

# Pilot guidelines

EC Technical Support Instrument Grant Agreement number  
101046124

Call: TSI-2021-SMARTCITIES-IBA

Topic: Citizens participation and green solutions in smart cities

Type of action: TSI-PJG

## **Deliverable 1.7: Pilot guidelines**

Delivery Year: 2022



*This project has received funding from the European Union's Technical Support Instrument (TSI) programme under grant agreement 101046124.*

## DOCUMENT INFORMATION

<b>Project Number</b>	101046124	<b>Acronym</b>	CitiMeasure
<b>Full title</b>	CitiMeasure - using citizen measurements to create smart, sustainable, and inclusive cities		
<b>Project URL</b>	<a href="https://citimeasure.eu/">https://citimeasure.eu/</a>		
<b>EU Project officer</b>	Anastasia Roufou		
<b>Deliverable Number</b>	D1.7	<b>Title</b>	<i>Pilot guidelines</i>
<b>Work package Number</b>	1	<b>Title</b>	<i>Instrument development and pilots</i>
<b>Date of delivery</b>	<b>Contractual</b>	Month 08	<b>Actual</b> Month 11
<b>Dissemination Level</b>	Public		
<b>Authors (Partner)</b>	Eurocities		
<b>Responsible Author</b>	Mohammad Gharesifard	<b>Email</b>	Mohammad.gharesifard@eurocities.eu
<b>Partner</b>	Eurocities		
<b>Abstract (for dissemination)</b>	This report presents the guidelines for the implementation, and monitoring and evaluation of the CitiMeasure pilots		
<b>Keywords</b>	Pilot, plan, implementation, evaluation, feedback		

### Version Log

<b>Version as date</b>	<b>Author</b>	<b>Partner</b>	<b>Change</b>
2022_04_08	Mohammad Gharesifard	Eurocities	Initial document creation and content structure
2022_04_27	Mohammad Gharesifard	Eurocities	Content input into Sections 2, 3 and 4
2022_04_28	Mohammad Gharesifard	Eurocities	Content input into Sections 1, 6 and 7
2022_04_29	Irene Vivas Lalinde	Eurocities	Input into illustrations and Section 4.2
2022_05_04	Gino Dehullu	The city of Roeselare	Review by the Strategy and Oversight working group
2022_05_06	Diana Escobar Vicent	The city of Barcelona	Review by the Strategy and Oversight working group
2022_05_06	Brooke Flanagan	Eurocities	Final internal review
2022_05_20	Farida Polsbroek	BZK	Final review

**To cite this document:**

Gharesifard, M., Vivas Lalinde, I., Flanagan, B. (2022). D1.7 Pilot guidelines. *Deliverable report of the CitiMeasure project (grant agreement No101046124), Brussels, Belgium.*

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# Contents

Document Information .....	2
1. Executive Summary.....	6
2. Introduction .....	6
2.1 About CitiMeasure .....	6
2.2. Purpose of this report .....	6
2.3 Structure of this report .....	6
3. Aim of the CitiMeasure pilot phase .....	7
4. Pilot stages and timeline .....	7
4.1 Planning.....	7
4.2 Piloting .....	8
4.3 feedback.....	10
4.4 Refinement.....	10
4.5 Timeline and interaction moments.....	10
5. Roles and responsibilities.....	11
6. Pilot monitoring and evaluation .....	12
7. Concluding remarks .....	13
Annex 1 .....	14

## Table of figures

Figure 1 Four stages of the CitiMeasure pilot phase .....	7
Figure 2 Timeline and interaction moments in the CitiMeasure pilot phase .....	10
Figure 3 Roles and responsibilities of Eurocities in the CitiMeasure pilot phase .....	11
Figure 4 Roles and responsibilities of the cases in the CitiMeasure pilot phase .....	12
Figure 5 Main components of the CitiMeasure monitoring and evaluation framework .....	12

## Acronyms

<b>BZK</b>	Ministry of the Interior and Kingdom Relations of Netherlands (Ministerie van Binnenlandse Zaken en Koninkrijksrelaties)
<b>CS</b>	Citizen science
<b>EC</b>	European Commission
<b>EU</b>	European Union
<b>URL</b>	Uniform resource locator
<b>WG</b>	Working group

# 1. Executive Summary

This report presents a set of generic guidelines for the CitiMeasure pilots, with the aim of clarifying the pilot phase of the projects. This includes elaboration of the pilot stages and timeline, roles and responsibilities of Eurocities team and the pilot cases, and the monitoring and evaluation plan for this phase.

## 2. Introduction

### 2.1 ABOUT CITIMEASURE

Citizen measurement (or citizen science) initiatives contribute to a sustainable transition in European cities. By using an array of tools and instruments, citizens can play a role in the measurement and monitoring indicators on air quality, temperature, soil moisture, biodiversity, or risk management, among other environmental areas. Citizen measurement initiatives also can foster communications and interactions among stakeholders and contribute to the democratisation of science and policy. The CitiMeasure project (2021-2023) aims to bring together the experiences and expertise of European cities, organisations and networks in implementing citizen science initiatives (in the form of guidelines, toolbox, web-platform, Apps, etc.). The project builds upon the lessons learned from the Dutch City Deal Working Groups, a network of stakeholders working on the broader area of smart cities, including citizen measurement initiatives. The City Deal partners have been working closely with the Dutch Ministry of Interior and Kingdom Relations for over a year.

CitiMeasure builds upon these experiences and will use those to develop and pilot three ‘instruments’, namely:

1. An instrument that allows the outputs of different city measurement initiatives to be compared.
2. An instrument that safeguards the digital inclusivity of city measurement initiatives (maximising the opportunities for participation of interested individuals and communities).
3. An instrument that connects information to behaviour and policy change.

A 4th (Strategy and Oversight) working group focuses on providing strategic direction and ensuring cohesion of activities across the three Instrument Sub-Groups and the project in general. CitiMeasure will also raise awareness of the importance of citizen measurement initiatives and capitalise on the results and tools of similar citizen science projects by creating an online European Knowledge Centre with a repository of good practices.

### 2.2. PURPOSE OF THIS REPORT

The purpose of this report is to provide a generic approach for the CitiMeasure pilots. Although each pilot case will develop an individual pilot plan, following a common approach and similar steps in the pilot process helps with planning required time and resources, and ensures that the findings of individual pilots are comparable.

### 2.3 STRUCTURE OF THIS REPORT

This report is structured as follows. Section 3 summarizes the aim of the CitiMeasure pilot phase. Four envisioned stages of the CitiMeasure pilot phase (i.e., planning, piloting, feedback, and refinement), as well as the timeline of these stages are elaborated in Section 4. Section 5 clarifies the roles and

responsibilities of Eurocities and the selected pilot cases. Information about the monitoring and evaluation plan is provided in Section 6. The report is concluded by a number of final remarks in Section 7.

### 3. Aim of the CitiMeasure pilot phase

The aim of the pilot phase is to test the applicability of CitiMeasure instruments and, through that process, gather inputs for improvement of the instruments. The pilot phase provides an opportunity for hands-on use of the Behaviour and Policy, and Digital Inclusion guidelines, as well as the comparability tool developed by the CitiMeasure working groups. Specific lessons learned from pilots can improve the structure and formulation of the guidelines, enhance technical details of the comparability tool, and provide empirical insights relevant for all CitiMeasure instruments.

### 4. Pilot stages and timeline

The CitiMeasure pilot process includes four stages, namely, planning, piloting, feedback, and refinement. Figure 1 provides a high-level summary of the four stages and the main activities at each stage. More details about the stages are provided in sections 4.1 to 4.4, and section 4.5 summarizes the timeline and interaction moments in the pilot phase.

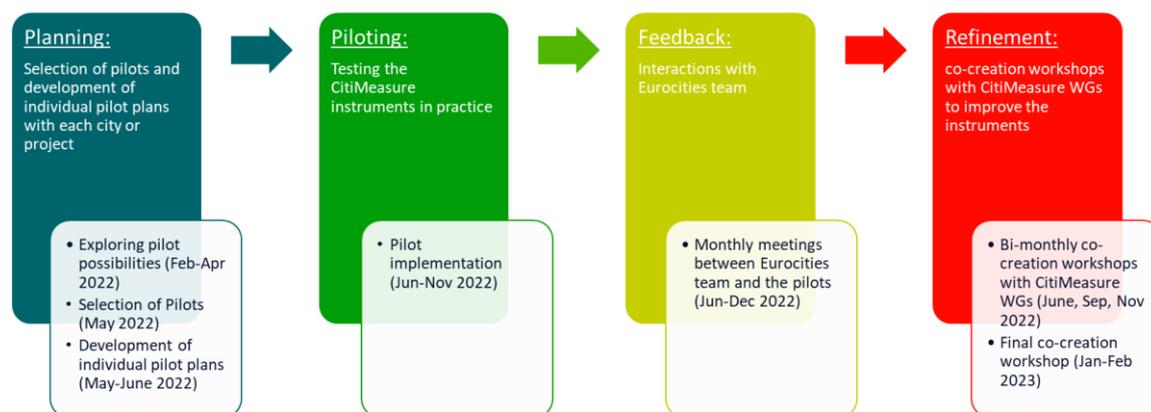


Figure 1 Four stages of the CitiMeasure pilot phase

#### 4.1 PLANNING

The planning of the CitiMeasure pilot phase started with publishing an Expression of Interest (EoI) in February 2022. At the time of publishing the EoI, the first prototypes of the CitiMeasure instruments were still under development. The main aim of the EoI was therefore to explore and have an initial indication of the level of interest in piloting the instruments. The EoI was shared with the CitiMeasure working group members (and through them, with their networks), and the Eurocities network by means of 3 newsletters to the Environment and Knowledge Society forums. On 15 March 2022, an information session was organized to provide more details about the pilot plans and requirements. The information session was attended by 20 individuals from 5 cities and 11 organizations. The deadline for completing the EoI was 30 March and in this period 9 EoIs were received from cities, organizations and projects who were interested in piloting the CitiMeasure instruments. The final

selection of the pilots is planned to be completed in May 2022. In addition to interest for piloting the CitiMeasure instruments, the main criteria for selecting the pilots include:

- (1) Feasibility of the desired pilot idea and scope
- (2) Alignment between the timeline of planned activities of the cities/initiatives and the timeline of the CitiMeasure pilot phase (May – December 2022)
- (3) Availability of resources (mainly dedicated staff and time) both at the pilot case, and at Eurocities

During April and May 2022, bilateral meetings with potential pilot cases were (or are) planned to start the discussions on the scope and feasibility of the pilots. Selected pilots will continue meeting with the Eurocities team to work on development of an individual pilot plan during May and June 2022.

## 4.2 PILOTING

The piloting stage is the stage in which the developed pilot plans will be executed. The actual length of this stage depends on the pilot plan and ambitions, but it is expected that all pilot cases follow the rough timeline of June to November 2022 for completing this stage. Possibilities for piloting the CitiMeasure instruments are not limited, but some possibilities include:

- Creating an action plan for a city or citizen science project to apply certain recommendations from the Behaviour and Policy, and Digital Inclusion guidelines
- Tailormade training based on the content of guidelines and the needs of the pilot case
- Policy labs to discuss and disseminate recommendations of the Behaviour and Policy or Digital Inclusion guidelines
- Guided test of the comparability tool
- Guided feedback on the structure and content of the comparability tool

The following boxes provide example scenarios for piloting the CitiMeasure instruments.

### Example pilot scenario #1 Behaviour and Policy guidelines

#### GUIDELINES “Fostering behaviour and policy change through citizen science”, including:

- Challenges
- Applications
- Conceptualizing behaviour and policy change
- Recommendations for cities and citizen science initiatives



- A 2-day **training** for city administration staff on how to adopt selected recommendations related to triggering behaviour change using citizen science
- Relevant recommendation needs to be selected in collaboration with the pilot city
- Training could include e.g., reaching diverse audiences, drivers and barriers for participation, and evaluation and impact assessment.

**Example pilot scenario #2**  
Behaviour and Policy guidelines

**GUIDELINES “Fostering behaviour and policy change through citizen science”, including:**

- Challenges
- Applications
- Conceptualizing behaviour and policy change
- Recommendations for cities and citizen science initiatives

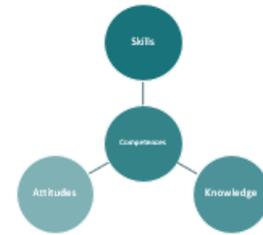


- Development of an **action plan** for a city or citizen science project inspired by the guidelines
- Relevant recommendation needs to be selected in collaboration with the pilot city or project
- Four workshops with city administration staff and citizen science projects to co-create an action plan

**Example pilot scenario #3**  
Digital Inclusion guidelines

**GUIDELINES “Competences for digital inclusion in citizen science”, including:**

- Skills
- Knowledge
- Attitudes

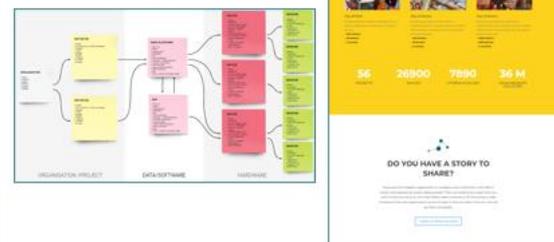


- A 1-day **training** on the guideline on competencies for digital inclusion with X city administration staff and Y citizen scientists in the pilot city/project, followed by a self-assessment exercise on selected competencies.
- Relevant competencies for the self-assessment need to be selected in collaboration with the pilot city or project

**Example pilot scenario #4**  
Comparability tool on air quality monitoring initiatives

**INTERACTIVE TOOL and INVENTORY OF AIR QUALITY MONITORING**

- Interactive and visual elements
- Four-step inventory



- A **guided test** to identify the needs of the pilot city (cities) related to participatory methods of air quality monitoring
- The guided test is followed by a **training workshop** on the application of the tool for fulfilling those needs. The needs could, for example, range from identifying best technical tools and approaches, to identifying collaboration opportunities, or learning from (un)successful cases.

### 4.3 FEEDBACK

Linked to the aim of piloting the CitiMeasure instruments, the feedback stage is designed to capture the lessons learned from the pilot phase. The feedback from the pilots will be captured with two main mechanisms, (1) regular meetings and interactions between individual pilot cases and the CitiMeasure team, and (2) dedicated sessions in which the relevant pilots share their learning with the CitiMeasure working groups. In principle, the meetings between the individual pilots will be organized on a monthly basis, but the frequency of the meetings can be increased or decreased based on the needs and stages of the pilots. Feedback and exchange sessions between pilots and working groups will be planned in June, September, and November. These are moderated sessions with the aim of facilitating co-learning across the CitiMeasure working group members and for improving the instruments.

### 4.4 REFINEMENT

Collected feedback from the previous stage will be used to refine and improve the CitiMeasure instruments. This will be done in collaboration with the pilot cases and CitiMeasure working group members. The interaction moments in June, September and November 2022 will be used to discuss and agree on the details. In between these meetings, working versions of improved instruments will be shared in the online workspace of the working groups (SharePoint) to allow for additional feedback and input from all working group members. A final co-creation session will be held in January/February 2023 to finalize the refinements.

### 4.5 TIMELINE AND INTERACTION MOMENTS

Figure 2 summarizes the timeline of the CitiMeasure pilot phase and the interaction moments. The hollow grey circles on the timeline represent interactions between the CitiMeasure team and the pilots. This includes regular meetings with the pilots to make sure the planning and piloting phases are on track. The hollow pink circles indicate the months in which a feedback exchange is planned between the pilots and the CitiMeasure working groups. The smaller circles correspond with the four stages of the pilot phase and show the continuation of activities of each phase in each month.

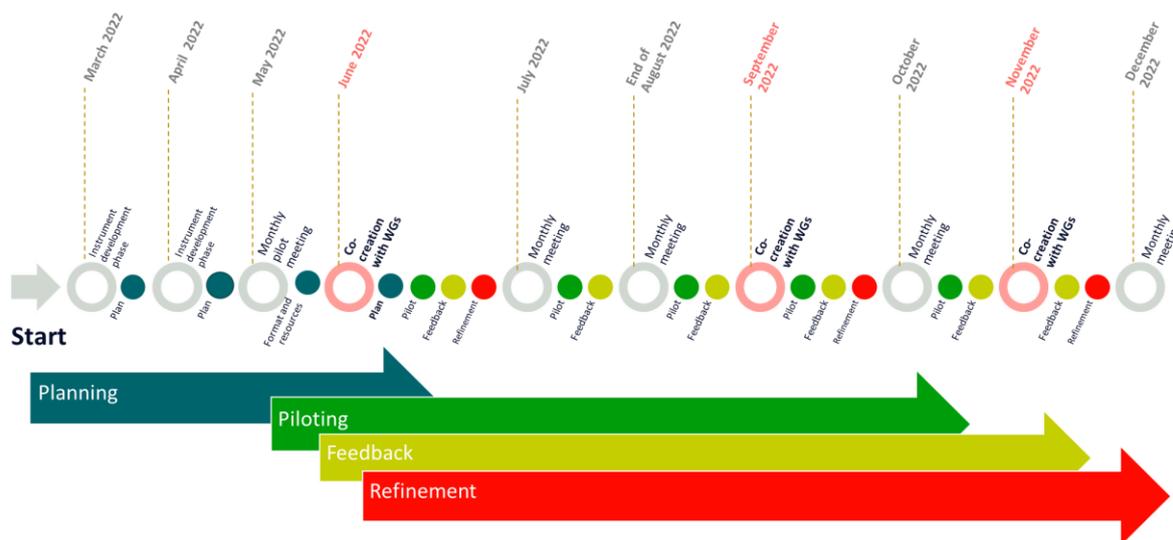
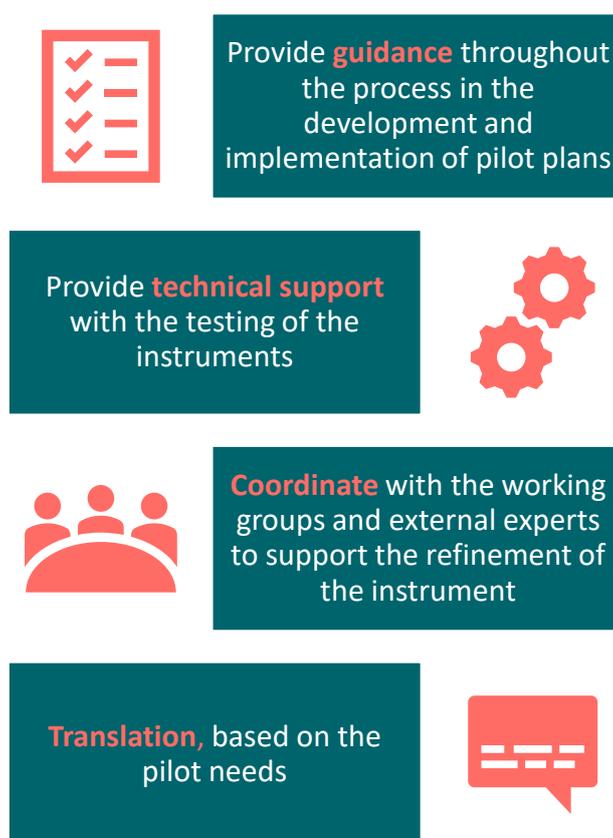


Figure 2 Timeline and interaction moments in the CitiMeasure pilot phase

## 5. Roles and responsibilities

Eurocities is responsible for coordinating the pilot process. This includes providing guidance for the selected pilot cases throughout the process of development and implementation of individual pilot plans. Where needed, Eurocities will provide technical support for testing of the instruments, e.g., for operationalizing specific design needs related to the comparability tool. Furthermore, we will coordinate the interactions between the pilot cases, working groups members and external experts to support the refinement of the instrument. Depending on the aim and location of the pilots, there may be a need for translating (parts of) the CitiMeasure instruments. Eurocities will support the cases with funding and implementing the translations. Figure 3 summarizes the roles and responsibilities of Eurocities in the pilot phase.



*Figure 3 Roles and responsibilities of Eurocities in the CitiMeasure pilot phase*

The selected pilot cases are expected to collaborate with Eurocities for timely co-creation and implementation of the pilot plans. Development and implementation of pilot plans in each case requires resources and commitment from the pilot cases. This includes resources such as dedicated staff who closely collaborate with the CitiMeasure team in the pilot phase. Moreover, it is essential that the pilot cases provide detailed reflections and feedback on piloting the instrument and help with improvement of the instruments through constant dialogue with the CitiMeasure working groups. Figure 4 provides a summary of the main roles and responsibilities of the selected pilot cases.

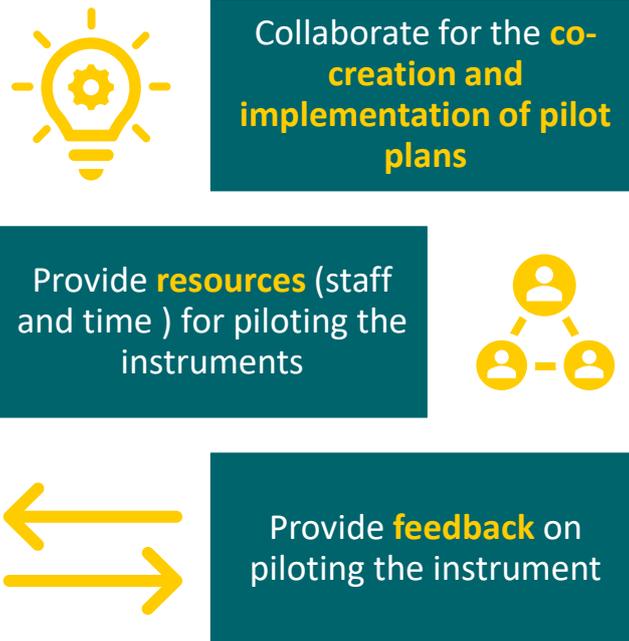


Figure 4 Roles and responsibilities of the cases in the CitiMeasure pilot phase

## 6. Pilot monitoring and evaluation

Pilot monitoring and evaluation will be a part of the broader CitiMeasure monitoring and evaluation plan that was developed between December 2021 and February 2022, and in consultation with the Strategy and Oversight working group. The CitiMeasure monitoring and evaluation follows a logical model of change (see Figure 5) and considers CitiMeasure as an intervention that requires inputs, includes activities, and produces outputs (products), outcomes (short/mid-term changes), and impacts (long term changes). The complete CitiMeasure monitoring and evaluation framework is provided in Annex 1 and summarizes the agreed upon inputs, activities, outputs, and outcomes & impacts items and indicators. Only a sub-set of these items and indicators are relevant for the pilot phase. Eurocities will coordinate the evaluation of the pilot phase, in close collaboration between the pilot cases and the working groups.



Inputs		Activities		Outputs		Outcomes & Impacts	
Input item	Input indicator	Activity item	Activity indicator	Output item	Output indicator	Outcome/impact item	Outcome/impact indicator
What are the main inputs required for the working group to function?	How do we measure the inputs?	What are the main activities in the working group?	How do we measure the activities?	What are the main expected outputs of the working group?	How do we measure the outputs?	What are the main expected outcomes & impacts of the working group?	How do we measure the outcomes/impacts?

Figure 5 Main components of the CitiMeasure monitoring and evaluation framework

## 7. Concluding remarks

The pilot phase is a critical step towards consolidating the efforts of the CitiMeasure working groups. Following a common approach is needed to both guide individual cases to plan and implement the pilots, and for monitoring and evaluating the results of the pilot phase. The current report presented and elaborated the four key steps of the CitiMeasure pilot phase, namely, planning, piloting, feedback and refinement. Example pilot scenarios were provided to inspire potential cases that may still be exploring pilot possibilities. Roles and responsibilities were described to clarify available support and expected inputs from selected pilot cases. Furthermore, the monitoring and evaluation framework was presented so that selected pilots can consider the indicators and evaluation criteria from the start of the pilot process.

# Annex 1

Inputs		Activities		Outputs		Outcomes & Impacts	
Input item	Input indicator	Activity item	Activity indicator	Output item	Output indicator	Outcome/impact item	Outcome/impact indicator
Human resources	Number of WG members	Co-design meetings	Number of co-design and other meetings	Draft instruments	Number of feedbacks received on draft instruments	Individual	Level of indicated satisfaction and learning of the WG members at the end of the project
	Number of WG members with expertise, including involvement in current or past in other projects relevant to the implementation of CitiMeasure in the specific WG topic				Online/offline events related to CitiMeasure		Number of WG members participating in other (online/offline) events related to CitiMeasure
		Number of WG members with involvement in other networks, communities of practice or working groups relevant to the implementation of CitiMeasure in the specific WG topic	Information gathering		Number of WG members who suggested documents in the information gathering phase	Draft instrument ready to pilot by end of April 2022	
				Pilot cases		Pilot guidelines are ready by end of April 2022	Organizational
						Pilot plans are ready by the end of June 2022	

Inputs		Activities		Outputs		Outcomes & Impacts			
Input item	Input indicator	Activity item	Activity indicator	Output item	Output indicator	Outcome/impact item	Outcome/impact indicator		
Time	Percentage of WG members who have joined each of our co-design meetings	Document analysis	Number of documents analysed by the WG member		Feedback received from the pilots during the test phase about the instruments (final reports)		Change in practices (applied value) for cities, organizations and individuals		
	Time spent to provide inputs outside of the meetings (hr/mon)		Number of WG members who participated in the analysis of documents						
Documents and other resources	Number of documents suggested by the WG members	Instrument development	Number of WG members who provided inputs/feedback into development of the guideline structure and content	Final instrument	Improvements to the instruments and guidelines (qualitative)	Broader outcomes for the field of citizen science	Uptake of the guidelines by citizen science projects in future		
		Piloting the instrument	Number of WG members, cities/organizations which volunteered to pilot the instrument in their city/project	Knowledge centre	Number of documents in the repository			Improved acceptance and uptake of CS as an approach by cities	
			Number of training sessions/webinars held on the application of the instruments		Mentions in social media and others				
			Number of participants in the training sessions/webinars		Number of visitors of the knowledge centre/website				
		Consolidation of the instrument	Number of WG members who participated in the consolidation of the instruments					Number of downloaded documents	
								Business plan	