

“The dialogue between science and the rest of society has never been more important.

As the Europe 2020 Strategy makes clear, to overcome the current economic crisis we need to create a smarter, greener economy, where our prosperity will come from research and innovation. Science is the basis for a better future and the bedrock of a knowledge-based society and a healthy economy.

After ten years of action at EU level to develop and promote the role of science in society, at least one thing is very clear: we can only find the right answers to the challenges we face by involving as many stakeholders as possible in the research and innovation process. Research and innovation must respond to the needs and ambitions of society, reflect its values, and be responsible. To my mind, there are a number of keys to doing this”.

MÁIRE GEOGHEGAN-QUINN, European Commissioner for Research, Innovation and Science
*Message delivered at the conference «Science in Dialogue - Towards a European Model for Responsible Research and Innovation»
Odense, Denmark, 23-25 April 2012*

Science in Society website:

<http://ec.europa.eu/research/science-society>

Research and Innovation policy

© European Union, 2012

Reproduction is authorised provided the source is acknowledged

Cover image © DouDou, #40440446, 2012. Source : www.fotolia.com



Publications Office

DOI 10.2777/11739

ISBN 978-92-79-25981-4



9 789279 259814



European
Commission

Responsible Research and Innovation

Europe's ability to
respond to societal
challenges

*Research and
Innovation*



Responsible Research and Innovation

The Directorate-General for Research and Innovation of the European Commission is determined to bridge the gap between the scientific community and society at large. In 2001, the «Science and Society» Action Plan was launched to set out a common strategy to make a better connection between science and European citizens. In 2007, under the 7th Framework Programme for Research and Technological Development (FP7), «Science and Society» became «Science in Society (SiS)» with the main objective to foster public engagement and a sustained two-way dialogue between science and civil society.

Since 2010 the focus of SiS has been to develop a concept responding to the aspirations and ambitions of European citizens: a framework for Responsible Research and Innovation (RRI). The grand societal challenges that lie before us will have a far better chance of being tackled if all societal actors are fully engaged in the co-construction of innovative solutions, products and services.

Responsible Research and Innovation means that societal actors work together during the whole research and innovation process in order to better align both the process and its outcomes, with the values, needs and expectations of European society. RRI is an ambitious challenge for the creation of a Research and Innovation policy driven by the needs of society and engaging all societal actors via inclusive participatory approaches.

The Responsible Research and Innovation framework consists of 6 keys:

“Choose together”

The first key is **Engagement** of all societal actors - researchers, industry, policy-makers and civil society – and their joint participation in the research and innovation process, in accordance with the value of inclusiveness, as reflected in the Charter of Fundamental Rights of the European Union. A sound framework for excellence in Research & Innovation entails that the societal challenges are framed on the basis of widely representative social, economic and ethical concerns and common principles. Moreover, mutual learning and agreed practices are needed to develop

joint solutions to societal problems and opportunities, and to pre-empt possible public value failures of future innovation.

“Unlock the full potential”

The second key is **Gender Equality**. Engagement means that all actors – women and men – are on board. The under-representation of women must be addressed. Research institutions, in particular their human resources management, need to be modernized. The gender dimension must be integrated in research and innovation content.

© Andres Rodriguez #42919181, 2012.
Source: Fotolia.com



“Creative learning fresh ideas”

Our third key is **Science Education**.

Europe must not only increase its number of researchers, it also needs to enhance the current education process to better equip future researchers and other societal actors with the necessary knowledge and tools to fully participate and take responsibility in the research and innovation process. There is an urgent need to boost the interest of children and youth in maths, science and technology, so they can become the researchers of tomorrow, and contribute to a science-literate society. Creative thinking calls for science education as a means to make change happen.

“Share results to advance”

In order to be responsible, research and innovation must be both transparent and accessible.

Our fourth key is to make **Open Access** a reality. This means giving free online access to the results of publicly-funded research (publications and data).

This will boost innovation and further increase the use of scientific results by all societal actors.



© Robert Kneschke #35609972, 2012. Source: Fotolia.com

“Do the right “think” and do it right”

Our fifth key is **Ethics**.

European society is based on shared values. In order to adequately respond to societal challenges, research and innovation must respect fundamental rights and the highest ethical standards. Beyond the mandatory legal aspects, this aims to ensure increased societal relevance and acceptability of research and innovation outcomes. Ethics should not be perceived as a constraint to research and innovation, but rather as a way of ensuring high quality results.

“Design science for and with society”

The last dimension is the umbrella for all the others: it is **Governance**.

Policymakers also have a responsibility to prevent harmful or unethical developments in research and innovation.

Through this key we will develop harmonious models for Responsible Research and Innovation that integrate public engagement, gender equality, science education, open access and ethics.



© FotolEdhar #32098167, 2012. Source: Fotolia.com