SESSION 3: STRATEGIES AND PROPOSALS ON RESPONSIBLE RESEARCH IN BIOSCIENCES

RESPONSIBLE RESEARCH IN BIOSCIENCES: CHALLENGES FOR MAINSTREAMING

On line conference - 29 May 2020

STRUCTURAL CHANGE IN EUROPEAN BIOSCIENCE ORGANIZATIONS: THE STARBIOS2 GUIDELINES

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Themes of the presentation

- A general presentation of the «RRI model for research organisation in the bioscience» at the basis of the Guidelines
- The self-interpretation process for implementing RRI in biosciences organization and its steps
- The critical areas of implementation of Action Plans

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A general presentation of the «RRI model for research organisation in the bioscience» at the basis of the Guidelines

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The Guidelines: a learning process

We learned that

- **RRI is relevant for bioscientists**
- & **responsibility is vital** to bioscientists activities

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Science and society co-evolution **creates:**

- **uncertainty about the future** of research and innovation
- **dilemmas about decisions** to take to cope with this uncertainty
- **RRI anticipates and assesses** potential implication and societal expectations for sustainable research & innovation

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The EC defines RRI as…

An approach that anticipates and assesses potential implications and societal expectations with regard to research and innovation, with the aim to foster the design of inclusive and sustainable research and innovation.

Responsible Research and Innovation (RRI) implies that societal actors (researchers, citizens, policy makers, business, third sector organisations, etc.) 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 society

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”Taking care of the future through collective stewardship of science and innovation in the present” (Stilgoe et al. 2013)

- **We are all societal actors**
  - Researchers
  - Policy makers
  - Industry representatives
  - Citizens
- We share the responsibility to work together to ensure processes and outcomes **align with our values, needs and expectations**.

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Bioscience needs RRI

- Because RRI can help ensure research and innovation align with values and needs in the society that we live in

- RRI helps in coping with the uncertainty **about direction** of research and innovation

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“De facto RRI”

- Some bioscientists already practice RRI to deal with **social implications of research**. For example when they…
  - **present results** to stakeholders and the public → **Trust is key!**
  - engage in efforts to **improve the overall research systems**
  - engage in **promoting conditions for women in science**, etc.
- But scientists rarely do this systematically

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The STARBIOS2 contribution

- **Rooting RRI** in bioscience research organizations **through structural change**
- We developed tools to support self-interpretation, all summarised in our guidelines:

1. A Model on RRI and structural change in bioscience research institutions
2. Some practical guidance
3. Some examples based on our experiences

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Science in transition, society changing

A Transition is taking place in science

Several issues at stake, for example:

- Autonomy of scientists
- Research is increasingly “context driven”
- Several actors are involved

Science and society relations change accordingly

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RRI as a possible contribution to a solution

- 5+1 RRI keys
  - Public engagement
  - Gender
  - Open Access
  - Ethical Issues
  - Education
  - Governance

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Our reasons to practice RRI:

- **Research actors taking social responsibility** can help solve critical issues in the relationship between science and society
- **Without betraying the mission of research and innovation** (producing new knowledge and making it available to society)

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How to start promoting RRI

- **The 5+1 RRI keys can help**
  - Public engagement, gender, open access, ethical issues, education and governance
- These are key aspects of **the life of the scientific community**, which is where the science/society relations are most evident
- They are relevant also for each **individual organization**
- The Guidelines has this angle, that could be defined as ”**micro**”

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RRI for the research organizations in the biosciences

- **RRI should be contextualised** to where it is practiced
  - Consider the **social and professional networks** that your organisation belongs to
  - Consider **relevant public and research policies**
  - Consider **scientific communication and mediation functions that maintain relations** between relevant actors

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The challenges faced…

- The biological revolution
- Stakeholders' needs
- Gender discrimination
- Genderization of research content
- How to educate young bioscientists
- Globalisation (indigenous knowledge, tech transfer)
- Organisational governance
- Now, we are facing a global pandemic

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Principles of Action

- RRI needs to be **a tool for creating better research** and innovation & for **providing solutions** to problems for research organisations
- **Each organisation needs its' own approach to RRI** practice & its' own consistent set of RRI practices
- This needs to be **tailored to each organisation's own context**

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To implement RRI, you need to…

- Define a vision of scientific activities
- Reframe the stages of the research process
- Change the main characteristics of the research organisation

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What does RRI entail?

RRI means initiating a process that does not produce results instantaneously and that is going to continue over time

1. RRI is for **complex organisations with complex missions**
2. RRI is **for researchers AND PROFESSIONALS** in research organisations
3. RRI entails **defining new roles in an organisation**
4. RRI **should not conflict with the main systems and incentives** at work
5. RRI should be **in line with the mission of the organisation**

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The self-interpretation process for implementing RRI in biosciences organization and its steps

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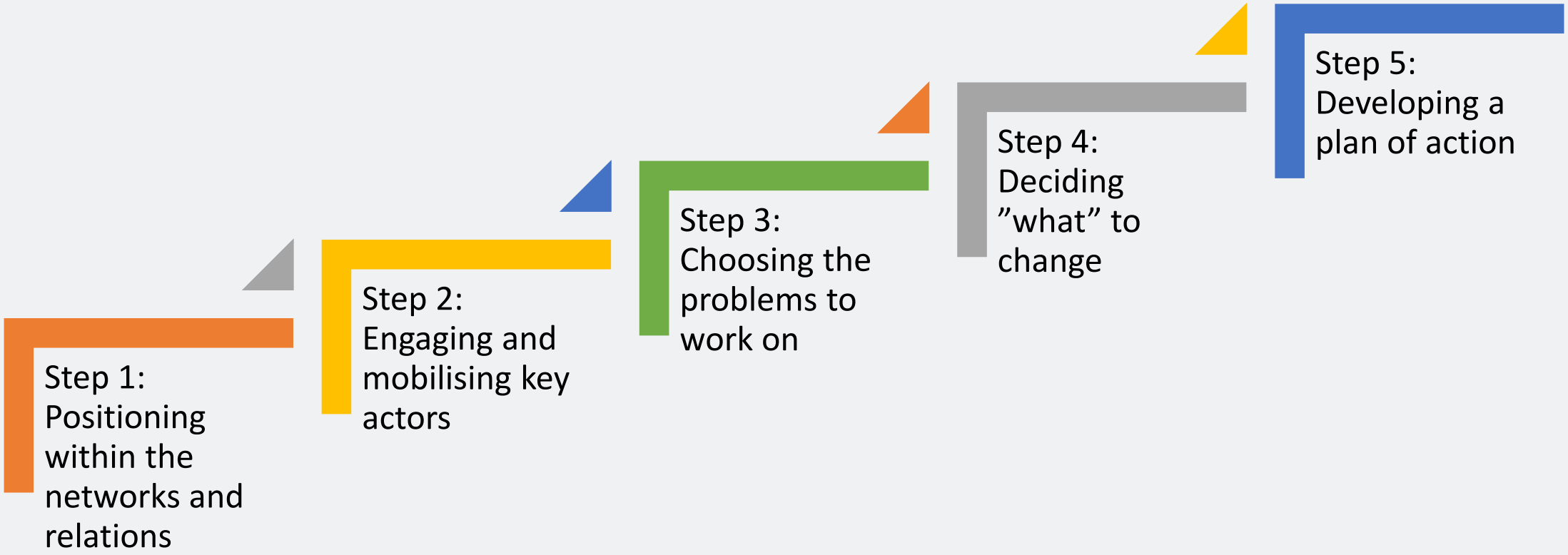
The self-reflection process



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1. Positioning within networks

- **Mapping** should involve…
  - **Research actors** (directly involved in project implementation and financing)
  - **Stakeholders** (research users, CSOs, policy makers, etc)
- **Specific challenges for bioscience** are…
  - **Policy** challenges
  - **Scientific** challenges
  - **Innovation** challenges
  - **Ethical** challenges
- Mapping and adressing challenges **helps develop a vision**
- & **define the state of relations with other actors** and critical aspects

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2. Engaging & mobilising key **internal** actors

- **Single out key actors** as a precondition for their mobilisation
- **Identify and involve actors that already do RRI-related activities**
- **Find out what RRI initiatives are already implemented** in your organisation

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3. Choosing the problems to address

- **Knowing the problems to address** makes promoting RRI easier
- **Consulting internal actors** is key
- **Engage** those who already carry out ”de facto RRI” initiatives
  - **Use the 5+1 keys as a guide in this process**

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4. Deciding what to change

”Principles of action”

- **What rules, roles, routines, missions, visions etc. could be changed?**
- Changes should impact the organisations’ actions, identity, culture and agency. Now and in the future.
- **Negotiations are central** to define
  - what changes to introduce,
  - to get people on board and identify potential conflicts

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5. Developing a plan of action

- Action plans (APs) activate complex and non-linear processes
- APs are tools to trigger change and managing complex outcomes
- It is central to identify and follow up how change is being generated

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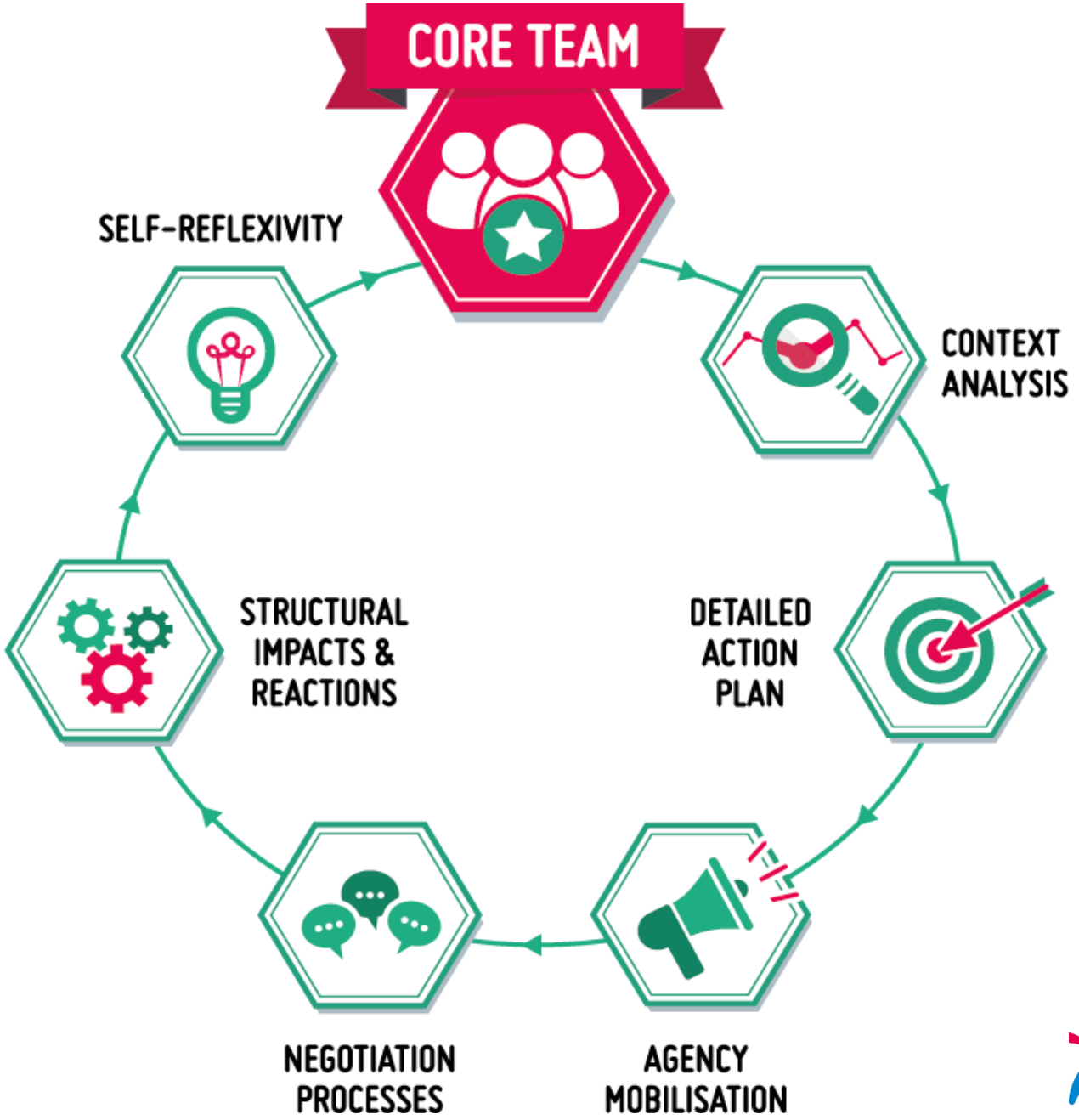
CORE TEAM
SELF-REFLEXIVITY
CONTEXT ANALYSIS
DETAILED ACTION PLAN
AGENCY MOBILISATION
NEGOTIATION PROCESSES
STRUCTURAL IMPACTS & REACTIONS

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The critical areas of implementation of Action Plans

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FIRST CRITICAL AREA OF IMPLEMENTATION

Core team establishment & maintenance

- Ensuring the **continuity and stability** of the Core Team composition
- Acquiring a wide set of **knowledge** and **competences**
- **Conciliating research activity and Core Team membership** (including the possible “time conflicts”)

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SECOND CRITICAL AREA OF IMPLEMENTATION

Context analysis & detailed design

The success or failure of an Action Plan depends also on contextual factors. Critical aspects concern the **analysis of…**

- **external factors** (national policies and regulations, culture, etc.), and
- **internal factors** (organisational culture and values, leadership's attitudes, previous experiences within the organisation and the entire set of relations with external stakeholders).

This helps to single out **problems and opportunities** to implement RRI and structural change.

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THIRD CRITICAL AREA OF IMPLEMENTATION

Mobilization of actors

The **mobilization of the internal social actors,** beyond the Core Team, is also crucial. The critical issues are:

- a possible **diffidence** toward RRI among bioscientists
- a **low priority** acknowledged to RRI related institutional changes
- participating in the AP and in the RRI activities **deviates from the main objectives and daily needs** of researchers

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FOURTH CRITICAL AREA OF IMPLEMENTATION

Negotiating change

Negotiation is a type of interaction necessary for the realization of many activities foreseen by an AP. The critical aspect is that negotiation:

- Is a **complex activity** related to interactions of an interpretive, symbolic, institutional or operational nature (e.g., the operational implementation of the activities, the creation of consensus among the actors, the reduction or elimination of conflicts, etc.)
- Is often **underestimated**, also because mainly “invisible”
- Often takes place in highly **informal contexts**.

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FIFTH CRITICAL AREA OF IMPLEMENTATION

Self-reflection

The positive outcomes of the Self-reflection process cannot be taken for granted. Some critical aspects are:

- the need to understand **the emerging factors that hinder and facilitate** the practice of RRI (it also requires a learning process in order to cope with the novelty produced by the implementation of the AP);
- the **unexpected effects** of an AP must be brought under control through procedures that are not usual for researchers in the field of Bioscience;
- the need to develop the **ability to interpret** what happens with an AP.

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Thank you!

You can find the Guidelines here:

https://starbios2.eu/2019/starbios2-guidelines-on-rri-implementation-in-bioscience-organisations/

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