Best practice II Societal Readiness Thinking Tool by NewHoRRizon¹

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Description of the good practice example

The primary objective of the Societal Readiness Thinking Tool (SR TT) by Nielsen et al. (2019) is to translate responsible research and innovation (RRI) into practice: how can we help scientists and engineers to increase the societal readiness of their research projects?

The SR TT (<https://thinkingtool.eu/tool>) provides questions to guide researchers to reflect on the societal alignment of their work at critical stages in the project lifecycle. The tool adopts a stage-gating-inspired approach that divides the development process into discrete stages punctuated by decision gates. Decision gates are characterized by the four phases common to most research projects (Figure II.I):

- Phase 1: research design and formulation
- Phase 2: implementation, data collection and testing
- Phase 3: data analysis and evaluation
- Phase 4: launching and dissemination.

In each phase, a set of questions are presented to stimulate researchers to pause and reflect on the societal impact of their research, in relation to the four RRI dimensions (anticipate, reflect, include, respond) and five RRI key areas (public engagement, science education, gender equality, open access and ethics). To increase usability, ‘entry points’ are available for selection in each of the four gates. An ‘entry point’ anticipates why a researcher might be motivated to use the SR TT in the first place.

Each question is accompanied by descriptions of existing projects, methodologies and resources that have proven useful in strengthening the societal appropriateness of research and innovation activities. The purpose of these descriptions is twofold: (1) to guide researchers on how to best address the questions provided in the tool; and (2) to provide real-world examples of how research projects have benefitted from using existing RRI methods and resources in practice.

Figure II.I Societal Readiness Thinking Tool.

Note: Some elements in this figure are inspired by Lettice et al. (2017).

Six social labs covering funding schemes across all pillars of Horizon 2020 in the NewHoRRizon project (Figure II.II) took part in the validation and testing of the tool:

1. Marie Skłodowska Curie Actions
2. Research Infrastructures
3. Leadership in Enabling Industrial Technologies
4. Secure, Clean and Efficient Energy
5. Secure societies
6. European Institute of Innovation and Technology.

Beyond the social labs, researchers, research administrators and managers across various European universities were included in the validation and testing process. Moreover, ad hoc feedback was collected, when the tool was presented orally or as a poster in workshops and conferences from September 2018 to June 2019. The result of the validation and testing led to an improved formulation concerning specific questions and further technical sophistication of the tool. Users also requested to supply information

EXCELLENT SCIENCE

SOCIAL LAB 1

European Research Council

SOCIAL LAB 2

Future and Emerging Technologies

SOCIAL LAB 3

Marie Skłodowska Curie Actions

SOCIAL LAB 4

Research Infrastructures, including e-Infrastructures

INDUSTRIAL LEADERSHIP

SOCIAL LAB 5

Leadership in Enabling Industrial Technologies

SOCIAL LAB 6

Access to Risk Finance & Innovation in SMEs

SOCIETAL CHALLENGES

SOCIAL LAB 7

Health, Demographic Change and Wellbeing

SOCIAL LAB 8

Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy

SOCIAL LAB 9

Secure, Clean and Efficient Energy

SOCIAL LAB 10

Smart, Green and Integrated Transport

SOCIAL LAB 11

Climate Action, Environment, Resource Efficiency and Raw Materials

SOCIAL LAB 12

Europe in a changing world - Inclusive, innovative and reflective societies

SOCIAL LAB 13

Secure societies – Protecting freedom and security of Europe and its citizens

DIVERSITY OF APPROACHES

SOCIAL LAB 14

Spreading Excellence and Widening Participation

SOCIAL LAB 15

Science with and for Society

SOCIAL LAB 16

European Institute of Innovation and Technology

SOCIAL LAB 17

Non-Nuclear direct actions of the JRC

SOCIAL LAB 18

Instruments of H2020

SOCIAL LAB 19

EURATOM

Figure II.II NewHoRRizon social labs.

about ways of working with the SR TT, i.e. the practical implementation of the tool in a research project context. In particular, the website should give advice about *who* in a research group should use the tool and *how* a research group should start working with the tool. In order to accommodate these suggestions, the introductory section on the website of the SR TT will be extended. Overall, the SR TT is considered technically adequate and the contents succeed in capturing core elements of RRI.

Aims and goals

Insights derived from literature, co-creation activities and validation with multiple stakeholders within the NewHoRRIzon project have led to the development of the SR TT. The tool is aimed at cultivating researchers' knowledge on RRI, and stimulating integration of RRI in their research project.

Benefit for organisation

Researchers could foresee and anticipate the possible risks and social impacts of their research projects, made apparent by the questions presented in the SR TT. Internal or external evaluators may use the tool to monitor the implementation of RRI in research projects.

Note

- 1 NewHoRRIzon is a Horizon 2020 project funded by the European Commission, which aims at further integrating Responsible Research and Innovation (RRI) in the research and innovation systems on national and international levels. From May 2017 – April 2021, multiple stakeholders from research, business, policy making, education and civil society are actively recruited to be involved in the project, to better align its processes and outcomes with the values, needs and expectations of society.

References

- Lettice, F., Rogers, H., Yaghmaei, E., & Pawar, K. S. (2017). Responsible Research and Innovation Revisited: Aligning Product Development Processes with the Corporate Responsibility Agenda. In A. Brem & E. Viardot (Eds.) *Revolution of Innovation Management* (pp. 247–269). London: Palgrave Macmillan.
- Nielsen, M. W., Mejlgaard, N., Alnor, E., Bergmans, J., Bernstein, M., Birkving, A. L., P., Chan, T. T., Griessler, E., Jensen, M. F., van der Klippe, W., Kolby, S., Larsen, S. S., Lorentz, J., Meijer, I., Nicolaisen, P. B., Nieminen, M., & Novitzky, P. (2019). The Societal Readiness Thinking Tool. Available online at: <http://thinkingtool.eu/>.