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# Organising for transitions in the research system; understanding the drivers for RRI

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# RRI-Practice

- ▶ Horizon 2020, SWAFS
- ▶ 12 countries
- ▶ Sept 2016 – Aug 2019

[www.rri-practice.eu](http://www.rri-practice.eu)



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# Main project aim

- ▶ Analyse RRI related discourses and pathways to implementation, (barriers and drivers), in 22 **research conducting** and **research funding** organisations, in 12 European and non-European countries,
- ▶ Identify, understand, disseminate and promote RRI implementation best practices that can be scaled up at European and global levels.





# Our focus: Organisations and organisational change



Presentations title

1.2019



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# Partners

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# Organisations for reviews and outlooks

Our own institutions and:		
Research Council of Norway	Norway	Funding organisation
Helmholtz Association of Research Centres	Germany	Funding organisation
Engineering and Physical Sciences Research Council (EPSRC)	The UK	Funding organisation
Fondazione Telethon	Italy	Research conducting/ funding organisation
Bulgarian Ministry of Education and Science	Bulgaria	Research policy organisation
The Netherlands Organisation for Scientific Research (NWO)	The Netherlands	Funding organisation
National Natural Sciences Foundation of China	China	Funding organisation
Department of Science and Technology, Indian Government	India	Research policy and funding organisation
Jawaharlal Nehru University (JNU)	India	Research organisation
Sao Paulo Research Foundation	Brazil	Funding organisation
The Commonwealth Scientific and Industrial Research Organisation (CSIRO)	Australia	Research organisation





# RRI reviews (in each organisation)

- ▶ Mapping and review of the current status of the work on the RRI aspects in the organisations





# RRI Outlooks for each organisation

1. Analysis of strategic commitments and visions of organisations and of where (and where not) these map onto RRI keys and other associated dimensions
2. Goals and targets for the further RRI related work (including the five keys, but potentially expanded in order to be adapted to the organisations' own understanding of responsibility and responsible research and innovation practices)
3. Review of barriers (this will already have been done by the RRI-Practice researchers in the review stage)
4. Analysis of organisational best practices (this will already have been done by the RRI-Practice researchers in the review stage)
5. Innovative strategies to address RRI barriers
6. Specific actions for developing the RRI dimensions in research content and programmes;
7. Indicators to monitor progress.
8. A plan for regular follow-up with updated reviews and Outlooks.
9. In future, responsibility for such regular reviews (and Outlooks) must lie within the organisations themselves.

Action research!





# Approach to RRI

- ▶ The 5 EC RRI policy keys: ethics, gender, open access/open science, societal engagement and science education
- ▶ The RRI process dimensions (EPSRC, Owen, Stilgoe and Macnaghten): Anticipation and reflexivity, Openness and transparency, Responsiveness and adaptation
- ▶ The participating countries' and organisations' own framing and operationalisation of responsibility in research
- ▶ RRI seen as an umbrella concept





# The project's organisational approach

- ▶ To view organisations as rational (structural), natural (cultural) and open (interchange) systems
- ▶ the rational systems approach understands the organisation as having
  - '(1) a visible set of hierarchical authority relations in which
  - (2) work activities are governed by formal rules and clearly defined criteria for evaluation, relations that
  - (3) are designed to pursue some set of goals.'

→ Is RRI integrated into these?





- ▶ Understanding the organisation as a *natural system* involves scrutinising the informal sides of the organisation.
    - how individuals may have a significant influence on attitudes and conduct in an organisation and
    - how cultures and sub-cultures may flourish more or less decoupled from formal structures, often undermining, replacing or transforming them
- Is RRI present in the culture?





- ▶ an *open systems* approach to organisations focuses on the relationships between the organisation and its environment, on which it is 'dependent for resources, personnel, and legitimacy'
- Are there exchanges between the organization and its environment that are relevant for RRI?





# Analytical framework in the project

## Example: gender

	Structural issues	Cultural issues	Interchange dynamics
Aspects of organisations	Mandates, legislative frameworks, formal hierarchies	Culture, informal routines, informal reward systems, focus on management	Policy learning, pressures from key stakeholders (owners, the public, etc.)
Potential drivers for RRI	Active ownership (e.g. the state), legislation that includes social responsibility as a core element of the mandate, formal evaluation criteria adapted to RRI goals	RRI dimensions become mainstreamed, managers start seeing RRI dimensions as an obvious part of their responsibilities, no social acceptance for neglect of the RRI dimensions	Pressure from the media, success stories from organisations considered to set 'gold standards' in the field
Potential barriers to RRI	No formalised pressures to conform to RRI dimensions	Informal incentive systems reward economic output/excellence/etc., effectively marginalising the RRI dimensions	Important stakeholders reward, for instance, excellence and economic performance to a greater extent than RRI related matters
Most important potential organisational actions [Example gender] Several actions can be included	Establishment of a sexual harassment hotline	Explicit reference to candidates' attitudes to gender balance in job interviews of leaders	Invitation of citizens to our university to learn about their perceptions of gender equality in our university system
Indicators for success [Example gender]	Awareness of the hotline among our employees/users/students	Increase of reported awareness of this issue in our annual employee survey	Number of employees actually interacting in dialogues with the public about their activities



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# Method for our analysis

- ▶ The 12 national reports reported systematically on structural, cultural and interchange drivers (and barriers)
- ▶ NVIVO analysis of drivers noted across the 12 national reports
- ▶ Coded RRI keys and process dimensions
- ▶ Coded drivers, barriers, good practices, etc.
  - structural
  - cultural
  - interchange dimension





# Findings: Structural drivers

- ▶ Dedicated (pilot) programs, infrastructure, or organizational units dealing with RRI (parts of the construct).
- ▶ Organizational mandates, regulations, policies, strategies and organizational goals.
- ▶ Guidelines, and procedures, organizational routines (including planning processes) in place.





# Cultural drivers

- ▶ A culture, well established organizational values, or perception of organizational identity that fits RRI.
- ▶ Overlaps with classical social science values, including the training of the next generation academics.
- ▶ Institutional entrepreneurs, managers and other 'translators' furthering a particular RRI key of dimension.





## Cultural drivers #2

- ▶ For Ethics key and Anticipation & Reflexivity, Responsiveness & Adaptation, Openness & Transparency:
- ▶ Hiring staff from outside the organization with expertise.
- ▶ Avoidance of conflicts.



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# Interchange drivers

- ▶ National policies, regulatory frameworks, laws and monitoring systems, as well as international benchmarks.
- ▶ Politically initiated programs.
- ▶ Demands from funding agencies.
- ▶ Expectations from stakeholders and the public, as well as expectations of expectations, creating pressure.
- ▶ Collaboration and cooperation across organizations and countries.





# Interchange drivers: Ehtics

- ▶ Fraud cases.
- ▶ Catastrophes.
- ▶ Scrutiny by the media.



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# Interchange drivers: OA, Ehtics and Public Engagement

- ▶ The reputation of the organization.
- ▶ What is seen as popular at any given moment.



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# Re. the findings

- ▶ Are these new or surprising?
  - Probably not; in line with outcomes from other RRI projects



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# Back to structural drivers....

- Structural features of organizations provide varying conditions for decision-making.
- Conditions for the implementation of RRI in universities may differ from those of other types of organizations.
- Universities are professional bureaucracies and are structured accordingly.
- Profound consequences for decision-making, span of control, and the pursuit of goals.





# Mintzberg's model of organisations

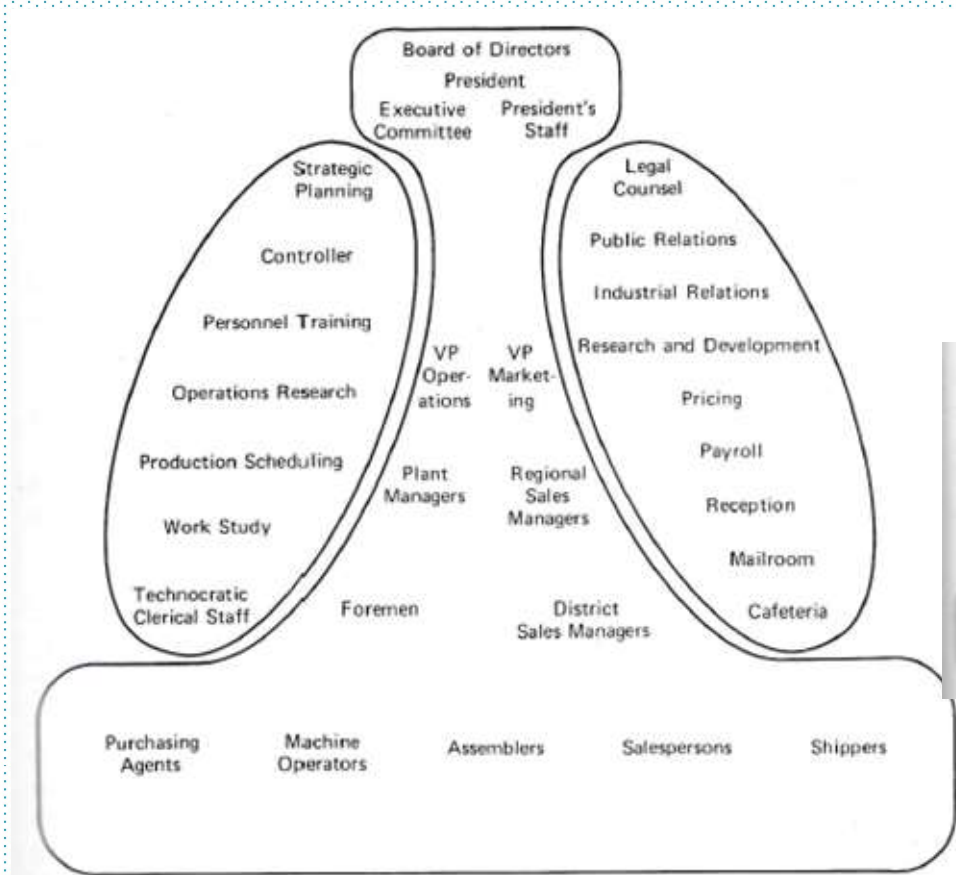
- ▶ The strategic apex – top management.
- ▶ The middle line – department managers.
- ▶ The technostructure – specialists, accounting.
- ▶ The support staff – cafeterias, bookstores.
- ▶ The operating core – researchers.



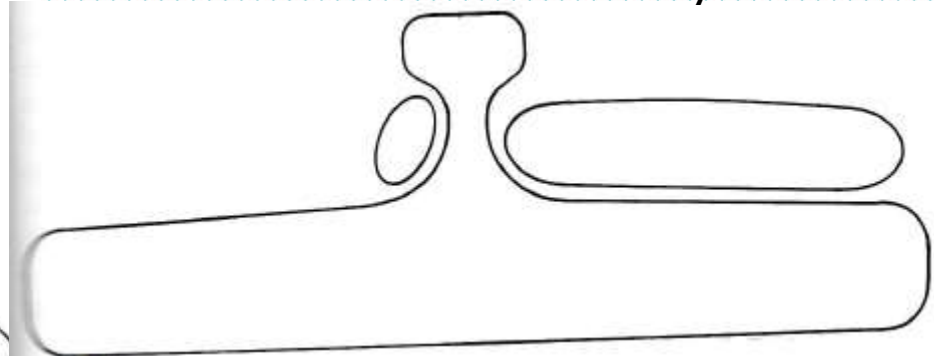
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# Mintzberg's model of organisations



A typical university



Mintzberg (1979)



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# From our studies:

- ▶ It is easy to further implement RRI aspects when the infrastructure is already there in the support staff and technostructure: ethics committee, gender officer, OA guidelines, etc.
- ▶ We find few Public Engagement and Science Education offices, thus there is no platform on which to anchor such work in the organisations  
→ the road to implementation is longer
- ▶ Distributed organisation seems to fit universities well.





# Strategies for expert bureaucracies

- ▶ Clear anchorage with top management.
- ▶ Focused activities, rather than broad-scale change (RRI keys/ dimensions).
- ▶ Lean centralized coordination with clear anchorage in the technostructure.
- ▶ Broadcasting of initiatives taken in the operating core to the organization, as well as to the environment of the organization.
- ▶ Local organization and anchorage in the operating core.





# RRI as an umbrella concept#1

- ▶ Corporate HR with respect to ethics in the form of Corporate Social Responsibility (CSR).
- ▶ One or more ethics committees for research on animals and humans.
- ▶ Possibly centralized research integrity committee.
- ▶ Organizational units or schools, dealing with ethics training (often in PhD courses), possibly relevant to each research area, where certain issues apply.
- ▶ Unit dealing with general RRI training for PhD's and other staff.





# RRI as an umbrella concept#2

- ▶ Corporate HR with respect to Gender Equality and Diversity, separate office from CSR.
- ▶ School, faculty or department office/ person, dealing with gender equality and diversity.
- ▶ University library unit or experts dealing with open access and/ or open science.
- ▶ Staff at institute level or department, knowledgeable of open access, depositories and open science.
- ▶ Centralized outreach unit or office with specialists in societal engagement





# RRI as an umbrella concept#3

- ▶ Institute or department office/ person, linking scientific staff and the outreach office, as well as bridging to appropriate training in societal engagement.
- ▶ Centralized outreach unit or office with specialists in science education
- ▶ Institute or department office/ person, linking scientific staff and the outreach office, as well as bridging to appropriate training in science education.





# RRI as an umbrella concept#4

- ▶ Center or organizational unit building expertise on the execution of process dimensions and the integration of process dimensions into the workflow of the organization.



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# Thus; to implement RRI #1

- Decide on scale of implementation.
- Craft policies for RRI.
- Provide incentives for RRI.
- Create guidelines for aspects of RRI.
- Create organisational routines supporting RRI.
- Leverage internal and external change processes.



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# Thus; to implement RRI #2

- Work with your external environment.
- Create organisational learning processes.
- Create pilot programmes and infrastructure.
- Create a coherent mix of instruments and means.
- Be an RRI champion – or make use of them!





- ▶ **Furthering RRI**
  - Use the drivers to overcome the barriers
  - Experiment! – but connect such experiments to the organisational structure!
  - Create learning processes! – but involve the national policy level to mobilise for national policy





# Further information

- ▶ <https://www.rri-practice.eu/>
- ▶ D15.1: Implementing RRI: Comparison across case studies
- ▶ D3.1 to D14.1 National case studies
- ▶ D.16.2 RRI-Practice Policy Recommendations and Roadmaps
- ▶ D17.6 RRI Handbook
- ▶ Under review: D15.2 National and organisational conditions for implementing RRI





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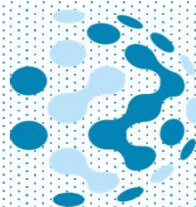
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**ITAS** Institute for  
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and Systems Analysis



UNIVERSITY OF  
**EXETER**



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DEGLI STUDI  
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Radboud University



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