DE MONTFORT UNIVERSITY LEICESTER

Responsible Innovation

Erfahrungen, Herausforderungen und Zukunftsperspektiven

1. Warum „Responsible Innovation“?
2. Ansatzpunkte und Beispiele
3. Hilfreiche Tools
4. Grenzen und Nutzen

SEVENTH FRAMEWORK PROGRAMME

Bernd Carsten STAHL, Wien, 4. Dez. 2018

EPSRC Engineering and Physical Sciences Research Council

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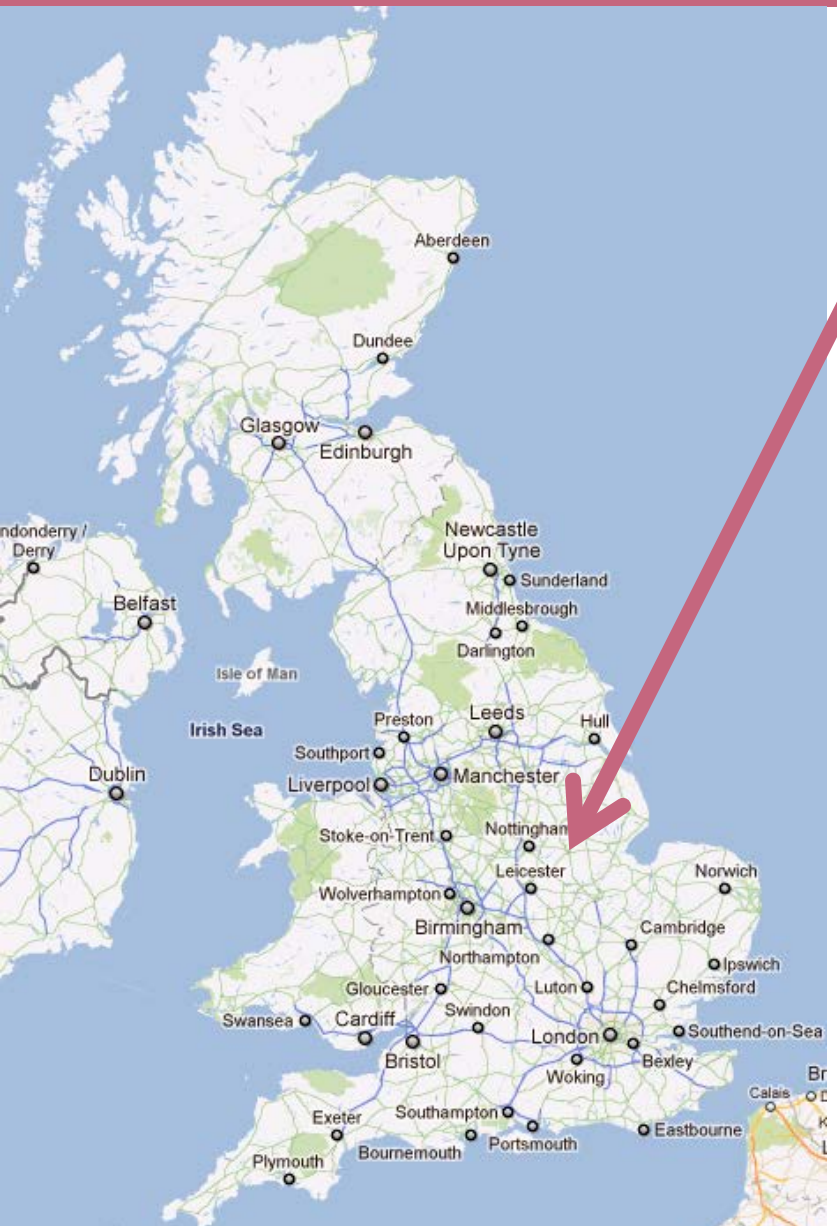
The Centre for Computing and Social Responsibility



gegründet 1996

20 permanente ForscherInnen, 15 GastforscherInnen

ETHICOMP conference series

Journal of Information, Ethics and Communication in Society

EU-Projekte zum Thema Responsible Research & Innovation

RESPONSIBLE INNOVATION COMPASS

SHERPA

ORBIT

Responsible-Industry

LIVING INNOVATION

EPSRC
Engineering and Physical Sciences Research Council

Warum Responsible Innovation ?

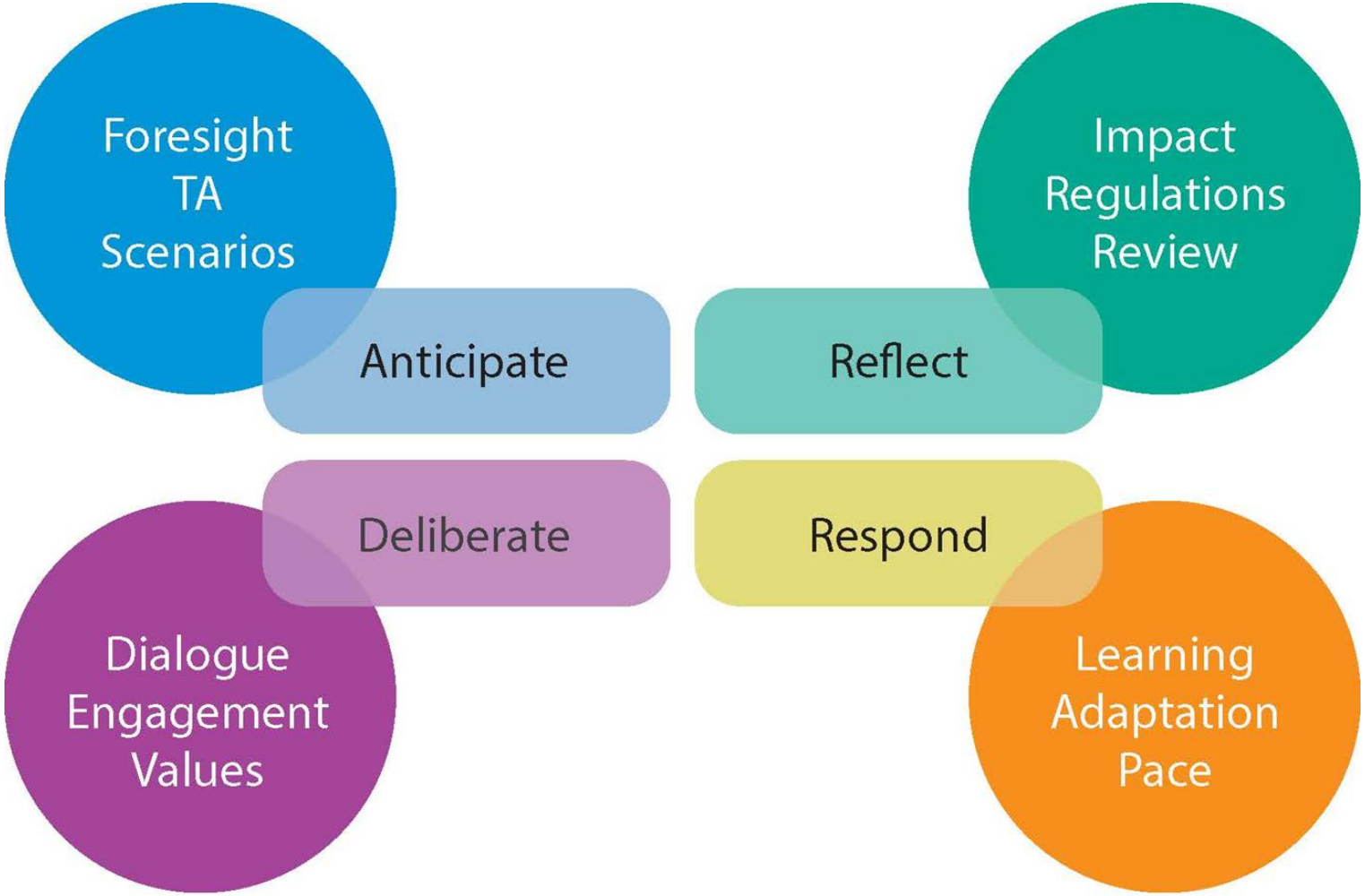
- Innovationen bringen Vorteile,
  schaffen manchmal aber auch Probleme
- Wenn Forschung und Innovation sowohl Teil des Problems als auch Teil der Lösung, dann brauchen wir Responsible Innovation
- Responsible Innivation soll Innovationen sensibler machen für die gesellschaftliche Dimension machen
- Wie soll das gehen?

Rene von Schomberg's RRI Definition

"Responsible Research and Innovation is a transparent, interactive process by which societal actors and innovators become mutually responsive to each other with a view to the (ethical) acceptability, sustainability and societal desirability of the innovation process and its marketable products."

Rene von Schomberg, European Commission, DG Research and Innovation (2013). "A vision of responsible innovation". In: R. Owen, Heintz and Bessant (eds.) Responsible Innovation. London: John Wiley, cited 635 times

Owen et al. – Responsive Stewardship



"RI is a collective commitment of care for the future through responsive stewardship of science and innovation in the present."

Stilgoe, J. et al. (2013). „Developing a Framework for Responsible Innovation". in: Research Policy, cited 800 times

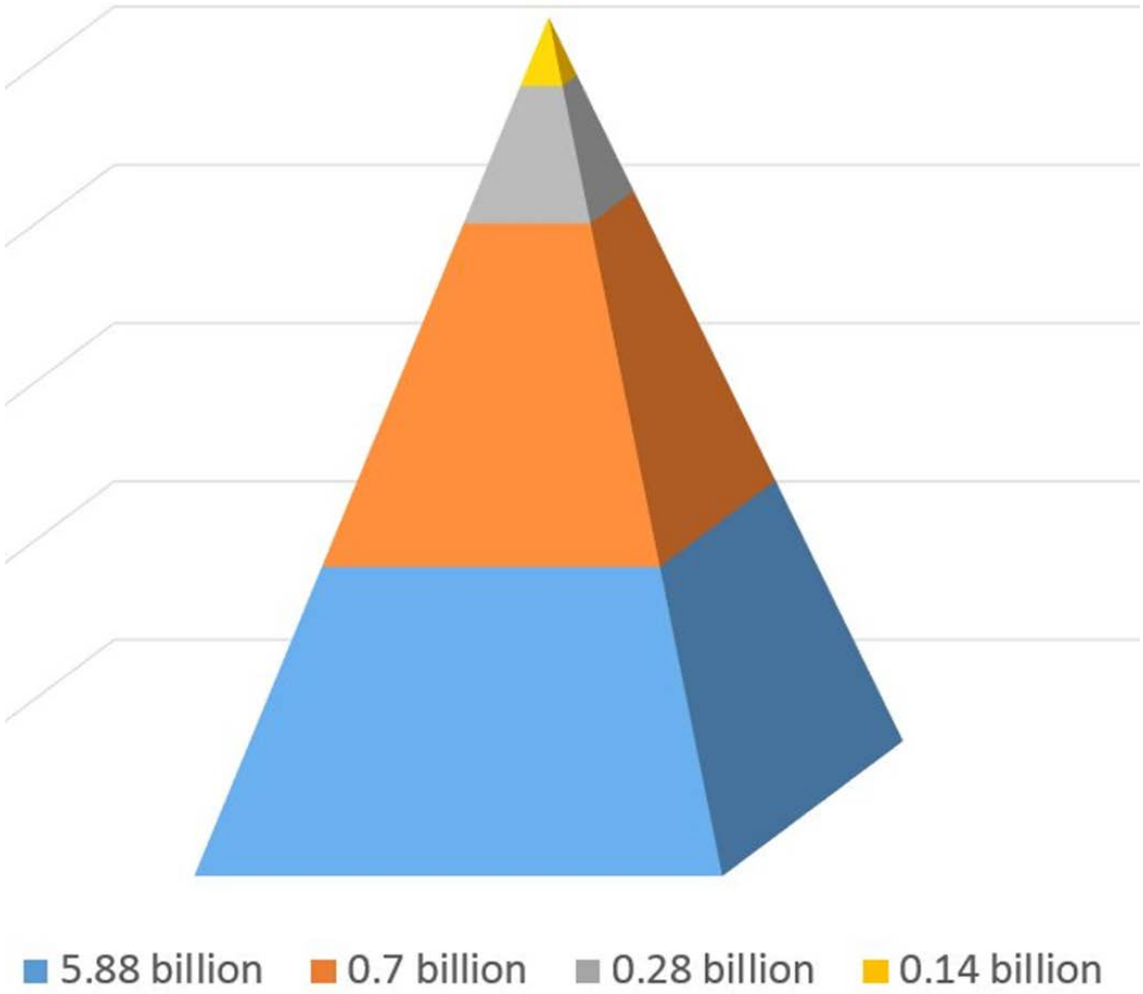
Ansatzpunkte und Beispiele

Base of the Pyramid Innovation

Co-Design in der Produkt-Entwicklung

Ethische Sensibilität

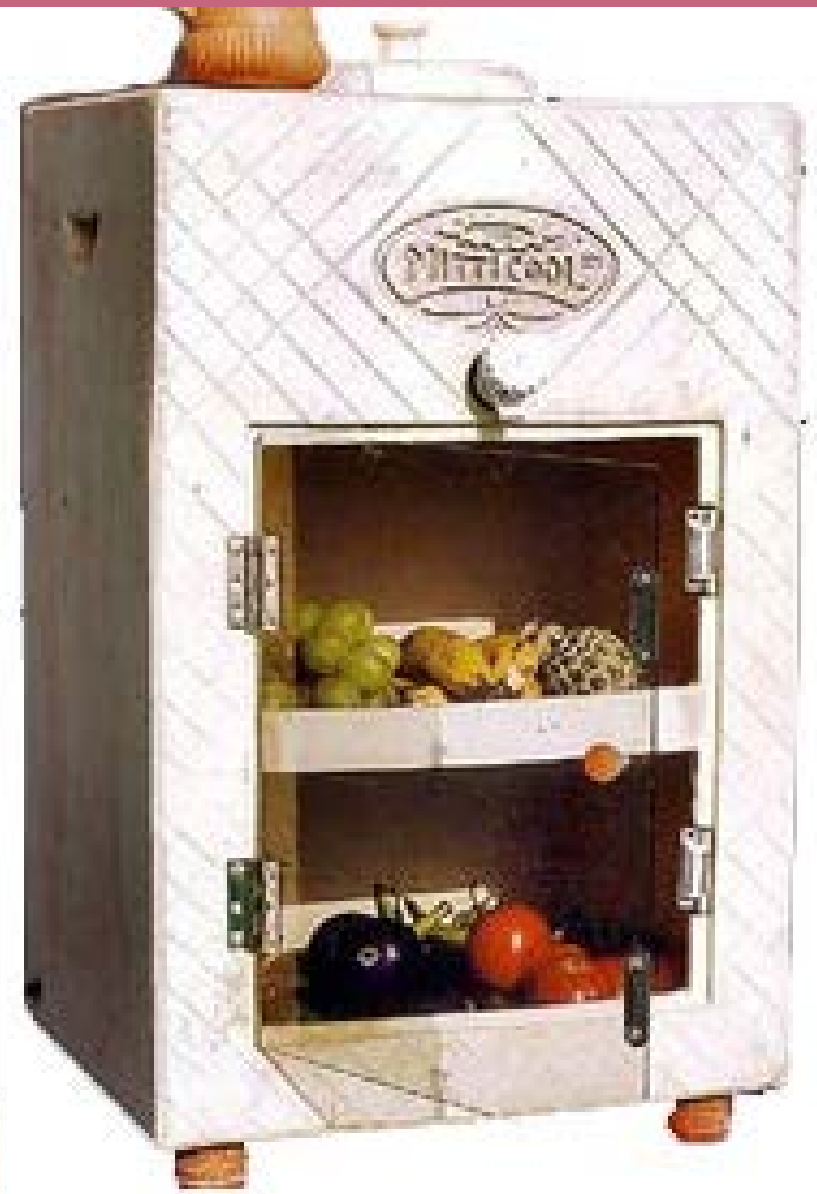
1. Base of the Pyramid Innovation



Inclusive Innovation (base of the pyramid)

"Inclusive innovation is the means by which new goods and services are developed for and/or by the billions living on the lowest incomes" (Foster and Heeks)."

1. Base of the Pyramid Innovation



Mitti Cool Kühlschrank

National Grassroots Innovation Awards India

Preis 75 Euro

(vgl. konventioneller Kühlschrank ~ 350 Euro)

https://mitticool.com/product-category/earthen-refrigerator/

1. Base of the Pyramid Innovation

Embrace Infant Warmer

Preis: 25 US$

(vgl. Inkubator 20.000 US$)

200.000 Leben gerettet

https://www.embraceinnovations.com/#home

2. Co-Design in der Produktentwicklung

Ambiact (www.oldntec.eu)

Als Zwischenstecker gebauter Stromsensor erkennt die Nutzung elektrischer Haushaltsgeräte. Bei ausbleibender Nutzung wird drahtlos Alarm über ein vorhandenes Hausnotrufgerät ausgelöst.

RRI: Intensive Einbeziehung von Stakeholdern in der Entwicklung

Weitere Vorteile: schneller Markteintritt und geringere Entwicklungskosten.

https://www.orbit-rri.org/blog/2018/03/30/ambiact/

2. Co-Design in der Produktentwicklung

GlucoTel™

Diabetes als globals Problem: 360 mio Patienten 2030

GlucoTel als erschwingliches Beispiel von Telemedizin

RRI: Einbindung von Patienten und Pflegern verbessert Produkt und Lebensqualitaet;

ISO Zertifizierung hilft rechtliche Verpflichtungen zu erfuellen

Wissen ist weitgehend frei zugänglich

Standardisierung von Telemedizin ermöglicht bessere Behandlung

Weitere Vorteile: optimales Produkt; Standardisierung führt zu sicheren und preiswerten Produkten

https://innovation-compass.eu/wp-content/uploads/2017/09/Case-Study-2_GlucoTel-Karsten-Bolz-Final.pdf

3. Ethische Sensibilität

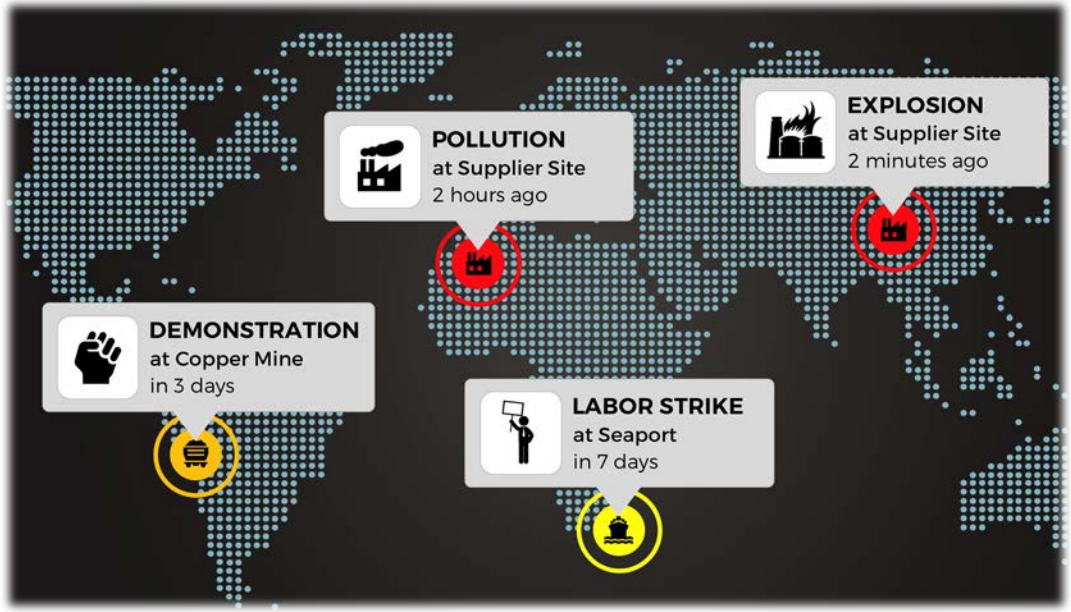
PREWAVE

TU Wien Spin-Off Prewave develops AI-powered risk detection algorithm

The algorithm analyzes social media and news data in multiple languages to automatically detect and predict disruption risks

Social Media, News, Blogs

Artificial Intelligence



Map of risk events

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3. Ethische Sensibilität

Responsible Innovation at PREWAVE

Responsible Data Science

Ethics Committee

- Advice
- Ethics Research

Code of Ethics

- Data Sourcing
- Data Privacy
- Data Distribution

Stakeholder Dialogues

AK ÖGB

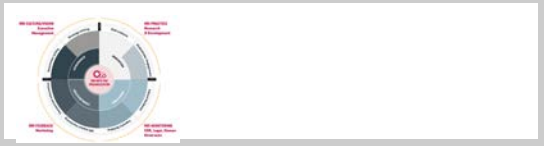
IG Metall

PRO-GE DIE PRODUKTIONSGEWERKSCHAFT

中国劳工通讯 CLB CHINA LABOUR BULLETIN

Hans Böckler Stiftung

Hilfreiche Tools



1. Framework

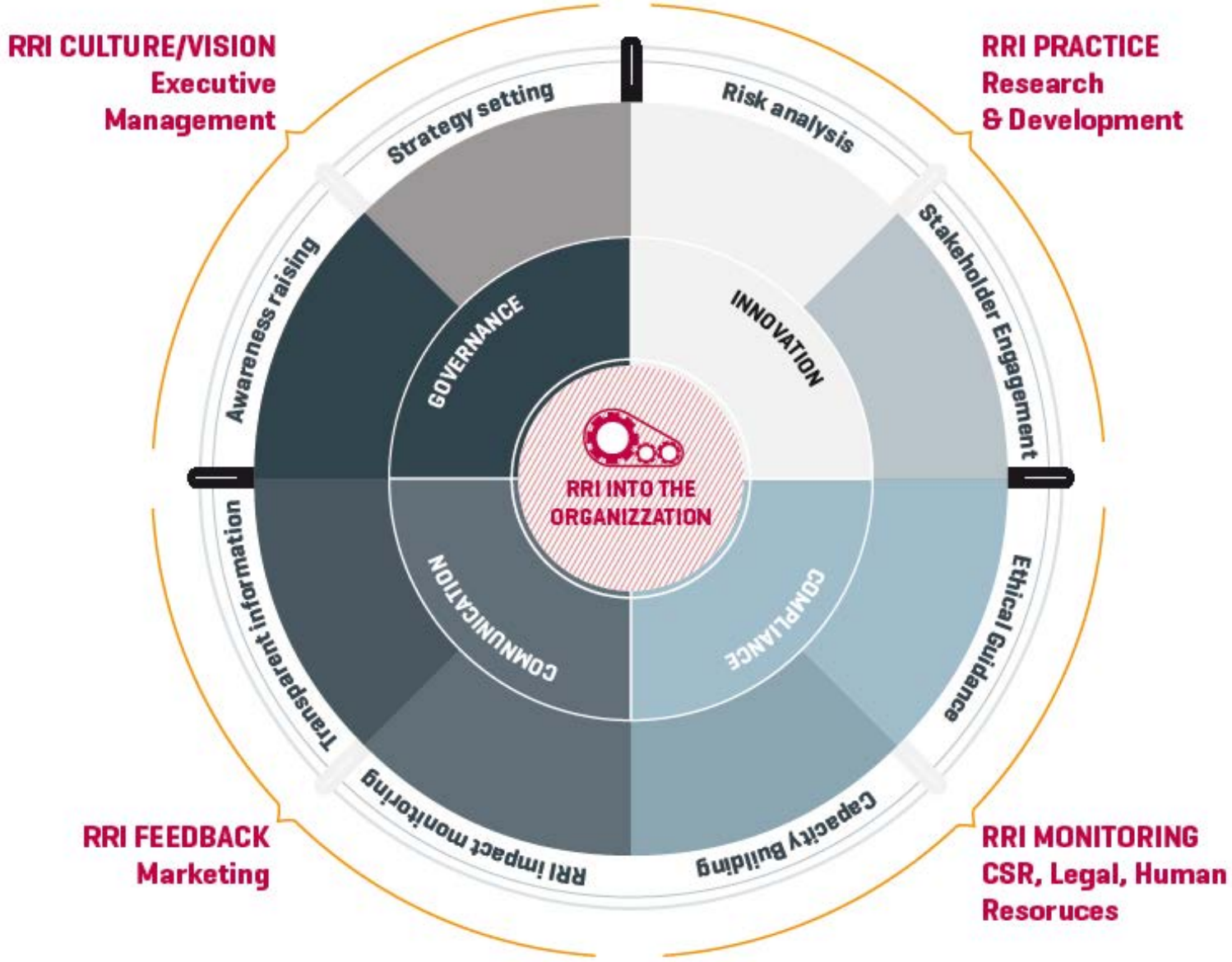
2. Maturity-Model

3. Training & Services

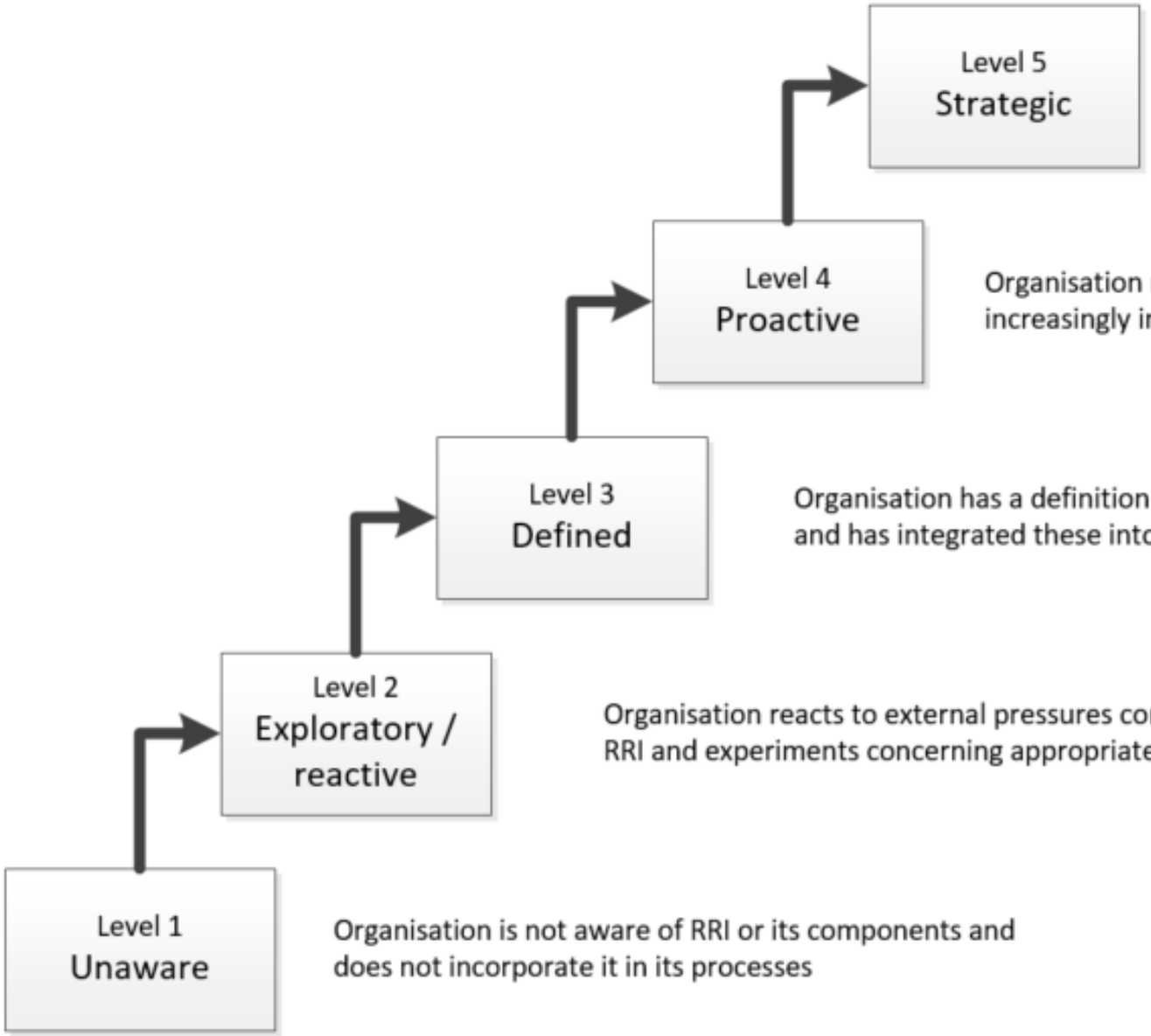
4. Self-Check Tool

5. Responsible Co-Design

Tool 1: Responsible Innovation Framework



Tool 2: Responsible Innovation Maturity Model



Organisation is not aware of RRI or its components and does not incorporate it in its processes

Organisation reacts to external pressures concerning aspects of RRI and experiments concerning appropriate processes

Organisation has a definition of (components of) RRI and has integrated these into its business processes

Organisation realises the benefits of RRI and seeks to proactively and increasingly integrate these into its business processes

Organisation has adopted RRI as a component of its strategic framework and aims to ensure all R&D activities cover all (or most) RRI components

Tool 3: ORBIT RRI Training

Introduction to RRI

This free Introduction explains the basic principles of RRI and familiarises users with ORBIT's role in providing RRI services. Completion of this initial course and the brief quiz gives access to ORBIT's expert services.

Start Today

Foundations in RRI

The Foundation course introduces the AREA 4P framework and its application to research projects. Once the Foundation course is completed, participants can undertake RRI activities in ICT research projects. The course can be tailored to the specific needs of the project or institution.

Registered Practitioner

The Practitioner course enables participants to embed the RRI principles into their small and medium-sized ICT grant proposals using the AREA 4P framework. Certification lasts for three years, after which re-registration is needed. The ORBIT Foundation course is a prerequisite.

Master Practitioner

The Master Practitioner course enables participants to embed the RRI principles into their large and complex ICT grant proposals using the AREA 4P framework. Certification lasts for three years, after which re-registration is needed. The ORBIT Foundation course is a prerequisite.

www.orbit-rri.org

Tool 3: ORBIT Services

ORBIT Community

ORBIT is creating a vibrant online community around collaboration and the sharing of best practice. By registering with the ORBIT web site you will become a member of this community and gain access to ORBIT services, specifically designed to embed RRI principles in research.

Register Today

Project Self Assessment Tool

This tool is free to use by members of the community. It allows individuals and organisations to assess their own position in RRI for ICT and to compare themselves against their peers. It also allows users to determine which areas of RRI they need to work on which will open the opportunity for specific training and consultancy offers.

Start Now

Case Studies

A series of case studies is available online to discuss and reflect on how the RRI principles can be embedded in the research process. This material is available for free to users that successfully complete the **Introduction to RRI** course.

Learn More

Proposal Service

ORBIT offers a proposal review service for universities bidding for research council and EU funding. These services are aimed at ensuring RRI is applied at an appropriate level, and that they are likely to be acceptable to the funding body purely from an RRI perspective. Please, contact the ORBIT team for further information about this service.

Learn More

www.orbit-rri.org

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Tool 4: Responsible Innovation Self-Check Tool

Company Management

This section includes questions on how Responsible Innovation is integrated into your company's goals and governance, including how you ensure that employees are empowered to facilitate Responsible Innovation.

Idea generation & research

This section will ask you about practices that your company follows at the beginning of an innovation, from idea inception and research to selection for further technical development.

For many SMEs with limited resources, it may be most important to invest in aligning these stages with responsible innovation principles, as the consideration of responsibility aspects in the initial stages of any innovation can make the greatest impacts on responsible outcomes.

Development & Testing

This section covers all activities related to the development phase of the innovation process. It addresses decision-making about production, testing, and market entry. It also deals with the issue of safeguards from unintended negative effects.

Market & Impact

This section focuses on the final stage of an innovation process, when the innovation is launched and re-evaluated. For your company to be a responsible innovator it is important not only to conduct research and manage the innovation process responsibly, but also ensure that innovations, once on market, do contribute to solving societal challenges.
It addresses the innovation's impact, company strategies for soliciting and integrating feedback, and the management of unintended or negative effects resulting from t product/service.

Tool 5: Responsible Co-Design

OUR GOALS

- co-creating the way we live in 2030
- involving leading ICT companies
- linking smart homes and smart health
- 18 workshops all across Europe 2019 / 2020
- a vibrant virtual community

WWW.LIVING-INNOVATION.NET

LIVING INNOVATION

Grenzen von Responsible Innovation

Responsible Innovation

- kann die Zukunft nicht vorhersagen
- kann nicht alle Probleme vermeiden
- kann Wertekonflikte nicht eliminieren
- ist kein Ersatz für persönliche Verantwortung
- kostet Zeit und Geld
- ist kein Allheilmittel

Aber Responsible Innovation

- kann zu einer fundierten Auseinandersetzung führen
- hilft Organisationen sich selber besser zu verstehen

Vorteile für Ihr Unternehmen

- Bessere Beziehungen zu Kunden und Verbrauchern
- Risikominimierung und Frühwarnfunktion
- Agile Reaktion auf die Umwelt
- Öffentliches Vertrauen in Produktsicherheit
- Verbesserte Akzeptanz von Produkten
- Umweltfreundliches Profil
- Sichtbarkeit in relevanten Communities

Langfristige Verbesserung der Wettbewerbsfähigkeit

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Weiterführende Informationen

www.responsible-industry.eu

ORBIT

www.orbit-rri.org

RESPONSIBLE INNOVATION COMPASS

www.innovation-compass.eu

LIVING INNOVATION

www.living-innovation.net

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