TIME4CS

REFLECTION TOOL

for Institutional Changes in Citizen Science

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Prepared by

Eugenia Vilarchao
Marie Fleck
Ildiko Ipolyi

SCIENCE CONNECT
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Are you interested in integrating Citizen Science practices to the research activities of your institution?
Would you like to learn how to define your action plan for institutional changes?

This Reflection tool is for you!

The Reflection tool for institutional changes in Citizen Science (CS) is dedicated to anyone that would like to pursue sustainable institutional changes towards Citizen Science.
This tool has been developed by the European Science Foundation within TIME4CS project. It draws its inspiration from the Reflection Tool for RRI initiatives designed within GRACE project, and has been adapted to the field of Citizen Science.
TIME4CS Reflection Tool assists you to promote institutional changes towards Citizen Science in your organisation.
TIME4CS implementing partners have found it useful for the development of their own action plan to support Institutional Changes in Citizen Science.

Now it is your turn to try it!

The tool will support you to define the Grounding Actions, i.e. actions aimed at implementing or favouring Institutional Changes. It will guide you to reflect on the big vision, to identify the relevant stakeholders, to define the success criteria of the actions, to highlight the necessary resources and find solutions to possible obstacles, as well as to formulate the timeline of the concrete steps needed to achieve sustainable changes.
Going through this process will provide you with all the core information to feed your roadmap, i.e. the action plan for institutional changes.

Get ready and embark on the journey towards institutional changes in Citizen Science!

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user guide

The reflection tool aims to support you in:

- defining the goals you would like to achieve at your Institution;
- setting measurable success criteria for the sake of monitoring and evaluation;
- reflecting on the stakeholders who will be affected by the initiative and will need to be involved in the decision-making;
- planning the steps of implementation;
- foreseeing potential obstacles;
- reflecting on needed resources.

For each Grounding Action it is important to complete the whole described process, composed by six steps as represented on Figure 1.

Figure 1. Step to define the grounding action

getting ready

Before starting the exercise, it is important to define the team that will participate in the reflection process. Some guiding questions below will help you to reflect on this. Another important preparatory step is to do an exercise of stocktaking and/or self-assessment. Finally, it is important to get inspired by others' experience and expertise.

the team

The reflection tool is the starting point for drafting the Grounding Actions that will be part of your institutional roadmaps. To start, it is crucial to identify the core team that will use this reflection tool and have a key role in the implementation of the actions.
Core team: essential for the discussion and design of activities and, later on, for the coordination of the implementation of these activities. Who is or should be taking part in this discussion? Who will coordinate the implementation of the activities?
Extended team: in active collaboration with the core team, the extended team will assist on the implementation of the actions. The extended team might vary among the Grounding Actions. Who are or who should be members of the extended team, if any?
Would it be important to include them on this reflection exercise?
More extensive reflection on stakeholders will be completed under step 3 "Stakeholder inclusion" for each Grounding Action.

taking stock

A stock-taking exercise would help you to identify the current status of resources and needs, gaps and problems that your organization has to support citizen science. Before starting to use this reflection tool we strongly recommend you to make a list of the current activities, resources, infrastructure, or trainings that could support Citizen Science, or even more broadly, Public Engagement and Open Science activities.
This will be useful for the following steps!

The TIME4CS Impact and ~~...~~ section dedicated to the "Baseline and Pla~~...~~ome of the stock -taking exe~~...~~done prior using th~~...~~cience or ~~...~~the

grounding action #1

name of the grounding action:

....

short description:

....
....
....
....

under which intervention area(s) would you place it?

☐ Research
☐ Education and Awareness
☐ Support resources and Infrastructures
☐ Policy and assessment
☐ Other:

....
....

big vision

What do we wish to achieve in the long run with the Grounding Action?

You are allowed to THINK BIG and develop a long-term Citizen Science vision for your institution!

Are there any problems or gaps that we wish to address with the action?

What are these problems/gaps in terms of Citizen Science in your organization?

success criteria

Now it is time to break down the big vision into specific and manageable goals and determine how you can assess goal attainment.
You can brainstorm on the following questions and/or go into detail and fill in the table if this helps you.

What are the goals of our action?

Please list them as specific as possible.
If you find it useful, you may differentiate your Short-Term (ST) Goals from Middle-Term (MT) and Long Term (LT) Goals. You may consider as Short-Term (ST) Goals those achievable in the next 3 years; Middle-Term (MT) Goals those to be achieved in 6 years; while the Long-Term (LT) Goals would be those achievable in the consolidation period of your actions in 9 years.

How do we assess goal achievement? What kind of documentation can be collected and used to substantiate the goal achievement?
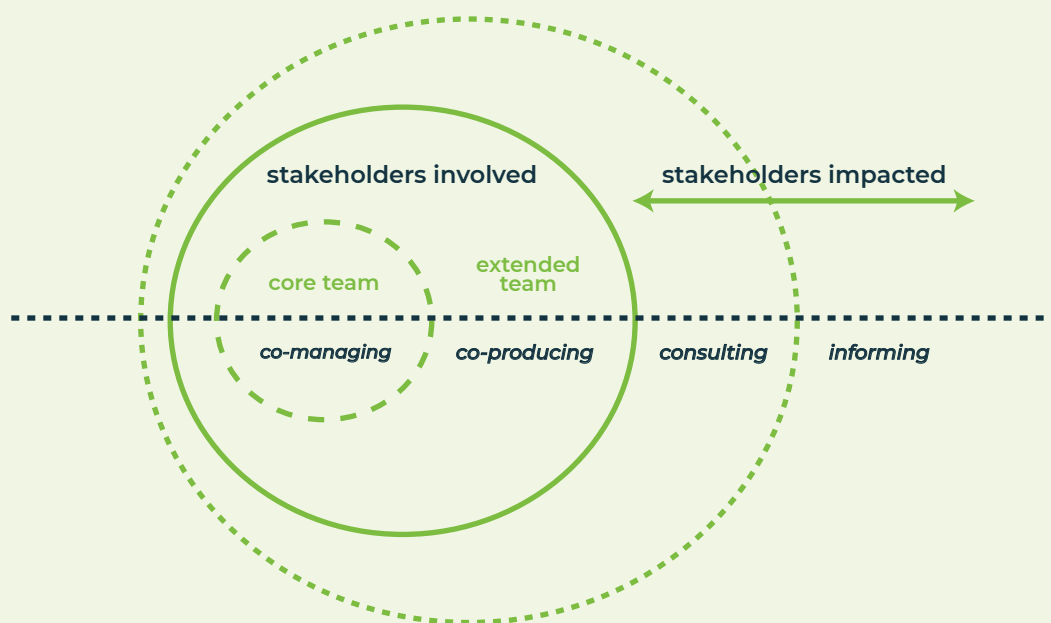
Goal (ST, MT or LT)	Success criteria	Documentation
E.g.: collect information on researchers' knowledge/ interest for CS etc.	E.g.: level of interest of researchers for CS, etc.	E.g.: survey results, list of projects using CS methodologies etc.

stakeholder inclusion

Who are the stakeholders in our Grounding Action?

Try to identify everyone who may be impacted by or should have influence on your decisions e.g. in government, industry, academia, or cultural and civil society. As inspiration you may use the figure below*1 to map your stakeholders.

stakeholders involved   stakeholders impacted

core team   extended team

co-managing   co-producing   consulting   informing

How will we involve stakeholders in the decision-making and execution of our initiative?

It can be useful to think about how to involve stakeholders (ways/formats for doing so) and when in the process of developing, implementing, and evaluating the initiative this is feasible and beneficial.
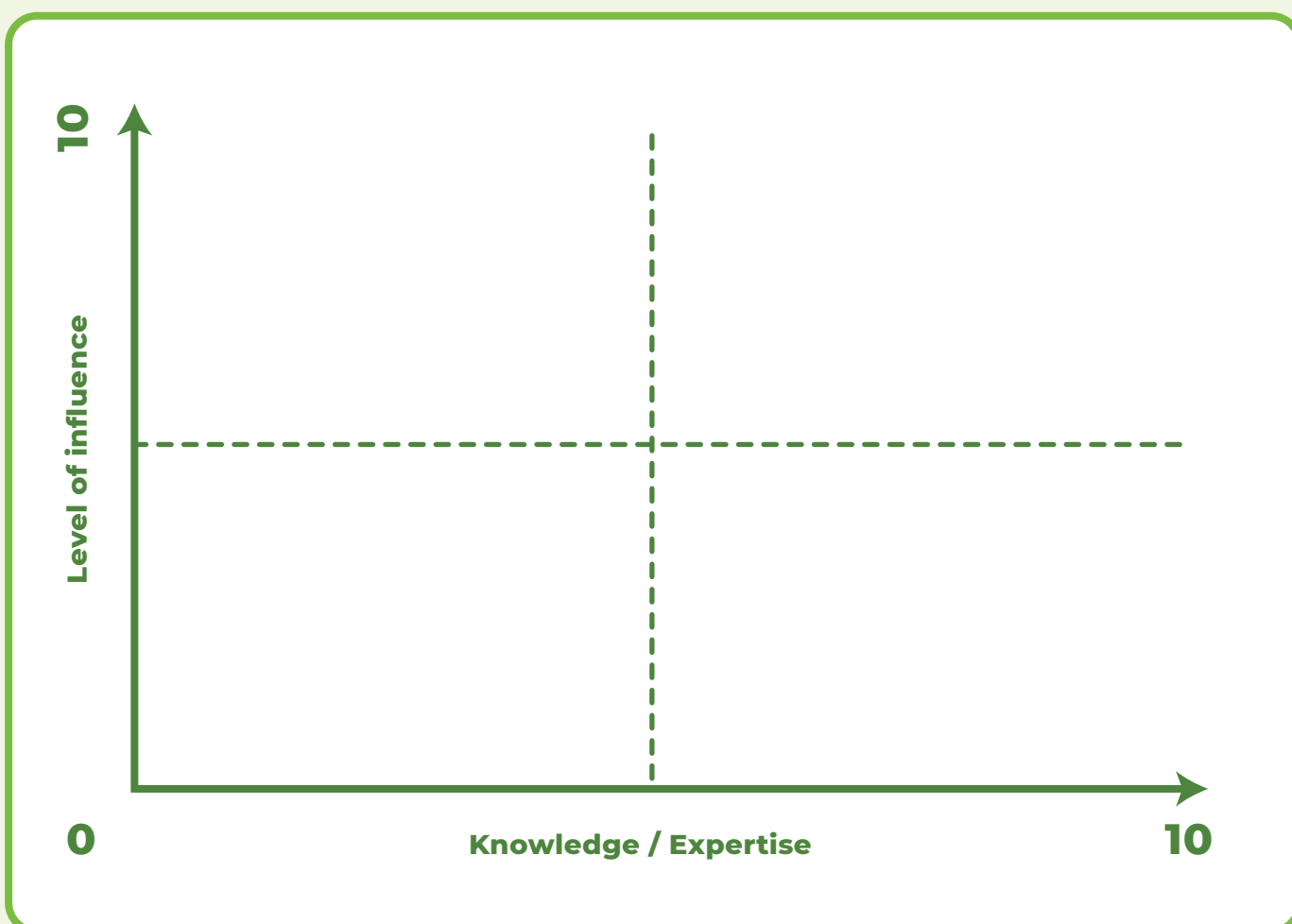
Which of these stakeholders could be change agents?

Change agents are:

- **Active** individuals, based on personal motivations.

- **Dynamic** informal groups or networks, such as students' associations, existing science clubs

- **Committed** citizen science or open science officers, librarians

- **Supportive** institutional figures, such top-managers; middle-managers; PIs

Try to identify the change agents among the previously identified stakeholders and place them on the following graph according to their level of influence and their knowledge /expertise for the current Grounding Action.

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Level of influence

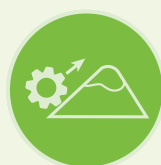**0**   **Knowledge / Expertise**   **10**

implementation

Now it is time to set out the implementation plan of the initiative step-by-step.
Start by defining the activities needed for achieving the Short-Term Goals. These would be part of your first Roadmap.

Who does what, when, and how?

If you find it useful, you can continue with the table below or you can simply write your plans in the free space.

Step	Activity	Responsible	Timeline
1	*E.g.: Preparing and sharing a survey with researchers on their interest and experience in CS.*	*E.g.: core team, extended team, others*	*Indicate: month year.*
2			
3			

obstacles

Try to connect each specific challenge with one or more ideas for how you can work around it or try to solve it.

What obstacles or difficulties could we run into in the implementation of our initiative?	How can we take these difficulties into account?
E.g.: lack of knowledge of researchers about CS, lack of interest etc.	*E.g.: investing time and resources in order to raise awareness on CS etc.*

resources

What resources do we need to implement our initiative?

This could for instance be external expert advice, specific employee competencies, funding, tools, or facilities such as a workshop venue.

How can we obtain these resources?

Think about who to ask, where to look for resources, but try to address, at the same time, who will do this and when.

continue to define your grounding actions

After defining "Grounding Action #1", you may continue developing all the other Grounding Actions that would help you to make sustainable Institutional Changes. Repeat the exercise and define "Grounding Action #2", "Grounding Action #3", and so forth.
Each additional Grounding Action will be detailed and encompass a big vision, success criteria, the stakeholders involved, an implementation plan, the obstacles, and resources.

Compile the Grounding Actions into a Roadmap

Once you have finished defining all your Grounding Actions you may compile them into a General Timeline. Doing this will help you to organize your actions, to avoid duplication of efforts, and to find synergies across some action lines. ➔ **General Timeline of your Roadmap**

You may also find useful to compile all the goals that you have defined for the different Grounding Actions. Grouping all the Short-Term Goals, all the Mid-Term and all the Long-Term Goals will also help you to see if there are any gaps on your roadmap. ➔ **Roadmap Goals**

general timeline of your roadmap

Fill out your planned timeline with the activities that you foresee month by month for each of your Grounding Actions. It will give you an overview of all the activities planned in a given timeframe (to achieve the Short-Term Goals). A more detailed version may be useful as a separate spreadsheet to monitor progress throughout the project.

	GA1 – [name GA1]	GA2 – [name GA2]	GA3 – [name GA3]	GA4 – [name GA4]
Year 1				
Month 1	E.g.: The Core team prepares a survey to be shared with the research community			
Month 2				
Month ...				
Month 12				
Year 2				
Month 1				
Month 2				
Month ...				
Month 12				
Year 3				
Month 1				
Month 2				
Month ...				
Month 12				

roadmap goals

List all the goals that you have defined for your different Grounding Actions, and group them to have first the Short-Term Goals (next 3 years); Middle-Term Goals (in 6 years); Long-Term Goals (in 9 years).

Goals	Grounding Action	Intervention Area	Type of Goal
			E.g.: STG, MTG or LTG