

Fig.1

Dimension	Indicative techniques and approaches	Factors affecting implementation	RRI tools reflection questions
Anticipation	<ul style="list-style-type: none"> <li>- Foresight</li> <li>- Technology assessment</li> <li>- Horizon scanning</li> <li>- Scenarios</li> <li>- Vision assessment</li> </ul>	<ul style="list-style-type: none"> <li>- Engaging with existing imaginaries</li> <li>- Participation rather than prediction</li> <li>- Plausibility</li> <li>- Scenario-building</li> <li>- Scientific autonomy and reluctance to anticipate</li> </ul>	<ul style="list-style-type: none"> <li>- Public engagement</li> <li>- Ethics</li> <li>- Governance</li> </ul>
Reflexivity	<ul style="list-style-type: none"> <li>- Multidisciplinary collaboration and training</li> <li>- Embedded social scientist and ethicists</li> <li>- Ethical technology assessment</li> </ul>	<ul style="list-style-type: none"> <li>- Rethinking moral division of labour</li> <li>- Enlarging or redefining role responsibilities</li> <li>- Reflexive capacity among scientist and within institutions</li> <li>- Connections made between research practice and governance</li> </ul>	<ul style="list-style-type: none"> <li>- Public engagement</li> <li>- Governance</li> <li>- Ethics</li> </ul>
Inclusion	<ul style="list-style-type: none"> <li>- Consensus conferences</li> <li>- Focus groups</li> <li>- Deliberative mapping</li> <li>- User-centered design</li> <li>- Open innovation</li> </ul>	<ul style="list-style-type: none"> <li>- Questionable legitimacy of deliberative exercises</li> <li>- Need for clarity about, purposes of and motivation for dialogue</li> <li>- Deliberation on framing assumptions</li> <li>- Ability to consider power imbalances</li> <li>- Quality of dialogue as a learning exercise</li> </ul>	<ul style="list-style-type: none"> <li>- Public Engagement</li> <li>- Science education</li> <li>- Governance</li> </ul>
Responsiveness	<ul style="list-style-type: none"> <li>- Standards</li> <li>- Open access and other mechanisms of transparency</li> <li>- Niche</li> </ul>	<ul style="list-style-type: none"> <li>- Strategic policies and technology “roadmaps”</li> <li>- Science-policy culture</li> <li>- Institutional</li> </ul>	<ul style="list-style-type: none"> <li>- Open Access</li> <li>- Governance</li> </ul>

	<p>management</p> <ul style="list-style-type: none"><li>- Value-sensitive design</li></ul>	<p>structure</p> <ul style="list-style-type: none"><li>- Prevailing policy discourses</li><li>- Institutional cultures</li><li>- Openness and transparency</li><li>- Intellectual property</li><li>- Technological standards</li></ul>	
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