

# Promoting ethical & responsible data management within a TOOLKIT for scaling Citizen Science projects

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## The Challenge

Citizen science has the potential to contribute towards achieving the UN Sustainable Development Goals (SDGs) by providing data to the monitoring and tracking of indicators, and in implementing the targets. However, an outstanding challenge is to demonstrate its

### Impact at scale

Research on data ownership, access & use, and ethics in digitizing agricultural systems is more relevant than ever in order to

include smallholder farmers and close the digital divide



## The idea: an interactive TOOLKIT for researchers

To define scaling ambition outcomes that are sustainable & responsible

The toolkit is based on a logical framework, and integrates both a tool for systems change at scale, and a sustainability assessment. It was tested with senior researchers for content, usability, and preferred format via a hypothetical case, where researchers indicated that the toolkit is of most use in early project stages, and that workshops as well as its implementation as a web-based would be useful.

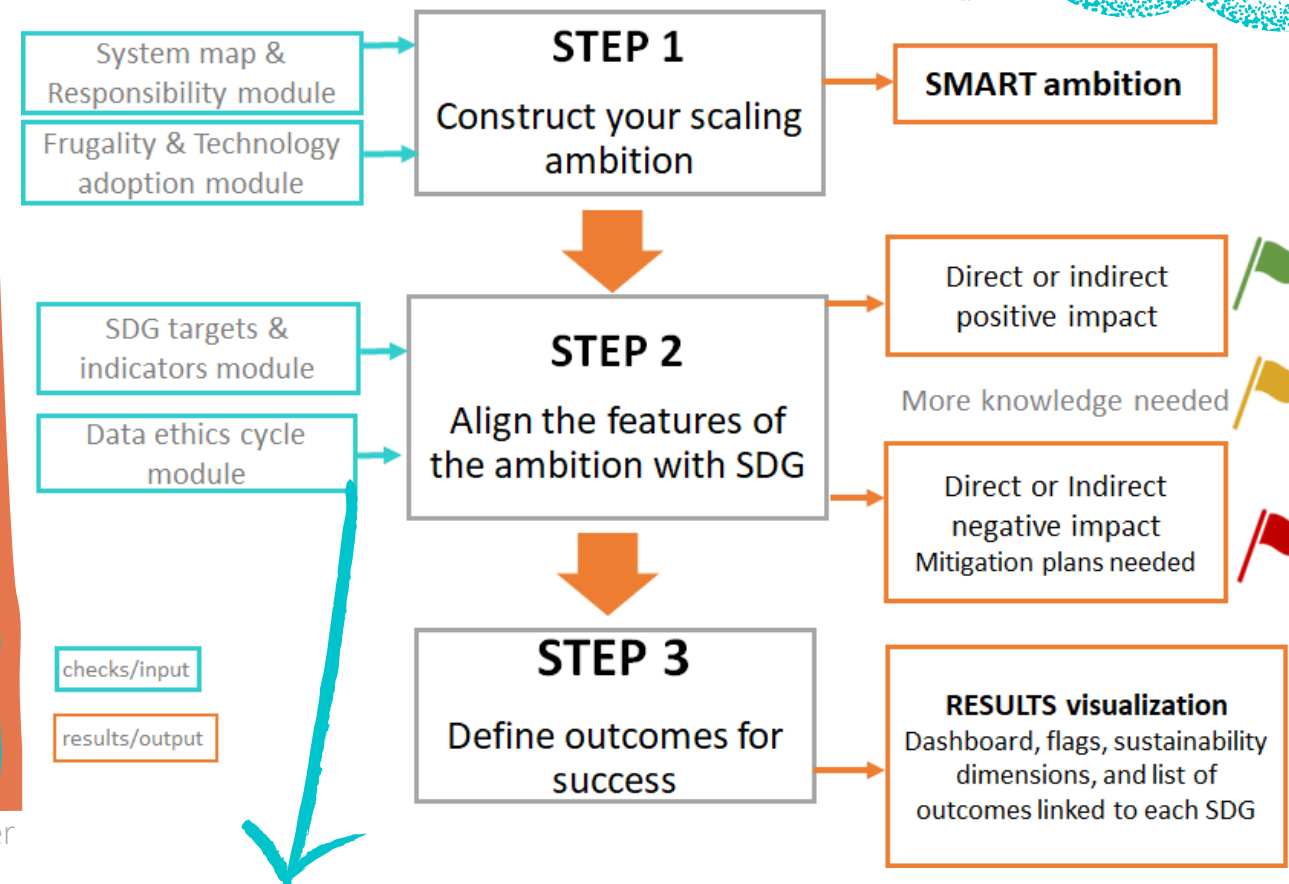
Responsible means that associated risks and negative unintended effects are considered

## How does the TOOLKIT work?

**Step 1** is based on the 'The Scaling Scan' by CIMMYT and PPPLab. The aim is to define an ambition that is **S**pecific, **M**easurable, **A**chievable, **R**ealistic, and **T**imebound), and to reflect on social, and environmental responsibility.

In **Step 2** the ambition feature impacts are assessed against each of the 17 SDGs. If a (+) impact is identified, the potential contribution to targets and indicators can be also indicated. If it is a (-) impact, then mitigation plans are required.

**Step 3** guide researchers to define outcomes for the identified impacts, in the form of **Key Performance Indicators** that can be tracked during the project.



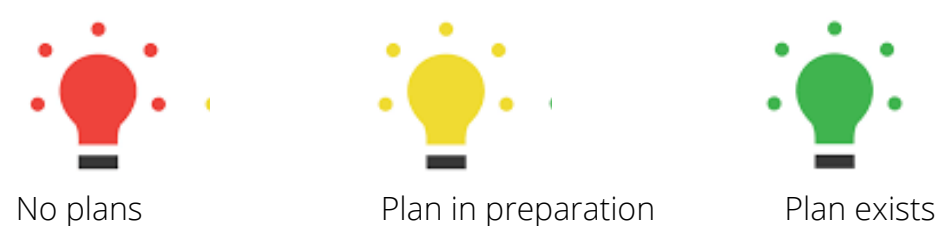
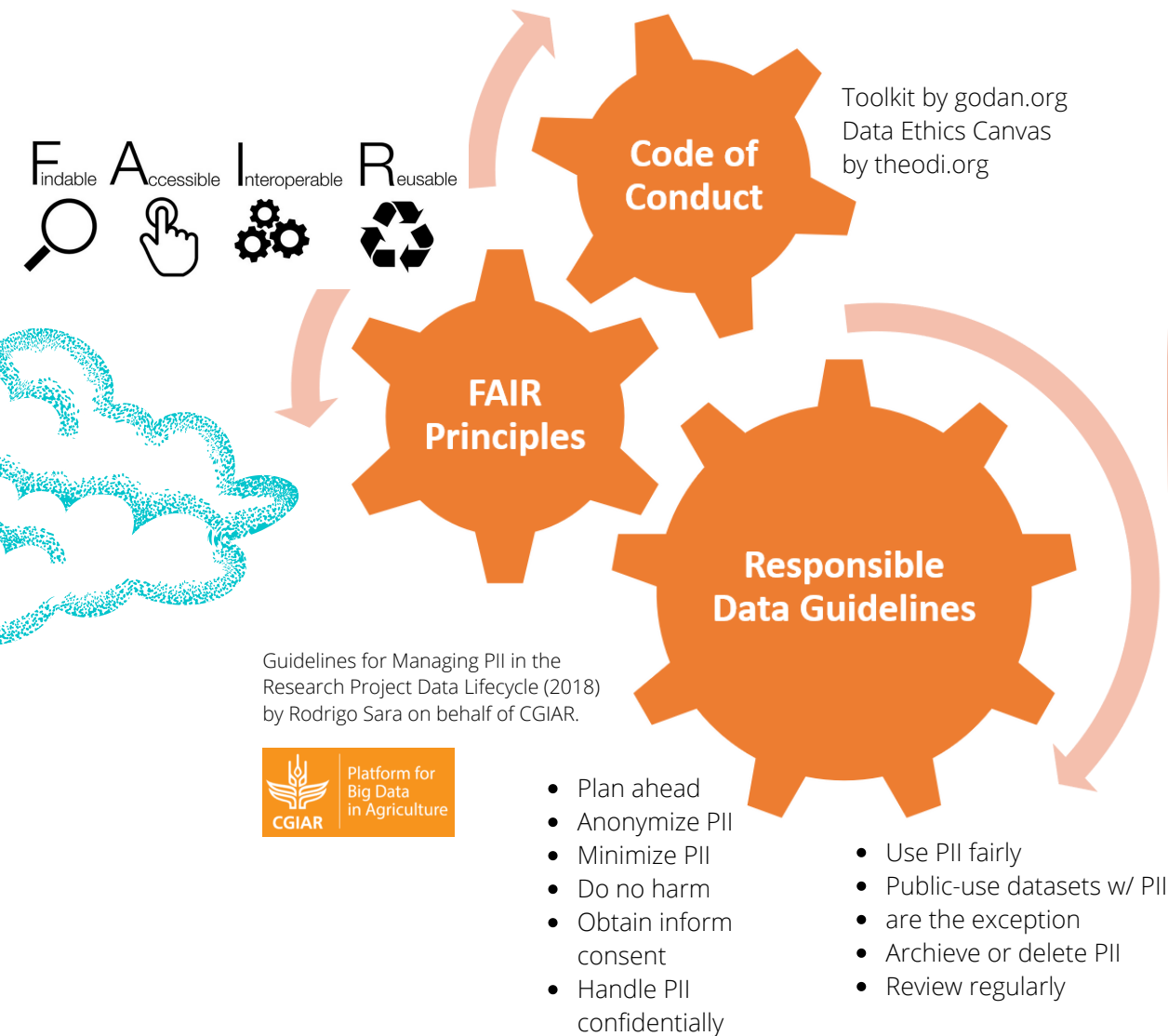
CIMMYT: International Maize and Wheat Improvement Center

## FAIR for Sustainable Development Goals

For instance, in an app for farmers where personally identifiable information (PII) is being collected, practitioners can acquire an overall understanding of the best practices to manage their data. Equally, if georeferenced information is to be collected, the FAIR Guiding Principles act as a compass. If researchers have identified a positive impact to a specific SDG indicator, the toolkit suggests to align this plan with the aforesaid guidelines. Researchers are asked to indicate a status against

### 15 criteria

If there is a defined plan for a given criterion, a green colour is indicated; if there is a plan but it is not completely defined, the criterion is marked yellow, while red is shown if there is no plan.



## Next steps and further research

Test the TOOLKIT in real cases

Its application will be expanded from agricultural to include all kinds of citizen science projects. Future research could involve matching the proposed guidelines with the required data quality criteria defined by local and regional statistical offices that are responsible for SDG monitoring and implementation.

want to try it? contact us at  
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