	2	2
PT	2	2	2
RO	8	8	8
SK	8	8	8
SI	5	5	5
ES	16	16	16
SE	11	11	11
NL	14	14	14
UK	18	18	18

GE8: PRO survey (Q°22)

Country	Q22_2014	Q22_2015	Q22_2016
AT	22	22	22
BE	3	3	3
BG	6	6	6
HR	6	6	6
CY	7	7	7
CZ	11	11	11
DK	1	1	1
FI	7	8	8
FR	10	10	10
DE	5	5	5
EL	12	12	12
HU	8	8	8
IE	4	4	4
IT	8	8	8
LV	6	6	6
LT	3	3	3
MT	2	2	2
PL	7	7	7
PT	2	2	2
RO	2	2	2
SK	3	3	3
SI	5	5	5
ES	5	5	5
SE	9	10	10
NL	13	13	13
UK	7	7	7



GE9: HEI survey (Q°23 and Q°24)

Country	Q2324_2014	Q2324_2015	Q2324_2016
AT	11	12	13
BE	3	2	3
BG	3	3	3
HR	4	3	3
CY	0	0	0
CZ	2	2	2
DK	4	4	4
EE	1	1	1
FI	7	7	7
FR	2	2	2
DE	3	3	3
EL	1	1	1
HU	2	2	2
IE	2	3	4
IT	4	4	4
LV	3	3	3
LT	4	3	3
MT	0	0	0
PL	0	0	0
PT	0	0	0
RO	5	5	5
SK	4	2	4
SI	3	3	4
ES	5	6	7
SE	7	7	7
NL	5	6	6
UK	3	3	4

GE9: PRO survey (Q°23 and Q°24)

Country	Q2324_2014	Q2324_2015	Q2324_2016
AT	7	7	7
BE	1	2	2
BG	1	2	1
HR	2	4	3
CY	3	4	3
CZ	4	4	4
DK	0	0	1
FI	2	2	4
FR	3	3	3
DE	1	1	1
EL	2	1	4
HU	3	3	2
IE	2	2	3
IT	0	2	3
LV	4	4	4
LT	1	1	1
MT	0	0	0
PL	4	5	4
PT	1	2	0
RO	1	1	1
SK	2	2	2
SI	1	2	1
ES	4	4	4
SE	6	6	6
NL	6	5	5
UK	3	3	3

## SLSE2: HEI survey (Q°25)

Country	Q25_2014	Q25_2015	Q25_2016
AT	18	19	19
BE	5	5	5
BG	4	4	4
HR	7	7	7
CY	2	2	2
CZ	6	6	6
DK	8	8	7
EE	4	4	4
FI	12	12	12
FR	3	3	4
DE	8	8	8
EL	3	3	3
HU	9	9	9
IE	8	8	8
IT	13	13	13
LV	5	5	5
LT	7	7	7
MT	1	1	1
PL	2	2	2
PT	2	2	2
RO	8	7	8
SK	9	9	9
SI	5	5	5
ES	16	16	16
SE	10	10	10
NL	14	14	14
UK	17	17	17

PE5: HEI survey (Q°26 and Q°27)

Country	Q26_total2014	Q26_total2015	Q26_total2016	Q27_2014	Q27_2015	Q27_2016
AT	18	18	18	18	18	18
BE	5	5	5	5	5	5
BG	4	4	4	3	4	3
HR	7	7	7	6	6	6
CY	1	1	1	2	2	2
CZ	6	6	6	6	6	6
DK	6	6	6	6	6	6
EE	4	4	4	4	4	4
FI	12	12	12	12	11	11
FR	3	3	3	3	3	3
DE	8	8	8	8	8	8
EL	3	3	3	3	3	3
HU	7	7	7	8	8	8
IE	7	7	7	8	8	8
IT	12	12	12	12	12	12
LV	5	5	5	5	5	5
LT	7	7	7	7	7	7
MT	1	1	1	1	1	1
PL	2	2	2	2	2	2
PT	2	2	2	2	2	2
RO	8	8	8	8	8	8
SK	9	9	9	9	9	9
SI	4	4	4	4	4	4
ES	15	15	15	15	15	15
SE	10	10	10	10	10	10
NL	14	14	14	14	14	14
UK	16	16	16	16	16	16

PE5: PRO survey (Q°25 and Q°26)

Country	Q25_total2014	Q25_total2015	Q25_total2016	Q26_2014	Q26_2015	Q26_2016
AT	18	18	18	18	18	18
BE	3	3	3	3	3	3
BG	6	6	6	6	6	6
HR	6	6	6	6	6	6
CY	7	7	7	7	7	7
CZ	11	11	11	11	11	11
DK	1	1	1	1	1	1
FI	8	8	8	7	8	8
FR	10	10	10	10	10	10
DE	5	5	5	4	4	4
EL	11	11	11	9	9	9
HU	7	7	7	7	7	7
IE	3	3	3	3	3	3
IT	8	8	8	7	7	7
LV	5	5	5	5	5	5
LT	3	3	3	3	3	3
MT	2	2	2	2	2	2
PL	7	7	7	7	7	7
PT	2	2	2	2	2	2
RO	2	2	2	2	2	2
SK	3	3	3	2	2	2
SI	5	5	5	5	5	5
ES	5	5	5	4	4	4
SE	10	10	10	9	10	10
NL	13	13	13	13	13	13
UK	7	7	7	7	7	7

PE7: RFO survey (Q°21 and Q°23)

Country	Q21_2014	Q21_2015	Q21_2016	Q23_2014	Q23_2015	Q23_2016
AT	6	6	6	5	5	5
BE	3	3	3	3	3	3
BG	2	2	2	2	2	2
HR	2	2	2	2	2	2
CY	1	1	1	1	1	1
CZ	4	4	4	4	4	4
DK	9	9	9	9	9	9
EE	4	4	4	3	3	4
FI	3	5	5	4	5	5
FR	2	2	2	2	2	2
DE	2	2	2	1	1	1
EL	2	2	2	1	1	1
HU	1	1	1	1	1	1
IE	3	3	3	3	3	3
IT	4	3	3	2	2	2
LT	3	3	3	3	3	3
MT	3	3	3	3	3	3
PL	1	1	1	1	1	1
PT	1	1	1	1	1	1
SK	4	4	4	4	4	4
SI	2	2	2	2	2	2
ES	4	4	3	4	4	4
SE	7	7	7	7	7	7
NL	3	3	3	3	3	3
UK	2	2	2	1	1	1

PE8: RFO survey (Q°24)

Country	Q24_2014	Q24_2015	Q24_2016
AT	5	5	5
BE	3	3	3
BG	2	2	2
HR	2	2	2
CY	1	1	1
CZ	4	4	4
DK	9	9	9
EE	4	4	4
FI	4	5	5
FR	2	2	2
DE	2	2	2
EL	1	1	1
HU	1	1	1
IE	3	3	3
IT	2	2	2
LT	3	3	3
MT	3	3	3
PL	1	1	1
PT	1	1	1
SK	4	4	4
SI	2	2	2
ES	3	3	3
SE	7	7	7
NL	2	2	2
UK	1	1	1

## E1a: HEI survey (Q°30 and Q°39)

Country	Q30_2014	Q30_2015	Q30_2016	Q39_2014	Q39_2015	Q39_2016
AT	21	21	21	21	21	21
BE	6	6	6	6	6	6
BG	5	5	5	5	5	5
HR	6	6	6	6	6	6
CY	2	2	2	2	2	2
CZ	6	6	6	6	6	6
DK	8	8	8	8	8	8
EE	4	4	4	4	4	4
FI	12	12	12	12	12	12
FR	4	4	4	4	4	4
DE	10	10	10	10	10	10
EL	4	4	4	4	4	4
HU	10	10	10	10	10	10
IE	9	9	9	8	8	8
IT	13	13	13	13	13	13
LV	5	5	5	5	5	5
LT	7	7	7	7	7	7
MT	1	1	1	1	1	1
PL	2	2	2	2	2	2
PT	2	2	2	2	2	2
RO	8	8	8	8	8	8
SK	10	10	10	10	10	10
SI	4	4	4	4	4	4
ES	17	17	17	16	16	16
SE	10	10	10	10	10	10
NL	14	14	14	14	14	14
UK	16	16	16	16	16	16



## E1a: PRO survey (Q°29 and Q°38)

Country	Q29_2014	Q29_2015	Q29_2016	Q38_2014	Q38_2015	Q38_2016
AT	20	20	20	19	19	19
BE	3	3	3	3	3	3
BG	6	6	6	6	6	6
HR	6	6	6	6	6	6
CY	7	7	7	7	7	7
CZ	11	11	11	11	11	11
DK	1	1	1	1	1	1
FI	8	8	8	8	8	8
FR	10	10	10	10	10	10
DE	5	5	5	5	5	5
EL	12	12	12	12	12	12
HU	7	7	7	7	7	7
IE	4	4	4	3	3	3
IT	7	7	7	7	7	7
LV	6	6	6	6	6	6
LT	3	3	3	3	3	3
MT	2	2	2	2	2	2
PL	7	7	7	7	7	7
PT	2	2	2	2	2	2
RO	2	2	2	2	2	2
SK	3	3	3	3	3	3
SI	5	5	5	5	5	5
ES	4	4	4	4	4	4
SE	10	10	10	10	10	10
NL	13	13	13	13	13	13
UK	7	7	7	7	7	7

## E3a: RFO survey (Q°25)

Country	Q25_2014	Q25_2015	Q25_2016
AT	6	6	6
BE	3	3	3
BG	3	3	3
HR	2	2	2
CY	1	1	1
CZ	4	4	4
DK	10	10	10
EE	4	4	4
FI	5	5	5
FR	2	2	2
DE	2	2	2
EL	3	3	3
HU	1	1	1
IE	6	6	6
IT	4	4	4
LT	4	4	4
MT	3	3	3
PL	1	1	1
PT	1	1	1
SK	4	4	4
SI	2	2	2
ES	3	3	3
SE	7	7	7
NL	4	4	4
UK	1	1	1

OA6: HEI survey (Q°51, Q°52 and Q°53)

Country	Q51_20 14	Q51_20 15	Q51_20 16	Q52_20 14	Q52_20 15	Q52_20 16	Q53_20 14	Q53_20 15	Q53_20 16
AT	3	6	8	3	5	6	6	6	7
BE	2	2	3	1	3	4	1	2	4
BG	0	0	0	0	0	0	0	0	0
HR	0	0	0	0	0	0	0	0	0
CY	0	0	0	0	0	0	0	0	0
CZ	1	1	1	1	1	1	1	1	2
DK	2	2	2	1	1	1	0	0	0
EE	2	2	2	2	2	2	1	1	1
FI	4	6	8	4	4	8	2	3	7
FR	0	1	2	1	1	2	2	2	3
DE	2	3	3	2	2	2	2	2	3
EL	1	1	1	1	1	1	1	1	1
HU	2	2	2	2	3	3	2	2	2
IE	1	1	1	3	3	3	2	2	2
IT	1	2	1	0	1	1	1	3	3
LV	1	1	2	1	1	3	2	2	2
LT	5	6	6	5	6	5	4	5	5
MT	0	0	0	0	0	0	0	0	0
PL	0	0	0	0	0	0	2	2	2
PT	2	2	2	2	2	2	1	1	1
RO	1	1	1	3	3	3	2	2	2
SK	0	0	0	1	1	1	0	1	1
SI	0	0	0	0	0	0	0	0	0
ES	3	4	5	6	6	7	3	3	5
SE	5	5	6	5	5	6	4	4	4
NL	5	5	7	5	6	6	6	7	8
UK	10	11	11	9	11	13	8	11	12

OA6: PRO survey (Q°49, Q°50 and Q°51)

Country	Q49_2014	Q49_2015	Q49_2016	Q50_2014	Q50_2015	Q50_2016	Q51_2014	Q51_2015	Q51_2016
AT	17	17	17	17	17	18	15	17	18
BE	2	2	2	2	2	2	1	1	2
BG	5	5	5	5	5	5	5	6	5
HR	5	5	5	6	6	6	4	4	4
CY	7	7	7	7	7	7	6	6	5
CZ	10	10	10	11	11	11	11	11	11
DK	1	1	1	1	1	1	1	1	1
FI	6	7	7	7	8	8	7	8	7
FR	8	8	8	7	7	7	8	8	8
DE	4	4	4	4	4	4	4	4	4
EL	10	10	10	11	11	11	10	10	10
HU	7	7	7	7	7	7	7	7	7
IE	3	3	3	3	3	3	2	3	3
IT	5	5	5	4	4	4	4	4	3
LV	5	5	5	5	5	5	5	5	5
LT	2	3	3	3	3	3	2	3	3
MT	2	2	2	2	2	2	2	2	2
PL	5	5	5	5	5	5	7	7	7
PT	1	2	2	2	2	2	2	2	2
RO	2	2	2	2	2	2	2	2	2
SK	1	1	1	1	1	1	1	1	1
SI	5	5	5	5	5	5	5	5	5
ES	3	3	3	4	4	4	4	4	4
SE	8	8	8	8	8	8	9	9	9
NL	12	12	12	10	10	11	10	10	11
UK	7	7	7	7	7	7	7	7	7

GOV2: HEI survey (Q°7)

Country	Q7_HEI_2014	Q7_HEI_2015	Q7_HEI_2016
AT	21	22	23
BE	5	5	5
BG	5	5	5
HR	6	6	6
CY	2	2	2
CZ	6	6	6
DK	5	7	7
EE	3	4	3
FI	11	12	12
FR	4	4	5
DE	10	10	10
EL	3	3	3
HU	5	5	6
IE	7	7	8
IT	13	12	12
LV	3	4	4
LT	8	8	8
MT	1	1	1
PL	1	1	1
PT	5	5	5
RO	8	8	9
SK	8	8	8
SI	3	4	4
ES	18	19	19
SE	10	10	10
NL	15	15	15
UK	18	18	18

GOV2: RFO survey (Q°7)

Country	Q7_RFO_2014	Q7_RFO_2015	Q7_RFO_2016
AT	8	8	8
BE	3	3	3
BG	2	2	2
HR	3	3	3
CY	1	0	0
CZ	4	4	4
DK	11	12	9
EE	4	4	4
FI	3	5	5
FR	1	1	1
DE	2	2	2
EL	2	4	4
HU	0	0	0
IE	6	6	6
IT	4	5	5
LT	3	2	3
MT	2	2	2
PL	1	1	1
PT	1	1	1
SK	4	4	4
SI	1	1	2
ES	3	4	4
SE	10	11	11
NL	6	6	6
UK	4	4	4

GOV2: PRO survey (Q°7)			
Country	Q7_2014	Q7_2015	Q7_2016
AT	22	22	22
BE	5	5	5
BG	8	8	8
HR	6	6	6
CY	7	7	7
CZ	13	13	13
DK	1	1	1
EE	1	1	1
FI	8	8	8
FR	10	10	10
DE	6	6	6
EL	13	13	13
HU	11	11	11
IE	7	7	7
IT	9	9	9
LV	6	6	6
LT	3	3	3
LU	1	1	1
MT	2	2	2
PL	7	7	7
PT	2	2	2
RO	4	4	4
SK	3	3	3
SI	7	7	7
ES	6	6	6
SE	11	11	11
NL	14	14	14
UK	8	8	8

GOV3: HEI survey (Q°13)

Country	Q13_2016_Ethics	Q13_2016_Engagement	Q13_2016_Open	Q13_2016_Gender	Q13_2016_Responsive
AT	27	25	26	27	26
BE	6	6	6	6	5
BG	5	5	5	5	5
HR	7	7	7	7	7
CY	2	2	2	2	2
CZ	6	6	6	6	6
DK	8	7	8	8	8
EE	4	4	4	4	4
FI	12	12	12	12	12
FR	4	4	4	4	3
DE	10	11	11	11	10
EL	4	4	3	4	4
HU	12	12	12	12	12
IE	10	10	10	10	10
IT	15	15	15	15	14
LV	5	5	5	4	4
LT	8	8	8	8	8
MT	1	1	1	1	1
PL	2	2	2	2	2
PT	3	3	3	3	3
RO	10	10	10	10	10
SK	10	10	9	10	10
SI	5	5	5	5	5
ES	19	18	18	19	18
SE	12	12	12	12	12
NL	16	16	16	16	15
UK	19	19	19	19	19



GOV3: RFO survey (Q°13)

Country	Q13_2016_Ethics	Q13_2016_Engagement	Q13_2016_Open	Q13_2016_Gender	Q13_2016_Responsible
AT	8	8	8	8	8
BE	3	3	3	3	3
BG	3	3	3	3	3
HR	3	3	3	3	3
CY	1	1	1	1	1
CZ	4	4	4	4	4
DK	12	12	12	12	12
EE	4	4	4	4	4
FI	5	5	5	5	5
FR	2	2	2	2	2
DE	2	2	2	2	2
EL	4	4	4	4	4
HU	1	1	1	1	1
IE	6	6	6	6	6
IT	5	5	5	5	5
LT	4	4	4	4	4
MT	3	3	3	3	3
PL	1	1	1	1	1
PT	1	1	1	1	1
SK	4	4	4	4	4
SI	2	2	2	2	2
ES	4	4	4	4	4
SE	10	10	10	10	10
NL	6	6	6	6	6
UK	3	3	3	3	3

GOV3: PRO survey (Q°13)

Country	Q13_2016_Ethics	Q13_2016_Engagement	Q13_2016_Open	Q13_2016_Gender	Q13_2016_Responsive
AT	22	22	22	22	22
BE	4	4	4	4	4
BG	6	6	6	6	6
HR	6	6	6	6	6
CY	7	7	7	7	7
CZ	11	11	11	11	11
DK	1	1	1	1	1
EE	1	1	1	1	1
FI	8	8	8	8	8
FR	10	10	10	10	10
DE	6	6	6	6	6
EL	13	13	13	13	13
HU	10	10	10	10	10
IE	6	6	6	6	6
IT	9	9	9	9	9
LV	6	6	6	6	6
LT	3	3	3	3	3
MT	2	2	2	2	2
PL	7	7	7	7	7
PT	2	2	2	2	2
RO	4	4	4	4	4
SK	3	3	3	3	3
SI	5	5	5	5	5
ES	6	6	6	6	6
SE	11	11	11	11	11
NL	13	13	13	13	13
UK	8	8	8	8	8

## APPENDIX 6: MELTWATER SEARCH KEYS

### Citizen engagement

("citizen engagement" OR "Bürgerbeteiligung" OR "Bürgerdialog" OR "participación ciudadana" OR "engagement citoyen\*" OR "envolvimento cidadão" OR "zaangażowanie obywateli" OR "impegno dei cittadini" OR "kodanike kaasamise" OR "pilsonis iesaistīšanās" OR "piliētis vestuvinis" OR "betrokkenheid van burgers" OR "állampolgár elkötelezettség" OR "občan zapojenie" OR "občan zapojení" OR "ангажираността на гражданите" OR "de participare" OR "medborgar engagemang" OR "kansalainen sitoutuminen" OR "borgernes engagement" OR "εμπλοκή των πολιτών")

near/10

(research OR Innovation OR science or Forschung OR wissenschaft OR Innovation OR investigación OR ciencia OR innovación OR recherche OR inovação OR pesquisa OR ciência OR innowacja OR badania OR nauka OR innovazione OR ricerca OR "scienza innovatsioon" OR teadustöö OR "teadus inovācija" OR pētniecība OR zinātne OR naujové OR tyrimas OR mokslas OR innovatie OR onderzoek OR wetenschap OR innováció OR kutatás OR tudomány OR inovácie OR výskum OR "veda inovace" OR výzkum OR věda OR нововъведение OR проучване OR "наука inovație" OR cercetare OR "știință innovation" OR forskning OR "vetenskap innovaatio" OR tutkimus OR "tiede innovation" OR videnskab OR καινοτομία OR έρευνα OR επιστήμη)

### Science literacy and science education

("science literacy" OR "science education" or "Wissenschaftliche Bildung" OR

"wissenschaftliche Ausbildung" or "Formación científica" OR "educación científica" or "enseignement des sciences" or "éducation scientifique" or "formação científica" OR "educação científica" or "Edukacja naukowa" or "insegnamento delle scienze" or "teaduse kirjaoskuse" OR "teadushariduse" or "zinātne lasītprasmes" OR "zinātniskā izglītība" or "Mokslas raštingumo" OR "mokslinis švietimas" or wetenschap near/10 geletterdheid OR "wetenschappelijk onderwijs" or "geslachtsgelijkheid" or "természettudományos ismeretek" OR "tudományos oktatás" or "přírodovědné gramotnosti" OR "vedecká výchova" or "přírodovědné gramotnosti" OR "vědecká výchova" or "науката грамотност" OR "научното образование" or "alfabetizare stiinta" OR "educația științifică" or "vetenskap läskunnighet" OR "vetenskaplig utbildning" or "Luonnontieteiden osaamisessa" OR "tieteellinen koulutus" or "science literacy" OR

"videnskabelig uddannelse" or "επιστημονικού αλφαριθμητισμού" OR "επιστημονική εκπαίδευση")

near/10

(research OR Innovation OR science or Forschung OR wissenschaft OR Innovation OR investigación OR ciencia OR innovación OR recherche OR inovação OR pesquisa OR ciência OR innowacja OR badania OR nauka OR innovazione OR ricerca OR "scienza innovatsioon" OR teadustöö OR "teadus inovācija" OR pētniecība OR zinātne OR naujové OR tyrimas OR mokslas OR innovatie OR onderzoek OR wetenschap OR innováció OR kutatás OR tudomány OR inovácie OR výskum OR "veda inovace" OR výzkum OR věda OR нововъведение OR проучване OR "наука inovație" OR cercetare OR "știință innovation" OR forskning OR "vetenskap innovaatio" OR tutkimus OR "tiede innovation" OR videnskab OR καινοτομία OR έρευνα OR επιστήμη)

## Gender equality

("gender equality" OR "Gleichstellung der Geschlechter" OR "Geschlechtergleichstellung" OR "igualdad de género" OR "égalité des sexes" OR "igualdade de gênero" OR "równość płci" OR "parità di genere" OR "soolise võrdõiguslikkuse" OR "zinātne lasītprasmes" OR "zinātniskā izglītība" OR "lyčių lygybė" OR "geslachtsgelijkheid" OR "nemek közötti egyenlőség" OR "rodovej rovnosti" OR "rovnosti žen a mužů" OR "равенството между половете" OR "egalitatea de gen" OR "jämställdhet" OR "sukupuolten tasa-arvo" OR "ligestilling" OR "ισότητα των φύλων")

near/10

(research OR Innovation OR science OR Forschung OR wissenschaft OR investigación OR ciencia OR innovación OR recherche OR science OR inovação OR pesquisa OR ciência or innowacja OR badania OR nauka OR innovazione OR ricerca OR "scienza innovatsioon" OR teadustöö OR "teadus inovācija" OR pētniecība OR zinātne or naujovē OR tyrimas OR mokslas or innovatie OR onderzoek OR wetenschap or innováció OR kutatás OR tudomány or inovácie OR výskum OR "veda inovace" OR výzkum OR věda or нововведение OR проучване OR "наука inovație" OR cercetare OR "știință innovation" OR forskning OR "vetenskap innovaatio" OR tutkimus OR "tiede innovation" OR forskning OR videnskab OR καινοτομία OR έρευνα OR επιστήμη)

## Open access

("OPEN ACCESS" OR "OPEN SCIENCE" OR "open data" OR "åben adgang" OR "vaba ligipääs" OR "avoin pääsy" OR "accès ouvert" OR "accès libre" OR "ανοιχτή πρόσβαση" OR "accesso libero" OR "otvoreni pristup" OR "brīva pieeja" OR "atviros prieigos" OR "vrije toegang" OR "otwarty dostęp" OR "acesso livre" OR "accès deschis" OR "fri tillgång" OR "otvorený prístup" OR "odprt dostop" OR "acceso abierto" OR "otevřený přístup" OR "nyílt hozzáférés" OR "отворен доступ")

near/5

(research OR Innovation OR science OR Forschung OR wissenschaft OR Innovation OR investigación OR ciencia OR innovación or innovation OR recherche OR science or inovação OR pesquisa OR ciência or innowacja OR badania OR nauka or innovazione OR ricerca OR "scienza innovatsioon" OR teadustöö OR "teadus inovācija" OR pētniecība OR zinātne or naujovē OR tyrimas OR mokslas or innovatie OR onderzoek OR wetenschap or innováció OR kutatás OR tudomány or inovácie OR výskum OR "veda inovace" OR výzkum OR věda or нововведение OR проучване OR "наука inovație" OR cercetare OR "știință innovation" OR forskning OR "vetenskap innovaatio" OR tutkimus OR "tiede innovation" OR forskning OR videnskab or καινοτομία OR έρευνα OR επιστήμη)

not "Royal Society Open Science"

## Ethics

("ethic" OR "ethics" OR "Ethik" OR "ética" OR "éthique" OR "ética" OR "etyka" OR "etica" OR "eetika" OR "ētika" OR "etika" OR "ethiek" OR "etika" OR "etika" OR "etika" OR "етика" OR "etică" OR "etik" OR "etiikka" OR "etik" OR "δεοντολογία")

near/5

(research OR Innovation OR science or Forschung OR wissenschaft OR Innovation or investigación OR ciencia OR innovación or innovation OR recherche OR science or inovação OR pesquisa OR ciência or innowacja OR badania OR nauka or innovazione OR

ricerca OR "scienza innovatsioon" OR teadustöö OR "teadus inovācija" OR pētniecība OR zinātne or naujovē OR tyrimas OR mokslas or innovatie OR onderzoek OR wetenschap or innováció OR kutatás OR tudomány or inovácie OR výskum OR "veda inovace" OR výzkum OR věda or нововъведение OR проучване OR "наука inovație" OR cercetare OR "știință innovation" OR forskning OR "vetenskap innovaatio" OR tutkimus OR "tiede innovation" OR forskning OR videnskap or καινοτομία OR έρευνα OR επιστήμη)

NOT "ethics, innovation" NOT "innovation, ethics"

## APPENDIX 7: NUMBER OF PUBLICATIONS AND PATENTS

Number of Publications Fractionated: Women												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
AT	1195	1356	1425	1600	1645	1757	2055	2153	2321	2428	2527	2392
BE	1603	1830	1918	2183	2307	2578	2867	3219	3349	3554	3507	3410
BG	289	323	356	411	436	447	461	514	579	547	488	498
CY	39	40	57	70	93	95	130	147	181	203	193	215
CZ	809	1076	1202	1304	1487	1638	1972	2118	2341	2523	2737	2723
DE	9566	10521	11409	12078	13073	14131	15460	16481	17497	18618	18635	18342
DK	1489	1606	1784	1958	2198	2367	2781	3091	3280	3554	3678	3530
EE	136	183	233	245	311	337	330	374	436	462	458	417
ES	5299	6314	6936	7753	8532	9369	10484	11534	12520	12979	12873	12525
FI	2046	2170	2276	2465	2579	2696	2851	2947	3087	3244	3311	3170
FR	7606	8291	8650	9385	10125	10626	11274	11957	12624	12936	12555	12074
EL	1160	1413	1503	1703	1873	1847	2011	1991	2094	2107	1970	1848
HR	834	902	1042	1139	1396	1503	1792	1748	1832	1751	1642	1543
HU	540	596	662	749	767	756	858	882	884	1014	927	881
IE	646	797	936	1054	1227	1393	1575	1584	1694	1835	1684	1742
IT	9825	11114	12142	13238	14303	14685	16044	17671	19640	20612	21058	20791
LT	284	315	335	455	490	480	554	569	588	630	621	619
LU	14	23	22	34	43	63	88	93	118	130	124	145
LV	44	54	62	80	97	136	160	182	258	239	241	226
MT	13	10	16	31	23	31	37	46	59	68	62	68
NL	3180	3552	3869	4309	4931	5560	6010	6695	7083	7490	7548	7217
PL	4597	5237	5194	5732	6254	6491	7329	7893	8764	9120	9307	9171
PT	1048	1262	1444	1679	1985	2285	2699	3045	3452	3779	3786	3808
RO	755	856	989	1736	2334	2473	2876	2898	3415	3112	3266	2691
SE	3300	3581	3793	3834	4117	4270	4636	4978	5371	5725	5713	5518
SI	490	500	604	739	876	883	1078	1128	1129	1233	1153	1110
SK	367	416	403	491	475	570	650	681	865	948	976	1027
UK	15496	17089	18237	18324	19687	21023	22490	23988	25829	25845	25985	25149

Source: Scopus, extraction December 2017

Number of Publications, fractionated: Men												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
AT	4238	4606	4867	5018	5335	5384	5847	6032	6329	6768	6524	6129
BE	5181	5469	5859	6215	6827	6802	7232	7595	8037	8309	8022	7597
BG	332	352	458	494	504	503	521	601	602	626	600	537
CY	102	134	164	201	258	277	313	334	398	352	407	447
CZ	2013	2286	2657	2844	2973	3412	3794	4018	4457	4857	4952	4932
DE	39781	42652	43388	44083	45743	46728	49230	51341	52352	54370	52629	50550
DK	4320	4677	4832	5042	5571	5793	6462	6979	7291	7801	7440	7232
EE	244	317	363	375	420	485	518	527	581	653	642	587
ES	10494	12344	13326	14347	15752	16492	18254	19582	20907	21856	20692	19920
FI	3733	4062	4043	4076	4273	4268	4547	4687	4829	5213	4903	4728
FR	18939	20110	20926	21998	23113	23746	25074	25773	26581	27024	25932	24778
EL	3354	3971	4319	4707	4997	4841	5041	4874	4913	4959	4416	4247
HR	1123	1137	1266	1370	1619	1598	1966	1862	1853	1732	1670	1560
HU	925	1083	1079	1109	1165	1126	1278	1302	1316	1374	1346	1246
IE	1715	1940	2155	2294	2654	2910	3136	3040	3124	3208	3017	2912
IT	17353	19355	20615	21904	23301	23359	24804	26748	29253	30269	29715	29165
LT	501	607	554	773	756	774	807	801	791	896	842	805
LU	62	72	83	111	158	178	220	240	322	379	344	360
LV	47	49	61	98	123	140	183	200	236	229	239	236
MT	45	38	57	81	88	89	101	149	158	162	191	168
NL	10388	11075	11689	12131	13365	13900	14427	14993	15361	15683	15095	14193
PL	6626	7272	7375	8316	8771	9010	9774	10516	11371	11865	11878	11246
PT	1157	1452	1599	1857	2064	2340	2655	2998	3432	3645	3631	3547
RO	834	954	1115	1852	2564	2714	3031	3132	3462	3127	3063	2560
SE	7910	8237	8160	8197	8670	8794	9096	9545	10138	10634	10377	10019
SI	849	947	1125	1258	1263	1275	1488	1515	1588	1619	1514	1393
SK	657	704	768	867	872	967	1093	1090	1327	1504	1370	1462
UK	38580	41317	42954	42603	44984	45821	48389	49723	51394	51351	50600	47463

Source: Scopus, extraction December 2017

Number of Publications, fractionated: Women AND men												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
AT	5434	5962	6292	6618	6979	7141	7902	8185	8649	9196	9051	8521
BE	6784	7299	7778	8398	9134	9379	10099	10815	11386	11863	11529	11007
BG	620	675	814	904	940	950	982	1115	1181	1173	1089	1035
CY	140	174	221	271	351	372	443	481	579	556	600	662
CZ	2822	3363	3859	4148	4460	5049	5765	6137	6798	7380	7688	7655
DE	49347	53173	54797	56161	58817	60859	64690	67822	69849	72987	71264	68892
DK	5809	6282	6616	6999	7769	8160	9244	10070	10572	11355	11118	10762
EE	380	500	595	620	732	822	849	900	1016	1116	1100	1005
ES	15793	18658	20262	22099	24285	25860	28738	31116	33427	34834	33565	32444
FI	5779	6232	6319	6541	6852	6964	7398	7633	7916	8457	8213	7898
FR	26545	28401	29576	31383	33239	34372	36348	37730	39205	39960	38487	36852
EL	4515	5385	5822	6410	6870	6689	7052	6865	7007	7067	6386	6095
HR	1958	2039	2308	2509	3015	3101	3758	3610	3685	3484	3311	3103
HU	1465	1679	1741	1858	1932	1883	2137	2183	2200	2388	2273	2128
IE	2362	2738	3091	3348	3881	4303	4711	4625	4819	5043	4701	4654
IT	27178	30470	32756	35142	37604	38045	40848	44420	48893	50881	50774	49957
LT	786	921	889	1228	1247	1254	1360	1370	1379	1526	1463	1424
LU	76	95	105	145	202	241	308	333	439	509	468	505
LV	91	103	123	178	220	276	343	382	494	468	480	462
MT	58	48	73	113	111	120	139	195	217	229	252	236
NL	13568	14627	15559	16440	18296	19460	20436	21688	22443	23172	22643	21410
PL	11223	12509	12569	14048	15024	15501	17103	18409	20135	20984	21185	20417
PT	2205	2714	3043	3536	4049	4625	5354	6042	6884	7424	7417	7355
RO	1589	1810	2104	3588	4898	5187	5906	6031	6876	6238	6329	5252
SE	11210	11819	11953	12030	12786	13064	13733	14523	15509	16359	16090	15537
SI	1339	1447	1729	1997	2140	2157	2566	2643	2717	2851	2667	2503
SK	1024	1120	1172	1358	1347	1537	1742	1771	2192	2451	2345	2489
UK	54076	58407	61192	60926	64671	66844	70879	73711	77223	77196	76585	72612

Source: Scopus, extraction December 2017



Number of Patents, fractionated: Women												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
AT	53	99	101	93	106	95	106	115	108	120	107	3
BE	148	169	175	158	157	147	163	127	131	138	156	7
BG	1	2	1	2	2	1	1	2	2	3	4	
CY			3	1	1		5	2	1	1	1	
CZ	7	6	14	10	10	12	15	16	17	20	20	1
DE	1389	1518	1605	1526	1625	1617	1631	1588	1604	1671	1714	56
DK	107	94	110	117	89	82	106	108	100	112	110	5
EE	1	3	4	3	1	3	4	2	2	4	3	
ES	253	234	265	339	358	373	343	343	310	277	309	11
FI	113	146	136	127	108	123	123	153	175	162	134	6
FR	898	979	1013	1032	1035	1029	1142	1050	1045	1003	1073	40
EL	7	12	7	7	7	5	5	6	9	5	7	0
HR	4	7	6	5	8	7	3	2	2	5	4	0
HU	19	19	19	12	18	15	13	11	13	7	10	0
IE	25	39	34	43	43	30	40	22	32	31	48	1
IT	435	445	431	441	427	439	405	399	400	436	405	9
LT	0	1	0	2	1	1	1	6	2	3	2	1
LU	3	5	5	3	3	6	4	7	6	3	8	1
LV	3	1	1	4	3	4	5	4	14	0	5	
MT	1			0		0						0
NL	160	162	205	175	174	150	190	238	228	226	245	12
PL	10	13	25	30	32	41	41	64	57	60	70	2
PT	16	23	17	25	23	31	32	27	28	30	43	
RO	5	3	3	5	2	4	5	7	7	9	11	
SE	229	242	285	227	214	234	221	239	208	201	228	8
SI	9	11	15	15	13	13	9	5	15	10	10	1
SK	1	4	3	1	2	3	5	3	3	1	6	
UK	496	503	511	449	470	438	518	440	524	536	556	32

Source: Patstat, extraction December 2017

Number of Patents, fractionated: Men												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
AT	1717	1898	1919	1803	1923	2066	2078	2063	2165	2144	2131	82
BE	1513	1555	1573	1542	1431	1514	1498	1496	1466	1455	1478	71
BG	8	15	9	15	13	13	24	18	14	24	24	1
CY	17	5	3	9	8	4	2	3	4	9	6	1
CZ	112	156	184	210	189	172	198	216	224	235	231	12
DE	25844	26902	28123	25865	25737	26379	26261	24749	23881	23875	23722	848
DK	1201	1221	1449	1383	1225	1285	1446	1307	1356	1325	1340	73
EE	2	9	16	17	21	22	9	8	15	18	14	0
ES	1429	1534	1661	1668	1834	1909	1885	1747	1625	1698	1647	78
FI	774	853	872	825	807	855	833	978	874	844	752	30
FR	8156	8370	8541	8454	8366	8382	8823	8339	7935	8272	8152	325
EL	70	70	81	78	75	52	69	80	71	65	59	2
HR	21	21	18	15	16	19	13	14	18	18	13	2
HU	114	124	149	132	137	149	149	115	64	92	89	2
IE	313	345	425	411	391	367	425	376	424	439	425	16
IT	5159	5565	5503	5196	4865	4851	4912	4702	4744	4783	4997	163
LT	3	3	6	2	3	3	5	8	3	9	3	
LU	76	96	67	84	61	73	78	74	74	72	67	1
LV	3	5	3	2	3	1	6	5	7	2	0	
MT	10	7	9	10	7	8	2	8	9	16	11	1
NL	2830	2933	2825	2790	2612	2273	2626	2814	2711	2792	2879	100
PL	124	141	177	228	268	305	320	400	365	432	542	13
PT	101	108	116	115	118	100	110	100	116	105	147	9
RO	17	21	27	31	28	26	41	48	63	63	65	5
SE	2537	2859	3224	3065	2777	2894	2962	3209	2963	3068	3000	115
SI	54	53	65	68	65	51	64	52	83	78	55	1
SK	38	39	43	33	27	48	56	40	60	44	49	4
UK	6341	6807	6740	6243	6135	6144	6140	5948	6426	6271	6242	268

Source: Patstat, extraction December 2017

Number of Patents, fractionated: Women AND men												
	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
AT	1770	1997	2020	1896	2029	2160	2184	2179	2273	2265	2238	85
BE	1661	1723	1748	1700	1588	1661	1661	1623	1596	1594	1634	78
BG	9	17	10	17	14	14	25	20	17	27	28	1
CY	17	5	6	9	10	4	7	5	5	10	7	1
CZ	119	162	198	220	199	185	213	232	241	255	251	13
DE	27233	28420	29728	27391	27363	27996	27892	26337	25485	25546	25436	903
DK	1308	1315	1559	1501	1314	1367	1551	1415	1456	1437	1450	77
EE	3	12	20	21	22	25	12	10	17	22	17	0
ES	1681	1767	1926	2008	2192	2282	2228	2089	1935	1975	1956	88
FI	887	999	1008	952	916	977	956	1131	1049	1006	887	36
FR	9053	9349	9554	9486	9401	9411	9965	9389	8980	9276	9225	365
EL	77	81	88	85	82	58	74	86	79	70	66	2
HR	25	28	24	20	23	26	16	17	20	24	17	3
HU	133	144	168	144	154	164	161	127	77	98	99	2
IE	339	384	459	454	434	397	465	398	455	470	473	17
IT	5594	6009	5934	5637	5292	5291	5316	5102	5143	5219	5402	172
LT	4	4	6	4	4	4	6	14	5	12	5	1
LU	80	100	72	86	65	78	82	81	80	74	75	2
LV	6	5	5	6	5	5	11	9	21	2	5	0
MT	11	7	9	11	7	8	2	8	9	16	11	1
NL	2990	3095	3031	2965	2786	2423	2816	3052	2938	3018	3124	112
PL	134	154	201	257	300	346	361	464	422	492	612	15
PT	117	131	134	139	142	131	143	126	144	135	190	9
RO	22	24	30	36	30	30	46	55	70	72	75	5
SE	2766	3101	3509	3292	2991	3128	3183	3448	3171	3270	3229	123
SI	63	64	80	83	79	64	73	57	98	88	65	2
SK	40	43	46	34	30	51	60	43	63	45	55	4
UK	6836	7310	7251	6692	6605	6582	6658	6388	6951	6807	6798	300

Source: Patstat, extraction December 2017

## APPENDIX 8: OPEN ACCESS DATA - MEAN NORMALISED

### CITATION SCORES OF OA PUBLISHING

	MNCS for all OA publications		MNCS Gold OA		MNCS Green OA	
	2010	2014	2010	2014	2010	2014
AT	1,62	1,71	0,94	0,98	1,62	1,71
BE	1,31	1,39	0,96	0,92	1,31	1,39
BG	0,89	0,58	0,72	0,42	0,89	0,58
HR	0,41	0,55	0,31	0,45	0,41	0,55
CY	0,90	1,60	0,52	0,77	0,90	1,60
CZ	1,25	1,22	0,48	0,56	1,25	1,22
DK	1,57	1,68	1,07	0,95	1,57	1,68
EE	0,92	1,32	0,45	0,56	0,92	1,32
FI	1,37	1,40	0,98	0,93	1,37	1,40
FR	1,39	1,40	0,93	1,03	1,39	1,40
DE	1,46	1,58	1,04	0,98	1,46	1,58
EL	1,17	1,06	0,79	0,69	1,17	1,06
HU	1,09	1,01	0,80	0,75	1,09	1,01
IE	1,30	1,34	1,14	0,98	1,30	1,34
IT	1,32	1,39	0,79	0,87	1,32	1,39
LV	0,83	0,67	0,43	0,53	0,83	0,67
LT	0,93	0,59	0,61	0,56	0,93	0,59
LU	1,36	1,33	1,11	0,88	1,36	1,33
MT	1,50	0,86	0,45	1,14	1,50	0,86
NL	1,56	1,64	1,09	1,02	1,56	1,64
PL	0,94	0,86	0,39	0,50	0,94	0,86
PT	1,14	1,22	0,53	0,67	1,14	1,22
RO	0,99	0,75	0,64	0,60	0,99	0,75
SK	0,88	0,82	0,50	0,41	0,88	0,82
SI	1,18	1,16	0,41	0,58	1,18	1,16
ES	1,19	1,32	0,61	0,66	1,19	1,32
SE	1,30	1,45	0,93	0,89	1,30	1,45
UK	1,62	1,70	1,22	1,17	1,62	1,70

Source: CWTS, MoRRI 2017

Note: Blue indicates positive higher as expected values, crème below and no colour around world average.

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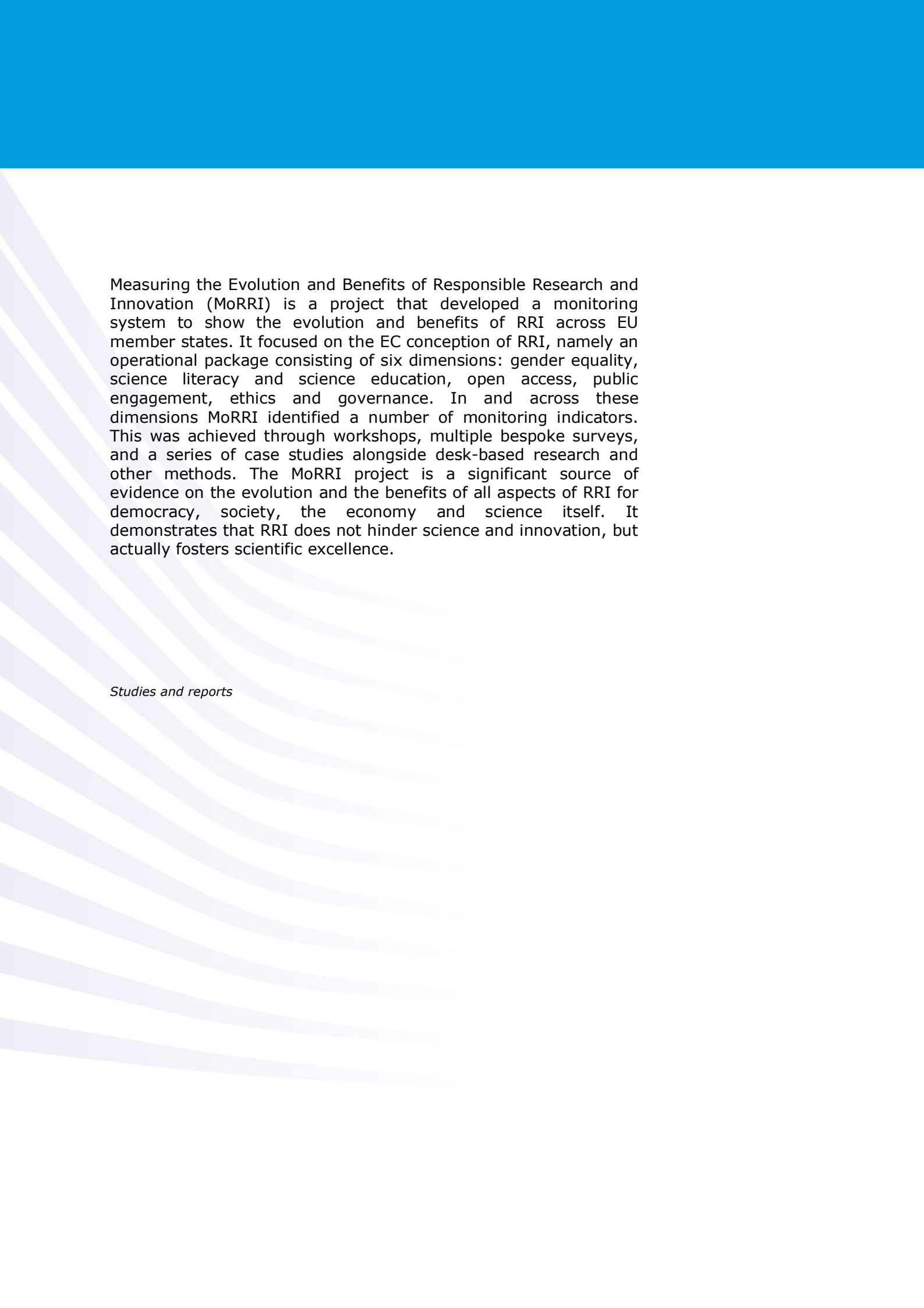
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Measuring the Evolution and Benefits of Responsible Research and Innovation (MoRRI) is a project that developed a monitoring system to show the evolution and benefits of RRI across EU member states. It focused on the EC conception of RRI, namely an operational package consisting of six dimensions: gender equality, science literacy and science education, open access, public engagement, ethics and governance. In and across these dimensions MoRRI identified a number of monitoring indicators. This was achieved through workshops, multiple bespoke surveys, and a series of case studies alongside desk-based research and other methods. The MoRRI project is a significant source of evidence on the evolution and the benefits of all aspects of RRI for democracy, society, the economy and science itself. It demonstrates that RRI does not hinder science and innovation, but actually fosters scientific excellence.

*Studies and reports*