



This project is co-financed by the European Union

Grant agreement no.: 824603  
Call: H2020-SwafS-2018-1  
Type of action: RIA  
Starting date: 1/02/2019



## **D7.4 SUSTAINABILITY PLAN V1**

**Coordinator: ANTONELLA PASSANI, T6**  
**Quality reviewer: Elena Simperl, KCL**

<b>Deliverable nature</b>	Report
<b>Dissemination level</b>	Public
<b>Work package and Task</b>	WP7, Task 7.4
<b>Contractual delivery date</b>	M15
<b>Actual delivery date</b>	M16

## Authors

<b>Author name</b>	<b>Organization</b>	<b>E-Mail</b>
Antonella Passani	T6	a.passani@t-6.it
Gefion Thuermer	KLC	gefion.thuermer@kcl.ac.uk
Esteban Gonzalez	UPM	egonzalez@fi.upm.es

<p><b>Abstract</b></p>	<p>This deliverable describes the sustainability strategy for the main outputs of the ACTION project and proposed sustainability models for CS projects. This is a first version of the sustainability plan that will be updated in the next months and submitted in its final version at M36.</p>
<p><b>Keywords</b></p>	<p>Sustainability, accelerator, ACTION toolkit, ACTION open data portal, sustainability models for CS projects.</p>

**Disclaimer**

*The information, documentation and figures available in this deliverable, is written by the ACTION project consortium under EC grant agreement 824603 and does not necessarily reflect the views of the European Commission. The European Commission is not liable for any use that may be made of the information contained herein.*



*This deliverable is licensed under a Creative Commons Attribution 4.0 International License*

**How to quote this document**

*Passani, A., Thuermer, G., Gonzalez, E. (2020), Sustainability Plan v1.*

## TABLE OF CONTENTS

<b>LIST OF ABBREVIATIONS</b>	5
<b>EXECUTIVE SUMMARY</b>	6
<b>1 INTRODUCTION</b>	7
<b>2 THE MAIN OUTPUTS OF THE ACTION PROJECT AND THEIR SUSTAINABILITY STRATEGY</b>	8
2.1 ACTION citizen science toolkit	8
2.2 ACTION open data portal	10
2.3 ACTION open call and accelerator	11
2.4 ACTION impact assessment framework	14
<b>3 SUSTAINABILITY MODELS FOR CITIZEN SCIENCE PROJECTS</b>	16
3.1 Access to public funding: grants and contracts	17
3.2 Access to private funding: foundation grants and corporate social responsibility plans	18
3.3 Crowdfunding	19
3.4 Self-funding: memberships, merchandising and donations	20
3.5 Service/product-based sustainability models: the CS project as provider of good and services	20
<b>4 CONCLUSIONS</b>	22
<b>5 REFERENCES</b>	23

## LIST OF ABBREVIATIONS

CS	Citizen Science
CSR	corporate social responsibility
D	Deliverable
ECSA	European Citizen Science Association
EDI	equality, diversity, inclusion
GDPR	General Data Protection Regulation
KCL	King's College London
RRI	Responsible Research and Innovation
SaaS	Software as a Service
WP	work package

## EXECUTIVE SUMMARY

The ACTION project is delivering methodologies, tools, guidance documents and methods to support citizen science (CS) projects in becoming more participatory, inclusive and impactful. To achieve this goal, ACTION carried out a first open call, selected six additional pilots, set up a citizen science accelerator programme and co-designed some of the instruments that will be part of the ACTION CS toolkit.

This deliverable starts reflecting on the sustainability of the ACTION outputs and, in parallel, drafts possible sustainability models for CS projects as an additional support for the CS community.

ACTION follows a *sustainability-by-design* approach, governed by three key principles: openness, co-design and reflexivity.

Following these principles, a preliminary sustainability plan is described for the following project outputs:

- ACTION citizen science toolkit;
- ACTION open data portal;
- ACTION open call and acceleration program;
- ACTION impact assessment framework.

In a second part, the topic of sustainability for CS projects is considered and five sustainability models are briefly described. These are:

- Access to public funding;
- Access to private funding;
- Crowdfunding;
- Self-funding through memberships, merchandising and donations;
- Service/product-based sustainability models.

For each model its level of novelty, its potential impact on sustainability and the support provided by ACTION is described.

These sustainability models will be further refined in the next months and will become part of the ACTION CS toolkit.

It is important to notice that this deliverable represents a first version of the actual sustainability plan that will be released in its final version at the end of the project (January 2022).

# 1 INTRODUCTION

The aim of the ACTION project is to deliver methodologies, tools, guidance documents and methods to fundamentally transform the way citizen science (CS) is understood and practiced today, to make it more participatory, inclusive, and impactful. To achieve this goal, ACTION:

- Carried out a first open call and selected six additional pilots with interesting, impactful ideas that address pollution challenges (four more pilots will be selected through a second call in the second half of 2020);
- Set up a citizen science accelerator to support the selected pilots;
- Is co-designing the ACTION citizen science toolkit that will include methodologies, tools and guidelines to guide CS actors in all the stages of the participatory science life cycle;
- Created the ACTION open data repository to help citizen scientists easily set up and manage projects in all their online and offline manifestations, manage and share their data openly, and comply with RRI (Responsible Research and Innovation) practices;
- Is co-designing an impact assessment framework that will analyse the value and the transformations generated by CS projects in social, economic, scientific, political and environmental terms.

The aim of this deliverable is to start reflecting on the sustainability of the above-mentioned outputs and, in parallel, draft possible sustainability models for CS projects that will be then included in the ACTION toolkit and will be part of the accelerator programme.

The deliverable is organised in two main chapters:

- Chapter 2 lists the main outputs of the ACTION project and describe how the consortium plans to make them sustainable after the end of the funding period;
- Chapter 3 describes 5 different sustainability models for citizen science projects.

It is important to note that this deliverable represents the first version of the actual sustainability plan that will be released in its final version at month 36 (January 2022). While most of our work is still ongoing, we believe this initial milestone is critical for consolidating our initial ideas around sustainability, and for planning and coordinating future efforts.

## 2 THE MAIN OUTPUTS OF THE ACTION PROJECT AND THEIR SUSTAINABILITY STRATEGY

ACTION follows *open science principles* and promotes open data, open knowledge, open tech and open access for all to its outputs. These principles are, per se, a way to make ACTION outputs sustainable beyond the end of the H2020 funding period. An open approach to the sharing of data, information, and knowledge between disciplines, communities, sectors and society makes the project results available for all to re-use, adapt and build on top of them.

To facilitate this, *openness* principles need to be put into action so that the project results will be not only available “in theory”, but genuinely accessible and used by relevant stakeholders. The dissemination and communication activities, especially in the last phase of the project (see an updated version of D7.1 (Dissemination and community building strategy), which is an Annex of D7.2 (Dissemination and community building report v1)), will be aimed at making our stakeholders aware of the results of the project, and of the options available for their usage and exploitation after the end of the ACTION project.

Another approach that will support the sustainability of the ACTION outputs is *co-design*. All the project outputs are, and will be, co-designed and in some cases co-developed by engaging the direct users (mainly CS project managers). This assures that the project outputs are answering the specific needs of the community and make them more usable and easier to include in the everyday process of the relevant organisations.

Finally, *reflexivity* is another important guiding principle in ACTION and all the activities are monitored in order to improve them; we follow an iterative approach throughout the main technical work packages, which means that core project outputs (such as the components of the ACTION toolkit) are released in multiple versions to allow us to draw upon stakeholder feedback and ongoing research insights.

In summary, ACTION follows a *sustainability-by-design* approach, governed by three key principles: openness, co-design and reflexivity. In the following, we explain how these apply them to individual project outputs.

### 2.1 ACTION citizen science toolkit

The ACTION citizen science toolkit includes methodologies, methods, tools, services and other resources that respond to a wide range of citizen science characteristics: online and offline activities, various and evolving goals and scopes, as well as different stages of development, from early ideas, to initiatives that have resulted in scientific publications and other forms of impacts.

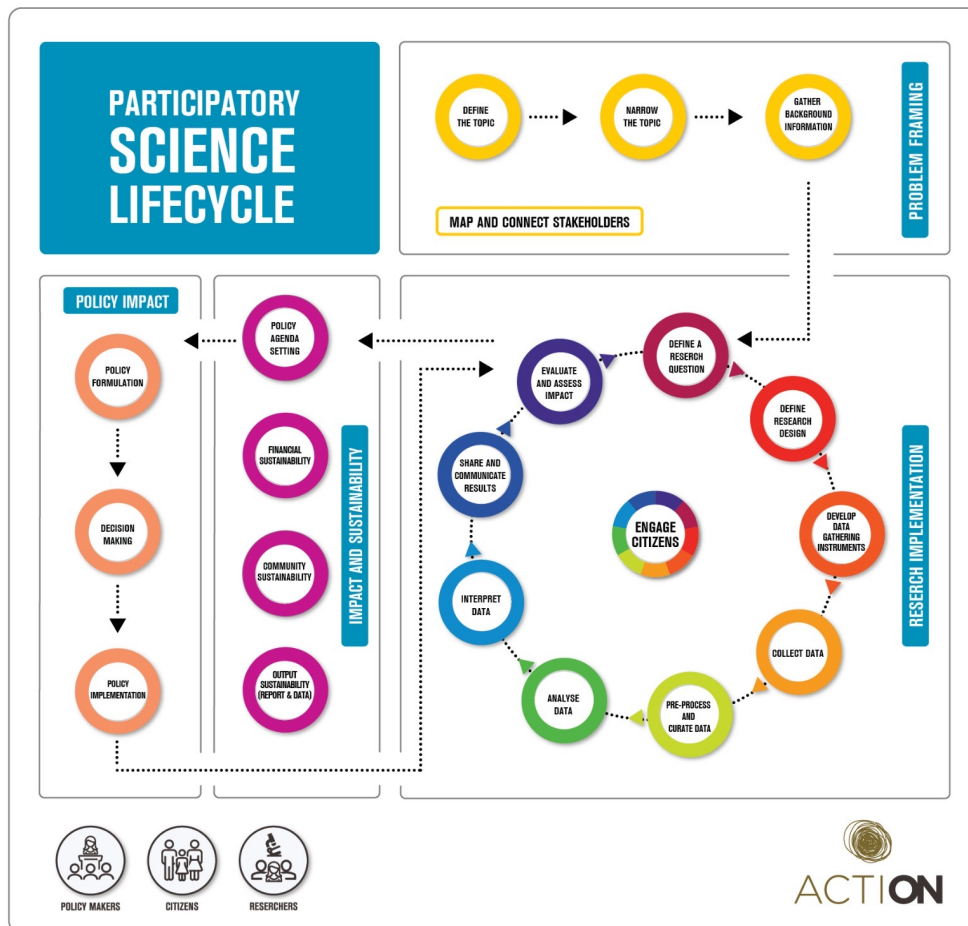
In the toolkit, CS projects’ actors will find a variety of resources for task design, quality assurance and validation, community engagement, incentives, and impact assessment, addressing the challenges around the projects’ diversity and evolution.

The toolkit will cover all steps of the participatory science lifecycle (see Figure 1 below) and offer CS projects tools and know-how to become more open, participatory and inclusive. The participatory science lifecycle is a visual representation, developed by the ACTION consortium, for visualising the main steps a CS project could follow in its development and acknowledges the diversity in disciplines and in involved actors that could characterise CS projects.



## D7.4 Sustainability plan v1

Some tools are developed directly by ACTION, while others are a curated selection of complementary tools from outside the consortium.



**Figure 1: Participatory science lifecycle**

The toolkit will be available through the [ACTION project website](#). The website will remain online four years after the end of the project. The toolkit page will be regularly updated. When new tools will be added in the toolkit, ACTION stakeholders will be notified via the project social media (currently Twitter and Facebook). Once the toolkit is finalised, it will be possible to download it as a single .pdf file. KCL committed to maintain the toolkit for four years after the end of the project, leveraging related research and institutional resources. Moreover, at the time of writing, ACTION and the Coordination Action [EU-citizen.science](#) project are starting to discuss how to give further visibility and streamline maintenance efforts by integrating the toolkit (or critical parts of it) in the EU-citizen.science platform. While the two differ in several ways, they also share common goals and one of our aims for the remaining 20 months of the project is to explore potential synergies to pool resources and help others contribute to the toolkit and use it for their own purposes. Moreover, it is our understanding that the EU-citizen.science platform is meant to become a resource of the European Citizen Science Association (ECSA); therefore, another avenue we are exploring is to host the toolkit on the ECSA website in the long run. A final decision is foreseen in autumn 2020, when the first version of the ACTION toolkit will be publicly available.

<b>Sustainability plan citizen science toolkit</b>	
Openness	Tool will be made openly available and accessible in various formats.
Co-design	Tools and resources are co-selected and -designed with users, through dedicated face to face or online workshops, opportunities to provide feedback, and request additional resources that may be required.
Reflexivity	The toolkit will be developed continuously, with the first version published at the end of 2020, and updated with additional content until the end of the project.

## 2.2 ACTION open data portal

The [ACTION open data portal](#) is the open science repository of all ACTION outputs (datasets, deliverables, papers, etc.). The repository is built to be self-sustainable beyond the end of the funding:

- It sits on top of Zenodo, a well-known resource open science community and beyond. Zenodo has been developed under the European OpenAIRE programme and is operated by CERN. It is meant as a tool to archive and preserve scientific results in all forms long-term;
- In addition, Zenodo offers unlimited storage capacity, which is an attractive proposition regarding hosting costs. This allows ACTION to expand the scope of the repository to potentially include not just resources directly related to ACTION and the accelerated pilots, but also other related efforts tackling pollution;
- The open data portal uses the same metadata structure as Zenodo, which fosters technical interoperability and reuse. For instance, the same technologies are in use by Star4All, a related H2020 effort which focused on collective actions against light pollution.

The ACTION open data portal will be used by ACTION pilots, but can be used also by other CS projects that intend to collaborate with ACTION. In order to make them aware of this opportunity, a dissemination campaign will be run by ACTION to incorporate new projects. We will contact them through email (or social channels) and we will give them support to include their digital resources with the resources created inside our project (videos, documents, slides, etc.) that will be publicly available. Projects will learn how to create communities in Zenodo, upload resources and make them visible following the Open Science approach.

Sustainability plan open data portal	
Openness	The source code of the data portal is open and can be found in our github repository <sup>1</sup> , as well as the source code of Zenodo. All the data indexed in the data portal is open and accessible although pilots have the possibility to upload private/embargo period datasets to Zenodo.
Co-design	In this first version, the initial pilots of ACTION have participated in the design of the data portal. In next versions of the open data portal, we will incorporate some of the dashboards designed in WP4.
Reflexivity	We will deploy two more versions of the open data portal (M24 and M36). These new versions will take into account the feedback provided by the pilots incorporated in the open calls.

### 2.3 ACTION open call and accelerator

ACTION developed a six-month accelerator to support CS pilots recruited through competitive calls. It has been co-designed with a set of seed pilots that joined the programme from its very beginning. The accelerator welcomed its first cohort early 2020, in response to an open call carried out in autumn 2019. It provides our pilots with resources and training, tailored to the needs of each citizen science project, including:

- Intensive training at the start of the accelerator on: project design, citizen engagement, data management and preservation, diversity and inclusion, funding and sustainability;
- Online mentoring during the pilot;
- Tools and infrastructure to host projects and their data according to state of the art IT practices;
- Tools and methods to facilitate participatory data collection and analysis;
- Bespoke consultancy on a diverse set of citizen science challenges, including: data quality, data preservation, General Data Protection Regulation (GDPR), research ethics, motivating participation, citizen empowerment, EDI (equality, diversity, inclusion), public engagement, and impact;
- Promotion via news on the ACTION web site and on social media, as well as presentation opportunities at the ACTION conference and other related events;
- Peer learning and networking, facilitated through workshops and online tools;
- Webinars on relevant topics, such as data processing, online engagement, or diversity.

<sup>1</sup> <https://github.com/actionprojecteu>

## D7.4 Sustainability plan v1

During this period pilots get support through a mentoring programme, e.g. one to one exchanges, but also regular webinars. The ACTION team works with them to address the most pressing challenges of Citizen Science today such as data quality, open data management, inclusiveness and diversity management, impact assessment, economic and community sustainability, etc.

The accelerator has produced a series of resources, which will be integrated into the toolkit to allow future initiatives to set up their own approaches to CS support. This includes:

- Open data platform, and webinar explaining its use;
- Data management tool, and guidance for use;
- Webinars on online community building, diversity, and other topics as suggested by the pilots;
- Guidelines for community engagement, incentives, and sustainability;
- Coney conversational survey tool;
- Impact assessment canvas (see paragraph 2.4).

More resources will be co-selected and -created with the pilots.

To help others to apply our learnings, we have planned a series of deliverables to document our experience and put it in context. The experiences of the ACTION Open Call and accelerator will be documented in the following deliverables:

- D2.14 Workshop reports (M18 - July 2020). The document will include the co-design and rapid prototyping workshops with the 5 pilots that are already in the consortium (carried out before M6) and those with the applications selected from the 1st Open Call;
- D2.15 Workshop reports (M30 - July 2021). The report will focus on the workshops and prototypes co-created with the pilots that joined the accelerator after the 2nd Open Call;
- D2.16 White paper of science innovation through citizen science (M36 - January 2022). This report will compile the lessons learned during the operation of the accelerator in a white paper;
- D3.3 Summary of round 1 (M18 - July 2020). This deliverable will report on the 1st Open Call in regard to relationships with applicants, the review, selection and negotiation process, call statistics and analysis and learnings for the 2nd Open Call;
- D3.4 Summary of round 2 (M30 - July 2021). This deliverable will report on the 2nd Open Call, following the same format as D3.3. In addition, it will include a final call dashboard with the collection and use of call-related data, which alongside expertise and feedback from the reviewers and the Advisory Board. The dashboard will have a public and a private part, to allow for exploratory data analysis.

This reflexivity approach is the result of an array of research and innovation efforts led by the coordinator and their team (first at University of Southampton, now King's College London (KCL)), which have facilitated knowledge transfer and helped develop community-driven resources and toolkits for everyone to use. The format draws upon frameworks and practice from open innovation, start-ups and entrepreneurship and has been initially developed in the [DataPitch](#) and [ODINE](#) H2020 data incubators, led by Simperl). It has been adapted and augmented to respond to the realities of CS work, which shares some similarities with start-ups (e.g. lean processes, limited resources), but also differs from them in important ways (e.g. different ways to understand impact, greater focus on grassroots and volunteer contributions). One of the main outputs of ACTION will be in the insights

#### D7.4 Sustainability plan v1

the team will gain on the viability of the format, which is rapidly becoming a point of reference in other contexts. For instance, KCL and T6 are part of a new H2020 programme bringing together start-ups, artists and citizens to fight challenges around online disinformation and disengagement.

Another important output of the accelerator is the community of CS projects working on pollution-related themes and it is our aim to make the community self-sustainable after the end of ACTION. In order to do so we:

- created a mailing list that supports constant exchange not only between the CS projects and the ACTION consortium but also among the CS projects. The mailing list is moderated so to support the emergence of a sense of community and foster autonomous networking among the projects;
- Run monthly webinars on selected topics as networking opportunities for the pilots.

Plus, the Accelerator has built-in mechanisms for alumni support.

Exchanges among projects will become even more relevant when the second cohort of projects will be onboarded: the pilots of the first cohort will be able to support the ones of the second cohort and work together on common topics and goals. Additionally, we will encourage all pilots to become members of ECSA and we will discuss with the ECSA board the possibility to create a working group on pollution so as to have a dedicated sub-community for the ACTION pilots and all other CS projects working in this field. Finally, the CS project working on light pollution will be invited to join the Star4All foundation as a community able to support them in further exchanges on this topic and as an umbrella organisation towards which the project could access additional funds and reach wider visibility.

<b>Sustainability plan - accelerator, including open call</b>	
Openness	The open call process is open to all the proponents with the due requirements. The process is described in detail in the open call documents (guide of applicants, etc) available on the ACTION website and also the evaluation process is fully described.
Co-design	The open call process is based on previous successful projects and adapted to ACTION thanks to the feedback of ACTION partners, especially its first pilots.
Reflexivity	After the end of the first open call the whole process was discussed before planning the second open call for taking on board the lesson learned. The accelerator kick off workshop was evaluated by participants and lessons learned will be used for the planning of its second edition.

## 2.4 ***ACTION impact assessment framework***

The ACTION socio-economic environmental and political impact assessment framework is under development and will be available in its first version in July 2020 (D6.1 Impact assessment methodological framework). The ACTION impact assessment framework is a modular, qualitative methodology intended to support CS projects (first of all ACTION pilots) to describe and quantify, as much as possible, their positive impact on society, at economic level, on the environment and at policy level. Its development is following a co-design approach, taking on board requirements and suggestions of ACTION partners and pilots. The framework is already available to ACTION pilot projects in the form of an impact assessment canvas: a template that provides pilots with questions (guiding examples) for describing the impact value chain of their project. In other terms, a graphical support that pilots fill in for describing how their activities and outputs will generate short- and long-term impacts. The ACTION impact assessment canvas will be included in the ACTION CS toolkit under a creative common licence. This is an easy-to-use support that each pilot project can use in order to:

- Reflect on the pilots' expected impacts;
- Plan data gathering and impact assessment activities;
- Improve their action plans (if needed) in order to improve their impacts.

By the end of the ACTION project the canvas will be accompanied by data gathering tools (questionnaires and focus groups guidelines) to allow any CS project team to carry out impact assessment activities in an autonomous way. A first version of the above-mentioned data gathering tool will be available in D6.1 in July 2020.

In order to assure openness, accessibility and ease of use, a video tutorial will be developed to support the CS projects' teams in adapting the ACTION impact assessment framework and the data gathering tools to their needs. The ACTION open data portal will store all developed adaptations and tools (including translation of questionnaires and focus groups guidelines in different languages, if developed by individual initiatives) to encourage further uptake.

As said, the tool will be part of the ACTION toolkit and the teams at T6 and DRIFT will invest their own resources beyond the end of funding period to offer support in the long run. We are discussing a double licensing model, which will consist of the following levels of service: free support if the assistance needed is related to the already available resources and limited to basic training and information provision. Premium, if the request of support implies a more demanding work, such as adaptation of the framework, actual application of it in terms in a specific project (data gathering and analysis) or more in depth, long training. T6 and DRIFT, indeed, already have business and pricing models for this kind of service provision.

<b>Sustainability plan - impact assessment framework</b>	
Openness	The deliverable describing the methodological framework (D7.1) and the data gathering tools developed during the project (D7.2) will be available in the ACTION open knowledge space. It will also be part of the ACTION toolkit (impact assessment canvas and related data gathering tools). A video tutorial will accompany it in order to make it more accessible and easier to use. The use of the impact assessment framework after the end of the project will have a free and premium resourcing model.
Co-design	The impact assessment framework has been co-designed in its first version with the ACTION partners during a project meeting; then pilots actions provided feedback for its further improvements that will be included in D6.1.
Reflexivity	The process of impact assessment is modular and is adapted in a dedicated way to each of the action pilots. Each application of the methodological framework will provide important input to its further improvement. The final version of the methodology will emerge thanks to this process at the end of the project and will be reflected in D6.4.

### 3 SUSTAINABILITY MODELS FOR CITIZEN SCIENCE PROJECTS

CS initiatives are largely based on voluntary work, however at least their costs need to be covered. ACTION pilots should demonstrate good sustainability plans as this was part of the selection process itself (see Figures 2 and 3 below showing the proposal template in regard to Growth and Sustainability and the related review criteria, both available on the [ACTION project website](#)).

#### 2.3 Growth and sustainability

<i>How many participants do you need to achieve your goals and why?</i>	
<i>How will you manage the growth of the pilot during the six months of the accelerator? Please provide a rough timeline.</i>	
<i>How will you ensure the sustainability of the work beyond the end of the funding? Please indicate any additional sources of funding/support you may need and how you plan to secure it.</i>	

**Figure 2: 1st ACTION Open Call proposal template - section 2.3 Growth and Sustainability of the proposed pilots**

<b>Impact</b>	Value proposition	Will the idea resolve the pollution issue? Will the idea benefit the citizen scientists taking part, or the community in which the pilot will take place?
	Opportunity and timing	Is this a good time to focus on the idea and issue in question? Has there been significant interest in the media, the scientific community or within the general public? Have new technologies and tools become available or accessible to facilitate this research?
	Growth and sustainability	Can the idea be grown from the proposed concept to achieve the target aims within the accelerator period (6 months)? Are the idea and outputs maintainable beyond the life of the project? Are new sources of funding available or likely to become available?

**Figure 3: 1st ACTION Open Call review criteria in regard to Impact (including growth and sustainability)**

We are studying the sustainability models of the organisations that are carrying out the ACTION pilots: many of them show a good mix between private and public funds. Nevertheless, in order to ensure continuity of delivery and help them scale up their efforts, additional resources are needed.



## D7.4 Sustainability plan v1

To this end public funds are essential and, considering the value they deliver to society, public funding appears to be a better option than private ones, especially as this can offer more continuity.

ACTION, through its policy makers master classes (to take place in 2021), aims at providing guidelines to policy makers on how to support CS at local, national and European level. However, access to public funding is often based on open calls for grants and tenders which include a certain level of risk (the success rate on public calls can vary considerably through time and in the various countries) and the procedure can be costly and time-consuming. For this reason, it is recommended to CS projects to complement this sustainability model with other sources of revenues to be less dependent on public funding for their everyday activities. In the following paragraphs we briefly describe some complementary sustainability models that will be further detailed in the next months and will become part of the ACTION CS toolkit.

ACTION CS pilots will be invited to two webinars with potential funders (one for each cohort), and experts in innovative sustainability models. Pilot projects will pitch their project idea/results and receive the needed feedback and suggestions for increasing their sustainability.

The sustainability models are:

- Access to public funding: grants and contracts;
- Access to private funding: foundations grants and corporate social responsibility plans;
- Crowdfunding;
- Self-funding: memberships, merchandising and donations;
- Service/product-based sustainability models: the CS projects as providers of goods and services.

### **3.1 Access to public funding: grants and contracts**

There are several public institutions that support CS initiatives through open calls for grants or contracts at different geographical levels:

- European level (directly, as in the case of some H2020 programme or indirectly through thought projects such as ACTION);
- National level through public bodies or national CS associations (where present);
- Regional or local level, again through public bodies or through national CS associations (where present).

CS projects participating in the ACTION accelerator and/or using the ACTION toolkit will access support tools for making their value proposition stronger. ACTION tools will help them in:

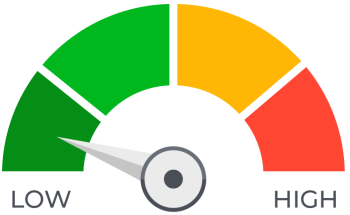
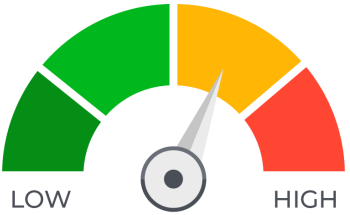
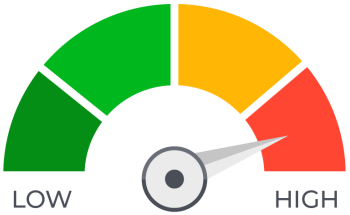
- clearly identifying their stakeholders;
- planning effective measures for inclusion and diversity management;
- planning citizen engagement processes;
- planning and implementing their research;
- developing open data management processes; and
- foreseeing procedures for impact assessment.

In addition, CS projects need to have the project management and proposal writing skills in order to succeed in public funding competitive processes. Therefore, on the latter aspect, a webinar on how to design a competitive CS project proposal will be organised during the launch of the second ACTION Open Call in order to provide guidelines for applicants but, at the same time, support all CS

## D7.4 Sustainability plan v1

projects interested in learning more on this topic. Indeed, similar webinars have been already carried out for the first call: they are available on the ACTION website (open call page) and are described in the upcoming D3.3.

It should be pointed out that a sustainability plan based on public funding might be time consuming and risky for several reasons, e.g. the high level of competition (especially for EU direct funding), asymmetries between countries on the availability of funds. In addition, the time for the application and the decision making process on the allocation of funds is often long and might represent a bottleneck in the effective planning of the CS pilot. On the other hand, the average amount of funding provided via public funding is relatively high, in respect to other sources.

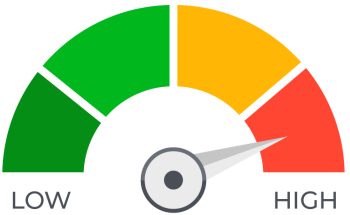
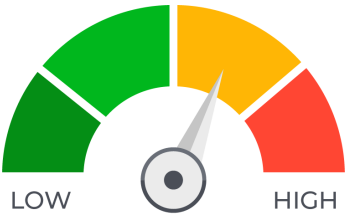
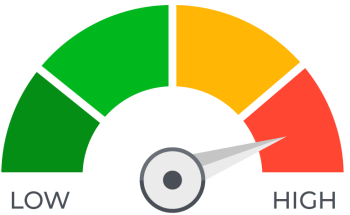
Level of novelty	Potential impact on sustainability	ACTION support provision
 <p>A gauge with a semi-circle divided into three segments: green (left), yellow (middle), and red (right). The needle points to the green segment, indicating a low level of novelty. The word 'LOW' is at the left end and 'HIGH' is at the right end.</p>	 <p>A gauge with a semi-circle divided into three segments: green (left), yellow (middle), and red (right). The needle points to the boundary between the green and yellow segments, indicating a medium potential impact on sustainability. The word 'LOW' is at the left end and 'HIGH' is at the right end.</p>	 <p>A gauge with a semi-circle divided into three segments: green (left), yellow (middle), and red (right). The needle points to the red segment, indicating high ACTION support provision. The word 'LOW' is at the left end and 'HIGH' is at the right end.</p>
<p><b>Skills needed</b> Proposal writing; financial management.</p>		

### 3.2 Access to private funding: foundation grants and corporate social responsibility plans

In some countries, private foundations support CS initiatives. This is especially true if CS tackles specific social or environmental challenges or topics strongly related to the funder's identity and core mission. In some cases, the procedure for accessing these funds is similar to that of public funding (open competitive calls), while in other cases the support takes the form of direct interaction with the funder, often via their PR office or via the office responsible for the corporate social responsibility (CSR) plan of a company.

In order to access these potential funds, a CS project should develop interactions with companies and foundations and pitch their initiative, showing their impacts and looking at the positive return for the foundation/company in terms of communication and public image. This is something that the CS projects accelerated in ACTION will learn thanks to the webinars we will organize with experts in the field (for the first cohort this will take place in autumn 2020 when they will be close to the finalisation of their activities). Guidelines on how to successfully pitch their projects will also be provided as part of the ACTION toolkit.

The pros of this sustainability path are linked to the amount of funding provided which is, in general, comparable to those of public funds. The cons can be related to the difficulties of getting in touch with funders, the procedures to be followed that can be time consuming and also to ethical aspects to be considered.

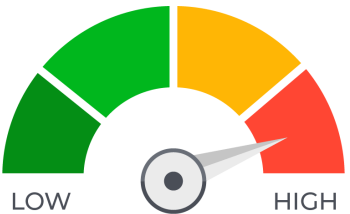
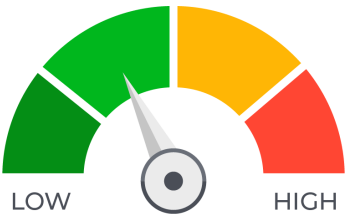
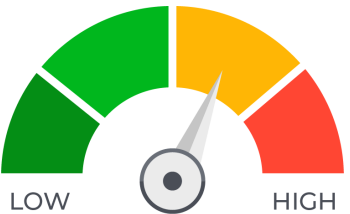
Level of novelty	Potential impact on sustainability	ACTION support provision
		
<b>Skills needed</b> Proposal writing; financial management; communication skills.		

### 3.3 Crowdfunding

Crowdfunding can be a promising channel for accessing additional funds. There are several crowdfunding platforms at national and European level. In particular, some of them such as [Goteo](#) or [Indiegogo](#) have a prosocial and pro-environmental focus, supporting projects that have a positive impact on society and/or the environment. These, or similar platforms, could be relevant channels for the ACTION CS pilots. Crowdfunding platforms typically charge the users a percentage of the funds collected in the crowdfunding campaign. CS projects interested in exploring this path will need good communication skills, not only for communicating in an effective way their project on the crowdfunding platform, but also for running a communication campaign able to make the crowdfunding campaign visible to a large, potentially funding, audience.




For a CS project, the pros of passing through a crowdfunding platform instead of running a fundraising campaign on their own are related to the reduced administrative effort (all legal and security aspects related to money exchange are covered by the platform). Moreover, also in terms of dissemination effort, it can be beneficial as the platforms have their own users community and carry on advertisement campaigns to a large audience as part of their service. The main con is the risk related to this process, as it is not possible to know in advance if the expected funds will be collected through the campaign.

A good point of reference for knowing more about crowdfunding and accessing a list of platforms available at national and EU level is the [European Crowdfunding Network](#).

Level of novelty	Potential impact on sustainability	ACTION support provision
		
<b>Skills needed</b> Proposal writing; financial management; communication skills.		

### 3.4 Self-funding: memberships, merchandising and donations

CS organisers and members could create an association (if they do not already have one) or create umbrella organisations taking together several initiatives with similar aims but non-competitive. This could generate revenue in the form of annual subscription and cover some of the CS projects activities, especially if mainly based on voluntary work. Another stream of revenue could come from the association merchandising: the creation of branded gadgets to be sold at key events or online could help strengthen the identity of the association and, at the same time, cover small costs. The Start4All H2020 project ran an analysis (Palacio and Rodriguez, 2019) looking at the merchandising activities of CS projects and found that only few projects follow this path and that the most often sold products are T-shirts. The pros of this sustainability are the relatively low effort requested for realising the related activities (even if it implies administrative efforts), the cons are the reduced amount of money that is usually collected in this way. Nevertheless, this can be a useful complement to other sustainability paths.

Level of novelty	Potential impact on sustainability	ACTION support provision
 <p>LOW HIGH</p>	 <p>LOW HIGH</p>	 <p>LOW HIGH</p>
<p><b>Skills needed</b>            Legal skills; financial management skills; communication skills; marketing skills; networking skills.</p>		

### 3.5 Service/product-based sustainability models: the CS project as provider of good and services

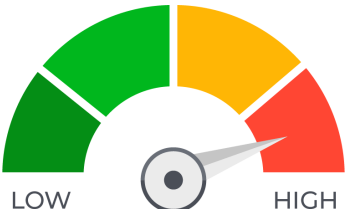


Some CS projects develop or improve already existing data collection devices such as sensor-based equipment. Others develop apps for smartphones, in some cases turning smartphones into data gathering devices themselves, or offering information on a specific topic while, at the same time, asking users to collect related data. In these cases, CS projects could be seen as product or service producers and could decide to develop a revenue stream out of their products. This can happen in two main ways:

- Following a market-based approach for which the good or service is sold on the market and the user pays for accessing it. For example, citizens interested in monitoring the air quality in their homes, could accept to pay for a sensor-based tool, especially if accompanied by an experts' interpretation of the gathered data and, may be, an advice on how to improve it. A successful example of this path is represented by Star4All, a project dedicated to light pollution: after the end of the project they created a foundation which now sells photometers (an instrument used for measuring the intensity of light) as its main revenue stream. Data

## D7.4 Sustainability plan v1

collection apps could follow several models to be sustainable, e.g. a dual licensing model, a subscription based or a small upfront payment, or an in-app purchase to access more functionalities.

- Following an open source-based approach. Many CS projects follow an open source approach when developing data gathering tools and apps, building on software released under open-source licences. CS organizers can provide support service or assistance and training for the tool developed. Users can ask for customisation or for further developments of a CS project output or may need dedicated training; all these can represent an additional source of revenue for a project. Moreover, advertising partnerships or providing tools in Software as a Service (SaaS) mode might generate additional revenues streams. Probably, only a low percentage of CS projects will be in the position of pursuing this sustainability path but, nevertheless, it is worth for ACTION to provide support on these aspects that might become more relevant in the future. CS projects will need support in order to develop a more entrepreneurial oriented mindset, develop appropriate business models and carry out marketing-related activities. At the ACTION accelerator kick-off meeting one of the invited speakers (Orsola de Marco) was covering these topics during a Business Design workshop. Some of the ACTION first open call pilots expressed their interest in learning more on these options. Therefore, upcoming webinars (planned for the next year) we will put due attention in involving experts able to provide guidance also on this sustainability model.

Level of novelty	Potential impact on sustainability	ACTION support provision
		
<p><b>Skills needed</b>            Technical skills; business skills; marketing skills; management skills.</p>		

## 4 CONCLUSIONS

This report has presented our ongoing ideas on how to make ACTION, and the CS pilots sustainable in medium- to long-term. ACTION will present, discuss and update this sustainability plan at the next project meetings, will start working on the described actions from now on and release the final plan in January 2022 in D7.5 (Sustainability plans v2). Additionally, and only presented briefly in this deliverable, the project will carry out six master classes for decision makers, providing them with guidelines for effectively supporting CS initiatives and in exploiting their results in the policy making processes (D6.5 Policy brief on citizen science mainstreaming). This could lead to an additional sustainability asset for the project and for CS more generally that will be explored in greater detail in the next version of this plan.

In order to support CS sustainability, ACTION will elaborate further the sustainability models here described and insert them - together with related success cases - as resources in the ACTION toolkit. As part of the acceleration programme, two webinars with potential funders, and experts in innovative sustainability models will be organised so that pilot projects can pitch their project idea/results and receive the needed feedback. The first webinar will be in autumn 2020 and will be dedicated to the pilots financed by the first open call.

Finally, ACTION will collect sustainability models and success stories as they will emerge from the acceleration programme and will include them in the ACTION toolkit.

## 5 REFERENCES

- ACTION Guide for applicants (ACTION call 2019) (2019). Available at: <https://actionproject.eu/wp-content/uploads/2019/07/PUBLIC-ACTION-Guide-for-applicants-2019.pdf>
- Curto-Millet, D., Gaston-Breton, C., Placios, M., Rodrigo, L. (2019), Stars4All market place
- Decis, J. Dusselier, A. (2018) D7.3 Sustainability strategy and implementation roadmap
- ODI, D6.2 Sustainability Plan (2016)
- Placios, M., Rodrigo, L. (2019), Star4all sustainability Plan
- Passani, A., Firus, A. Amendola, V. (2019), Dissemination and community building strategy (ACTION D7.1)
- Passani, A., Firus, A. Amendola, V. (2020), Dissemination and community building report v1 (ACTION D7.2)