



AREA and the RRI Maturity Model



The AREA Framework

Anticipate – describing and analysing the impacts that might arise.

Reflect – reflecting on the purposes of, motivations for and potential implications of the research.

Engage – opening up such visions, impacts and questioning to broader deliberation, dialogue, engagement.

Act – using these processes to influence the direction and trajectory of the research and innovation process itself.



RRI - The 4 Ps

Process: covers all activities in preparing research, undertaking data collection and analysis, storage and presentation of data and interaction with respondents.

Product: can refer to products or services. It includes the consequences of use as well as misuse of research products and the impact that research has on the natural and social environment.

Purpose: covers the question why research is undertaken at all.

People: are at the heart of RRI and need to be explicitly considered.



	Process (speed or innovation & diffusion)	Product (Ubiquity & Pervasiveness)	Purpose (Logic malleability)	People (Problem of many hands)
Anticipate (Opportunity)	Is the planned research methodology acceptable?	Will the products be socially desirable? How sustainable are the outcomes?	Why should this research be undertaken?	Have we included the right stakeholders?
Reflect (Considerations)	Which mechanisms are used to reflect on process? How could you do it differently?	How do you know what the consequences might be? What might be the potential use? What don't we know about? How can we ensure societal desirability? How could you do it differently?	Is the research controversial? How could you do it differently?	Who is affected? How could you do it differently?
Engage (Alternatives)	How to engage a wide group of stakeholders?	What are viewpoints of a wide group of stakeholders?	Is the research agenda acceptable?	Who prioritises research? For whom is the research done?
Act (Capabilities)	How can your research structure become flexible? What training is required? What infrastructure is required?	What needs to be done to ensure social desirability? What training is required? What infrastructure is required?	How do we ensure that the implied future is desirable? What training is required? What infrastructure is required?	Who matters? What training is required? What infrastructure is required?

RRI - the European View

Pillars / policy areas of RRI in the EU

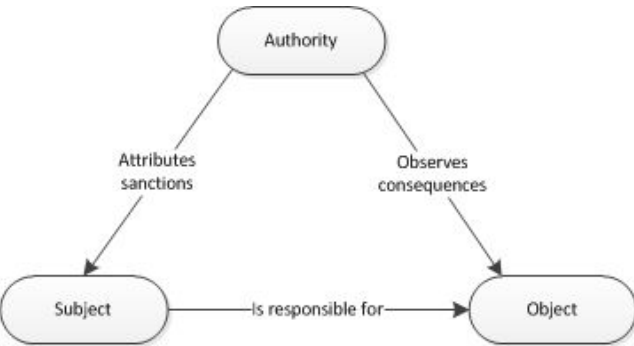
- Ethics
- Gender equality
- Governance
- Open access
- Public engagement
- Science education

And sometimes added:

- Sustainability
- Social justice



RRI as Meta-Responsibility



The role of RRI as a meta-responsibility is to

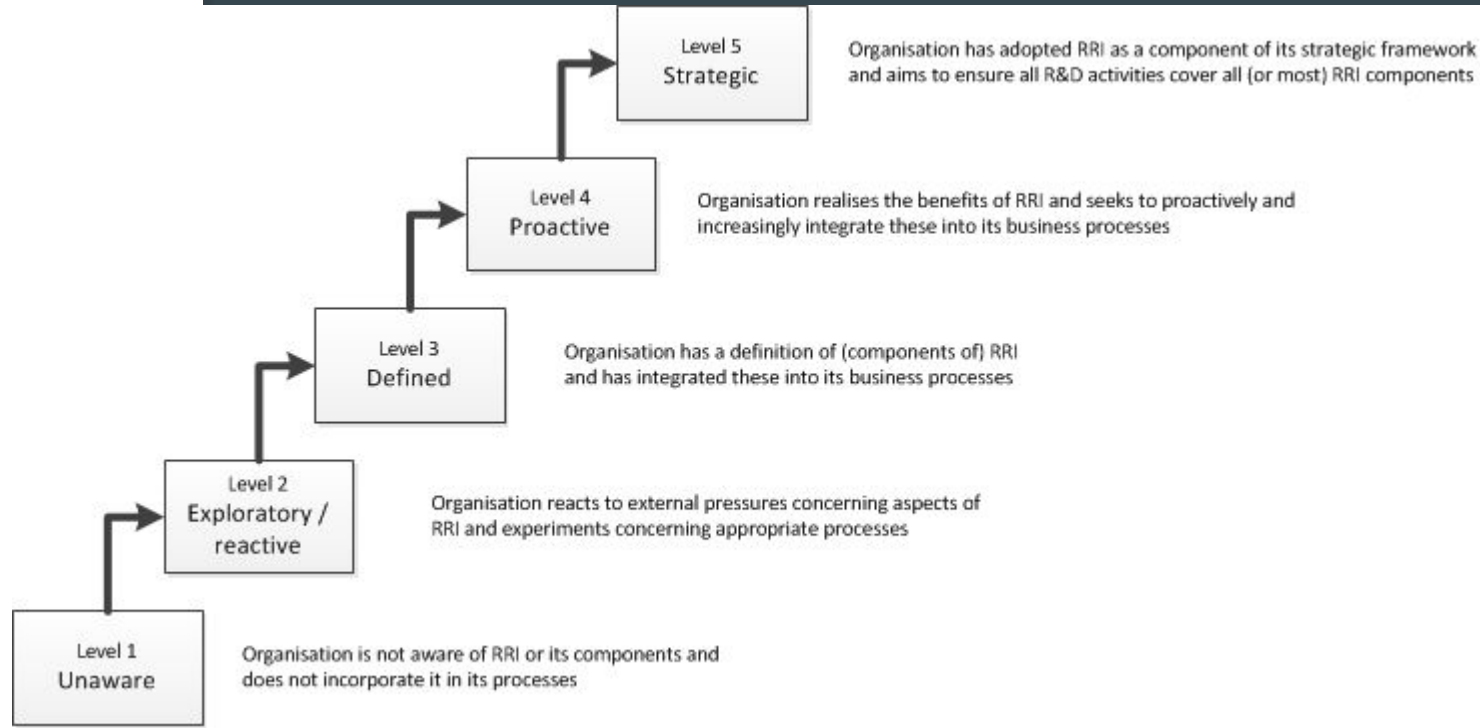
- shape,
- maintain,
- develop,
- coordinate and
- align

existing and novel research and innovation-related

- processes,
- actors and
- responsibilities

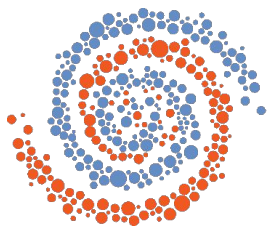
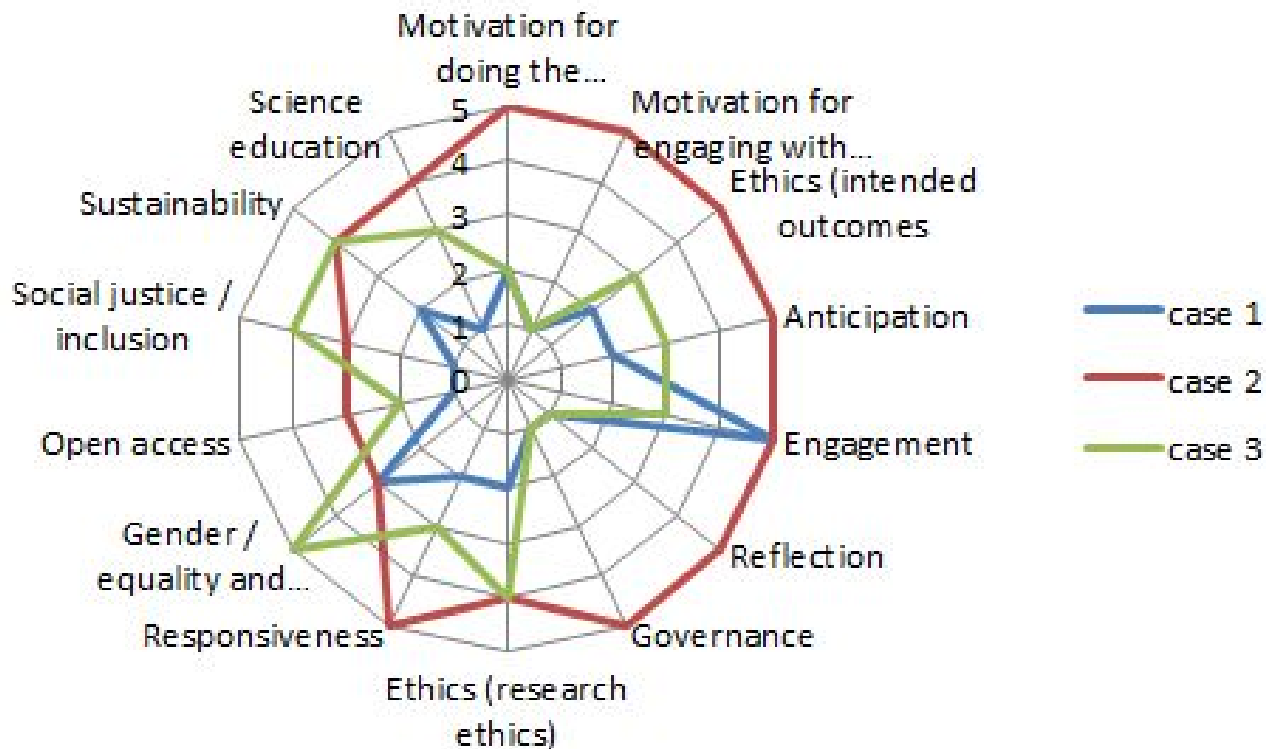
with a view to ensuring desirable and acceptable research outcomes.

The RRI Maturity Model



		Unaware	Exploratory / reactive	Defined	Proactive	Strategic
Motivation (purpose)	Motivation for doing the research					
	Motivation for engaging with RRI					
	Ethics (intended outcomes)					
Process	Anticipation					
	Engagement					
	Reflection					
	Governance					
	Ethics (research ethics)					
	Responsiveness					
Outcomes (product)	Gender / equality and diversity					
	Open access					
	Social justice / inclusion					
	Sustainability					
	Science education					

RRI Maturity Model - Application Example



ORBIT



Observatory for Responsible Research and Innovation in ICT

ORBIT - Overview

Some key facts

- Service contract signed 25.01.2017
- Collaboration between DMU and Oxford (collaboration agreement pending)
- 3 year contract with an option to extend to 5 years
- Financial value: £450k
- Will develop into a legal entity



DMU	Oxford
B. Stahl	M. Jirotko
Director: Martin De Heaver	Project Officer: NN
Webmaster: Paul Keene	Marketing Officer: NN

Orbit Aims

ORBIT will **provide information** and **services** to ICT research and development communities to support them in undertaking their work responsibly. It will be a **community resource** allowing the exchange of information, networking and reflection on ICT research. By **helping research** stakeholders **harness their creativity and imagination**, it will contribute to better research processes and outcomes, thus ensuring that ICT research and innovation are socially desirable and acceptable.



Orbit Activities

- A website to serve as the knowledge base for the exchange of information, which will include
 - An open access online journal
 - A self-assessment tool for RRI in ICT
- Training provision targeted at
 - Academic audiences (e.g. DTCs)
 - Commercial audiences (SMEs, multinationals)
- Consultancy services for
 - Proposal development
 - Organisational structures for RRI
- Research
 - To promote awareness of RRI
 - To support consortia in implementing RRI
- Community creation and network building



www.orbit-rri.org

Orbit Value Proposition



1. To the **publicly funded** UK ICT research community by allowing researchers to **access to funding** by funders who value RRI, such as EPSRC or the European Commission.
2. To **small and medium size enterprises** in ICT by offering services that support **compliance** in relevant areas such as data protection, research process regulations (animal research, clinical trials), research integrity or ethics assessment. SMEs will also benefit by joining up their R&I activities and using RRI to express the value they place on **customer** and societal perceptions
3. To large **multinational companies** by helping them extend their **corporate social responsibilities** to cover their R&I activities.

What can ORBIT do for researchers?

- An open access online journal
- A self-assessment tool for RRI in ICT
- Training provision targeted at
- Academic audiences (e.g. DTCs)
- Training for commercial audiences
- (SMEs, multinationals)
- Consultancy services for
- proposal development
- Organisational structures for RRI



ORBIT self- assessment tool

Based on RRI MM (stages 1-5); Structure of the tool:

- Info about the respondent
- Info about the project / organisation
- Questions on
 - Purpose
 - Process
 - Outcomes
- Specific questions for
 - Projects / Organisations
 - Technology
 - Application area
 - TRL
 - ...
- Output:
 - automated radar diagram
 - Specific guidance to areas of weakness

ORBIT self- assessment tool

- Practical considerati ons

Source of questions / items:

- FRRICT framework
- Responsible-industry
- Other RRI projects
 - RRI Tools, KARIM, ResAgorA, GREAT, ...

Open questions

- Are the stages relevant / measurable?
- Are the categories ok?
- Where will we get detail for the technologies, applications, industries,...

ORBIT and COMPASS

All of you are invited to join by registering on www.orbit-rri.org.

ORBIT journal - do we need a place to publish? For example case studies?

Do you want to contribute to the journal as AE or member of the editorial board?

Link between COMPASS self-check and ORBIT self-assessment?

ORBIT legal entity and the COMPASS legacy?