

Citizen Science Engagement
Framework |
How to engage citizens in
every step of the citizen
science way?

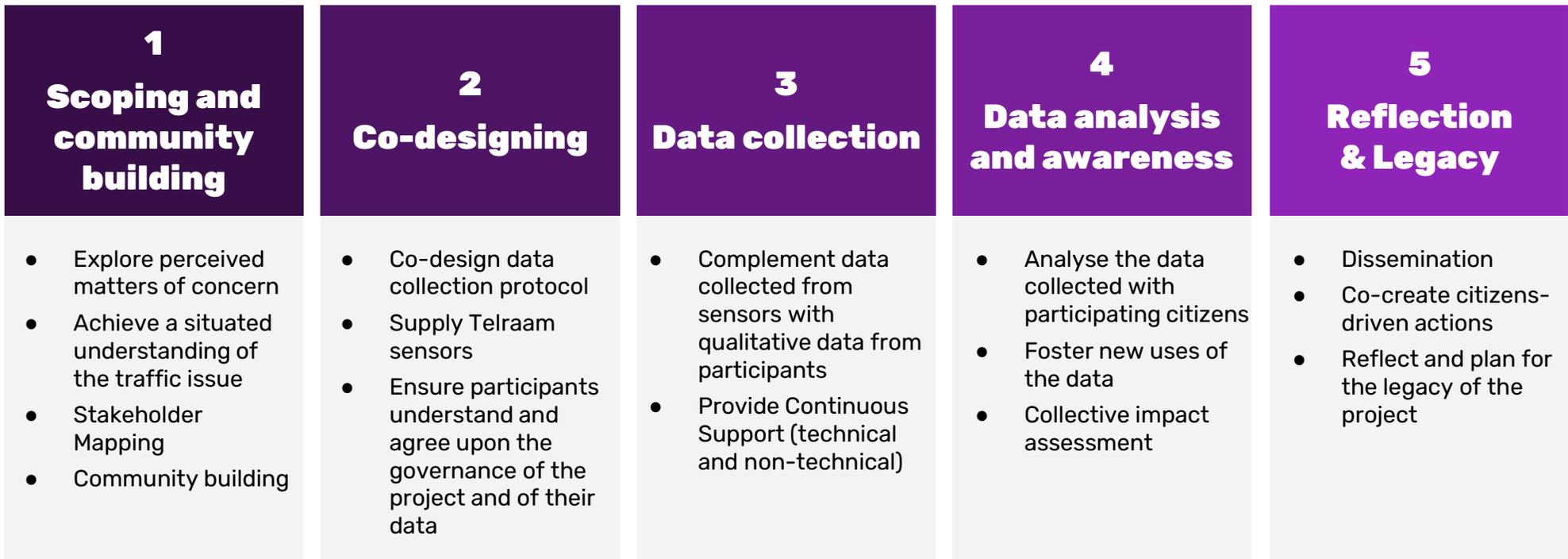




The WeCount Engagement Framework



The Engagement Framework





1. Scoping and Community Building

*Phase Overview: this first phase includes several heuristics for gradually **narrowing down the focus** of the intervention and, while doing so, **building the community of participants**. The steps and tools within this phase must be adjusted also depending on the level of granularity of the understanding of a particular issue.*

1.1 Achieve a situated understanding of the traffic issue

Why?

1. Break down traffic issues into more specific matter of concerns experienced in the city;
2. Initially develop project narrative;
3. Definition of a current and relevant issue.

How (i.e. tools and method options)?

1. **Online citywide survey**
2. Desk research of the traffic-related information;
3. Mapping of publicly available information on traffic issues and policies;
4. Interviews with local officials;



1.2 Explore perceived mobility-related matters of concern

Why?

1. Break down traffic issues into more specific matter of concerns perceived by citizens;
2. Further develop project narrative;
3. Initial community building;
4. Promotion of WeCount.

How (i.e. tools and method options)?

1. Focus group conversations;
2. Street chats;
3. Participatory Problem Formulation Workshop;

The image shows two survey cards from WeCount. The top card is titled '¿Cómo se mueve tu barrio? Problemas y beneficios de la movilidad en un día' and features a timeline from 5:00 am to 10:00 pm. The bottom card is titled '¿Cómo se mueve tu barrio? Problemas y beneficios de la movilidad en un año' and features a timeline from January to December. Below the cards is a 2x2 grid of topic areas: Contaminación y salud, Tiempo, Seguridad vial, and Diseño urbano.

Contaminación y salud	Tiempo
Seguridad vial	Diseño urbano

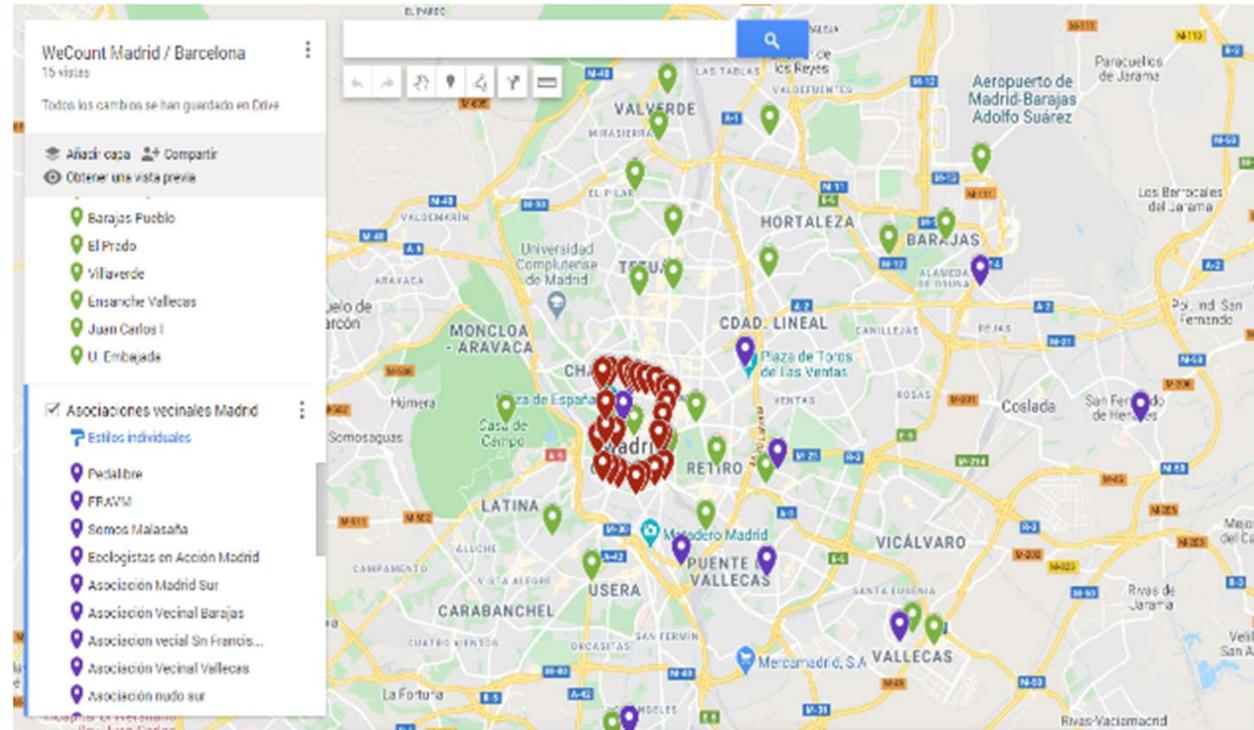
1.3 Map the Local Ecosystem

Why?

1. Stakeholder mapping
2. To meaningfully inform community building;
3. To inform who the target audience(s) are;
4. To target relevant actors.

How (i.e. tools and method options)?

1. Stakeholder Mapping exercise;
2. Additional interviews and/or desk research.
3. **Local Ecosystem Mapping**



1.4 Community Building

Why?

1. To start an ongoing process to form the community of participants (this will be ongoing throughout the project to leave it open for other citizens to join);
2. To identify and establish community champions early in the process.

How (i.e. tools and method options)?

1. Massive local communication campaign through **website** social media, flyers, **stickers**, **posters**, letters etc.;
2. Snowballing from first participants recruited (e.g. through initial survey);
3. Storytelling: videos, pictures, mind-maps;
4. Call for pilots;
5. Launch event / party;
6. Speeddating;
7. Mapping important routes;
8. **Recruitment Cards**



Ahora responde...		
¿Tienes una ventana exterior?	SI	NO
¿Tienes una vista clara a la calle? o, sin árboles, postes o algún obstáculo?	SI	NO
¿Vives en un piso entre planta principal y tercer piso?	SI	NO
¿Tu calle tiene más de una vía?	SI	NO
¿Tienes aceras en ambos lados?	SI	NO
¿WiFi donde se pueda conectar el dispositivo?	SI	NO
¿Y enchufe cerca?	SI	NO



Moving online...





2. Co-Design

***Phase Overview:** in this phase we define the **pilot governance framework** detailing different level of participation and commitment across citizens, scientific researchers, and other relevant actors / entities. The ultimate goal is to **co-create a data collection protocol**; source and install the Telraam sensor and/or other data collection instruments; and co-design of governance protocol. At the end of this phase, the data collection campaign is set to start.*

2.1 Co-Design of data collection protocol

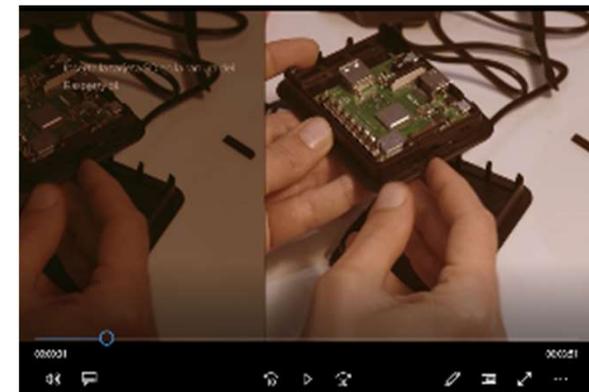
Why?

1. To provide participants with the necessary knowledge to design the study in a way that it addresses the research question(s) / their interests and concerns;
2. To make sure participants learn and understand the technology, the ethical aspects as well as the methodology;
3. To design the pilot according to the participants availability, skills, and expectations;
4. To establish participants' commitment.

How (i.e. tools and method options)?

1. Workshop with motivated participants;
2. **Collaborative pilot schedule / Calendar Canvas;**
3. **Telraam assembly video**

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2.2 Supply and install Telraam (& other tools)

Why?

1. (for obvious reasons)
2. To guide participants through the registration, assembly, and instalment processes thus improving inclusiveness;
3. To make sure that participants understand the technology, its limitations (and why), how to use it, and how to visualise the data.

How (i.e. tools and method options)?

1. Deployment workshop / online delivery;
2. **WeCount ToolBox;**
3. **Step by step installation guide;**
4. Installation (online) workshop(s);
5. Train the trainer approach;
6. Telraam installation video.



2.3 Project (and data) governance

Why?

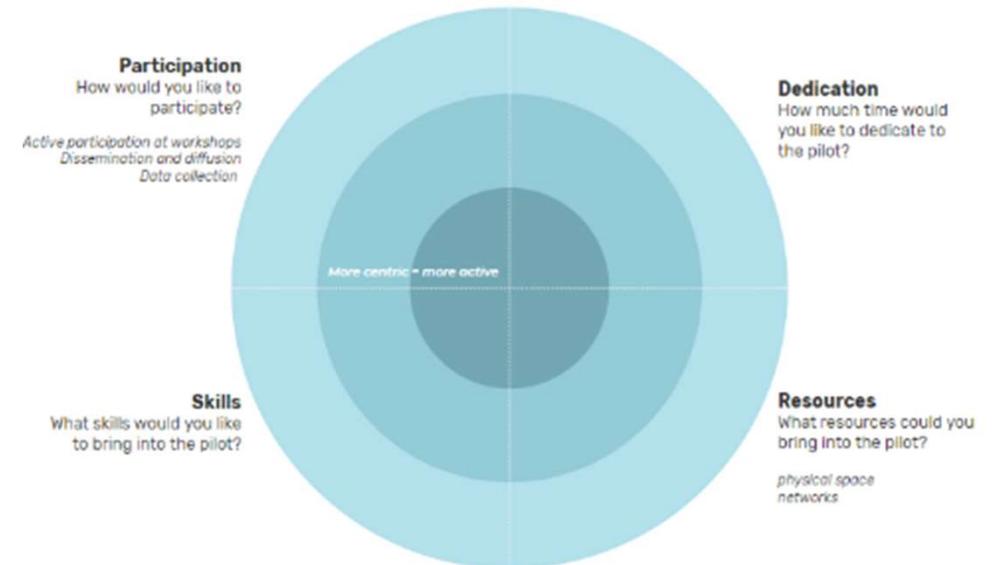
1. Establish a **final governance framework** in terms of roles, decision rights and accountabilities of each individual / entity involved; and,
2. Make sure **participants understand and agree** upon what data they share and under what conditions.

How (i.e. tools and method options)?

1. Risk / benefits Matrix; (only relevant if additional technology is used to collect data beyond Telraam)
2. **Contributions and commons mapping;**
3. **Telraam contract.**



My Contribution would be...





3. Data Collection

***Phase Overview:** at this stage sensors have been deployed and installed and the data collection process starts. Crucial aspects within this phase are: (1) providing continuous **support** and guidance to participants; and (2) facilitate complementary (qualitative) data collection.*

3. Data Collection

3.1: Complement data collected from sensors with qualitative data from participants

Why?

1. Enable effective interpretation of the data provided by the sensors.

How (i.e. tools and method options)?

2. Data journals

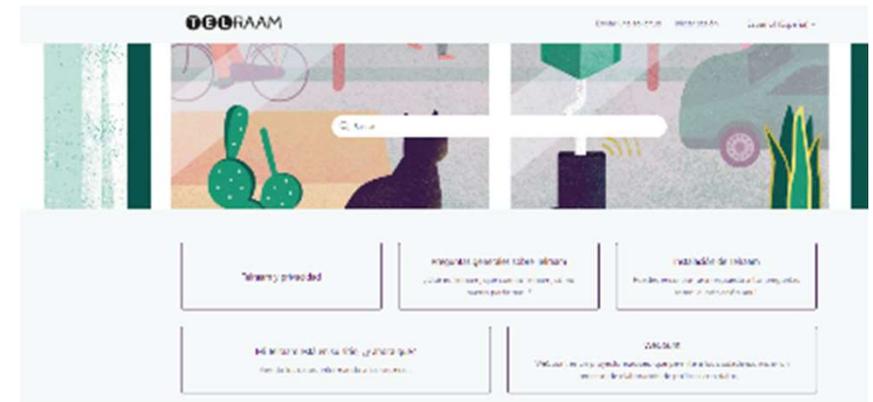
3.2: Provide Continuous Support (technical and non-technical) and communication to participants

Why?

1. Make sure support is given should any issue occur with the technology or other aspects of participation.
2. To sustain and extend the community of participants

How (i.e. tools and method options)?

1. **Helpdesk via Zendesk;**
2. Information on the website in local language and/or local web pages;





4. Data Analysis and Awareness

Phase Overview: While the scope of the pilot (from phase 1) dictates the appropriate methods for analysis, a cornerstone for this phase is to give an opportunity to proactively engage participants in the analysis process. To enable this, the team needs to ensure that effective **visualisation** is in place with respect to: the findings as these emerge; and aggregated “raw data” as the volume of data collected increases.

4. Data Analysis and Awareness

4.1 Analyse the data collected with participating citizens

Why?

1. Make sense of the data together with citizens;
2. Prepare for the co-design of actions informed by the data collected.

How (i.e. options and tools)?

1. Data analysis workshop(s) – e.g. by theme or neighbourhood;
 1. Awareness sheets;
 2. Data discussion sheets;



4.2 Foster new uses of the data

Why?

1. Explore WeCount as an open data platform where developers can re-use the data generated as a core or marginal component of new services and application.

How (i.e. options and tools)?

1. Hackathon / datathon on the results; (2) API - <https://telraam-api.net/>





5. Reflection and legacy

Phase Overview: : overall, the last phase of the pilot aims at implementing actions to ensure that: (1) the pilot's findings are effectively disseminated across different venues reaching appropriate audiences; (2) the impact of the pilot is translated into policy making proposal or provokes policy-oriented debates; (3) the learning from the pilot is captured and codified to foster both long-lasting impact and scaling of the pilot; (4) positive and negative experiences are captured and contribute to the overall advancement of the citizen science knowledge base. **Planning for this stage should start during the Design Phase.**

5. Reflection and Legacy

5.1 Disseminate results among different audiences and co-create citizens-driven actions

Why?

1. To disseminate results and empower citizens to propose courses of action. The aim is to co-create, plan and deliver actions that can generate recognition of the issue explored in the pilot experiment and possibly make an impact.

How (i.e. options and tools)?

1. Press release; academic papers; white papers; social media and blogs;
2. Wecount policy brief (WP6).
3. Final event / meeting with citizen, project team and local policy makers;
4. **Future newspaper;**
5. Co-creation assemblies
6. **Raambabbel (window chat)**

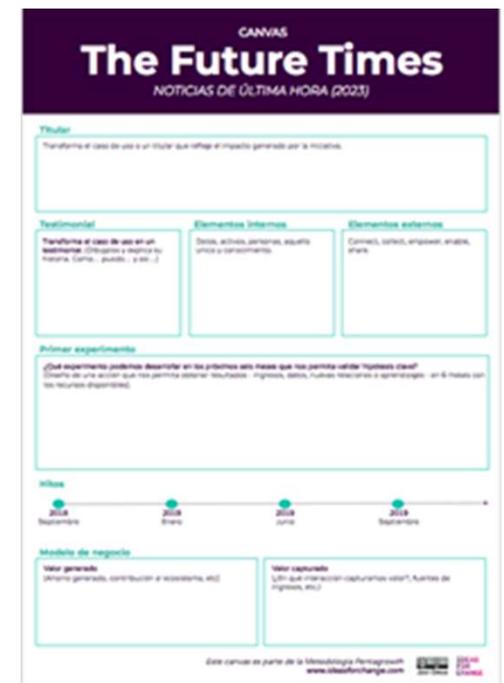
5.2 reflect and plan for the legacy of the project

Why?

1. To codify and transfer the learning from the pilot and to plan for impact beyond the end of WeCount.

How (i.e. options and tools)?

1. Ex post survey / questionnaires / interviews **(in conjunction with WP5);**
2. Pilot appraisal **(in conjunction with WP5);**
3. Graduation ceremony;



4. WeCount Final Actions





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