

Chapter 3

Organisational Drivers for RRI



Abstract In this Chapter, we give an overview of drivers furthering the implementation of RRI. We analyse drivers as structural, cultural and interchange related, using a framework derived from neo-institutional theory. We include a discussion based on types of organisation (such as research funding versus performing organisation) and we provide overall reflections the role of on drivers in implementing RRI.

Keywords Drivers for RRI · Responsible research and innovation · Structural drivers, cultural drivers, interchange drivers · Implementation · Neo-institutional theory

Organisational drivers are those that support the uptake of RRI in organisations and that alert organisational members to the merits of RRI. Each country report was set up to discuss drivers for RRI under the five keys and the four process dimensions. In this chapter we discuss the structural, cultural and interchange drivers, focusing on the following questions:

1. What are the drivers across the RRI keys and dimensions?
2. What is the interplay between drivers that are structural, cultural and interchange related?
3. How do drivers relate to research funding and research performing organisations respectively, and what are the differences?
4. How do drivers relate to small and large organisations?
5. How do drivers relate to different fields of research and funding?
6. How do drivers and barriers relate to groupings of countries?
7. From an organisational perspective, does use of RRI as a phrase make a difference, and how?

3.1 Structural Drivers for RRI Keys and Dimensions

Structural drivers are the most prevalent drivers identified in the national reports (alongside interchange drivers). Across the constituent RRI keys and dimensions, these include:

- Dedicated (pilot) programmes, infrastructure, and organisational units dealing with the key or dimension or integrating several of them into a coherent bundle of practices.
- Organisational mandates, regulations, policies, strategies and organisational goals.
- Guidelines, procedures and organisational routines (including planning processes) in place to support the key or dimension or bundles of them.

A key driver is the existence of programmes aimed at supporting aspects of RRI in the form of specific keys or bundles of keys and dimensions, such as ethics and process dimensions conceptually close to ethics (Anticipation and Reflexivity, Responsiveness and Adaptation). Programmes exist for all types of keys, and to some extent for the process dimensions too, and programmes may combine more than one of these, such as in initiatives that combine societal engagement and science education. The existence of organisational units that deal with specific keys or—less often—coherent bundles of keys are also frequently mentioned, such as offices for outreach, gender equality or ethics. Likewise, infrastructure supporting keys and dimensions appears to be an important driver, such as the existence of a university-wide repository for publications, or an archive for research data, supporting the Openness and Transparency dimension, and the Open Access key. Other structural drivers that feature prominently in the reports include organisational mandates, regulations, policies, strategies and organisational goals. For instance, a funding organisation may have research ethics as parts of its mandate and a set of policies aimed at promoting societal engagement. Similarly, policies may be accompanied by funding, for example, for open access publishing in research performing and research funding organisations. While the exact measures may differ between funding and research organisations due to the nature of their work, the nature of the measures (for example, in the form of dedicated programs, mandates, or guidelines) differ less.

When aspects of RRI are in line with official goals pursued by the organisation, this is seen as a strong driver in the reports. Such convergence can drive attention, and in some cases ‘policing.’ Convergence may also facilitate support through internal funding mechanisms. Gender equality and open access seem to benefit from such convergence in some of our cases, but ethics and outreach activities, the promotion of science education and public engagement, are also present. Soft governance mechanisms in the form of guidelines, established procedures, and organisational routines can have similar effects in supporting the implementation of RRI. These may be guidelines supporting gender equality, for societal engagement, or procedures for publishing open access. We see no clear picture in the drivers discussed above in relation to funding providers versus research organisations; they seem to appear across types of organisations.

Less, but still frequently mentioned structural drivers include:

- RRI included as an integrated part of evaluation criteria or other incentives.
- RRI as incorporated into established research methods and procedures.
- Training courses on aspects of RRI.

These drivers focus on the integration of keys and dimensions into organisational practice. One important driver discussed in the reports is the existence of evaluation criteria that further a particular key or dimension, such as counting only open access publications in evaluation processes. Another driver is the existence of incentives. Some organisations (such as the Indian Department of Science and Technology) use incentives that target women to increase the share of women in science and curb issues related to maternity leave. Evaluation of funding applications against clear criteria for gender equality or ethics are also common among funding organisations. Training courses to raise awareness and competence are also mentioned frequently, such as courses in ethics or science education. While some funders provide training courses, these are more commonly mentioned in connection with research institutions. In short, the more RRI keys and dimensions are included into the everyday practice of researchers, and into activities organised by research funding organisations, the better the chances for RRI to become institutionalised.

3.2 Cultural Drivers for RRI Keys and Dimensions

Cultural drivers receive relatively little attention in the country reports. However, these are manifold, and include:

- An organisational culture, expressed in established organisational values and organisational identity, that fits the key or dimension and that supports it.
- An overlap with traditional scientific values and norms, that include the training of next generation academics.
- Institutional entrepreneurs, managers and other ‘translators’ that further a particular RRI key or dimension, or several of them, in the organisation.

In some organisations, members see themselves as aligned culturally or by means of values with aspects of RRI. In some reports, such convergence is even described as part of the identity of the organisation, such as the Bulgarian ARC Fund’s focus on societal engagement (see (Damianova et al. 2018)), which is both ingrained in the culture and the mandate of the organisation, and a key in which the organisation has built significant expertise over many years. Cultural fit (Ansari et al. 2010) appears the strongest driver for the Ethics key, as well as for the Openness and Transparency dimension with respect to cultural drivers, and is also mentioned for other aspects of RRI, across types of organisations. Several national reports (for example, Brazil (Reyes-Galindo and Monteiro 2018), Netherlands (van der Molen et al. 2018), and France (Grinbaum et al. 2018)) discuss how RRI aspects align with classic scientific norms and values, often deeply ingrained in the classical role of universities, and how this drives (and constrains) the appetite for Openness and Transparency, Responsiveness and Adaptation, Anticipation and Reflection, as well as for the Societal Engagement key. Interestingly, this type of cultural driver is not mentioned in discussions of the Science Education key. Additionally, the perception

that science should be unbiased carries over to the way in which funding organisations allocate funds, and is mentioned several times as a driver for the Ethics key (Netherlands (ibid), India (Srinivas et al. 2018), and Germany (Hahn et al. 2018)). While the impact of long held ideas of what a university is and should be, is connected mostly to research performing organisations, classical scientific values and norms are described as drivers for funding organisations as well (Netherlands (ibid)). The same is true of values found in health care and medicine, which are particularly strong influencers with regards to the Ethics key (see the Telethon foundation in the Italy report (Neresini and Arnaldi 2018)). The importance of the training in RRI aspects (such as in ethics, or in research integrity) is a frequently mentioned driver for research performing organisations (Netherlands (ibid)).

Institutional entrepreneurs, in viewing culture more as a ‘toolkit’ rather than a solidified and static concept (Swidler 1986), are occasionally mentioned as strong drivers for either the entire RRI concept or parts of it. This is particularly salient in the Gender and Diversity key and among research performing organisations (Norway (Egeland et al. 2018), Australia (Sehic and Ashworth 2018), and the USA (Doezema and Guston 2018)). Institutional entrepreneurs create attention, mobilise organisational members and instigate programmes. Sometimes such entrepreneurs are also managers of the entire organisation or units. Similarly, the role of ‘translators’ and institutional entrepreneurs is discussed in some reports as an important counterbalance to contexts where RRI—or aspects of RRI—is conceived as being of less immediate relevance to the organisation, or where the concept is not widespread in the country, or where the interchange pressures to adopt RRI are weak (France, Bulgaria). While these agents are important for organisational change processes in a broad sense (e.g. Randles 2016; North 1990), their roles are seldomly explicated in the national reports. We have been surprised by this fact, as a common narrative structure in most societies is to focus on (single) ‘heroes’ creating change (MacLeod 2007; Hutto 2007). For additional information on the role of change agents of good practices see Wittrock and Forsberg (2019). Other important cultural drivers include:

- That the key or dimension is seen as a good in itself, sometimes as part of existing institutional work.
- That the relevant aspect in RRI matches with existing organisational discourses.

In some cases, a particular key or dimension is seen as a good in itself within an organisational culture (what Suchman (1995) would call *cognitive legitimacy*), or as part of an organisational practice. Ethics, for instance, is seen as inherently good, and may be further supported by a fear that science is losing credibility in society at large. Similar ideas are on occasion tied to other keys and dimensions, for instance in relation to the Openness and Transparency dimension. Some organisations—across funders and research organisations—see their mission as closely tied to the development of ongoing ethics, societal engagement or science education work: in other words, these aspects of RRI *touch upon what the organisation does in this world*. Likewise, the education of the next generation of researchers is mentioned as a driver

for reflection and ethics in research performing organisations that also have doctorate students.

Organisational discourses (or national ones) create a backdrop against which RRI is evaluated; talk fosters organisational change and is an integral part of change (Sturdy and Fleming 2003). In some cases, national report authors point to such ongoing ‘organisational talk’ as an important driver for RRI. This can be the case for instance in relation to gender equality or diversity, but also in the case of the Ethics key. As we discuss when dealing with the interaction of structural, cultural and interchange dimensions, the existence of organisational units catering to specific keys or dimensions often supports such organisational discourse. Likewise, national discourses sometimes support specific RRI aspects, as discussed in Part II of the report.

For the Ethics key and process dimensions conceptually close to ethics (Anticipation and Reflexivity, Responsiveness and Adaptation, Openness and Transparency) a special group of drivers are mentioned in addition to the ones above. These are:

- Hiring staff from outside the organisation with expertise.
- Avoidance of conflicts.

Specifically, with respect to the medical sector, respondents in the Telethon study mention that employing staff from industry aids ethical considerations in the organisation. The reason is that research ethics is deeply engrained in the medical sector, and enforced by strict guidelines and procedures, which are binding for organisations wishing to put a product on the market. The avoidance of conflicts relates to drivers that we discuss further in the interchange dimension. However, in the cultural dimension, the avoidance of ethical conflicts appears to be tied to perceptions of what science is and should be, namely an activity that does not create ethical challenges.

3.3 Interchange Drivers for RRI Keys and Dimensions

Interchange drivers are mentioned roughly as often as structural ones, but appear more diverse, falling into many groups. Frequently mentioned ones include:

- National policies, regulatory frameworks, laws and monitoring systems, as well as international benchmarks driving policies, such as the PISA assessment.
- Politically initiated programmes.
- Demands from funding agencies, and the EC, particularly through its framework programs and their assessment criteria.
- Expectations from stakeholders and the public, as well as expectations of expectations, creating pressure.

National policies, regulatory frameworks, laws and monitoring systems appear an effective and dominant bundle of drivers, applying across funding organisations and research organisations. In many cases, funders by mandate seek to sway research

organisations to adopt RRI aspects by virtue of their assessment criteria (see below), monitoring systems, and policies. These drivers are relevant for all keys and dimensions, although not well developed for all keys and dimensions in all countries researched. In fact, few countries, if any, appear to have effective measures for all aspects of the RRI concept. International benchmarks are mentioned occasionally, especially the PISA assessment in connection with the science education key. Many of the keys and some of the process dimensions are addressed by politically initiated programmes. While programs relevant to research performing organisations appear more widespread than for funding organisations, such programmes may influence both types of organisations (such as gender equality measures in a Dutch context, or science education efforts in an Indian context). The programmes are quite diverse and most often relate to single keys, although also to process dimensions, and sometimes in combination (such as in the combination of societal engagement and anticipation and reflexivity in the context of emerging science and technology).

The demands of funding agencies and their assessment criteria is a very dominant driver for research performing organisations. The European Commission and its framework programmes are mentioned as important drivers in all the national reports, both as a condition for participation in EC funded projects, and as a factor in how EC programmes shape national funding priorities. Likewise, EC programmes have reach beyond the EU, not least through peer review, as well as in participation in projects involving researchers from within and outside Europe (China (Zhao et al. 2018)). Expectations from stakeholders in the immediate environment of organisations, as well as from political quarters and from the public constitute, a strong driver for all types of organisations studied, as well as across keys and dimensions. The effect includes ‘expectations of expectations’ or what may be called social expectations; in other words, if the organisation perceives that ethical conduct or gender equality may be an expectation held by important stakeholders (even in the absence of strict evidence), this has the capacity to influence the organisation and consequently may pave the way for RRI activities. The neo-institutional insight that organisations align with their environments (DiMaggio and Powell 1983) is well documented in the national reports. In some reports, the expectations of industry partners are also mentioned as drivers for RRI. This is particularly pronounced in the Ethics key, but also applies to the Anticipation and Reflexivity dimension (see e.g. Italy report). The concerns of industry partners appear most relevant for research performing organisations, although this is determined by the specific operations of the individual organisation. Some funders also come into close contact with industry partners. While the group of drivers discussed above constitutes the most frequently mentioned ones, several others appear important. These are:

- Societal discourses and national norms supporting (aspects of) RRI keys and dimensions.
- Bodies (such as ethics commissions) that monitor organisational practices.
- The mandate of the organisation.

We have seen above in the section on cultural drivers that organisational discourses play a role as a driver for RRI keys and dimensions. Stronger though, seems to be the influence of societal discourses and national norms that are then in some cases reflected in organisational discourses. For instance, national norms supporting gender equality or diversity appear a strong driver for this aspect of RRI, regardless of organisational type. Another strong driver is the existence of bodies (for example, in the form of commissions) monitoring organisational practices. This is particularly pronounced for the Ethics key, and across types of organisations, but does also relate to other keys. We discuss this further under the heading ‘Isomorphism and funding organisations as environment for research organisations’ in Chap. 5.

The mandate of the organisation can also be a driver. For instance, the dimension Openness and Transparency may benefit from mandates given to policy organisations, as is also commonly the case with the Ethics key. In fact, across all organisations, mandates pertaining to the Ethics key appear to be a frequent driver, as does the nature of the organisation or the research field covered (for example, ethics is particularly pronounced in research on nuclear power, medicine or artificial intelligence). In the case of Oslo Metropolitan University, the recently acquired status as a university (replacing the status of university college), is mentioned as a driver for attention to RRI as it is seen as related to professionalization of research.

Public pressure is a strong driver in relation to the Ethics key and to the dimensions closely related to it, such as Anticipation and Reflection, Responsiveness and Adaptation, and Openness and Transparency. Particular drivers have been associated with fraud cases, catastrophes, and scrutiny by the media. Scandals such as Cambridge Analytica or national cases of research misconduct are a strong driver for a focus on research ethics and integrity, as are catastrophes like the Fukushima nuclear disaster (see e.g. the Netherlands and Norway reports). In general, scrutiny by the media and resulting public attention appears to be a very strong driver for ethics across all types of organisations. We also find descriptions of how such cases have occasioned policies, regulation, and other structural drivers.

Furthermore, a set of drivers relating mainly to the Open Access key, Ethics, and to Public Engagement are concerned with the reputation of the organisation, and what is seen as popular at any given moment. In line with neo-institutional theory, the reputation of the organisation is mentioned in many national reports as an important concern that drives attention to core aspects of the overall RRI concept. RRI also seems to capture some trends in current research and innovation thinking, as national reports mention the topic of some keys and dimensions as fashionable or at least popular today. By engaging with these topics, the organisations will then appear to be on the forefront of progress (Abrahamson 1996). While reputation concerns are mainly connected to policy and research conducting organisations, the theme of popularity appears to cut across types of organisations. For instance, in the Bulgaria report it is noted that RRI is connected to the EC, and thus seen as attractive.

The final group of interchange drivers concern collaboration and cooperation across organisations and countries. Collaboration and cooperation that transcends organisational units, or organisational borders, is frequently mentioned as a driver

for several keys. This appears most pronounced amongst research performing organisations. Cooperation with researchers foreign to the organisation or organisational units has a tendency to promote Anticipation and Reflection (indeed, this was the most frequently mentioned driver for this RRI dimension), Openness and Transparency, Responsiveness and Adaptation, and Science Education, as well as being a very dominant theme in the Ethics key (China (ibid)). Successful programmes demonstrating the merits of societal engagement—i.e. collaboration across organisational boundaries—is also a frequently mentioned driver in the Societal Engagement key. Similarly, a number of country reports mention that international collaboration drives attention to gender and diversity. These findings are hardly surprising, as research consistently shows that personal networks facilitate contagion and diffusion across otherwise unconnected entities (Watts and Strogatz 1998). One may theorize that researchers in international projects function as a ‘hub’ (or centrally placed node) connection in ‘small worlds’ across the globe.

3.4 Interaction of Structural, Cultural and Interchange Related Drivers

Structural, cultural and interchange related drivers interact. In many cases, they mutually reinforce each other, thereby gaining strength. In some cases, drivers are both interchange related and structural. For instance, this happens when national legislation demands that organisations implement policies or measures to further some aspect of RRI. The national reports contain reviews of national legislation which illuminate this dynamic. Another prominent example, often alluded to, is the role of national policymaking and funding programmes as structural and cultural drivers for organisations. The pursuit of open access in some countries is an example of this point. In other cases, national cultural drivers (interchange related) and organisational culture overlap. This happens when national culture reinforces organisational culture in some way relevant to the RRI keys or dimensions. This tendency is for instance reported in the case of open access in Brazil and science education in France. Gender provides a good example too. When national culture is in favour of gender equality, this often has an impact on organisational culture, as reported in the Norwegian case study.

3.5 Discussion on Types of Organisation and Embedding Dynamics

In this section, we expand the discussion on drivers to address more directly some of the research questions posed with respect to drivers for RRI across keys and dimensions. Some of the findings are discussed further in Chap. 5, where we collate

results. With respect to groups of organisational types and RRI drivers, the most striking finding is perhaps that most drivers cut across the spectrum of organisational types. Likely, one reason for this is that RRI addresses many societal issues which are prominent in the interchange dimension of our analysis. And most of these issues are of relevance to all types of organisations, whereby they all experience considerable pressure from their environments.

Research performing versus research funding organisations

A striking finding in our research is the encompassing attention to policy signals, shared across research funding and performing organisations. Another is the extent to which research funders constitute an important part of the environment of research performing organisations. This is evident across cases, where the research performing organisation depends on the research funder for financial support. Some differences are obviously connected to different circumstances of their mandate and operation, such as the impact of international collaborations, and requirements in funding applications. However, understanding other differences are less clear. Research funding organisations in general appear to experience:

- Comparatively fewer drivers in the Anticipation and Reflexivity dimension
- Comparatively fewer drivers in the Societal Engagement key
- Comparatively fewer drivers in the Science Education key

These are interesting findings, for which there may be many reasons. However, especially for the Science Education key, it indicates that research funding providers likely could do more to support science education and find ways of integrating such support in new ways in the funding of research. We discuss this further in Chap. 4 on barriers.

Differences between small and large organisations

Elsewhere in this book we suggested that smaller organisations typically are easier to change than larger ones. While there is some evidence of that in our sample, we focus on a counterfactual picture emerging in our data that large universities with top management and leadership supporting gender equality and diversity are capable of making significant progress on the Gender and Diversity key by means of multiple projects and dedicated resources. They also appear to have significant success in changing the culture of their institutions to think differently about gender and diversity issues. In our RRI handbook, we have described the very innovative and research-based Christine Mohrmann programme at Radboud University in the Netherlands (Witrock and Forsberg 2019). However, we see similar patterns in Australia, Germany, Italy, Norway and the US. From a neo-institutional point of view, the pressure from the environment of the organisations may be strongest on the gender and diversity key, and it appears that skilful change agents in organisations have successfully leveraged pressure to change their organisations. One may speculate if they would have similar success in furthering other RRI keys if they applied themselves to this task. Several reports indicate that this might be the case.

Top management and leadership of organisations have also successfully advanced green open access (with a preference for gold), while other organisations have been successful in developing a societal engagement culture, as well as supporting science education.

Differences with respect to fields of research and funding

Our sample contains several technical universities and funding bodies that focus on science and technology and the natural sciences. Likewise, our sample contains several broad and often classic universities and well as broad national funders. Differences between these groups are not clear in our data material. In our sample, we also have a group of organisations working in the health care sector. The Italian Telethon is the most obvious example, but Radboud University in the Netherlands also has a large university hospital and associated research tied to it. This appears to translate into a high interest in, and attention to, the Ethics key. Research ethics is a key concern in health care, and one that is supported by players in the health care industry too, as the field is tightly regulated, and lack of compliance can be fatal.

Differences in RRI attitudes related to national embedding

National differences receive analytical treatment in Part II of this book using social imaginaries theory as a methodology. Consequently, we wanted to consider possible differences between groups of countries in this section which we may connect to branches of neo-institutional theory. In our original coding scheme, we first hypothesized that we would find differences between European and non-European countries. We also thought we would find differences between occidental and non-occidental countries. However, the hypothesized differences are not clear-cut in the data. It appears that a more telling distinction is that of centre versus periphery. By this we mean who is being emulated (centre) and who are seeking to emulate (periphery) in our case countries. This distinction has support in diffusion studies, and in the study of organizational innovations; it is known that apparent success (or popularity) drives efforts to emulate (Macy and Strang 2001; Sahlin-Andersson and Engwall 2002). In our study, such a distinction should transfer into stronger interchange related pressures related to the perceived attractiveness of particular models of organisation, and of the national STI system, for others to emulate.

This approach has some support in the data: Mentions of interchange related pressures stemming from European policymaking and Horizon 2020 programmes, international collaborations, and global trends on issues addressed by RRI all appear less frequent in reports from Germany, France and the UK, than from the Netherlands, Norway and Bulgaria. Hence, the old and large ‘science countries’ in Europe may be less interested in RRI, than the periphery. Similarly, reports from countries outside Europe appear generally more positive towards RRI than the actual European countries, and seem more frequently to see RRI as being in line with current (popular) trends, which they perceive as important or future-oriented. They also frequently point to international collaborations as being a driver for RRI-related

activities and organisational change processes. Several factors other than a centre-periphery dynamic may explain these observations, for instance author bias or preferences, and a generally positive attitude to new ideas. However, we find it interesting that European policy-making (here in the form of the concept of RRI) seems to be on the radar of countries far removed from Europe, and less so in the large dominant players in the European Union. The project may also have been a factor as ambassador for RRI in countries where the idea is new to most organisations in the science field.

What difference does formal recognition of RRI as a term make?

In the RRI-Practice project, we surveyed both the concept of RRI and what Sally Randles and colleagues have called ‘de-facto rri’, in other words, practices that may not be labelled RRI in their host organisations, but that may from a ‘content’ point of view—that what people actually do—be subsumed under the RRI label (Randles et al. 2016; Randles 2016). It is not clear from our data that drivers to RRI differ significantly in the few organisations where the RRI label is in current use, and reasonably widespread. However, there are indications of some differences when RRI is formally recognised: descriptions of drivers are more specific, and often take the form of concrete actions or provisions; more drivers are mentioned; and policy pressures and public pressures appear at times taken for granted.

3.6 Conclusion and Reflections on Drivers for RRI

In this Chapter we have seen that structural and interchange drivers seem to be the most important drivers for RRI. They are discussed more than twice as often as cultural drivers. National policies, regulatory frameworks, laws and monitoring systems appear to be the most effective drivers, alongside dedicated pilot programmes and organisational units providing institutional homes for practices, as well as organisational mandates, organisational goals, guidelines, procedures, routines, and like measures. Likely, they are most powerful in unison, where outside pressures are aligned with intra-organisational measures supporting RRI or aspects of the concept (Reay et al. 2013). Similarly, some of the most cited cultural drivers are values and perceptions of organisational identity that match one or more RRI aspects; providing a cultural fit (Ansari et al. 2010). However, organisational cultures seem often to need to change in order to accommodate RRI and obtain the sought-after institutional change.

In the RRI-Practice project there has been a hypothesis (in part based on Randles (2016), in part based on the experience of consortium members) that change agents, or RRI champions, are of great importance for the implementation of RRI practices in organisations. However, this is not clear from the data, other than with respect to separate aspects of RRI, especially the Gender and Diversity key. It may be that we call RRI champions, in toto, are typically champions of specific RRI keys, such as

gender equality, open access, research ethics, public engagement or science education. Alternatively, they may be champions of concrete major projects that have supported one of the RRI keys, such as the Indian ‘Science Express’ project, which is a milestone in science education globally. As we obtained further information from consortium partners and from the field, more change agents did appear to emerge in case studies developed from the research. It appears that the most effective change agents have been able to capitalize on external pressures in order to promote aspects of RRI. This is not surprising as change agents work with the concrete situation at hand in order to obtain some objective, either by combining policy frameworks (structural/interchange drivers), or from some pressing situation that needs to be resolved. Certainly, our data suggest that change agents are more successful when they have institutional support. Similarly, external and internal drivers help change agents make their case.

In general, it appears that practices are likely to change only with sufficiently strong structural measures, and that interchange or structural forces need to be in place for RRI champions to be effective. For the European Commission, these considerations indicate that the EC needs to work with policy-makers in member states, and on occasion with those in non-member states to successfully implement RRI. Similarly, we have seen how the demands of funding organisations are commonly an important part of the environment influencing choices and priorities set in universities, at both the policy level and the level of individual researchers. Working with national funding organisations therefore constitutes a viable way of influencing the STI system in Europe for the EC. In general, the pattern that emerges affiliates with the neo-institutional insight that organisations align with their environments, and seek to obtain legitimacy by complying with widespread norms of perceived good conduct and organisation (Tolbert and Zucker 1983), albeit sometimes only at a surface level (Meyer and Rowan 1977). International collaboration appears to be an effective way of transmitting norms from perceived centres of excellence and through processes of emulation to other organisations, including those at the periphery (Sahlin-Andersson and Engwall 2002).

A final reflection on the concept of RRI is in order. When comparing drivers for individual RRI aspects with the general drivers for RRI, it appears that drivers for ethics are close to drivers for RRI in general. However, ethics is not always promoted as a key part of the RRI concept; it is, for instance, not mentioned among the process dimensions or in most co-creation policies. RRI might appear as a more coherent and forceful concept if ethics is more explicitly profiled as a driving force for RRI. A further finding is that research funding organisations exhibit comparatively fewer drivers on some aspects of RRI, particularly on the Science Education key. Likewise, there are indications that policy organisations are more concerned about reputation management as a possible driver for RRI, and that organisations working with the healthcare sector experience comparatively stronger drivers for research ethics. Our data imply that the EC label, international collaborations, and global trends may be less important drivers for countries at the centre of European decision-making (Germany, France, and the UK). More clearly, the EC has a lot to learn with respect to diversity from countries where this issue has been longstanding and deeply

embedded in national identities (Australia, Brazil, India, and the USA). We do not see clear differences with respect to drivers when comparing organisations where the RRI term is in current use and those where it is (largely) unknown. However, there are indications that descriptions of drivers are more plentiful and more detailed in organisations where the term is in current use.

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