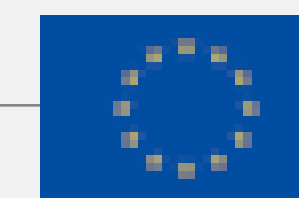


SMART·map

*RoadMAPs to Societal Mobilisation for
the Advancement of Responsible
Industrial Technologies*



Angela Simone

Fondazione Giannino Bassetti – Project Deputy Coordinator

The experience of SMART-map: benefits and actions for Responsible Innovation Ecosystems stakeholders

MARIE Mid-term event

Responsible Innovation Summit, Dublin 16th October

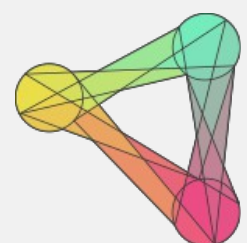


An ambitious objective

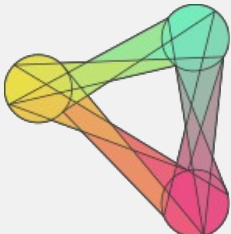
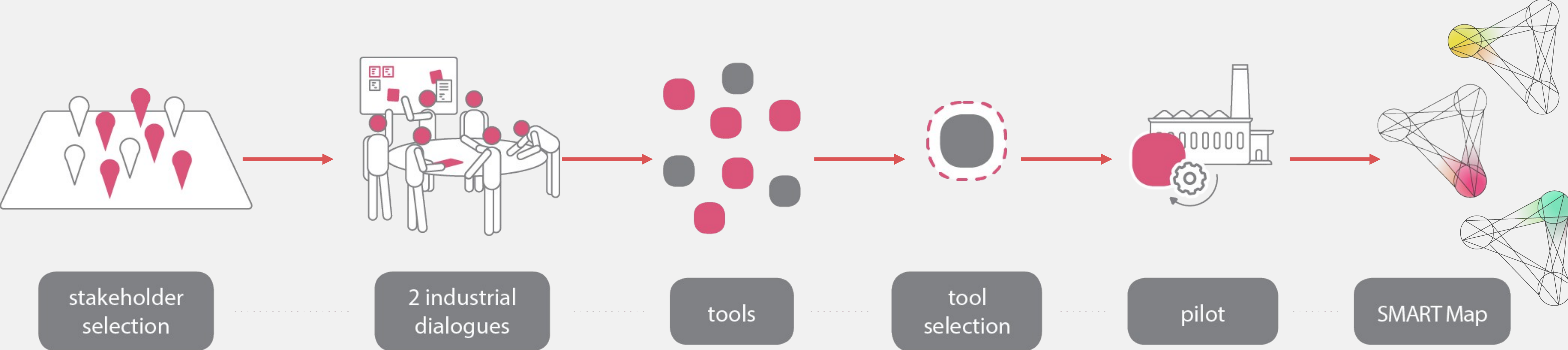
RoadMAPs to Societal Mobilisation for the Advancement of Responsible Industrial Technologies

The **goal** has been **co-designing** concrete **roadmaps** for the responsible development of technologies and services in **three key game-changing fields** (precision medicine, synbio, 3D printing in the biomedical field), **mobilising** linked **innovation ecosystem stakeholders**.

The **ambition** is **to go beyond** the three sectors explored in the project.



An overview of the journey



Learning from the dialogues

Ecosystem of RRI

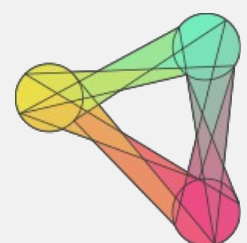
RRI is a multi-stakeholder ecosystem by definition, and the “co-constructed” proposals require the involvement of different subjects at a “systems-level”

RRI and innovation field

Often difficult to consider RRI as separate from field-specific technical needs and challenges, but in emerging technologies, technical challenges can be similar. This means that tools can be also applicable to other innovation sectors.

The role of Industry

New tools cannot be introduced without additional measures (incentives, funding, recognition) and involving other players. The focus on the sole industry is often questioned.



Executive summaries for different audiences (industry, CSOs, funders, RRI community, policymakers)




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A SMART Map for Precision Medicine

Executive Summary for Industry

The SMART Map is a tool that helps businesses address issues of social and environmental responsibility they face in their innovation processes. It is based on the **Responsible Research Innovation (RRI)** approach promoted by the European Commission and it provides different stakeholders with practical suggestions on how to promote and put into practice these principles.

The SMART Map proposes a route that guides industry from the current scenario of Precision Medicine towards the implementation of RRI practices and their potential benefits for companies, through a series of suggested actions and concrete examples collected during a pilot.



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A SMART Map for 3D Printing in the Biomedical Field (3DMed)

Executive Summary for Industry

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The SMART Map proposes a route that guides industry from the current scenario of 3DMed towards the implementation of RRI practices and their potential benefits for companies, through a series of suggested actions and concrete examples collected during a pilot.



RRI: why you need to get there

RRI practices in the Precision Medicine industrial context have benefits at various levels for the industry sector

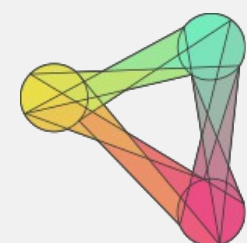
- For a **Chief Technology Officer**: when you carry out a technology assessment or need to update your product roadmaps, SMART-map tools can help you gather higher-quality input and run the exercise in a more customer-focused manner. Tools like an **end user advisory panel**, or a **multi-stakeholder responsible innovation group** can offer independent views on what is important for your market, and support in anticipating trends. *"This kind of instruments helped us understand which will be the needs and barriers of physicians with less experience who are addressing genetic testing for the first time. It helps us anticipate and address their needs."*, said M.Carmen Álvarez, the IMEGEN Project Manager involved in piloting the tool.
- For the **R&D and Product Development**: SMART-map tools can help translating the company vision into requirements for R&D process, and implement "agile ways of working". **Co-creation multi-stakeholder groups**, as well as **end-user advisory panels** and **participatory feedback tools**, can enable greater patient-centricity and can help rapid prototyping and agile design. **RRI workforce training** help staff understanding and making the best use of external ideas. *"Waiting for the test results without any information in the meanwhile is pretty difficult"* reported one of the patients involved in the pilot. It is also for this reason that IMEGEN is considering introducing more material targeted to patients, and potentially an online tracking tool.
- For **Commercialisation and assessment**: SMART-map tools can help addressing gaps in health technology assessment, and particularly in patient-reported outcomes, to know better their audience and prepare for regulatory approval. **Repositories for subjective experience of treatments** can help comparing patient experiences with the view or needs of other stakeholders; **RRI standards and accreditation**, including labelling of the product, will help commercialising activities. **Living labs** and **end-user advisory panels** can help gathering information for regulators. One of the patients involved in the pilot stressed that *"psychological care, as well as a comfortable environment where the results are communicated face-to-face are really important to understand and deal with the conclusions of diagnostic report"*, highlighting the transformative potential of collecting these feedbacks.

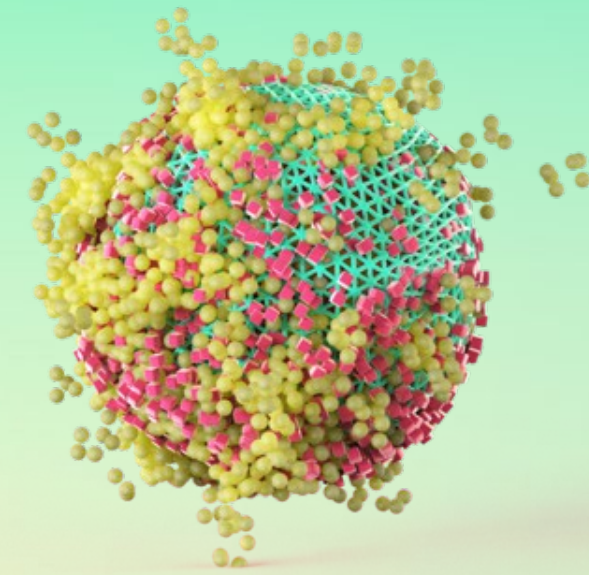


RRI: why you need to get there

RRI practices in the 3DMed industrial context have benefits at various levels for the industry sector

- For a **Chief Technology Officer**: when you carry out a technology assessment or need to update your product roadmaps, SMART-map tools can help you gather higher-quality input and run the exercise in a more customer-focused manner. Tools like a **RRI 3DMed multi-stakeholder workshop** can contribute to understand and anticipate uncertainties, concerns and expectations around both products and processes (for example safety, affordability and timing issues) of end users, thereby building a relation of trust with society and the market, which in turn increases the company's reputation. Furthermore, the tool can help implementing new strategies to improve the quality and the safety of products and finding new business opportunities by adopting an inclusive and participatory approach. As emerged from the 3Dmed pilot, focusing on revising standards and certification approach for the 3D printed medical devices, the **RRI 3DMed multi-stakeholder workshop** could be a concrete means to identify the needs of the stakeholders and to unleash the potential of 3D printing in biomedicine, also in terms of personalisation of products. *"So far Medical Device Certification focused on technical aspects mainly; thanks to the collaboration with SMART-map we are now including the ethical dimension which will increase the value our companies will provide to patients, doctors and the rest of stakeholders"*, highlighted Alessio Giuliani, SYMBIONICA Project Coordinator, involved in the 3Dmed pilot experience.
- For **Management and the R&D and Product Development**: SMART-map tools can help translating the company vision into requirements for R&D process, and implement "agile ways of working". **RRI training**, **RRI self-assessment** and **RRI score** can foster the self-assessment of companies so to identify new research, development and management priorities or to strengthen existing ones in line with societal needs.
- For **Commercialisation and assessment**: SMART-map tools can help addressing gaps in health technology assessment, and particularly in patient-reported outcomes, to know better their audience and prepare for regulatory approval. Tools like **RRI training**, **RRI self-assessment** and **RRI score** can sharpen communication activities and goals, presenting RRI-compliance as an added value. Moreover, **RRI 3DMed multi-stakeholder workshop** can increase the companies' awareness about their innovation ecosystem, enlarging the community of stakeholders and improving the relationship with them, and positively influencing the innovation ecosystem governance both in terms of avoiding over-regulation for new technologies and including more voices that can prevent the development of a monopolistic system composed of a small number of big companies.



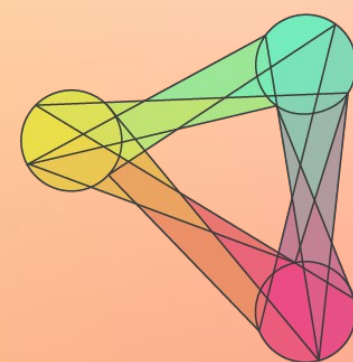


Thank you

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